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MARE ISLAND
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Final

Record of Decision/Remedial Action Plan Investigation Area A2, Former North Building Ways Area

Former Mare Island Naval Shipyard Vallejo, California

August 24, 2010

Prepared for:
Base Realignment and Closure
Program Management Office West
San Diego, California 92101

Prepared under:
Naval Facilities Engineering Command
Contract Number N62467-04-D-0055
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FINAL RECORD OF DECISION/ REMEDIAL ACTION PLAN

Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California

August 24, 2010

1.0 DECLARATION

This Record of Decision/Remedial Action Plan (ROD/RAP) presents the basis for the no further action (NFA) decision for Investigation Area (IA) A2, which includes the Former North Building Ways (FNBW) Area, at the former Mare Island Naval Shipyard (Mare Island) in Vallejo, California (Figure 1).

Figure 1. Facility Location Map

1.1 LOCATION

Mare Island consists of 5,250 acres located on the Mare Island peninsula that extends south into San Pablo Bay, 25 miles northeast of San Francisco (Figure 1). The Napa River (Mare Island Strait) separates the peninsula from the City of Vallejo to the east. Mare Island is within the incorporated boundaries of the City of Vallejo. For environmental cleanup, Mare Island is divided into various sites and investigation areas. IA A2 is Navy-owned property located in the northernmost portion of Mare Island, along the Mare Island Strait (Figure 2). IA A2 is generally bounded by Highway 37 to the north, Railroad Avenue and K Street to the west, and G Street to the south. The Fleet Reserve Pier is also located within IA A2 as an appurtenant structure.

1.2 STATEMENT AND BASIS OF PURPOSE

The NFA remedy for IA A2 was selected in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 (Title 42 *United States Code* Section [§] 9601, et seq.), and, as applicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (Title 40 *Code of Federal Regulations* [CFR] Part 300). The remedy also satisfies the State of California Department of Toxic Substances Control (DTSC) requirements for a RAP for hazardous substance release sites pursuant to California Health & Safety Code § 25356.1.

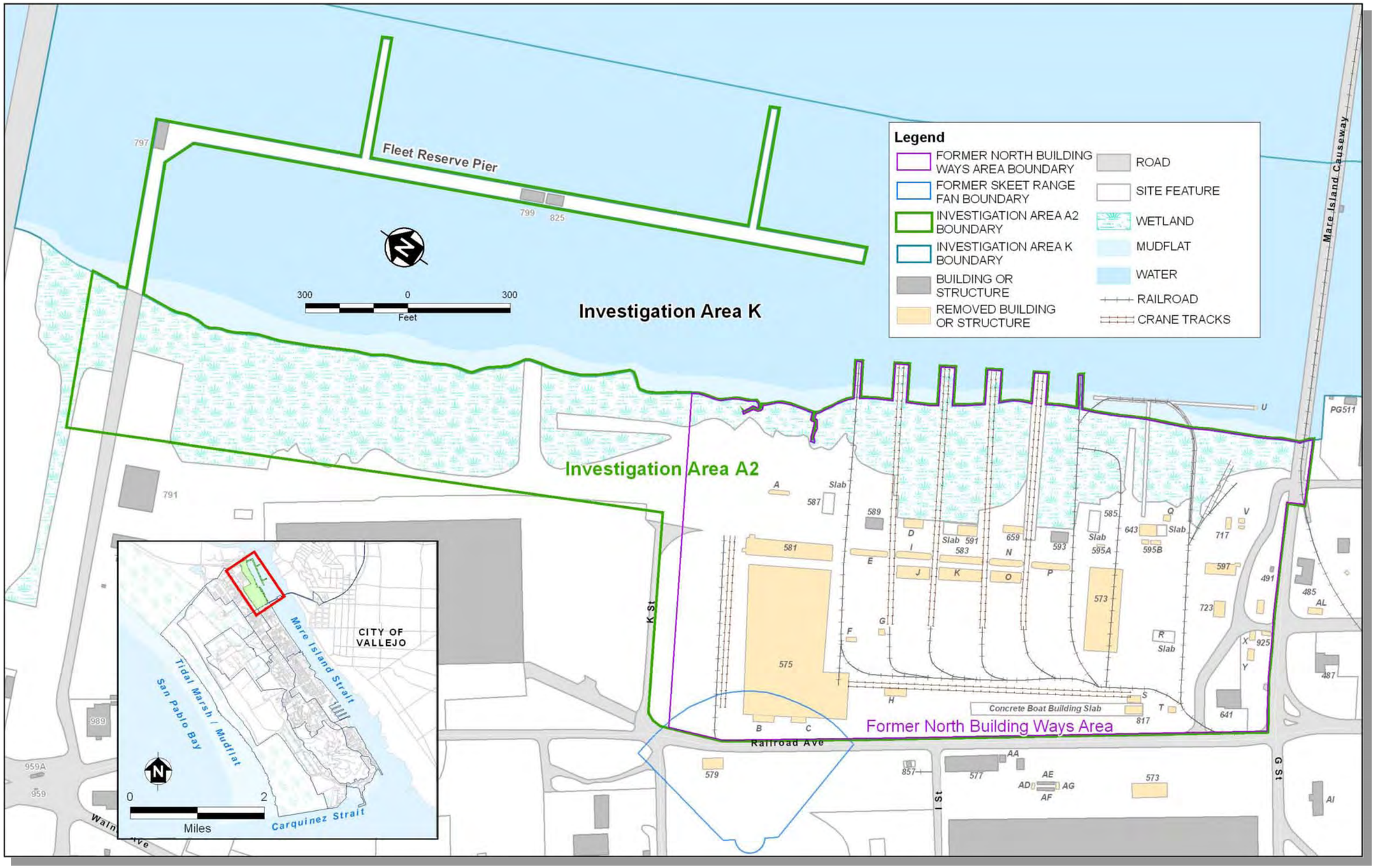

Figure 2. Investigation Area A2 and Former North Building Ways Area Map

The remedy for IA A2 is based on information contained in the Administrative Record[1] (Attachment A) for the site. Information not specifically summarized in this ROD/RAP or its references but that is contained in the Administrative Record has been considered and is relevant to selection of the NFA decision. Thus, the ROD/RAP is based on and relies on the entire Administrative Record file.

The Navy, as the lead federal agency, provides funding under the Base Realignment and Closure (BRAC) program for site cleanup at Mare Island and is vested with the authority to select CERCLA cleanup remedies at Mare Island. The Federal Facility Site Remediation Agreement (FFSRA) for Mare Island documents how the Navy meets and implements CERCLA in partnership with DTSC and the San Francisco Bay Regional Water Quality Control Board (Water Board). The Navy selected the NFA remedy for IA A2 and the FNBW Area, the only CERCLA site within IA A2. DTSC, the Water Board, and the U.S. Environmental Protection Agency (EPA) concur with the NFA remedy for IA A2.

Environmental investigations began at IA A2 in 1992. The Final Revision 1 Remedial Investigation (RI) Report was completed in September 2008, and a **Proposed Plan (PP)/Draft RAP(1)** was completed in September 2009. Investigations concluded that no unacceptable risks to human health or the environment are present as a result of exposure to site soil or groundwater.

Investigation findings supporting the Navy's declaration of the NFA decision include:

- No chemical of potential concern (COPC) poses an unacceptable risk to human health. Cancer risks from exposure to chemicals for the future resident and the commercial/industrial worker are equal to or within the risk management range of 10^{-6} and 10^{-4} that EPA considers acceptable, and the cancer risk for the future construction worker is less than the point of departure of 10^{-6} for carcinogens.

- Excess cancer risks are associated with polycyclic aromatic hydrocarbon (PAH) concentrations in soil; however, these PAH concentrations represent ambient conditions typical of fill material at Mare Island.

- Noncancer hazards for both the future commercial/industrial worker and the construction worker are below the noncancer threshold of 1. The summed noncancer hazard indexes (HI) for the future resident were equal to or greater than the threshold of 1 for noncarcinogens. However, the summed HIs segregated by target organ effects did not exceed the noncancer threshold of 1.

[1] **Bold blue text** identifies detailed site information available in the Administrative Record and listed in the References Table (Attachment B). This ROD/RAP is also available on CD, whereby **bold blue text** serves as a hyperlink to reference information. The hyperlink will open a text box at the top of the screen. A blue box surrounds applicable information in the hyperlink. To the extent there may be any inconsistencies between the referenced information attached to the ROD/RAP via hyperlinks and the information in the hard copy ROD/RAP itself, the language in the hard copy ROD/RAP controls. Acronyms and abbreviations are provided at the end of the ROD/RAP.

- No chemical of potential ecological concern (COPEC) poses an unacceptable risk to wetland or upland birds or mammals at IA A2, and there is a low potential for transport of chemicals in the upland area to adjacent wetland areas.

- DTSC, the Water Board, the California Department of Health Services, and EPA concurred with the Navy's recommendation for NFA after radiological studies and cleanup at Buildings 589, 593, and 643.

- Four Resource Conservation and Recovery Act (RCRA) Solid Waste Management Units (SWMU) were identified in IA A2: SWMU 2 and portions of SWMUs 93, 106, and 108. DTSC and the Water Board concurred with the Navy's recommendation of NFA after investigation of the portions of these SWMUs that are located within IA A2.

- EPA concurred with the Navy's recommendation of NFA after the polychlorinated biphenyl (PCB) investigation and cleanup at the Buildings 589, 591, 593, 641, 643, 797/Grounded Rocker Arm (GRA) 51, 799, 825/GRA61, GRA53, GRA55, GRA63, GRA65, and Pier 55.

- The Water Board concurred with the Navy's recommendation of NFA for total petroleum hydrocarbons (TPH) after a removal action within the FNBW Area at IA A2.

1.3 SELECTED REMEDY

The Navy, in partnership with DTSC, the Water Board, and EPA, considered all pertinent factors in accordance with CERCLA and concluded no further CERCLA action is necessary to ensure protection of human health or the environment at IA A2 and the FNBW Area. Results of investigations concluded that no unacceptable risk to human health or the environment is present from potential exposure to soil or groundwater for current or future uses at IA A2. No institutional controls will be required and no groundwater cleanup is needed for the IA A2 and the FNBW Area. This ROD/RAP does not include or affect any other sites at Mare Island.

1.4 STATUTORY DETERMINATIONS

The statutory determinations normally included in ROD documents pursuant to CERCLA § 121 are not required for IA A2 since it has been determined that no remedial action is necessary to ensure protection of human health and the environment (**EPA[2]**, "A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents"). In addition, a 5-year review for IA A2 will not be required because no remedy is being selected and no CERCLA contaminants, pollutants, or hazardous substances remain on site above levels that allow for unlimited use and unrestricted exposure.

1.5 AUTHORIZING SIGNATURES

This signature sheet documents the Navy's selection of the NFA decision in this ROD/RAP. This signature sheet also documents the State of California's (DTSC and Water Board) concurrence with this ROD/RAP.

Anthony Megliola

Mr. Anthony M. Megliola
Base Closure Manager
BRAC Program Management Office West
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8-24-10
Date

Barbara J. Cook

Ms. Barbara J. Cook, P.E.
Performance Manager
Brownfields and Environmental Restoration Program – Berkeley Office
Department of Toxic Substances Control

8/26/2010
Date

Bruce H. Wolfe

Mr. Bruce H. Wolfe
Executive Officer
California Environmental Protection Agency
San Francisco Bay Regional Water Quality Control Board

8/30/10
Date

2.0 DECISION SUMMARY

2.1 SITE DESCRIPTION AND HISTORY

Mare Island Naval Shipyard consists of 5,250 acres located on the Mare Island peninsula, which extends south into San Pablo Bay; 25 miles northeast of San Francisco (see Figure 1). The Napa River (Mare Island Strait) separates the peninsula from the City of Vallejo to the east. Mare Island is within the incorporated boundaries of the City of Vallejo. The FNBW Area is located within IA A2 on the northernmost portion of Mare Island, along the Mare Island Strait (see Figure 2).

Mare Island was the first naval shipyard established on the Pacific coast. The Navy established the facility in 1853 and commenced shipbuilding operations in 1854. The primary ship construction and maintenance area of Mare Island was established along the northeastern shore of the original island, adjacent to Mare Island Strait. In the early 1920s, the Navy initiated construction and maintenance of submarines at Mare Island. During World War II, Mare Island reached peak capacity for shipbuilding, repair, overhaul, and maintenance. After the war, Mare Island was considered one of the primary stations for construction and maintenance of the Navy's Pacific Fleet of submarines. However, shipyard activity decreased because of diminishing Navy needs in a postwar environment. Mare Island was closed on April 1, 1996, after 142 years of operation. In accordance with the Defense Base Closure and Realignment Act of 1993, Mare Island will eventually be transferred to the City of Vallejo.

The **FNBW**(3) Area is the only installation restoration (IR) site located within IA A2. The Navy used the FNBW Area to assemble destroyers and landing craft during World War II. **Historical aerial photographs**(4) document operations at IA A2 and the FNBW Area. The site consisted of numerous **buildings and structures**(5), five ship building ways, and associated wharves situated along Mare Island Strait. At the end of World War II, shipbuilding at the site was phased out, and most of the buildings, ways, and wharves were removed. Currently, the site primarily consists of an approximately 32-acre upland area, including three remaining buildings, and the adjacent tidal wetland. **Current aerial photographs**(6) document conditions at IA A2 and the FNBW Area. The future anticipated use of the upland area of IA A2 is light industry, while the tidal wetland portion of the site is designated as open space.

2.2 SITE CHARACTERISTICS

IA A2 consists of flat lowlands adjacent to Mare Island Strait that were constructed by placing borrowed fill material from various non-industrial sources, including dredged sediments. The ground surface elevation at IA A2 is between 4 and 9 feet above mean sea level. Geologic units that have been identified in **cross-sections**(7) for IA A2 are (from top to bottom stratigraphically): (1) unconsolidated heterogeneous materials, and (2) fine-grained, unconsolidated homogeneous materials (known as the silty clay unit). The unconsolidated heterogeneous materials together with the upper portion of the silty clay unit represent the Mare Island artificial fill unit. The lower portion of the silty clay unit represents the unconsolidated natural deposits unit, known as Younger Bay Mud. Wood pieces and buried wooden pilings and platforms are present in the tidal wetland and intertidal mudflat area.

Hydrogeology(8) at IA A2 and the FNBW Area is based on borings advanced during the RI and in adjacent investigation areas. Groundwater was observed in open boreholes and wells in adjacent investigation areas at depths ranging from approximately 3 to 7 feet below ground surface (bgs). Based on the location of the Mare Island Strait to the northeast, site topography, and hydraulic modeling, the groundwater gradient is flat and is oriented to the northeast. The gradient in the areas directly adjacent to the strait are likely tidally influenced. The flat gradient, coupled with the fine-grained nature of the soil, results in very slow to virtually no groundwater movement across the site.

The **ecology**(9) at IA A2 includes both upland and tidal wetland areas. The upland habitat consists of a broad, relatively flat area that is partially asphalt paved, highly compacted from past sustained heavy traffic, or covered by buildings. The tidal wetland habitat consists of a low-lying, relatively flat area between the uplands and Mare Island Strait that is influenced by tidal action. The offshore area, including the tidal mudflats, is being investigated under IA K and is not included in this ROD/RAP. No threatened or endangered species have been observed at IA A2 or its vicinity; however, other federal- and state-listed endangered species have been observed elsewhere at Mare Island.

2.3 PREVIOUS INVESTIGATIONS

At Mare Island, the Navy conducts cleanup pursuant to four separate programs: (1) the IR Program pursuant to CERCLA (including radiological releases) and RCRA; (2) the Petroleum Corrective Action Program pursuant to State of California petroleum regulations; (3) the PCB Compliance Program pursuant to federal Toxic Substances Control Act (TSCA) standards; and (4) the Military Munitions Response Program pursuant to CERCLA and Department of Defense and Department of Navy guidance. While this ROD/RAP is being prepared under the IR Program, various investigations and cleanup actions have been or are currently being undertaken at IA A2 under other programs. This section summarizes efforts undertaken under all applicable cleanup programs.

The sources of potential contamination at IA A2 and the FNBW Area include petroleum spills and leaks in the upland area, welding and grinding, radiological releases within buildings, and PCB releases to concrete slabs around electrical equipment. Assessment of CERCLA contamination and risk for the FNBW Area is based on the RI conducted in 1998 through 2000 and the supplemental RI activities conducted in 2003 and 2008. Both the RI and supplemental RI activities are detailed in the Final Revision 1 RI. The radiological, PCB, and petroleum release sites (Figure 3) have been addressed by removal actions under separate Navy programs, and concurrence with the Navy's recommendation of NFA was received from the regulatory agencies.

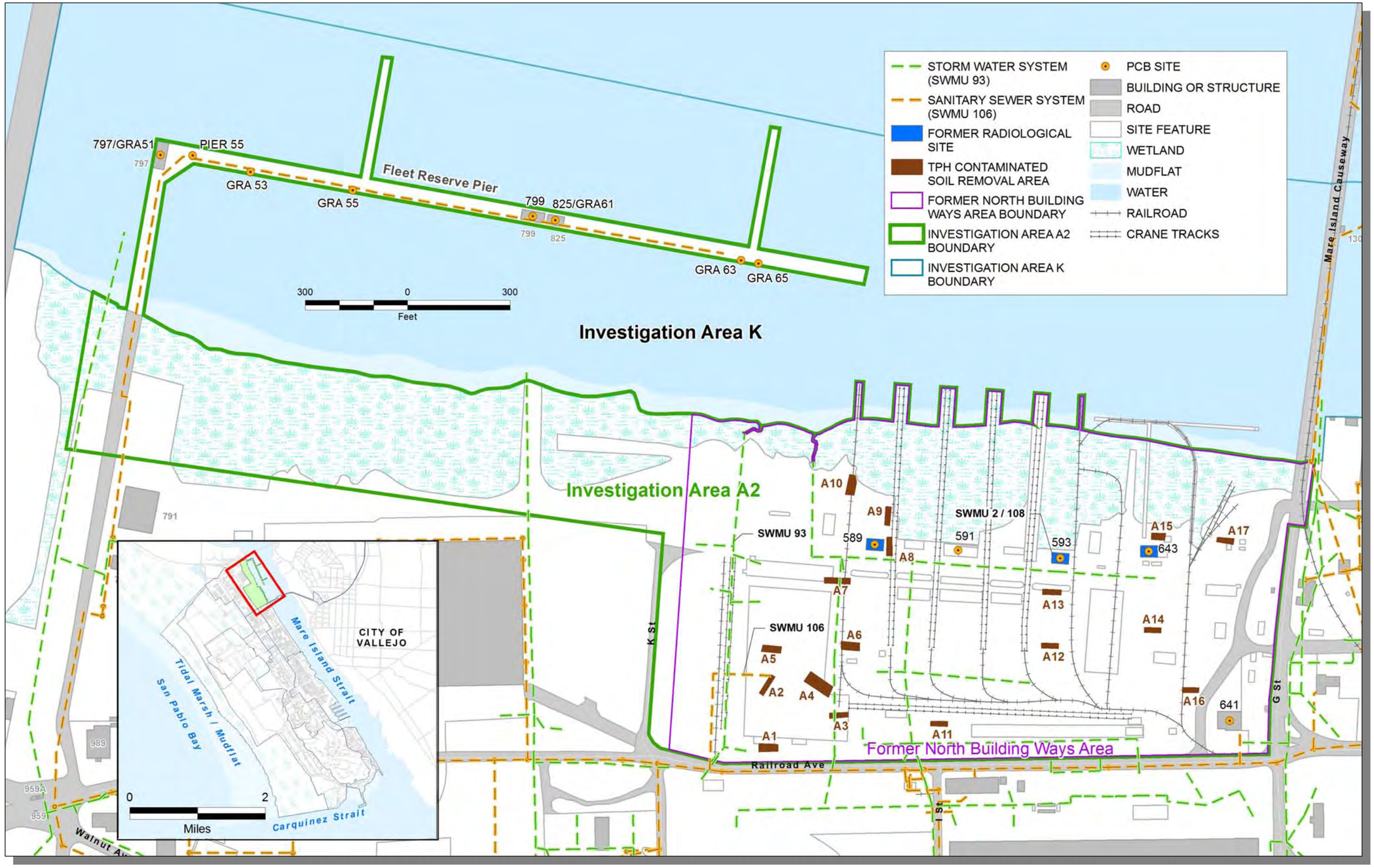

Figure 3. Other Navy Compliance Related Sites

Radiological activity has been reduced to background levels; however, residual chemicals detected in soil and sediment in the FNBW Area include **PAHs(10)**, **lead(11)**, and **TPH(12)**; while chemicals detected in grab groundwater samples were limited to **TPH(13)**. Based on recent studies and investigations, the sources and extent of the remaining contamination in soil, sediment, and groundwater have been well characterized.

Table 1 summarizes the previous CERCLA and RCRA studies, investigations, as well as other studies, investigations, and removal actions conducted under the Navy cleanup programs and other authorities.

TABLE 1. PREVIOUS INVESTIGATIONS AND REMOVAL ACTIONS

Previous Investigation/ Removal Action	Date	Investigation / Removal Action Activities
CERCLA and RCRA Studies and Investigations		
RCRA Facility Assessment	1987	A RCRA facility assessment was completed to identify and evaluate SWMUs at Mare Island. A total of 95 SWMUs, 11 potential SWMUs, and 13 areas of concern were identified in the report. Only four of the sites identified were located or partially located within IA A2 during the **RCRA Facility Assessment(14)**: SWMU 2 (Building 593), portions of SWMU 93 (storm sewer system), one potential SWMU (areas indicating radium contamination), and portions of one area of concern (sanitary sewer system).
Site Investigation (SI)	1992	The SI assessed the potential for radiological contamination at Building 593, a former radium decontamination facility. It included sampling for radioactive particulates, radon gas, mercury vapor, surface alpha and beta radiation, gamma radiation, and removable surface radioactivity, and soil sampling in the vicinity of Building 593. Investigation results showed elevated alpha, beta, and gamma activity inside of the building. Surface soil samples collected outside, adjacent to a duct providing exhaust for a ventilation hood, contained elevated alpha activity. Building 593 cleanup was addressed under a separate General Radioactive Material (G-RAM) study (see G-RAM below).
Preliminary Assessment (PA)/SI for Nonradiological Sites	1995	A PA/SI was completed to further evaluate SWMUs for Mare Island. Four SWMUs were identified within the boundary of IA A2: SWMU 2 (Building 593) and portions of SWMU 93 (storm sewer system), SWMU 106 (sanitary sewer system), and SWMU 108 (areas indicated radium contamination, including Building 593) (Figure 3). SWMUs 2 and 108 were not evaluated in the PA/SI because they were radiological sites, which the Navy addressed in a separate 1996 G-RAM survey (see G-RAM below). SWMUs 93 and 106 were later evaluated during the 1998 Group II/III accelerated study.
Ordnance PA/SI	1995	An ordnance PA/SI was performed at IA A1, west of IA A2 and FNBW Area, to determine if munitions remain at a former skeet range formerly located between Walnut and Railroad Avenues, near K Street. The fan of the skeet range extended onto a portion of the IA A2 property before it was hydraulically filled to its present grade. A **1995 field survey(15)** did not identify any munitions at the former skeet range or fan area. A **follow up sampling investigation(16)** in 2000 was conducted to determine if semivolatile organic compounds (SVOCs) or lead were present in soils at the skeet range and fan area. No SVOCs were detected. Lead was detected, but at concentrations below the screening criteria. The Navy recommended and DTSC concurred with **closure of the former skeet range(17)**.

TABLE 1. PREVIOUS INVESTIGATIONS AND REMOVAL ACTIONS (CONTINUED)

Previous Investigation/ Removal Action	Date	Investigation / Removal Action Activities
CERCLA and RCRA Studies and Investigations (Continued)		
G-RAM and Naval Nuclear Propulsion Program (NNPP) Studies and Removal Action at Building 589	1996	A radiological decommissioning survey was completed at **Building 589**(18) as part of the G-RAM and NNPP studies (Figure 3). Areas inside of and tunnels beneath Building 589 exhibited elevated levels of radioactivity. The materials were removed from the building and tunnel surfaces. Regulatory agencies provided **closure letters**(19,20) that concurred with Navy's finding of NFA for radioactivity at the Building 589 site.
G-RAM Study and Removal Action at Building 593	1996	Building 593 was identified during the PA/SI as SWMU 2 and a portion of SWMU 108, but Building 593 was not fully evaluated during the PA/SI investigation because it was a radiological site. Instead, a radiological decommissioning survey was completed at **Building 593**(21) as part of the G-RAM study (Figure 3). Soil outside of Building 593 that exhibited elevated levels of radioactivity was removed. In addition, a portion of the concrete inside of the building was removed. Regulatory agencies provided a **closure letter**(20) that concurred with the Navy's finding of NFA for radioactivity at the Building 593 site.
NNPP Study at Building 643	1996	A radiological decommissioning survey was completed at **Building 643**(22) as part of the NNPP study (Figure 3). No elevated levels of radioactivity were identified within the building. Regulatory agencies provided a **closure letter**(19) that concurred with the Navy's finding of NFA for radioactivity at the Building 643 site.
Group II/III Accelerated Study	1998	An accelerated study was conducted for Group II and III sites at Mare Island. The storm sewer system (SWMU 93) and sanitary sewer system (SWMU 106) were excluded as sites, in their entirety, unless catch basins were identified as concerns within the boundary of a site. Based on the conceptual model presented in the Group II/III accelerated study, potential contamination, if any, in the sanitary sewer system would collect at the sanitary sewer domestic pump stations (that is, "DOM sites"). The Navy sampled the two closest DOMs (DOM1 and DOM2) to the FNBW Area in 1998; sample results did not exceed screening criteria. The Navy received NFA concurrence for **DOM1 and DOM2**(23) from DTSC and EPA in May 2000. In addition, no concerns were identified for the storm sewer system during the RI of the FNBW Area.
Onshore Basewide Ecological Risk Assessment (ERA)	2002	An ERA was completed for onshore areas at Mare Island. The onshore ERA at the FNBW Area consisted of a scoping assessment, which was conducted to determine whether (1) significant wildlife inhabit or use the site, and (2) actual or potential complete exposure pathways exist. The ERA evaluated analytical data for soil and sediment collected during the RI within the upland and tidal wetland at the FNBW Area.
Additional Sampling Investigation for TPH and Metals	2003	Step-out sampling was conducted at 17 locations in the FNBW Area where TPH and metals concentrations exceeded screening levels. The results of the analysis indicated the continued presence of TPH in surface soil above the screening levels. Metals were reported below screening criteria. Because asphalt pavement was encountered at most of the sampling locations at the site, TPH fingerprinting was used to determine if TPH may be a result of the asphalt oils intermixed with the soil. Comparison findings suggest that asphalt oils may have intermixed with the soil. TPH cleanup was transferred to a separate Petroleum Corrective Action Program.

TABLE 1. PREVIOUS INVESTIGATIONS AND REMOVAL ACTIONS (CONTINUED)

Previous Investigation/ Removal Action	Date	Investigation / Removal Action Activities
CERCLA and RCRA Studies and Investigations (Continued)		
Supplemental ERA	2008	A supplemental ERA for onshore areas at the FNBW Area was developed to address regulatory agency comments on the onshore ERA. Agencies specifically asked that additional receptors be added to the upland and wetland habitat evaluations. The Navy agreed to add three species to the receptor list for the upland habitat and to add six species to the receptor list for the wetland habitat. Additionally, the existing dose models were revised by using additional sources for toxicity reference values (TRV) for chemicals that did not previously have an assigned value.
Remedial Investigation	1998-2000 (revised final in 2008)	Site conditions were assessed through literature searches; interviews with former employees; aerial photograph review; installation of soil and sediment borings; and collection of groundwater from borings. The following **samples(24)** were collected within the **FNBW Area(25)**: 79 surface soil, 86 subsurface soil, and 17 shallow grab groundwater samples in the upland area; 40 sediment samples and one shallow grab groundwater sample from the wetland area; and one sump residue sample. Samples were analyzed for one or a combination of the following chemicals: metals, volatile organic compounds (VOC), SVOCs, pesticides, PCBs, and TPH compounds. Based on the RI results, the FNBW Area was not recommended for further evaluation in a feasibility study (FS). Regulatory agencies **concurred with Navy findings(26)**. Locations with elevated concentrations of TPH and PCBs were transferred to separate programs for cleanup and abatement.
PP/Draft RAP	2009	The **PP/Draft RAP(1)** invited the public to review and comment on the finding of NFA for IA A2 before the final remedy is selected. Regulatory agencies concurred with the NFA finding.
Various Compliance Program Studies, Investigations, and Removal Actions		
PCB Base Wide Confirmation Sampling	1998	PCB sampling and abatement activities were conducted under a basewide PCB compliance program to address PCBs regulated by TSCA. Generally, sites throughout Mare Island that contained or previously contained transformers, electrical substations, electrical shops, or machinery were selected as potential PCB sites for the study. PCB assessment locations were identified, screening samples were collected, and abatement activities were conducted by the Navy. Studies within IA A2 included sampling at Buildings 589, 591, 593, 641, 643, 797, and 825, along railroad tracks, and on the Fleet Reserve Piers.
PCB Base-wide Data Gap Study	2004	A PCB base-wide **data gap assessment(27)** was performed to identify the specific actions that must be conducted at each PCB site to comply with the self-implementing regulations for cleanup of PCB remediation waste under TSCA. The assessments evaluated past PCB investigation and cleanup that were conducted and provided a **summary(28)** for each site. The following information was evaluated for each site: delineation of areas of contamination, identification of areas where PCB concentrations exceed the screening criterion, and adequacy of characterization and abatement verification sampling. **Summary tables(29)** recommended NFA at three sites and further action at ten sites at IA A2.

TABLE 1. PREVIOUS INVESTIGATIONS AND REMOVAL ACTIONS (CONTINUED)

Previous Investigation/ Removal Action	Date	Investigation / Removal Action Activities
Various Compliance Program Studies, Investigations, and Removal Actions (Continued)		
PCB Base-wide Sampling, Abatement, and Closure Plan Implementation for 10 of 13 PCB Sites within IA A2	2009	After the data gap study, 10 sites within IA A2 required additional verification sampling or abatement (or both) before site closure documentation could be prepared. A PCB base-wide sampling, abatement, and **closure plan**(30) was prepared to address closure of the 10 remaining sites. Of the 10 sites within IA A2, one site requires only verification sampling before closure. The other nine sites within IA A2 require **abatement**(31) and verification sampling before closure.
Closure Requested for 3 of 13 PCB Sites within IA A2	2009 and 2010	The data gap study identified three **PCB sites**(32) within IA A2 ready for closure (Figure 3). **NFA closure reports**(33) were prepared for Buildings 589, 591, and 641, and submitted to EPA for concurrence. EPA provided **PCB closure letters**(34) that concurred with Navy's finding of NFA for PCBs at Buildings 589, 591, and 641.
Abatement and Closure of 10 Remaining PCB Sites	2010	PCB abatement at the 10 remaining sites within IA A2 (Figure 3) identified in the closure plan (593, 643, 797/GRA51, 799, 825/GRA61, GRA53, GRA55, GRA63, GRA65, Pier 55) was completed in 2010. **Closure reports**(35) were prepared for all 10 sites and submitted to EPA for concurrence. EPA provided **PCB closure letters**(36) that concurred with Navy's finding of NFA for PCBs at all 10 sites. A TSCA cleanup goal of 1 milligram per kilogram (mg/kg) was used as the basis for NFA.
TPH Corrective Actions	2009	A Petroleum Corrective Action Plan (PCAP) was prepared to address soils at 17 locations (Figure 3) containing TPH at concentrations exceeding the screening criterion of 1,000 mg/kg. **Implementation of the PCAP**(37) consisted of excavation of 3,378 cubic yards of TPH-impacted soil from depths of up to 3 feet bgs. The impacted soils were sent off-site for disposal, **confirmation sampling was performed**(38), and the excavations were backfilled with imported borrow fill. The Water Board provided a **closure letter**(39) that concurred with Navy's finding of NFA for TPH at IA A2.

2.4 CURRENT AND POTENTIAL FUTURE LAND AND RESOURCE USES

IA A2 is not currently used. The uplands area is partially paved and includes three remaining buildings. The appurtenant Fleet Reserve Pier has three remaining buildings. A tidal wetland open space area borders the upland area next to Mare Island Strait. The **reuses**(40) identified in the 2008 Amended Mare Island Specific Plan and on the City of Vallejo's 1994 Mare Island Final **Reuse Plan map**(41) were evaluated by the following exposure scenarios: Mixed-Use Office/Research and Development (light industrial, commercial, office, and warehouse uses) and Wetlands/Open Space (public access trail).

Historical use of groundwater at Mare Island has been limited by poor water quality and wells that seasonally ran dry. Currently, groundwater is not used for any purpose at Mare Island; however, the Navy did consider the potential for future municipal and freshwater replenishment uses of groundwater during scoping for the risk assessment. The Navy evaluated site hydrogeology and natural water chemistry in the RI and determined that groundwater is not suitable as a potential source of **drinking water**(42) for risk assessment purposes. Freshwater replenishment was identified as a potential use of groundwater in maintaining the quantity of water in non-tidal wetland areas.

2.5 SUMMARY OF SITE RISKS

The source of chemicals potentially released at IA A2 and the FNBW Area (PAHs, TPH, and metals) is mostly attributed to industrial activities by the Navy, except for PAHs and several metals such as aluminum, arsenic, cadmium, and manganese that are found at levels consistent with ambient concentrations in fill material at Mare Island. A conceptual site model (CSM) showing historical activities at the FNBW Area is provided in Figure 4. As shown in the figure, most of the site contamination is believed to be from small oil spills and leaks and from grinding and welding associated with ship assembly. The primary fate and transport mechanisms include root uptake, wind suspension, volatilization, migration of contaminants via sheet flow, and infiltration into subsurface soil and groundwater. A general CSM showing current site conditions at the FNBW Area is provided in Figure 5. Potential future risks to human health and the environment were evaluated in the Final Revision 1 RI Report. Results of the human health risk assessment (HHRA) are presented in Section 2.5.1.

Upland and wetland habitats are available for terrestrial wildlife in IA A2 and the FNBW Area. Therefore, a supplemental ecological risk assessment (ERA) was prepared in 2008 to evaluate exposure of ecological receptors to chemicals in soil and sediment in the upland and wetland habitats. Results of the supplemental ERA for the FNBW Area are presented in Section 2.5.2.

Historically, the IA A2 site boundary had encompassed portions of adjacent tidal mudflats and deepwater areas of Mare Island Strait. However, the Navy and regulatory agencies revised the site boundary of the offshore IA K to include all tidal mudflats and deepwater areas of Mare Island Strait. Therefore, IA A2 no longer includes those offshore areas. A separate offshore ERA was prepared for IA K to evaluate potential risk from exposure to sediment in tidal mudflats and deep water in Mare Island Strait.

As described in further detail below, the results of the HHRA and ERA demonstrate that no unacceptable risk from CERCLA contaminants, pollutants, or hazardous substances remains at the site, and therefore no remedial action is necessary to protect human health and the environment.

2.5.1 Summary of Human Health Risk Assessment

Based on the **human health CSM(43)**, a quantitative **HHRA(44)** was completed for potential exposure to soil and groundwater at the FNBW Area. Potential uptake routes considered for the FNBW Area included inhalation, ingestion, and direct dermal contact with surface (0 to 3 feet bgs) and subsurface (0 to 10 feet bgs) soils. Groundwater was determined to be non-potable; therefore, ingestion of and other direct exposures to groundwater were not considered as complete exposure pathways. However, groundwater was evaluated as a potential source of volatile chemicals that could migrate from the subsurface into indoor air.

Potential receptors were evaluated based on the planned future use of the FNBW Area, which includes commercial/industrial workers and construction workers. Although residential development is not anticipated at the site, residential (adult and child) exposure scenarios were

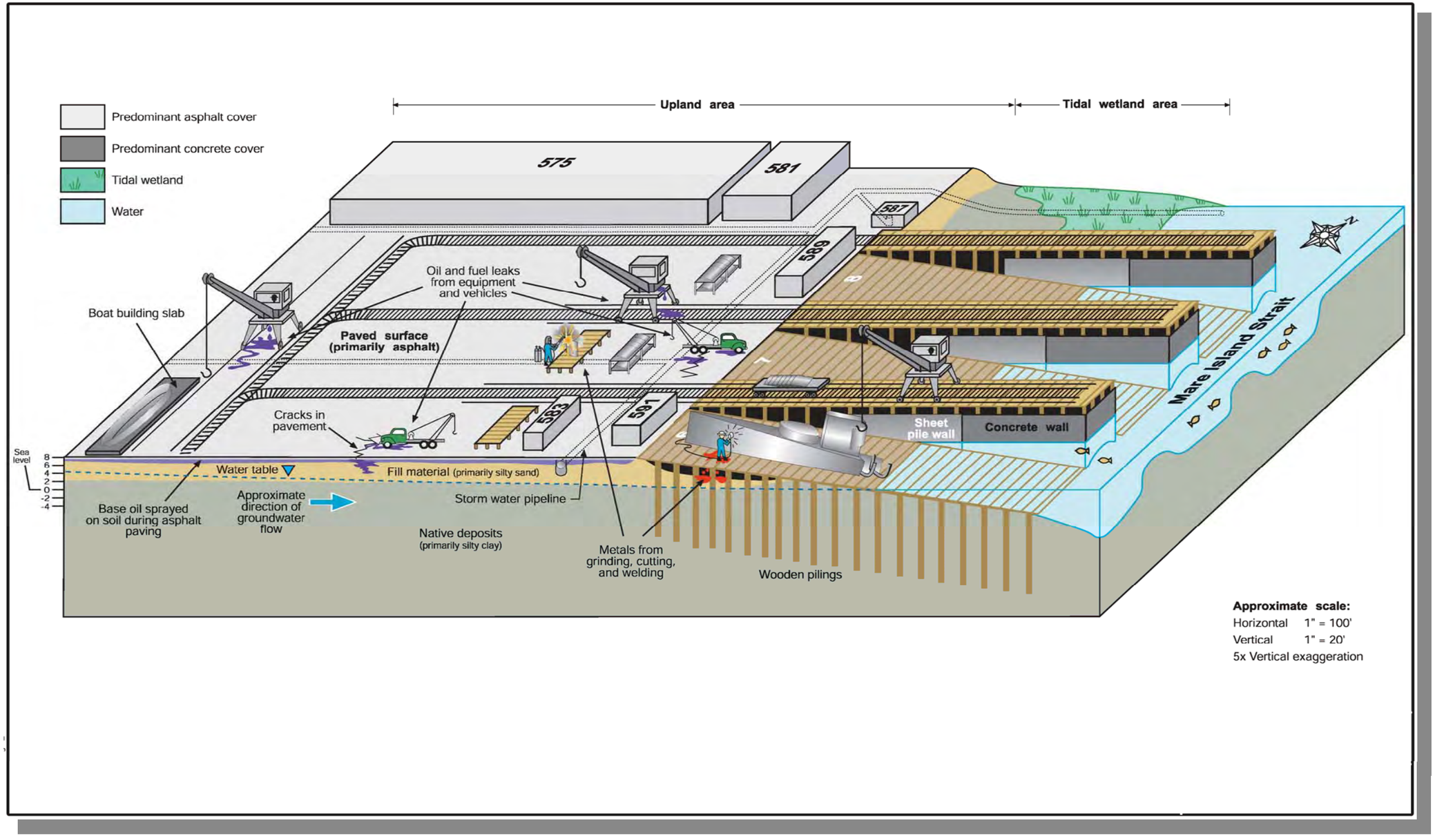

Figure 4. Conceptual Site Model Circa 1944

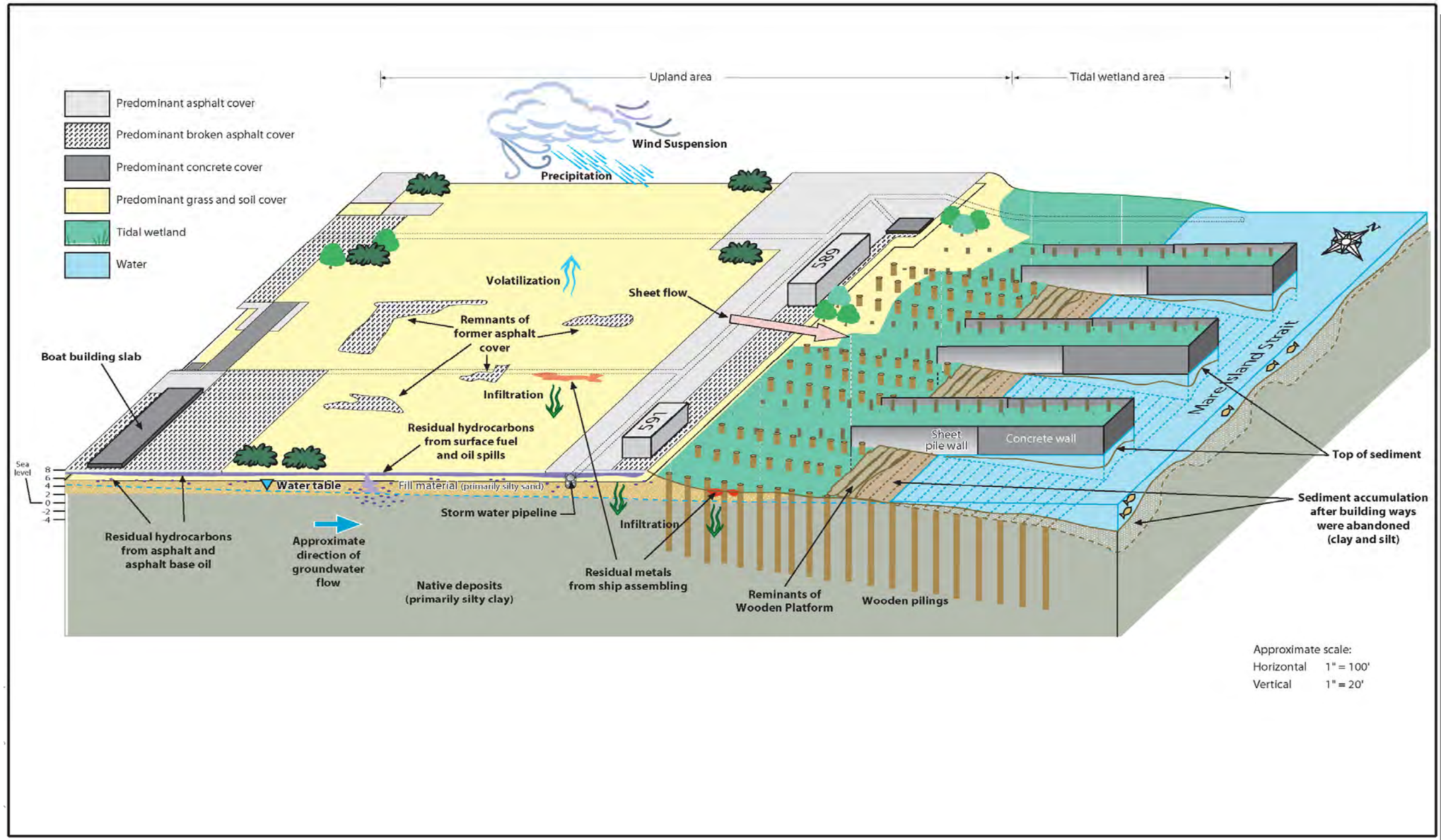

Figure 5. Current Conceptual Site Model

included in the HHRA to evaluate potential future land use options outside of those proposed for the site. Recreational use of the site could occur, but recreational exposure was not evaluated quantitatively in the HHRA because residential exposure is more conservative than recreational exposure. The following different sets of risk estimates were evaluated for each receptor: **site, total, ambient, and incremental risks(45)**.

Potential **cancer risks and noncancer hazards(46)** were calculated based on reasonable maximum exposure (RME) assumptions recommended by EPA and DTSC rather than an average or medium-range exposure assumption. RME assumptions provide a conservative and protective approach that estimates the highest health risks that are reasonably expected to occur at a site. Actual risks from exposures to **COPCs(47)** in soil and groundwater at the FNBW Area are likely to be lower.

At Mare Island, risk management decisions for exposure levels for known or suspected carcinogens are generally based on concentration levels that represent an excess upper bound lifetime cancer risk to an individual between 10^{-4} (a 1 in 10,000 chance of developing cancer) and 10^{-6} (a 1 in 1,000,000 chance of developing cancer) using information on the relationship between dose and response. The 10^{-6} risk level or a noncancer HI greater than 1 is used as the point of departure for establishing cleanup goals when remedial action is warranted.

To help characterize risk, the Navy adopted a conservative approach and evaluated the need for action for cancer risks greater than 10^{-6} or a noncancer HI greater than 1. Based on the **HHRA results(48)** chemical cancer risks for the future resident and commercial/industrial worker were equal to or within the risk management range of 10^{-6} and 10^{-4} that EPA generally considers acceptable (see Table 2). The cancer risk for the future construction worker was below the risk management range for carcinogens (see Table 2). The noncancer hazards for both the future commercial/industrial worker and the construction worker were below the noncancer threshold of 1. The summed noncancer HIs for the future resident were equal to or greater than the threshold of 1 for noncarcinogens. However, the summed HIs segregated by target organ effects did not exceed the noncancer threshold of 1.

TABLE 2. CANCER RISKS AND NONCANCER HAZARDS

	Unchanged Site Configuration (0 to 3 feet bgs interval)		Modified Site Configuration (0 to 10 feet bgs interval)	
Exposure Scenario	Cancer Risk	Hazard Index	Cancer Risk	Hazard Index
Resident	1×10^{-5}	1	1×10^{-5}	2
Commercial/Industrial Worker	4×10^{-6}	0.4	3×10^{-6}	0.4
Construction Worker	--	--	5×10^{-7}	0.4

Notes: Cancer risks and noncancer hazards shown are incremental risk estimates based on a reasonable maximum exposure scenario.

-- Construction worker exposure to surface soil (0 to 3 feet bgs) is included in the evaluation of subsurface soil (0 to 10 feet bgs) exposure pathways.

bgs Below ground surface

Although the HHRA indicated that carcinogenic risk estimates are greater than the conservative minimum threshold that is used as a point of departure for establishing cleanup goals during the RI, the estimates are within the risk management range that EPA generally considers acceptable. The results of the HHRA indicated PAHs as the main contributor to site risk; however, the detected concentrations of PAHs were determined to be consistent with ambient conditions typical of fill material at Mare Island. Complete details of the HHRA are presented in the Final Revision 1 RI Report for IA A2 and the FNBW Area.

The HHRA specifies the **assumptions and uncertainties**(49) inherent in the risk assessment process based on the number of samples collected, their location, the literature-based exposure and toxicity values used to calculate risk, and risk characterization across multiple media and exposure pathways. The effects of uncertainties are overestimation or underestimation of the actual cancer risk or HI. In general, the risk assessment process is based on the use of conservative (health-protective) assumptions that, when combined, are intended to overestimate the actual risk.

Buildings that previously contained residual radiological activity were not evaluated in the HHRA because the Navy completed decommissioning surveys and remediation before the HHRA and RI report were prepared. Remediation reduced radiological activity to levels below regulatory risk thresholds; therefore, the Navy recommended and the regulatory agencies concurred in **closure letters**(19,20) that NFA was required after radiological studies and cleanup at Buildings 589, 593, and 643.

Buildings that contained residual PCBs were not evaluated in the HHRA; however, the Navy implemented abatement activities for residual PCB contamination under the Navy's PCB Compliance Program. Under the program, the Navy has recommend and EPA has concurred in **PCB closure letters**(34,36) with NFA after studies and abatement at 13 buildings or sites at IA A2 (589, 591, 593, 641, 643, 797/GRA51, 799, 825/GRA61, GRA53, GRA55, GRA63, GRA65, and Pier 55). Abatement reduced residual PCB concentrations to below the TSCA cleanup level of 1 milligram per kilogram (mg/kg).

Potential human health effects from exposure to TPH mixtures detected in soil and groundwater were evaluated in the HHRA by considering the benzene, toluene, ethylbenzene, and total xylenes (BTEX) and PAH components to represent the toxic components of those mixtures. The BTEX and PAH components, rather than the TPH mixtures, were retained as COPCs for evaluation in the HHRA. As discussed above, PAH compounds were identified as the main contributor to risk in the HHRA; however, the detected concentrations were consistent with ambient conditions.

Under the Navy's Petroleum Corrective Action Program, the concentrations of TPH mixtures were compared to Mare Island Tier 2 **residential screening levels**(50) (SL). As a result of this comparison, the Navy identified the need for a corrective action to address elevated levels of TPH motor oil in soil and excavated 17 areas of petroleum-contaminated soil in April 2009 from the FNBW Area. TPH-motor oil was reported at concentrations below the Tier 2 residential SL in all confirmation soil samples; therefore, the Navy recommended NFA for TPH in the FNBW Area and the Water Board concurred in a **closure letter**(39).

Based on the results of the HHRA and the comparison of PAH and metals concentrations to ambient conditions, no unacceptable health risks are associated with the FNBW Area, and no action is warranted to protect human health. In addition, the regulatory agencies have already concurred with NFA based on actions previously taken under the other Navy programs discussed above.

2.5.2 Summary of Ecological Risk Assessment

In 2002, an **onshore ERA(51)** was conducted for the FNBW Area as part of a base-wide ERA that evaluated the potential effects of site contaminants on three ecological receptors: the salt marsh harvest mouse (federal- and state-listed as endangered), gray fox, and northern harrier. Based on regulatory agency comments on the Final Revision 1 RI report, a **supplemental ERA(52)** was conducted in 2008 to update the 2002 onshore ERA for the FNBW Area, including expanding the number of potential ecological receptors and updating toxicity reference value (TRVs) and other species-specific values.

The Navy's **supplemental ERA approach(53)** involved a three-step process. The primary objective of Step 1 was to identify complete exposure pathways between chemicals and selected ecological receptors at the site. In Step 2, risks were characterized using screening ecotoxicity estimates and conservative exposure assumptions when complete pathways were identified for the chemicals. Based on the **results of Steps 1 and 2(54)**, which identified metals, pesticides, and PCBs as ecological concerns, a **risk refinement step(55)** (Step 3a, the first step of a baseline ERA [BERA]) was conducted. While the **dose calculations(56)** for Step 2 were conducted using the maximum detected chemical concentration, the doses were calculated in the Step 3a risk refinement using a 95 percent upper confidence limit (UCL) concentration (95UCL) where available. As a result of the refined assessment of **risk to birds(57)**, no COPECs were found to pose unacceptable risks to wetland or upland birds. Likewise, no COPECs were found to pose unacceptable risks to wetland or upland mammals as a result of the refined assessment of **risk to mammals(58)**. Thus, **no further BERA evaluation or action(59)** was recommended to address ecological concerns in the onshore (tidal wetland and upland) areas of the FNBW Area. In addition, a discussion of potential **fate and transport of chemicals(60)** from uplands to tidal wetlands was included in the RI report for TPH, PAHs, and PCBs. Based on the evaluation, it was concluded that TPH, PAHs, and PCBs detected in upland areas had little potential to affect the adjacent wetland areas.

Areas off shore of IA A2 include tidal mudflat and deepwater habitats, which were previously evaluated for IA A2 under an **offshore ERA(61)** in 2002. However, since that time, the Navy and regulatory agencies revised the site boundary for Mare Island to include these offshore areas under the investigations for IA K. Thus, those offshore areas are no longer part of IA A2 and are not addressed as part of this ROD/RAP.

2.6 COMMUNITY PARTICIPATION

Community participation at Mare Island includes a Restoration Advisory Board (RAB), public meetings, a public information repository, newsletters, fact sheets, public notices, and an IR Program website. The **Community Relations Plan**(62) for Mare Island provides detailed information on community participation for the IR Program and documents interests, issues, and concerns raised by the community regarding the ongoing investigation and cleanup at Mare Island.

In the late 1980s, the Navy formed a technical review committee (TRC) consisting of the Navy, community members, and regulatory agency representatives. The TRC met to discuss environmental issues pertaining to Mare Island. In 1994, pursuant to the Defense Environmental Restoration Program, Title 10 *United States Code* § 2705(d), the Navy formed the RAB, which replaced the TRC. The RAB consists of members of the Navy, the community, and the regulatory agencies. RAB meetings are held on the last Thursday of every month and are open to the public to provide opportunity for public comment and input. Documents and relevant information relied on in the remedy selection process have been made available for public review in the public information repository listed below or in the administrative record.

John F. Kennedy Library
505 Santa Clara Avenue
Vallejo, California 94590
(866) 572-7587

Library Hours:

Monday, Wednesday:	10:00 a.m. – 9:00 p.m.
Tuesday, Thursday:	10:00 a.m. – 6:00 p.m.
Friday, Saturday:	10:00 a.m. – 5:00 p.m.
Sunday:	1:00 p.m. – 5:00 p.m.

For access to the Administrative Record, contact:

Commanding Officer
Naval Facilities Engineering Command, Southwest
Attn: Ms. Diane Silva, Command Records Manager, Code EV33
1220 Pacific Highway (NBSD Building 3519)
San Diego, California 92132
Phone: (619) 556-1280
E-mail: diane.silva@navy.mil

For additional information on the IR Program, contact:

Mr. Anthony Megliola
BRAC Program Management Office West
Base Closure Manager
1455 Frazee Road, Suite 900
San Diego, California 92108-4310
Phone: (619) 532-0765
E-mail: anthony.megliola@navy.mil

In accordance with CERCLA §§ 113 and 117 and the NCP § 300.430(f)(3), the Navy provided a public comment period for the proposed NFA remedy for IA A2 and the FNBW Area described in the **PP/Draft RAP(1)** from September 22, 2009, to October 21, 2009. The PP/Draft RAP was mailed to the Mare Island community mailing list on September 18, 2009, prior to the start of the public comment period. Public notice of the meeting and availability of documents was placed in the *Vallejo Times-Herald* on September 20, 2009, on the **IR Program website(63)**, and noted in the PP/Draft RAP. A public meeting to present the PP/Draft RAP was held on September 23, 2009. A transcript of the public meeting is included as Attachment C to this ROD/RAP.

3.0 RESPONSIVENESS SUMMARY

The responsiveness summary is the third component of a ROD/RAP; its purpose is to summarize information about the views of the public and support agencies on both the NFA and general concerns about the site submitted during the public comment period. It documents how public comments were integrated into the decision-making process. The participants in the public meeting held on September 23, 2009, included community members, RAB members, and representatives of the Navy and DTSC. Questions and concerns received during the meeting were addressed at the meeting and are documented in the meeting transcript, which is available in the Administrative Record. Responses to comments provided at the meeting and received during the public comment period are included in the responsiveness summary (Attachment D).

ACRONYMS AND ABBREVIATIONS

§	Section
BERA	Baseline ecological risk assessment
bgs	Below ground surface
BRAC	Base realignment and closure
BTEX	Benzene, toluene, ethylbenzene, xylene
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COPC	Chemical of potential concern
COPEC	Chemical of potential ecological concern
CSM	Conceptual site model
DOM	Domestic pump station
DTSC	Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
ERA	Ecological risk assessment
FFSRA	Federal Facility Site Remediation Agreement
FNBW	Former North Building Ways
FS	Feasibility study
GRA	Grounded Rocker Arm
G-RAM	General Radioactive Material
HHRA	Human health risk assessment
HI	Hazard index
IA	Investigation area
IR	Installation Restoration
mg/kg	Milligram per kilogram
Mare Island	Mare Island Naval Shipyard
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NFA	No further action
NNPP	Naval Nuclear Propulsion Program
PA	Preliminary assessment
PAH	Polycyclic aromatic hydrocarbon
PCAP	Petroleum corrective action plan
PCB	Polychlorinated biphenyl
PP	Proposed plan

RAB	Restoration Advisory Board
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
RI	Remedial investigation
RME	Reasonable maximum exposure
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act
SI	Site investigation
SL	Screening level
SVOC	Semivolatile organic compound
SWMU	Solid waste management unit
TPH	Total petroleum hydrocarbon
TRC	Technical review committee
TRV	Toxicity reference value
TSCA	Toxic Substances Control Act
UCL	Upper confidence limit
VOC	Volatile organic compound
Water Board	San Francisco Bay Regional Water Quality Control Board

ATTACHMENT A
ADMINISTRATIVE RECORD INDEX

MARE ISLAND
ABBREVIATED ENVIRONMENTAL RESTORATION RECORD INDEX

UIC No.	Rec. No.	Record Date	Subject	Sites
N00221	000715	10/20/1992	FINAL REPORT SITE INVESTIGATION (SI) OF ADMIN RECORD BUILDING 593	
N00221	000717	10/21/1992	SUBMISSION OF FINAL REPORT SITE INVESTIGATION (SI) OF BUILDING 593	
N00221	002081	4/20/1995	DRAFT TECHNICAL MEMORANDUM (TM), EXAMINATION OF GROUNDWATER FOR MUNICIPAL AND DOMESTIC SUPPLY	
N00221	001025	5/19/1995	SUBMISSION OF PRELIMINARY ASSESSMENT/SITE INSPECTION (PA/SI) FINAL SUMMARY REPORT FOR NON-RADIOLOGICAL SITES	
N00221	001026	5/19/1995	PRELIMINARY ASSESSMENT/SITE INSPECTION (PA/SI) FINAL SUMMARY REPORT NON-RADIOLOGICAL SITES	
N00221	002021	12/11/1995	ADMINISTRATIVE RECORD FOR THE RADIOLOGICAL DECOMMISSIONING, VOLUME 3 - QUALITY ASSURANCE (QA)	
N00221	002022	12/11/1995	ADMINISTRATIVE RECORD FOR THE RADIOLOGICAL DECOMMISSIONING, VOLUME 5 - BASE CLEAN-UP TEAM CORRESPONDENCE	
N00221	001099	12/14/1995	SUBMISSION OF TECHNICAL ADMIN RECORD MEMORANDUM (TM), ESTIMATION OF AMBIENT METAL CONCENTRATION IN SOILS	
N00221	002000	12/14/1995	TECHNICAL MEMORANDUM (TM), ESTIMATION OF AMBIENT METAL CONCENTRATION IN SOILS (SEE AR #56 - UPDATE TO TECH MEMO)	
N00221	002007	2/16/1996	QUALITY ASSURANCE PROJECT PLAN ADMIN RECORD (QAPP) FOR THE GENERAL RADIOACTIVE MATERIAL (G-RAM) RADIOLOGICAL SURVEY PLAN	
N00221	002020	2/28/1996	RADIOLOGICAL SURVEY PLAN FOR THE RADIOLOGICAL DECOMMISSIONING, VOLUME I, BOOK 1 - SURVEY METHODOLOGY AND SPECIFICATIONS	
N00221	001532	3/18/1996	LETTER REGARDING THE “NAVAL NUCLEAR PROPULSION PROGRAM (NNPP) RADIOLOGICAL SURVEY PLAN FOR DECOMMISSIONING MARE ISLAND NAVAL SHIPYARD, VOLUME I, DATED 2/28/96 AND THE NAVAL NUCLEAR PROPULSION PROGRAM RADIOLOGICAL FINAL REPORT FOR DECOMMISSIONING MARE ISLAND NAVAL SHIPYARD, DATED 4/1/96.”	

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ABBREVIATED ENVIRONMENTAL RESTORATION RECORD INDEX

UIC No.	Rec. No.	Record Date	Subject	Sites
N00221	001533	3/19/1996	LETTER REGARDING THE "NAVAL NUCLEAR PROPULSION PROGRAM (NNPP) RADIOLOGICAL SURVEY PLAN FOR DECOMMISSIONING MARE ISLAND NAVAL SHIPYARD, VOLUME I, DATED 2/28/96 AND THE NAVAL NUCLEAR PROPULSION PROGRAM RADIOLOGICAL FINAL REPORT FOR DECOMMISSIONING MARE ISLAND NAVAL SHIPYARD, DATED 4/1/96."	
N00221	000069	4/1/1996	GENERAL RADIOACTIVE MATERIAL PROGRAM (G-RAM) FINAL RADIOLOGICAL SITE INSPECTION REPORT FOR THE DECOMMISSIONING OF MARE ISLAND NAVAL SHIPYARD, VOLUMES I-III (VOLUME II HAS 34 BOOKS AND VOLUME III HAS 2 BOOKS)	BLDG 0000589, BLDG 0000593
N00221	002016	4/1/1996	RADIOLOGICAL FINAL REPORT FOR THE RADIOLOGICAL DECOMMISSIONING, VOLUME II, BOOK 6 OF 8 - OTHER PERMANENT FACILITIES (BUILDING 273 - BUILDING A-228)	
N00221	003068	11/22/1996	TECHNICAL MEMORANDUM (TM): ESTIMATION OF AMBIENT METAL CONCENTRATIONS IN SHALLOW GROUNDWATER	
N00221	003078	12/5/1996	SSPORTS LTR DTD 05 DEC 1996, GENERAL RADIOACTIVE MATERIAL (G-RAM) RADIOLOGICAL FINAL RELEASE RPT, AND FINDING OF NO FURTHER ACTION REQUIRED FOR NEW DEFENSE MATERIAL	
N00221	003077	1/9/1997	SUBMISSION OF SSPORTS LTR DTD 05 DEC ADMIN RECORD 1996, GENERAL RADIOACTIVE MATERIAL (G-RAM) RADIOLOGICAL FINAL RELEASE RPT, AND FINDING OF NO FURTHER ACTION REQUIRED FOR NEW	
N00221	003191	6/9/1997	SUBMISSION OF THE DRAFT TECHNICAL MEMORANDUM (TM), ASSESSMENT OF BENEFICIAL USES OF GROUNDWATER - 09 JUNE 1997	
N00221	003192	6/9/1997	DRAFT TECHNICAL MEMORANDUM (TM), ASSESSMENT OF BENEFICIAL USES OF GROUNDWATER	
N00221	003247	10/23/1997	COMPLETION OF ALL MARE ISLAND NAVAL SHIPYARD GENERAL RADIOACTIVE MATERIAL (G-RAM) SURVEYS, LIST OF APPROVED NAVY DOCUMENTS	

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UIC No.	Rec. No.	Record Date	Subject	Sites
N00221	003260	12/29/1997	SUBMISSION OF THE FINAL BIOACCUMULATION AND FOOD-CHAIN ANALYSIS IN TERRESTRIAL AND AQUATIC HABITATS: THEIR ROLE IN THE ECOLOGICAL RISK ASSESSMENT (ERA) AT MARE IS	
N00221	003261	12/29/1997	FINAL BIOACCUMULATION AND FOOD-CHAIN ANALYSIS IN TERRESTRIAL AND AQUATIC HABITATS: THEIR ROLE IN THE ECOLOGICAL RISK ASSESSMENT (ERA) AT MARE ISLAND	
N00221	003341	7/27/1998	DRAFT TECHNICAL MEMORANDUM (TM) ESTIMATION OF AMBIENT CONCENTRATIONS OF POLYNUCLEAR AROMATIC HYDROCARBONS IN SOIL	
N00221	003342	7/27/1998	DRAFT TECHNICAL MEMORANDUM (TM) HUMAN HEALTH RISKS FROM EXPOSURE TO RESIDUAL PCB	
N00221	003370	12/30/1998	REQUEST FOR IDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR), INVESTIGATION AREA A2	
N00221	003409	3/30/1999	NAVY'S POSITION REGARDING NO FURTHER ACTION (NFA) AT THE FORMER NORTH BUILDINGS WAYS AREA	
N00221	003419	5/7/1999	DRAFT USE OF BIOACCUMULATION FACTOR TO IDENTIFY CHEMICALS OF ECOLOGICAL CONCERN FOR THE ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA)	
N00221	000314	5/4/2000	LETTER CONCURRING WITH NO FURTHER ACTION FOR SANITARY SEWER PUMP STATIONS (DOM)-1, -2, AND -17.	
N00221	000418	5/4/2000	LETTER CONCURRING WITH NO FURTHER ACTION FOR SANITARY SEWER PUMP STATIONS (DOM)-1, -2, AND -17.	
N00221	000087	8/23/2001	FINAL COMMUNITY RELATIONS PLAN {INCLUDES REPLACEMENT PAGES & TWO TRANSMITTAL LETTERS; FOR DOCUMENT AND FOR REPLACEMENT PAGES} (CONTAINS TRANSMITTAL LETTER FROM J. DUNAWAY WITH SOME SENSITIVE ADDRESSES)	

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UIC No.	Rec. No.	Record Date	Subject	Sites
N00221	000082	8/24/2001	TECHNICAL MEMORANDUM - RESULTS OF THE PRELIMINARY ASSESSMENT AND SITE INSPECTION AT THE FORMER SKEET RANGE AND RECOMMENDATION FOR CLOSURE	
N00221	000584	2/5/2002	NO FURTHER COMMENTS ON THE TECHNICAL MEMORANDUM - RESULTS OF THE PRELIMINARY ASSESSMENT AND SITE INSPECTION AT THE FORMER SKEET RANGE AND RECOMMENDATION FOR CLOSURE	
N00221	000194	2/22/2002	RESTORATION ADVISORY BOARD ORIENTATION PACKET [INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY & M. HAYES]	
N00221	000113	4/19/2002	FINAL COMPILATION OF TECHNICAL MEMORANDA ON AMBIENT ANALYSES OF METALS IN SOILS AND GROUNDWATER - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY [MAILING LIST IS SENSITIVE]	
N00221	000195	6/26/2002	DRAFT POINT PAPER - AMBIENT GROUNDWATER TECHNICAL MEMORANDUM	
N00221	003688	7/15/2002	FEDERAL FACILITY SITE REMEDIATION AGREEMENT (FFSRA) (CAL-EPA ID NO.CA7170024775)	
N00221	000144	7/23/2002	FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT, VOLUMES 1 - 3, REVISION 1; INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY CONTAINING SOME SENSITIVE ADDRESSES	
N00221	000143	8/2/2002	REVISED FINAL OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT, VOLUMES 1 & 2; INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY WHICH CONTAINS SOME SENSITIVE ADDRESSES	
N00221	000218	1/1/2003	DRAFT SITE CONTROL PLAN FOR NAVY RETAINED PROPERTY - INCLUDES TRANSMITTAL LETTER BY J. DUNAWAY WITH CONFIDENTIAL DISTRIBUTION LIST	
N00221	000671	10/28/2003	DRAFT TECHNICAL MEMORANDUM EVALUATION AND APPROACH FOR TOTAL PETROLEUM HYDROCARBONS (TPH) SCREENING CRITERIA FOR SOIL AND GROUNDWATER [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL}	

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UIC No.	Rec. No.	Record Date	Subject	Sites
N00221	000651	12/12/2003	DRAFT FORMER NORTH BUILDING WAYS ADDITIONAL SAMPLING SUMMARY REPORT, INVESTIGATION AREA - INCLUDES ELECTRONIC VERSION AND SWDIV TRANSMITTAL LETTER BY J. DUNAWAY WITH CONFIDENTIAL DISTRIBUTION LIST	
N00221	000749	3/8/2004	LETTER DOCUMENTING AGREEMENT REGARDING FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT	
N00221	003503	8/11/2004	DRAFT SUPPLEMENTAL ENVIRONMENTAL BASELINE SURVEY REMAINING NAVY OWNED UPLAND PROPERTY [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL; CD COPY ENCLOSED}	
N00221	001240	7/1/2008	DRAFT PETROLEUM CORRECTIVE ACTION PLAN FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA (CD COPY ENCLOSED)	
N00221	001239	7/30/2008	TRANSMITTAL OF DRAFT PETROLEUM CORRECTIVE ACTION PLAN FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA (W/ OUT ENCLOSURE) [PORTION OF MAILING LIST IS SENSITIVE]	
N00221	001242	9/12/2008	TRANSMITTAL OF THE FINAL REVISION 1, FORMER NORTH BUILDING WAYS AREA, REMEDIAL INVESTIGATION (PORTION OF THE MAILING LIST IS SENSITIVE) [W/OUT ENCLOSURE]	
N00221	001243	9/22/2008	FINAL REVISION 1, FORMER NORTH BUILDING WAYS AREA, REMEDIAL INVESTIGATION (INCLUDES ANALYTICAL DATA AND CD COPY)	
N00221	001257	10/6/2008	CONCURRENCE WITH THE FINAL REVISION 1, FORMER NORTH BUILDING WAYS AREA, REMEDIAL INVESTIGATION REPORT	
N00221	001418	9/1/2009	FINAL PROPOSED PLAN / DRAFT REMEDIAL ACTION PLAN FORMER NORTH BUILDING WAYS AREA (CD COPY ENCLOSED)	
N00221	000212	9/1/2009	FINAL POLYCHLORINATED BIPHENYL SITE REQUEST FOR CLOSURE, TOXIC SUBSTANCES CONTROL ACT SELF-IMPLEMENTING PROGRAM (CD COPY ENCLOSED)	BLDG 0000589

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UIC No.	Rec. No.	Record Date	Subject	Sites
N00221	000214	9/1/2009	FINAL POLYCHLORINATED BIPHENYL SITE REQUEST FOR CLOSURE, TOXIC SUBSTANCES CONTROL ACT SELF-IMPLEMENTING PROGRAM (CD COPY ENCLOSED)	BLDG 0000641
N00221	000216	9/1/2009	FINAL POLYCHLORINATED BIPHENYL SITE REQUEST FOR CLOSURE, TOXIC SUBSTANCES CONTROL ACT SELF-IMPLEMENTING PROGRAM (CD COPY ENCLOSED)	BLDG 0000591
N00221	000263	10/13/2009	FINAL PETROLEUM CORRECTIVE ACTION PLAN (PCAP) COMPLETION REPORT FORMER NORTH BUILDING WAYS (CD COPY ENCLOSED)	
N00221	001509	10/29/2009	LETTER REGARDING THE “NO FURTHER ACTION FOR TOTAL PETROLEUM HYDROCARBONS AT THE FORMER NORTH BUILDING WAYS AREA WITHIN INVESTIGATION AREA A2, FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA.”	
N00221	001380	11/5/2009	REVIEW AND COMMENTS ON THE PROPOSED, NO FURTHER ACTION PLAN AT INVESTIGATIVE AREA	
N00221	000279	2/4/2010	TRANSMITTAL OF THE DRAFT POLYCHLORINATED BIPHENYL SITE CLOSURE REPORT, TOXIC SUBSTANCES AND CONTROL ACT SELF IMPLEMENTING PROGRAM (LETTER RECEIVED IN THE COMPLIANCE RECORDS FILE W/OUT ENCLOSURE)	BLDG 0000593
N00221	000280	2/4/2010	TRANSMITTAL OF THE DRAFT POLYCHLORINATED BIPHENYL SITE CLOSURE REPORT, TOXIC SUBSTANCES AND CONTROL ACT SELF IMPLEMENTING PROGRAM (LETTER RECEIVED IN THE COMPLIANCE RECORDS FILE W/OUT ENCLOSURE)	GRA 000053
N00221	000281	2/4/2010	TRANSMITTAL OF THE DRAFT POLYCHLORINATED BIPHENYL SITE CLOSURE REPORT, TOXIC SUBSTANCES AND CONTROL ACT SELF IMPLEMENTING PROGRAM (LETTER RECEIVED IN THE COMPLIANCE RECORDS FILE W/OUT ENCLOSURE)	GRA 000063

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N00221	000282	2/4/2010	TRANSMITTAL OF THE DRAFT POLYCHLORINATED BIPHENYL SITE CLOSURE REPORT, TOXIC SUBSTANCES AND CONTROL ACT SELF IMPLEMENTING PROGRAM (LETTER RECEIVED IN THE COMPLIANCE RECORDS FILE W/OUT ENCLOSURE)	PIER 00055
N00221	000283	2/4/2010	TRANSMITTAL OF THE DRAFT POLYCHLORINATED BIPHENYL SITE CLOSURE REPORT, TOXIC SUBSTANCES AND CONTROL ACT SELF IMPLEMENTING PROGRAM (LETTER RECEIVED IN THE COMPLIANCE RECORDS FILE W/OUT ENCLOSURE)	BLDG 0000825, GRA 000061
N00221	000284	2/4/2010	TRANSMITTAL OF THE DRAFT POLYCHLORINATED BIPHENYL SITE CLOSURE REPORT, TOXIC SUBSTANCES AND CONTROL ACT SELF IMPLEMENTING PROGRAM (LETTER RECEIVED IN THE COMPLIANCE RECORDS FILE W/OUT ENCLOSURE)	BLDG 0000797, GRA 000051
N00221	000289	2/8/2010	REVIEW AND CONCURRENCE WITH THE REQUEST FOR NO FURTHER ACTION FOR THE FINAL POLYCHLORINATED BIPHENYL SITE REQUEST FOR CLOSURE, TOXIC SUBSTANCES AND CONTROL ACT SELF-IMPLEMENTING PROGRAM	BLDG 0000591
N00221	000292	3/17/2010	TRANSMITTAL OF THE FINAL POLYCHLORINATED BIPHENYL (PCB) SITE CLOSURE REPORT, TOXIC SUBSTANCES AND CONTROL ACT SELF-IMPLEMENTING PROGRAM (LETTER RECEIVED IN THE COMPLIANCE RECORDS FILE W/OUT ENCLOSURE)	PIER 00055
N00221	000293	3/25/2010	TRANSMITTAL OF THE FINAL POLYCHLORINATED BIPHENYL (PCB) SITE CLOSURE REPORT, TOXIC SUBSTANCES AND CONTROL ACT SELF-IMPLEMENTING PROGRAM (LETTER RECEIVED IN THE COMPLIANCE RECORDS FILE W/OUT ENCLOSURE)	GRA 000053
N00221	000294	3/25/2010	TRANSMITTAL OF THE FINAL POLYCHLORINATED BIPHENYL (PCB) SITE CLOSURE REPORT, TOXIC SUBSTANCES AND CONTROL ACT SELF-IMPLEMENTING PROGRAM (LETTER RECEIVED IN THE COMPLIANCE RECORDS FILE W/OUT ENCLOSURE)	GRA 000063

MARE ISLAND
ABBREVIATED ENVIRONMENTAL RESTORATION RECORD INDEX

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N00221	000295	3/25/2010	TRANSMITTAL OF THE FINAL POLYCHLORINATED BIPHENYL (PCB) SITE CLOSURE REPORT, TOXIC SUBSTANCES AND CONTROL ACT SELF-IMPLEMENTING PROGRAM (LETTER RECEIVED IN THE COMPLIANCE RECORDS FILE W/OUT ENCLOSURE)	BLDG 0000593
N00221	000296	3/25/2010	TRANSMITTAL OF THE FINAL POLYCHLORINATED BIPHENYL (PCB) SITE CLOSURE REPORT, TOXIC SUBSTANCES AND CONTROL ACT SELF-IMPLEMENTING PROGRAM (LETTER RECEIVED IN THE COMPLIANCE RECORDS FILE W/OUT ENCLOSURE)	BLDG 0000825
N00221	000300	8/17/2010	REVIEW OF 15 JULY 2010 LETTER REQUESTING TSCA CLOSURE OF POLYCHLORINATED BIPHENYL (PCB) TRANSFORMER (15 JULY 2010 REQUEST LETTER AND EPA LETTER DATED 7 JUNE 2010 GRANTING TSCA CLOSURE OF BLDG. 593 NOT SUBMITTED TO ENVIRONMENTAL RECORD FILE)	BLDG 0000593, PCB T-1204
N00221	000301	8/17/2010	REVIEW OF FINAL CLOSURE REPORT FOR POLYCHLORINATED BIPHENYL (PCB) SITE - AGENCY CONCURS SITE CLOSURE REQUIREMENTS HAVE BEEN MET (CLOSURE REPORT DATED 23 JUNE 2010 NOT SUBMITTED TO ENVIRONMENTAL RECORD FILE)	BLDG 0000799
N00221	000302	8/17/2010	REVIEW OF FINAL CLOSURE REPORT FOR GROUNDED ROCKER ARM (GRA) 55 POLYCHLORINATED BIPHENYL (PCB) SITE - AGENCY CONCURS CLOSURE REQUIREMENTS HAVE BEEN MET (CLOSURE REPORT DATED 23 JUNE 2010 NOT SUBMITTED TO ENVIRONMENTAL RECORD FILE)	GRA 000055

NOTE: THE COMPLETE MARE ISLAND ENVIRONMENTAL RESTORATION RECORD INDEX IS PROVIDED ON THE ATTACHED CD-ROM

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N00221 / 000384 NONE REPORT NONE 0	**02-01-1976** 11-29-1999 5090.3.A. NONE	M&E	ENVIRONMENTAL ENGINEERING SURVEY	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0007
N00221 / 000523 NONE REPORT NONE 0	**06-08-1979** 11-29-1999 5090.3.A. NONE	KALDVEER	GEOTECHNICAL INVESTIGATION FOR LEVEE IMPROVEMENTS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000201 NONE REPORT NONE 0	**03-01-1983** 11-29-1999 5090.3.A. NONE	NEESA	INITIAL ASSESSMENT STUDY (NEESA 13-012) (IAS)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0003
N00221 / 000389 NONE REPORT NONE 0	**09-29-1983** 11-29-1999 5090.3.A. NONE	KLEINFELDER	GEOTECHNICAL INVESTIGATION REPORT - LANDFILL AREA	ADMIN RECORD	IA H SITE 00001	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000140 NONE CORRESPONDENCE NONE 0	**07-26-1984** 11-29-1999 5090.3.A. NONE	CRWQCB	NOTICE OF RECEIPT OF INITIAL ASSESSMENT STUDY (IAS)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000282 NONE CORRESPONDENCE NONE 0	**07-26-1984** 11-29-1999 5090.3.A. NONE	CRWQCB	NOTIFICATION OF RECEIPT OF INITIAL ASSESSMENT STUDY (IAS)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004

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N00221 / 000141 NONE CORRESPONDENCE NONE 0	**08-27-1984** 11-29-1999 5090.3.A. NONE	CRWQCB	COMMENTS ON MARCH 1983 INITIAL ASSESSMENT STUDY (IAS)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000283 NONE CORRESPONDENCE NONE 0	**08-27-1984** 11-29-1999 5090.3.A. NONE	CRWQCB	COMMENTS ON INITIAL ASSESSMENT STUDY (IAS)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000132 NONE CORRESPONDENCE NONE 0	**09-12-1984** 11-29-1999 5090.3.A. NONE	CRWQCB	NEW SUBCHAPTER 15 REGULATIONS AND CONFIRMATION OF DISCUSSION/CONCLUSIONS FROM 06 SEPTEMBER 1984 MEETING	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000200 NONE REPORT NONE 0	**11-01-1984** 11-29-1999 5090.3.A. NONE	RICHESIN	VERIFICATION STUDY - WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0003
N00221 / 000203 NONE CORRESPONDENCE NONE 0	**12-07-1984** 11-29-1999 5090.3.A. NONE	CRWQCB	CONFIRMATION OF WELL PLACEMENT AND SCHEDULE FOR GROUNDWATER MONITORING PROGRAM ISD NO. CAD 717002475	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0003
N00221 / 000152 NONE CORRESPONDENCE NONE 0	**02-12-1985** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF VERIFICATION WORK PLAN (WP)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000284 NONE CORRESPONDENCE NONE 0	**02-12-1985** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF WORK PLAN (WP) FOR VERIFICATION PHASE OF NACIP PROGRAM	ADMIN RECORD		FRC - PERRIS	181-03-0180 BX 0004 31089137
N00221 / 000134 NONE CORRESPONDENCE NONE 0	**02-13-1985** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF VERIFICATION STEP STUDY WORK PLAN (WP)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000224 NONE CORRESPONDENCE NONE 0	**02-13-1985** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF VERIFICATION PHASE WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 BX 0004 31089137
N00221 / 000124 NONE CORRESPONDENCE NONE 0	**02-19-1985** 11-29-1999 5090.3.A. NONE	NAVY	NOTIFICATION OF INSTALLATION OF ADDITIONAL GROUNDWATER MONITORING WELLS	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000142 NONE CORRESPONDENCE NONE 0	**03-06-1985** 11-29-1999 5090.3.A. NONE	CRWQCB	COMMENTS ON VERIFICATION STEP STUDY WORK PLAN (WP)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000128 NONE CORRESPONDENCE NONE 0	**03-08-1985** 11-29-1999 5090.3.A. NONE	NAVY	GROUNDWATER MONITORING PROGRAM FOR SANITARY LANDFILL	ADMIN RECORD	IA H SITE 00001	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000202 NONE CORRESPONDENCE NONE 0	**03-12-1985** 11-29-1999 5090.3.A. NONE	CRWQCB	COMMENTS ON GROUNDWATER MONITORING PROGRAM - ISD NO. CAD 717002475	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0003
N00221 / 000374 NONE REPORT NONE 0	**03-26-1985** 11-29-1999 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION	GROUNDWATER MONITORING PROGRAM FOR THE SANITARY LANDFILL AND INDUSTRIAL WASTEWATER TREATMENT PLANT (IWTP)	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000123 NONE CORRESPONDENCE NONE 0	**04-22-1985** 11-29-1999 5090.3.A. NONE	DHS	COMMENTS ON VERIFICATION STUDY WORK PLAN (WP)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000101 NONE CORRESPONDENCE NONE 0	**06-26-1985** 11-29-1999 5090.3.A. NONE	CRWQCB	ANNUAL INTERIM STATUS GROUNDWATER MONITORING PROGRAM EVALUATION REPORT FOR HW FACILITIES AT MINSY	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000199 NONE REPORT NONE 0	**08-01-1985** 11-29-1999 5090.3.A. NONE	RICHESIN	CONFIRMATION STUDY/VERIFICATION STEP - REPORT OF SOIL AND GROUNDWATER ASSESSMENT STUDIES BUILDINGS 519 AND 567	ADMIN RECORD	IA A SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0003
N00221 / 000115 NONE CORRESPONDENCE NONE 0	**08-27-1985** 11-29-1999 5090.3.A. NONE	NAVY	VERIFICATION STUDY WORK PLAN (WP) - JULY 1985 MEETING CONCLUSIONS	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000390 NONE REPORT NONE 0	**09-17-1985** 11-29-1999 5090.3.A. NONE	NAVY	PRELIMINARY EVALUATION - POTENTIAL LEAD CONTAMINATION OF GROUNDWATER	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000105 NONE CORRESPONDENCE NONE 0	**09-18-1985** 11-29-1999 5090.3.A. NONE	CRWQCB	NOTIFICATION OF CLEANUP AND ABATEMENT ORDER FOR SANITARY LANDFILL	ADMIN RECORD	IA H SITE 00001	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000111 NONE CORRESPONDENCE NONE 0	**09-18-1985** 11-29-1999 5090.3.A. NONE	CRWQCB	CLEANUP AND ABATEMENT ORDER (CAO) NO. 85-019	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000137 NONE CORRESPONDENCE NONE 0	**10-11-1985** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF SCOPE OF WORK FOR GROUNDWATER MONITORING EVALUATION	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000145 NONE CORRESPONDENCE NONE 0	**10-28-1985** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF INFORMATION REQUIRED UNDER ORDER NO. 85-019	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000146 NONE CORRESPONDENCE NONE 0	**02-10-1986** 11-29-1999 5090.3.A. NONE	CRWQCB	REVIEW OF INFORMATION SUBMITTED UNDER ORDER NO. 85-019 (28 OCTOBER 1985)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000133 NONE CORRESPONDENCE NONE 0	**03-12-1986** 11-29-1999 5090.3.A. NONE	DHS	COMMENTS ON SCOPE OF WORK FOR VERIFICATION STUDY WORK PLAN (WP)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000196 NONE REPORT NONE 0	**03-19-1986** 11-29-1999 5090.3.A. NONE	SCS	VERIFICATION STUDY REPORT - APPENDIX D - VOLUME II	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000197 NONE REPORT NONE 0	**03-19-1986** 11-29-1999 5090.3.A. NONE	SCS	VERIFICATION STUDY REPORT - APPENDIX D - VOLUME I	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000155 NONE CORRESPONDENCE NONE 0	**03-21-1986** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO CRWQCB ORDER NO. 85-01	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000150 NONE CORRESPONDENCE NONE 0	**04-11-1986** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF PROPOSED HYDROGEOLOGIC INVESTIGATION WORK PLAN (WP)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000370 NONE REPORT NONE 0	**09-10-1986** 11-29-1999 5090.3.A. NONE	AT	BATTERY TANK COMPLEX DEMOLITION CONTRACT NO. N62474-85-C-0221	ADMIN RECORD		FRC - PERRIS	181-03-0180 BX 0006 31089137

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N00221 / 000369 NONE CORRESPONDENCE NONE 0	**10-15-1986** 11-29-1999 5090.3.A. NONE	FPE GROUP	INDUSTRIAL HYGIENE INVESTIGATION FOR ASBESTOS AND HAZARDOUS MATERIALS DEMOLITION AT BUILDING 290 AND 814	ADMIN RECORD	IA C SITE 00018	FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000371 NONE REPORT NONE 0	**10-22-1986** 11-29-1999 5090.3.A. NONE	WAHLER	PRELIMINARY SUBSURFACE CONTAMINATION INVESTIGATION (CHEMICAL ANALYSIS OF CONCRETE, WATER AND SOIL SAMPLES)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000388 NONE REPORT NONE 0	**12-01-1986** 11-29-1999 5090.3.A. NONE	AQUA TERRA	GEOTECHNICAL INVESTIGATION GROUNDWATER MONITORING PLAN - LANDFILL	ADMIN RECORD	IA H SITE 00001	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000135 NONE CORRESPONDENCE NONE 0	**12-30-1986** 11-29-1999 5090.3.A. NONE	DHS	REQUEST FOR SUBMISSION OF CONFIRMATION STUDY REPORT	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000198 NONE REPORT NONE 0	**01-01-1987** 11-29-1999 5090.3.A. NONE	SCS	VERIFICATION STUDY REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0003
N00221 / 000163 NONE CORRESPONDENCE NONE 0	**01-16-1987** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF VERIFICATION STEP STUDY REPORT INCLUDING APPENDICES	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000206 NONE CORRESPONDENCE NONE 0	**01-23-1987** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF VERIFICATION STUDY	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000131 NONE CORRESPONDENCE NONE 0	**06-30-1987** 11-29-1999 5090.3.A. NONE	U.S. EPA - SAN FRANCISCO, CA	TSCA SECTION 6 PCB INVESTIGATION REPORT CONDUCTED BY EPA	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000380 NONE REPORT N62474-85-D-5627 0	**07-01-1987** 11-29-1999 5090.3.A. DO 23	ERM WEST NAVFAC - WESTERN DIVISION	DRAFT SITE INVESTIGATION (SI) REPORT (VOL. I) - (SEE AR #381 FOR VOL. II - APPX. A; AR #382 FOR VOL. III - APPX. B; AR #383 FOR VOL. IV - APPX. C)	ADMIN RECORD INFO REPOSITORY	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0007
N00221 / 000381 NONE REPORT N62474-85-D-5627 200	**07-10-1987** 11-29-1999 5090.3.A. DO 23	ERM WEST NAVFAC - WESTERN DIVISION	DRAFT SITE INVESTIGATION (SI) REPORT (VOL. II / APPENDIX A) - (SEE AR #380 FOR VOL. I - DRAFT REPORT; AR #382 FOR VOL. III - APPX. B; AR #383 FOR VOL. IV - APPX. C)	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0007
N00221 / 000382 NONE REPORT N62474-85-D-5627 200	**07-10-1987** 11-29-1999 5090.3.A. DO 23	ERM WEST NAVFAC - WESTERN DIVISION	DRAFT SITE INVESTIGATION (SI) REPORT (VOL. III / APPENDIX B) - (SEE AR #380 FOR VOL. I - DRAFT REPORT; AR #381 FOR VOL. II - APPX. A; AR #383 FOR VOL. IV - APPX. C)	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0007
N00221 / 000383 NONE REPORT N62474-85-D-5627 250	**07-10-1987** 11-29-1999 5090.3.A. DO 23	ERM WEST NAVFAC - WESTERN DIVISION	DRAFT SITE INVESTIGATION (SI) REPORT (VOL. IV / APPENDIX C) - (SEE AR #380 FOR VOL. I - DRAFT REPORT; AR # 381 FOR VOL. II - APPX. A; AR #382 FOR VOL. III - APPX. B)	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0007

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N00221 / 000524 NONE REPORT NONE 0	**07-23-1987** 11-29-1999 5090.3.A. NONE		SOIL QUALITY ASSESSMENT DRY DOCK NO NO. 3 REFUELING COMPLEX	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000151 NONE REPORT NONE 0	**08-12-1987** 11-29-1999 5090.3.A. NONE	NEESA	DOCUMENTATION RECORDS FOR HAZARD RANKING SYSTEM (HRS) PACKAGE	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000876 NONE REPORT NONE 0	**09-11-1987** 11-29-1999 5090.3.A. NONE	ERM WEST	DRAFT HYDROGEOLOGICAL ASSESSMENT REPORT - SLUDGE PONDS INDUSTRIAL WASTEWATER TREATMENT PLANT (IWTP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0015
N00221 / 000467 NONE REPORT NONE 0	**10-27-1987** 11-29-1999 5090.3.A. NONE		MARE ISLAND VERIFICATION STUDY (NACIP) BORING LOGS	MISSING @ SWDIV		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000186 NONE CORRESPONDENCE NONE 0	**12-02-1987** 11-29-1999 5090.3.A. NONE	U.S. EPA - SAN FRANCISCO, CA	COMMENTS ON IAS, VERIFICATION STUDY, AND VERIFICATION STUDY WORK PLAN (WP)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000164 NONE CORRESPONDENCE NONE 0	**12-11-1987** 11-29-1999 5090.3.A. NONE	NAVY	REQUEST FOR ARARS	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000165 NONE CORRESPONDENCE NONE 0	**12-11-1987** 11-29-1999 5090.3.A. NONE	NAVY	REQUEST FOR ARARS	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000166 NONE CORRESPONDENCE NONE 0	**12-11-1987** 11-29-1999 5090.3.A. NONE	NAVY	REQUEST FOR ARARS	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000167 NONE CORRESPONDENCE NONE 0	**12-11-1987** 11-29-1999 5090.3.A. NONE	NAVY	REQUEST FOR ARARS	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000525 NONE REPORT NONE 0	**01-01-1988** 11-29-1999 5090.3.A. NONE	ERM WEST NAVFAC - SOUTHWEST DIVISION	MONITORING WELL COMPLETION REPORT FOR SANITARY LANDFILL AND INDUSTRIAL WASTEWATER TREATMENT PLANT (IWTP)	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 001340 NONE CORRESPONDENCE NONE 14	**01-05-1988** 07-24-2009 5090.3.A. NONE	HOENIG, D. DEPARTMENT OF HEALTH SERVICES - BERKELEY, CA DRENNON, P. NAVFAC - WESTERN DIVISION	RESPONSE TO REQUEST TO IDENTIFY APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR) STANDARDS, CRITERIA, AND/OR LIMITATIONS (W/ ENCLOSURE) [DOCUMENT PERTAINS TO MULTIPLE BASES]	ADMIN RECORD	OU 0000005 PARCEL B	NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000170 NONE CORRESPONDENCE NONE 0	**01-22-1988** 11-29-1999 5090.3.A. NONE	CRWQCB	RESPONSE TO APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR) SOLICITATION	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000204 NONE REPORT NONE 0	**02-29-1988** 11-29-1999 5090.3.A. NONE	LWESI	FINAL REPORT - SOIL AND GROUNDWATER INVESTIGATION BUILDING 225	ADMIN RECORD	IA C SITE 00015	FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000222 NONE CORRESPONDENCE NONE 0	**02-29-1988** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT SOIL SAMPLING PLAN (SP) FOR DETECTION OF SPENT ABRASIVES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000385 NONE REPORT NONE 0	**02-29-1988** 11-29-1999 5090.3.A. NONE	ERM WEST NAVFAC - SOUTHWEST DIVISION	GROUNDWATER DATA REPORT SANITARY LANDFILL AND INDUSTRIAL WASTEWATER TREATMENT PLANT (IWTP)	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0007
N00221 / 000386 NONE REPORT NONE 0	**02-29-1988** 11-29-1999 5090.3.A. NONE	ERM WEST	HYDROGEOLOGICAL ASSESSMENT REPORT - APPENDIX A AND B	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0007
N00221 / 000387 NONE REPORT NONE 0	**02-29-1988** 11-29-1999 5090.3.A. NONE	ERM WEST NAVFAC - SOUTHWEST DIVISION	HYDROGEOLOGICAL ASSESSMENT REPORT - SLUDGE PONDS INDUSTRIAL WASTEWATER TREATMENT PLANT (IWTP)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000104 NONE CORRESPONDENCE NONE 0	**03-01-1988** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF SOIL AND GROUNDWATER INVESTIGATION REPORT FOR BUILDING 225, PART I	ADMIN RECORD	IA C SITE 00015	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000114 NONE CORRESPONDENCE NONE 0	**03-08-1988** 11-29-1999 5090.3.A. NONE	NAVY	MARE ISLAND PERMIT DECISION (CA 7170024775) - LANDFILL AND IWTP	ADMIN RECORD	IA C IA D IA F1 IA H SITE 00001 SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000257 NONE REPORT NONE 0	**03-15-1988** 11-29-1999 5090.3.A. NONE	LWESI	ADDENDUM TO FINAL REPORT SOIL AND GROUNDWATER INVESTIGATION BUILDING 225, PHASE I	ADMIN RECORD	IA C SITE 00015	FRC - PERRIS	181-03-0180 BX 0004 31089137
N00221 / 000169 NONE CORRESPONDENCE NONE 0	**03-29-1988** 11-29-1999 5090.3.A. NONE	NAVY	CONFIRMATION OF SUBMISSION OF INFORMATION FOR PRELIMINARY ASSESSMENT (PA) - HRS PK	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000109 NONE CORRESPONDENCE NONE 0	**04-01-1988** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF STUDY AND CALCULATION FOR IWTP SURFACE IMPOUNDMENT	ADMIN RECORD	IA C IA F1 IA H SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000136 NONE REPORT NONE 0	**04-01-1988** 11-29-1999 5090.3.A. NONE	ERM WEST	PROPOSAL, REPORT OF WASTE DISCHARGE INDUSTRIAL WASTE TREATMENT PLAN (IWTP)	ADMIN RECORD	IA H SITE 00006	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000205 NONE REPORT NONE 0	**04-01-1988** 11-29-1999 5090.3.A. NONE	ERM WEST	GROUNDWATER MONITORING PROGRAM - MINSY	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000213 NONE CORRESPONDENCE NONE 0	**04-01-1988** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF REPORT OF WASTE DISCHARGE FROM (IWTP) AND GROUNDWATER MONITORING PLAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000215 NONE CORRESPONDENCE NONE 0	**04-01-1988** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF ADDENDUM TO FINAL REPORT SOIL AND GROUNDWATER INVESTIGATION AT BUILDING 225, PHASE I	ADMIN RECORD	IA C SITE 00015	FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000168 NONE CORRESPONDENCE NONE 0	**04-05-1988** 11-29-1999 5090.3.A. NONE	CRWQCB	COMMENTS ON SOIL SAMPLING PLAN (SP) FOR BUILDING 900 AREA - COMPLIANCE WITH ORD.NO.87-170	ADMIN RECORD	IA F2 SITE 00004	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000172 NONE CORRESPONDENCE NONE 0	**04-22-1988** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF AMENDED BORING STATUS	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000294 NONE CORRESPONDENCE NONE 0	**05-01-1988** 11-29-1999 5090.3.A. NONE	NAVY	COMMENTS CONCERNING TENTATIVE CEASE AND DESIST ORDER	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0005

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N00221 / 000187 NONE CORRESPONDENCE NONE 0	**05-12-1988** 11-29-1999 5090.3.A. NONE	NAVY	PROVISION OF 11 APRIL 1988 MEETING NOTES	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000181 NONE CORRESPONDENCE NONE 0	**05-16-1988** 11-29-1999 5090.3.A. NONE	NAVY	PROVISION OF 17 AERIAL PHOTOS OF LANDFILL AREA	ADMIN RECORD	IA H SITE 00001	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000121 NONE CORRESPONDENCE NONE 0	**05-25-1988** 11-29-1999 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF SAMPLING, CLEANING, AND INSPECTION PLAN FOR STORM DRAINS WITHIN CONCORD ANNEX	ADMIN RECORD	IA G SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000526 NONE REPORT NONE 0	**06-07-1988** 11-29-1999 5090.3.A. NONE	ERM WEST NAVFAC - SOUTHWEST DIVISION	PROPOSAL, REPORT OF WASTE DISCHARGE ADDENDUM INDUSTRIAL WASTEWATER TREATMENT PLANT (IWTP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 BX 0011 31089137
N00221 / 000177 NONE CORRESPONDENCE NONE 0	**06-10-1988** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF ADDENDUM TO THE SAMPLING PLAN (SP) FOR THE BUILDING 900 AREA	ADMIN RECORD	IA F2 SITE 00004	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000185 NONE CORRESPONDENCE NONE 0	**06-14-1988** 11-29-1999 5090.3.A. NONE	U.S. EPA - SAN FRANCISCO, CA	COMMENTS ON MINSY INSTALLATION RESTORATION PROGRAM ACTIVITIES	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000178 NONE CORRESPONDENCE NONE 0	**06-20-1988** 11-29-1999 5090.3.A. NONE	ITC	CLARIFICATION OF CHEMICAL ANALYSIS PROTOCOL - BUILDING 900 AREA	ADMIN RECORD	BLDG. 900 IA F2 SITE 00004	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000191 NONE CORRESPONDENCE NONE 0	**07-01-1988** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO BOARD'S WASTE DISCHARGE REQUIREMENTS (WRD) ORDER NO. 87-170	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000171 NONE CORRESPONDENCE NONE 0	**07-19-1988** 11-29-1999 5090.3.A. NONE	CRWQCB	AMENDED REPORT OF BORING STATUS ON PROPOSAL TO SEAL BORINGS	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000193 NONE CORRESPONDENCE NONE 0	**07-19-1988** 11-29-1999 5090.3.A. NONE	CRWQCB	COMMENTS ON REVISIONS TO SAMPLING PLAN (SP) FOR BUILDING 900 AREA	ADMIN RECORD	IA F2 SITE 00004	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000285 NONE CORRESPONDENCE NONE 0	**07-21-1988** 11-29-1999 5090.3.A. NONE	CRWQCB NAVFAC - WESTERN DIVISION	CONCORD ANNEX - NOTICE OF VIOLATION CLEANING OF STORM DRAINS	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000327 NONE REPORT NONE 0	**08-12-1988** 11-29-1999 5090.3.A. NONE	KAMAN	DRAFT REVIEW WATER QUALITY SOLID WASTE ASSESSMENT TEST (SWAT) PROPOSAL	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0005

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N00221 / 000161 NONE CORRESPONDENCE NONE 0	**08-22-1988** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF SCHEDULE FOR SEALING OPEN BORINGS FROM VERIFICATION STEP FIELD WORK	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000230 NONE REPORT NONE 0	**08-25-1988** 11-29-1999 5090.3.A. NONE	KAMAN	AIR QUALITY SOLID WASTE ASSESSMENT TEST (SWAT) PROPOSAL	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000256 NONE REPORT NONE 0	**09-01-1988** 11-29-1999 5090.3.A. NONE	ITC	SOIL SAMPLING PLAN (SP) FOR DETECTION OF SPENT ABRASIVES - BUILDING 900 SANDBLAST AREA	ADMIN RECORD	IA F2 SITE 00004	FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000158 NONE CORRESPONDENCE NONE 0	**09-07-1988** 11-29-1999 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON SAMPLING, CLEANING AND INSPECTION PLAN FOR STORM DRAINS AT CONCORD ANNEX FACILITY	ADMIN RECORD	IA G SITE 00005	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000225 NONE CORRESPONDENCE NONE 0	**09-07-1988** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF AIR QUALITY SOLID WASTE ASSESSMENT TEST (SWAT) PROPOSAL	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000250 NONE REPORT NONE 0	**09-30-1988** 11-29-1999 5090.3.A. NONE	HAZWRAP	OPEN BOREHOLE SEALING REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004

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N00221 / 000316 NONE CORRESPONDENCE NONE 0	**09-30-1988** 11-29-1999 5090.3.A. NONE	DHS	DENIAL OF HAZARDOUS WASTE FACILITY PERMIT APPLICATION FOR RCRA LANDFILL	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0005
N00221 / 000898 NONE REPORT NONE 0	**09-30-1988** 11-29-1999 5090.3.A. NONE	KAMAN	SAMPLING AND ANALYSIS, AND HEALTH AND SAFETY PLAN (SAP/HASP) FOR LEAD OXIDE CONTAMINATED AREAS	ADMIN RECORD	IA B SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0015
N00221 / 000235 NONE REPORT NONE 0	**10-01-1988** 11-29-1999 5090.3.A. NONE	HAZWRAP	FINAL WORK PLAN (WP) FOR REMEDIAL INVESTIGATION (RI) , VOLUME IV: QUALITY ASSURANCE PROJECT PLAN (QAPP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000255 NONE REPORT NONE 0	**10-01-1988** 11-29-1999 5090.3.A. NONE	ITC	SAMPLING, CLEANING, AND INSPECTION PLAN FOR STORM DRAINS WITHIN CONCORD ANNEX	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000287 NONE CORRESPONDENCE NONE 0	**10-13-1988** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF ADDITIONS AND CORRECTIONS TO HYDROGEOLOGICAL ASSESSMENT REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000245 NONE REPORT NONE 0	**10-20-1988** 11-29-1999 5090.3.A. NONE	HAZWRAP	PROPOSAL FOR REPORT OF WASTE DISCHARGE FOR BUILDING 900 SANDBLAST AREA	ADMIN RECORD	IA F2 SITE 00004	FRC - PERRIS	181-03-0180 31089137	BX 0004

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N00221 / 000240 NONE REPORT NONE 0	**10-31-1988** 11-29-1999 5090.3.A. NONE	ITC	DRAFT SAMPLING INVESTIGATION PLAN FOR IR SITES 10, 11, 12, AND 13 (SP)	ADMIN RECORD	IA C IA D SITE 00010 SITE 00011 SITE 00012 SITE 00013	FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000328 NONE REPORT NONE 0	**10-31-1988** 11-29-1999 5090.3.A. NONE	KAMAN	DRAFT WATER QUALITY ASSESSMENT TEST (SWAT) PROPOSAL RCRA LANDFILL	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0005
N00221 / 000251 NONE CORRESPONDENCE NONE 0	**11-03-1988** 11-29-1999 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF SAMPLING, CLEANING, AND INSPECTION PLAN, STORM DRAIN AT CONCORD ANNEX AND BUILDING 900	ADMIN RECORD	BLDG. 900 IA F2 IA G SITE 00004 SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000241 NONE CORRESPONDENCE NONE 0	**11-07-1988** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF PROPOSAL FOR REPORT OF WASTE DISCHARGE FOR BUILDING 900, SANDBLAST AREA	ADMIN RECORD	IA F2 SITE 00004	FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000246 NONE CORRESPONDENCE NONE 0	**11-07-1988** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF OPEN BOREHOLE SEALING REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000231 NONE CORRESPONDENCE NONE 0	**11-08-1988** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF RI/FS WORK PLAN (WP), VOLUME IV: QUALITY ASSURANCE PROJECT PLAN (QAPP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004

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N00221 / 000236 NONE CORRESPONDENCE NONE 0	**11-10-1988** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT SAMPLING INVESTIGATION PLAN FOR IR SITES 10, 11, 12, AND 13 (SP)	ADMIN RECORD	IA C IA D SITE 00010 SITE 00011 SITE 00012 SITE 00013	FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000286 NONE CORRESPONDENCE NONE 0	**11-15-1988** 11-29-1999 5090.3.A. NONE	NAVFAC - EFA WEST	SUBMISSION OF SELF MONITORING REPORT FOR DREDGE SPOILS PONDS UNDER ORDER NO. 86-37	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000291 NONE CORRESPONDENCE NONE 0	**11-23-1988** 11-29-1999 5090.3.A. NONE	NAVY NAVFAC - SOUTHWEST DIVISION	CLARIFICATION OF REQUIREMENT TO REMOVE ALL HAZARDOUS WASTE FROM SURFACE IMPOUNDMENTS	ADMIN RECORD	IA H SITE 00006	FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000368 NONE REPORT NONE 0	**11-29-1988** 11-29-1999 5090.3.A. NONE	HAZWRAP	REMEDIAL INVESTIGATION HEALTH AND SAFETY PLAN (RI/HASP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000292 NONE CORRESPONDENCE NONE 0	**12-06-1988** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT SAMPLING PLAN (SP) IR-7 (T-3 ACID TANK AREA)	ADMIN RECORD	IA C SITE 00007	FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000293 NONE CORRESPONDENCE NONE 0	**12-08-1988** 11-29-1999 5090.3.A. NONE	NAVY	SUBMITTAL OF RI/FS HEALTH AND SAFETY PLAN (HASP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0005

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N00221 / 000281 NONE REPORT NONE 0	**12-16-1988** 11-29-1999 5090.3.A. NONE	ERM WEST	SITE INVESTIGATION (SI) REPORT, DRY DOCK NO. 3	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000409 NONE REPORT NONE 0	**12-23-1988** 11-29-1999 5090.3.A. NONE	FEDREG	PT III - ENVIRONMENTAL PROTECTION AGENCY-IN RE: 40 CFR PART 300	MISSING @ SWDIV		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000280 NONE CORRESPONDENCE NONE 0	**12-29-1988** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF SITE INVESTIGATION (SI) REPORT, DRY DOCK NO. 3	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000258 NONE CORRESPONDENCE NONE 0	**01-03-1989** 11-29-1999 5090.3.A. NONE	NAVY	REQUEST FOR IDENTIFICATION OF APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000325 NONE REPORT NONE 0	**01-05-1989** 11-29-1999 5090.3.A. NONE	HAZWRAP	DRAFT SAMPLING INVESTIGATION PLAN FOR (IR-3), BERTHS 4 AND 5 AREA	ADMIN RECORD	IA C SITE 00003	FRC - PERRIS	181-03-0180 31089137	BX 0005
N00221 / 000288 NONE CORRESPONDENCE NONE 0	**01-13-1989** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT SAMPLING AND INVESTIGATION PLAN FOR SITE IR-3 AREA (BERTHS 4 AND 5)	ADMIN RECORD	IA C SITE 00003	FRC - PERRIS	181-03-0180 31089137	BX 0004

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N00221 / 000259 NONE CORRESPONDENCE NONE 0	**01-17-1989** 11-29-1999 5090.3.A. NONE	U.S. EPA - SAN FRANCISCO, CA	RESPONSE TO IDENTIFICATION OF ARARS REQUEST	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000260 NONE CORRESPONDENCE NONE 0	**01-25-1989** 11-29-1999 5090.3.A. NONE	DHS	RESPONSE TO IDENTIFICATION OF ARARS REQUEST	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000326 NONE REPORT NONE 0	**02-03-1989** 11-29-1999 5090.3.A. NONE	HAZWRAP	DRAFT SAMPLING INVESTIGATION PLAN FOR (IR-1) HISTORIC LANDFILL AND (IR-2) OIL SUMPS	ADMIN RECORD	IA H SITE 00001 SITE 00002	FRC - PERRIS	181-03-0180 31089137	BX 0005
N00221 / 000289 NONE CORRESPONDENCE NONE 0	**02-17-1989** 11-29-1999 5090.3.A. NONE	CRWQCB	COMMENTS ON SITE INVESTIGATION (SI) REPORT, DRY DOCK NO. 3	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000379 NONE REPORT NONE 0	**03-01-1989** 11-29-1999 5090.3.C. NONE	HAZWRAP	INTERNAL DRAFT - REMEDIAL INVESTIGATION (RI) VOLUME IV: DATA MANAGEMENT PLAN	SITE FILE		FRC - PERRIS	181-03-0180 31089137	BX 0007
N00221 / 000261 NONE CORRESPONDENCE NONE 0	**03-23-1989** 11-29-1999 5090.3.A. NONE	NAVY	DHS PARTICIPATION IN NAVY IR PROGRAM AT MARE ISLAND NAVY SHIPYARD	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004

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N00221 / 000279 NONE REPORT NONE 0	**03-27-1989** 11-29-1999 5090.3.A. NONE		SITE INVESTIGATION (SI) REPORT, DRY DOCK NO. 3	MISSING @ SWDIV		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000278 NONE CORRESPONDENCE NONE 0	**03-29-1989** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF SITE INVESTIGATION (SI) REPORT, DRY DOCK NO. 3	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000324 NONE REPORT NONE 0	**04-01-1989** 11-29-1999 5090.3.A. NONE	HAZWRAP	DRAFT DISTRIBUTION AND ENVIRONMENTAL FATE OF METALS AND ORGANOTIN NEAR BUILDING 900 VOLUMES I, II, AND III (VOLUMES I, II, AND III ARE BOUNDED IN THREE SEPERATE	ADMIN RECORD	IA F2 SITE 00004	FRC - PERRIS	181-03-0180 31089137	BX 0005
N00221 / 000347 NONE REPORT NONE 0	**06-01-1989** 11-29-1999 5090.3.A. NONE	HAZWRAP	DRAFT REMEDIAL INVESTIGATION (RI) VOLUME I: PROJECT WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000348 NONE REPORT NONE 0	**06-01-1989** 11-29-1999 5090.3.A. NONE	HAZWRAP	DRAFT REMEDIAL INVESTIGATION (RI) VOLUME II: SAMPLING AND ANALYSIS PLAN (SAP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000349 NONE REPORT NONE 0	**06-01-1989** 11-29-1999 5090.3.A. NONE	HAZWRAP	DRAFT REMEDIAL INVESTIGATION (RI) VOLUME VI: DATA MANAGEMENT PLAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006

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N00221 / 000378 NONE REPORT NONE 0	**06-06-1989** 11-29-1999 5090.3.A. NONE	HAZWRAP NAVFAC - SOUTHWEST DIVISION	WORK PLAN (WP) SITE INVESTIGATION (SI) FOR THE INDUSTRIAL WASTEWATER TREATMENT DIGESTER TANKS	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0007
N00221 / 000295 NONE CORRESPONDENCE NONE 0	**06-16-1989** 11-29-1999 5090.3.A. NONE	CRWQCB	COMMENTS ON REVISED SOIL QUALITY ASSESSMENT REPORT, SITE INVESTIGATION (SI) AT DRY DOCK NO. 3	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0005
N00221 / 000270 NONE REPORT NONE 0	**07-01-1989** 11-29-1999 5090.3.A. NONE		DRAFT RI PLAN, VOLUME III, HEALTH AND SAFETY PLAN (HASP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000271 NONE REPORT NONE 0	**07-01-1989** 11-29-1999 5090.3.A. NONE	HAZWRAP	DRAFT RI PLAN, VOLUME IV, QUALITY ASSURANCE PROJECT PLAN (QAPP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000296 NONE CORRESPONDENCE NONE 0	**07-13-1989** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT REPORT, DISTRIBUTION AND ENVIRONMENTAL FATE OF METALS AND ORGANOTIN IN MARE ISLAND STRAIT, VOLUMES I, II, AND III	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0005
N00221 / 000272 NONE REPORT NONE 0	**08-01-1989** 11-29-1999 5090.3.A. NONE	HAZWRAP	DRAFT RI PLAN, VOLUME V, COMMUNITY RELATIONS PLAN (CRP)	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0004

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N00221 / 000377 NONE REPORT NONE 0	**08-01-1989** 11-29-1999 5090.3.A. NONE	HAZWRAP	MONITORING WELL SEALING REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0007
N00221 / 000277 NONE REPORT NONE 0	**08-14-1989** 11-29-1999 5090.3.A. NONE	NAVY	RFI WORK PLAN (WP) FOR LEAD OXIDE CONTAMINATION SITES - RCRA FACILITY INVESTIGATION	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000269 NONE CORRESPONDENCE NONE 0	**09-06-1989** 11-29-1999 5090.3.A. NONE	NAVY	TRANSMITTAL LETTER AND DRAFT CONSOL WORK PLAN (WP), VOLUMES III, IV, AND V	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000273 NONE CORRESPONDENCE NONE 0	**09-08-1989** 11-29-1999 5090.3.A. NONE	NAVY	SUBMITTAL OF RCRA FACILITY INVESTIGATION (RFI) WORK PLAN (WP) FOR LEAD OXIDE CONTAMINATION	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0004
N00221 / 000376 NONE REPORT NONE 0	**11-01-1989** 11-29-1999 5090.3.A. NONE	HAZWRAP NAVFAC - SOUTHWEST DIVISION	SITE INVESTIGATION (SI) REPORT FOR INDUSTRIAL WASTEWATER TREATMENT DIGESTER TANKS	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000395 NONE REPORT NONE 0	**03-08-1990** 11-29-1999 5090.3.A. NONE		PT II - EPA NATIONAL OIL/HAZARDOUS SUBSTANCE POLLUTION CONTINGENCY PLAN FINAL RULE	MISSING @ SWDIV		NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000338 NONE CORRESPONDENCE NONE 0	**05-02-1990** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO AGENCY LETTER REGARDING GROUNDWATER MONITORING OF T-SERIES WELLS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0005
N00221 / 000339 NONE MINUTES NONE 0	**05-21-1990** 11-29-1999 5090.3.A. NONE	NAVY	INSTALLATION RESTORATION PROGRAM (IRP) TECHNICAL REVIEW COMMITTEE (TRC) MEETING MINUTES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000329 NONE MINUTES NONE 0	**05-30-1990** 11-29-1999 5090.3.A. NONE	NAVY	TECHNICAL REVIEW COMMITTEE (TRC) MEETING MINUTES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0005
N00221 / 000340 NONE CORRESPONDENCE NONE 0	**06-26-1990** 11-29-1999 5090.3.A. NONE	NAVY	DISTRIBUTION OF TRC MEETING MINUTES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000341 NONE CORRESPONDENCE NONE 0	**06-26-1990** 11-29-1999 5090.3.A. NONE	NAVY	DISTRIBUTION OF TRC MEETING MINUTES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000342 NONE CORRESPONDENCE NONE 0	**06-26-1990** 11-29-1999 5090.3.A. NONE	NAVY	DISTRIBUTION OF TRC MEETING MINUTES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006

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N00221 / 000343 NONE CORRESPONDENCE NONE 0	**06-26-1990** 11-29-1999 5090.3.A. NONE	NAVY	DISTRIBUTION OF TRC MEETING MINUTES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000344 NONE CORRESPONDENCE NONE 0	**06-26-1990** 11-29-1999 5090.3.A. NONE	NAVY	DISTRIBUTION OF TRC MEETING MINUTES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000345 NONE CORRESPONDENCE NONE 0	**06-26-1990** 11-29-1999 5090.3.A. NONE	NAVY	DISTRIBUTION OF TRC MEETING MINUTES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000346 NONE CORRESPONDENCE NONE 0	**06-26-1990** 11-29-1999 5090.3.A. NONE	NAVY	DISTRIBUTION OF TRC MEETING MINUTES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000334 NONE REPORT NONE 0	**07-01-1990** 11-29-1999 5090.3.A. NONE	HAZWRAP	JUNE 1990 QUARTERLY SAMPLNG SANITARY LANDFILL AND DRYDOCK NO. 3, ADDENDUM 1	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0005
N00221 / 000330 NONE REPORT NONE 0	**07-09-1990** 11-29-1999 5090.3.A. NONE	HAZWRAP	JUNE 1990 QUARTERLY SAMPLING OF SANITARY LANDFILL AND DRY DOCK NO. 3	ADMIN RECORD INFO REPOSITORY	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0005

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N00221 / 000375 NONE REPORT NONE 0	**07-18-1990** 11-29-1999 5090.3.A. NONE	ERM WEST	DRAFT SUPPLEMENT TO HYDROGEOLOGIC INVESTIGATION OF THE SANITARY LANDFILL	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000332 NONE CORRESPONDENCE NONE 0	**07-30-1990** 11-29-1999 5090.3.A. NONE	DHS	COMPREHENSIVE GROUNDWATER MONITORING EVALUATION AT RCRA LANDFILL	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0005
N00221 / 000331 NONE REPORT NONE 0	**08-01-1990** 11-29-1999 5090.3.A. NONE	HAZWRAP	MAY 1990 QUARTERLY SAMPLING FOR SANITARY LANDFILL	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0005
N00221 / 000335 NONE REPORT NONE 0	**08-01-1990** 11-29-1999 5090.3.A. NONE	HAZWRAP	MAY 1990 QUARTERLY SAMPLING FOR DRY DOCK NO. 3	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0005
N00221 / 000336 NONE CORRESPONDENCE NONE 0	**08-22-1990** 11-29-1999 5090.3.A. NONE	NAVY	CLOSURE OF THE SANITARY LANDFILL	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0005
N00221 / 000337 NONE CORRESPONDENCE NONE 0	**08-22-1990** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT HYDROGEOLOGIC INVESTIGATION WORK PLAN (WP) FOR SANITARY LANDFILL	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0005

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N00221 / 000333 NONE CORRESPONDENCE NONE 0	**08-24-1990** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF ANALYTICAL RESULTS FROM QUARTERLY GROUNDWATER MONITORING OF "T" SERIES WELLS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0005
N00221 / 000373 NONE REPORT NONE 0	**09-10-1990** 11-29-1999 5090.3.A. NONE	NAVY	REPORT OF HAZARDOUS WASTE AND ENVIRONMENTAL PROGRAM ASSESSMENT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000899 NONE REPORT NONE 0	**10-01-1990** 11-29-1999 5090.3.A. NONE	HAZWRAP	SITE INVESTIGATION AND REMEDIAL INVESTIGATION PROJECT WORK PLAN, VOLUME I (SI/RI/WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0015
N00221 / 000900 NONE REPORT NONE 0	**10-01-1990** 11-29-1999 5090.3.A. NONE	HAZWRAP	SITE INVESTIGATION AND REMEDIAL INVESTIGATION SAMPLING AND ANALYSIS PLAN, VOLUME II (SI/RI/SAP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0015
N00221 / 000901 NONE REPORT NONE 0	**10-01-1990** 11-29-1999 5090.3.A. NONE	HAZWRAP	SITE INVESTIGATION AND REMEDIAL INVESTIGATION HEALTH AND SAFETY PLAN, VOLUME III (SI/RI/HASP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0015
N00221 / 000902 NONE REPORT NONE 0	**10-01-1990** 11-29-1999 5090.3.A. NONE	HAZWRAP	SITE INVESTIGATION AND REMEDIAL INVESTIGATION QUALITY ASSURANCE PROJECT PLAN, VOLUME IV (SI,RI,QAPP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0015

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N00221 / 000903 NONE REPORT NONE 0	**10-01-1990** 11-29-1999 5090.3.A. NONE	HAZWRAP	SITE INVESTIGATION AND REMEDIAL INVESTIGATION COMMUNITY RELATIONS PLAN, VOLUME V (SI,RI,CRP)	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0015
N00221 / 000904 NONE REPORT NONE 0	**10-01-1990** 11-29-1999 5090.3.A. NONE	HAZWRAP	SITE INVESTIGATION AND REMEDIAL INVESTIGATION DATA MANAGEMENT PLAN, VOLUME VI (SI,RI,DMP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0015
N00221 / 000356 NONE CORRESPONDENCE NONE 0	**10-04-1990** 11-29-1999 5090.3.A. NONE	MMES	CONFIRMATION OF PHONECON WITH RWQCB ON CLOSURE PLANS FOR INDUSTRIAL WASTE TREATMENT PLANT (IWTP) SLUDGE BLEND PONDS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000361 NONE REPORT NONE 0	**11-01-1990** 11-29-1999 5090.3.A. NONE	HAZWRAP	SEPTEMBER 1990 QUARTERLY SAMPLING APPENDICES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000363 NONE REPORT NONE 0	**11-01-1990** 11-29-1999 5090.3.A. NONE	HAZWRAP	SEPTEMBER 1990 QUARTERLY SAMPLING FOR THE SANITARY LANDFILL	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000364 NONE REPORT NONE 0	**11-01-1990** 11-29-1999 5090.3.A. NONE	HAZWRAP	SEPTEMBER 1990 QUARTERLY SAMPLING FOR DRY DOCK NO. 3	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006

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N00221 / 001348 PROJECT NUMBER 409728 CORRESPONDENCE NONE 4	**11-01-1990** 08-06-2009 5090.3.A. NONE	WILLIAMS, D. IT CORPORATION STANLEY, S. DEPARTMENT OF HEALTH SERVICES - BERKLEY, CA	RESPONSE TO THE 31 OCTOBER 1990 REQUEST FOR SURVEY AND WATER LEVEL DATA FLOPPY DISKS (INCLUDES HARDCOPY OF THE DATA TABLES) [LETTER RECEIVED IN THE RESTORATION RECORDS FILE W/OUT FLOPPY DISKS]	ADMIN RECORD	WELL IR01-T1D WELL IR01-T1DO WELL IR01-T1I WELL IR01-T1S WELL IR01-T2I WELL IR01-T3D WELL IR01-T3I WELL IR01-T3S WELL IR01-T4D WELL IR01-T4I WELL IR01-T4S WELL IR01-T5D WELL IR01-T5DO WELL IR01-T5I WELL IR01-T5S WELL IR01-T6D WELL IR01-T6I WELL IR01-T6S WELL IR01-T7D WELL IR01-T7I WELL IR01-T7S WELL IR01-T8D WELL IR01-T8I WELL IR01-T8S	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000353 NONE REPORT NONE 0	**11-09-1990** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	SEWAGE DIGESTER TANKS REMOVAL ACTION DRAFT WORK PLAN (RM/WP)	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000666 NONE CORRESPONDENCE NONE 0	**11-14-1990** 11-29-1999 5090.3.A. NONE	HAZWRAP	AGENCY COMMENTS ON DRAFT REMEDIAL INVESTIGATION WORK PLANS (WP, SAP, AND QAPP) (RI/WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0013

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N00221 / 000350 NONE CORRESPONDENCE NONE 0	**11-15-1990** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF SEWAGE DIGESTER TANK REMOVAL ACTION DRAFT WORK PLAN (RM/WP)	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000354 NONE REPORT N62474-88-D-5086 0	**11-15-1990** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT NAVFAC - SOUTHWEST DIVISION	SEWAGE DIGESTER TANK REMOVAL ACTION - DRAFT ENGINEERING EVALUATION/COST ANALYSIS (EE/CA)	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000355 NONE REPORT NONE 0	**11-16-1990** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRAFT WORK PLAN (WP) ENVIRONMENTAL INVESTIGATION	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000357 NONE CORRESPONDENCE NONE 0	**11-23-1990** 11-29-1999 5090.3.A. NONE	NAVY	SUBMITTAL OF SEWAGE DIGESTER TANK REMOVAL ACTION (RM) DRAFT EE/CA	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000360 NONE CORRESPONDENCE NONE 0	**11-26-1990** 11-29-1999 5090.3.A. NONE	DHS	COMMENTS TO DRAFT RI/FS HEALTH AND SAFETY PLAN (HASP), AND COMMUNITY RELATIONS PLAN (CRP)	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000362 NONE CORRESPONDENCE NONE 0	**12-05-1990** 11-29-1999 5090.3.A. NONE	MMES	TRANSMITTAL OF SEPTEMBER 1990 QUARTERLY GROUNDWATER RESULTS FOR LANDFILL AND DRY DOCK NO. 3 AREAS	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0006

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N00221 / 000404 NONE REPORT NONE 0	**12-20-1990** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	TREATMENT EFFLUENT SAMPLES ANALYTICAL RESULTS (CONT), VOLUME 3: APPENDIX F	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000908 NONE REPORT NONE 0	**12-31-1990** 11-29-1999 5090.3.A. NONE	DHS	COMPREHENSIVE GROUNDWATER MONITORING EVALUATION AT RCRA FACILITIES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000394 NONE REPORT NONE 0	**01-01-1991** 11-29-1999 5090.3.A. NONE	HAZWRAP	INTERPRETIVE DATA REVIEW/ANALYSIS - HISTORIC LANDFILL - VOLUMES 1, 2, AND 3 (VOLUMES 1, 2 AND 3 ARE BOUNDED IN THREE SEPERATE BINDERS)	ADMIN RECORD	IA H SITE 00001	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000468 NONE REPORT NONE 0	**01-01-1991** 11-29-1999 5090.3.A. NONE		PHASE I RI FIELD ACTIVITY DAILY LOGS PHASE 003, GEOPHYSICS	MISSING @ SWDIV		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000365 NONE CORRESPONDENCE NONE 0	**01-11-1991** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF GEOTECHNICAL REPORT AND ANALYSIS OF BLASTING GRIT FROM BUILDING 690 SOIL SAMPLING	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000469 NONE REPORT NONE 0	**02-01-1991** 11-29-1999 5090.3.A. NONE		PHASE I RI FIELD ACT DAILY LOGS - PHASES 005, 006, 007, 008	MISSING @ SWDIV		NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000476 NONE REPORT NONE 0	**02-01-1991** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	SEPTEMBER 1991 QUARTERLY SAMPLING FOR DRY DOCK NO. 3	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0010
N00221 / 000372 NONE CORRESPONDENCE NONE 0	**02-05-1991** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF RI/FS WORK PLANS (WP), VOLUMES I - VI (WP, SAP, HASP, QAPP, CRP, AND DMP)	MISSING @ SWDIV		FRC - PERRIS	181-03-0180 31089137	BX 0006
N00221 / 000403 NONE REPORT NONE 0	**02-08-1991** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	TREATMENT EFFLUENT SAMPLES ANALYTICAL RESULTS, VOLUME 2: APPENDIX F	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000405 NONE REPORT NONE 0	**02-11-1991** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DIGESTER TANK LID WIPE SAMPLES ANALYTICAL RESULTS, VOLUME 4: APPENDIX F	ADMIN RECORD	IA H SITE 00024	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000408 NONE REPORT NONE 0	**02-15-1991** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	GROUNDWATER SAMPLES ANALYTICAL RESULTS, VOLUME 7: APPENDIX F	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0007
N00221 / 000407 NONE REPORT NONE 0	**02-25-1991** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	SOIL SAMPLES ANALYTICAL RESULTS, VOLUME 6: APPENDIX F	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0007

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N00221 / 000470 NONE REPORT NONE 0	**03-01-1991** 11-29-1999 5090.3.A. NONE		PHASE I RI INVESTIGATION - WELL DEVELOPMENT LOGS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0010
N00221 / 000905 NONE REPORT NONE 0	**03-01-1991** 11-29-1999 5090.3.A. NONE	HAZWRAP	DECEMBER 1990 QUARTERLY SAMPLING FOR THE SANITARY LANDFILL, VOLUME I	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0015
N00221 / 000406 NONE REPORT NONE 0	**03-04-1991** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DIGESTER TANK SLUDGE SAMPLES ANALYTICAL RESULTS, VOLUME 5: APPENDIX F	ADMIN RECORD	IA H SITE 00024	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000472 NONE REPORT NONE 0	**04-01-1991** 11-29-1999 5090.3.A. NONE		PHASE I RI INVESTIGATION - FIELD ACT DAILY LOGS PHASE 002, 003, 004	MISSING @ SWDIV		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000473 NONE REPORT NONE 0	**04-01-1991** 11-29-1999 5090.3.A. NONE		PHASE I RI INVESTIGATION - FIELD ACT DAILY LOGS PHASE 006 WELL DEVELOPMENT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0010
N00221 / 000474 NONE REPORT NONE 0	**04-01-1991** 11-29-1999 5090.3.A. NONE		PHASE I RI INVESTIGATION - FIELD ACT DAILY LOGS PHASE 006 WELL TESTING	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0010

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N00221 / 000475 NONE REPORT NONE 0	**04-01-1991** 11-29-1999 5090.3.A. NONE		PHASE I RI INVESTIGATION - FIELD ACT DAILY LOGS PHASE 007 GROUNDWATER SAMPLING	MISSING @ SWDIV		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000520 NONE REPORT NONE 0	**04-01-1991** 11-29-1999 5090.3.A. NONE		PHASE I REMEDIAL INVESTIGATION (RI) FIELD ACTIVITY LOGS FOR PHASE 008	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000910 NONE REPORT NONE 0	**04-01-1991** 11-29-1999 5090.3.A. NONE	HAZWRAP	DECEMBER 1990 QUARTERLY SAMPLING FOR DRY DOCK NO. 3	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000391 NONE CORRESPONDENCE NONE 0	**04-19-1991** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF EXISTING GROUNDWATER DATA REPORT	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1 BX-001		
N00221 / 000396 NONE REPORT NONE 0	**04-23-1991** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRAFT FINAL WORK PLAN (WP) SITE INVESTIGATION (SI) OF BUILDING 593 AND DATA COLLECTION FOR HRS	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000402 NONE REPORT NONE 0	**05-06-1991** 11-29-1999 5090.3.A. NONE	NAVY	DRAFT INTERIM REPORT FOR SEWAGE DIGESTER TANKS REMOVAL ACTION (RM) PLAN, VOLUME 1	ADMIN RECORD	IA H SITE 00024	NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000397 NONE REPORT NONE 0	**05-15-1991** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	HEALTH AND SAFETY PLAN (HASP)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000401 NONE CORRESPONDENCE NONE 0	**05-15-1991** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT INTERIM REPORT FOR REMOVAL ACTION(RM) FOR THE SEWAGE DIGESTER TANK SITE	ADMIN RECORD	IA H SITE 00024	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000398 NONE CORRESPONDENCE NONE 0	**05-16-1991** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF SITE INVESTIGATION (SI) WORK PLAN (WP), AND HEALTH AND SAFETY PLAN (HASP) FOR BUILDING 593	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000906 NONE REPORT NONE 0	**07-01-1991** 11-29-1999 5090.3.A. NONE	HAZWRAP	MARCH 1991 QUARTERLY SAMPLING FOR THE SANITARY LANDFILL, VOLUME I	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000907 NONE REPORT NONE 0	**07-01-1991** 11-29-1999 5090.3.A. NONE	HAZWRAP	MARCH 1991 QUARTERLY SAMPLING FOR THE SANITARY LANDFILL, VOLUME II	ADMIN RECORD	IA C SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000911 NONE REPORT NONE 0	**07-01-1991** 11-29-1999 5090.3.A. NONE	HAZWRAP	MARCH 1991 QUARTERLY SAMPLING FOR DRY DOCK NO. 3	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016

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N00221 / 000416 NONE REPORT NONE 0	**07-08-1991** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRAFT INTERIM REPORT - SEWAGE DIGESTER TANKS REMOVAL ACTION (RM)	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0007
N00221 / 000410 NONE CORRESPONDENCE NONE 0	**07-11-1991** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF REMOVAL ACTION (RM) DRAFT INTERIM REPORT FOR SEWAGE DIGESTER TANK SITE (VOLUMES I - VII)	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0007
N00221 / 000462 NONE REPORT NONE 0	**07-16-1991** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRAFT HAZARD RANKING SYSTEM (HRS) SITE DATA	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0010
N00221 / 000412 NONE REPORT NONE 0	**09-25-1991** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRAFT FINAL INTERIM REPORT - SEWAGE DIGESTER TANKS REMOVAL ACTION (RM)	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0007
N00221 / 000411 NONE CORRESPONDENCE NONE 0	**10-07-1991** 11-29-1999 5090.3.A. NONE	NAVY	DRAFT FINAL INTERIM REMOVAL ACTION (RM) REPORT FOR SEWAGE DIGESTER TANKS (VOLUME I)	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0007
N00221 / 000424 NONE REPORT NONE 0	**10-09-1991** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRAFT FINAL WORK PLAN (WP) AND DATA COLLECTION FOR HRS - SITE INVESTIGATION (SI) OF BUILDING 593	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0007

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N00221 / 000425 NONE REPORT NONE 0	**10-09-1991** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	HEALTH AND SAFETY PLAN (HASP) - SITE INVESTIGATION (SI) BUILDING 593	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0008
N00221 / 000423 NONE CORRESPONDENCE NONE 0	**10-17-1991** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT FINAL WORK PLAN (WP), AND HEALTH AND SAFETY PLAN (HASP) FOR SITE INVESTIGATION (SI) OF BUILDING 593	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0007
N00221 / 000427 NONE REPORT NONE 0	**11-01-1991** 11-29-1999 5090.3.A. NONE	HAZWRAP	JUNE 1991 QUARTERLY SAMPLING FOR DRY DOCK NO. 3, VOLUME 1	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0008
N00221 / 000428 NONE REPORT NONE 0	**11-01-1991** 11-29-1999 5090.3.A. NONE	HAZWRAP	JUNE 1991 QUARTERLY SAMPLING FOR SANITARY LANDFILL, VOLUME I	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0008
N00221 / 000429 NONE REPORT NONE 0	**11-01-1991** 11-29-1999 5090.3.A. NONE	HAZWRAP	JUNE 1991 QUARTERLY SAMPLING FIELD DATA FOR SANITARY LANDFILL, VOLUME II	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0008
N00221 / 000426 NONE CORRESPONDENCE NONE 0	**11-06-1991** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO AGENCY COMMENTS ON REMEDIAL INVESTIGATION WORK PLAN (RI/WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0008

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N00221 / 000452 NONE REPORT NONE 0	**11-14-1991** 11-29-1999 5090.3.A. NONE	HAZWRAP	SITE CHARACTERIZATION SUMMARY, VOLUME III - APPENDICES A, B, AND C	ADMIN RECORD		FRC - PERRIS	181-03-0180 BX 0009 31089137
N00221 / 000453 NONE REPORT NONE 0	**11-14-1991** 11-29-1999 5090.3.A. NONE	HAZWRAP	SITE CHARACTERIZATION SUMMARY, VOLUME IV - APPENDICES D, E, AND F	ADMIN RECORD		FRC - PERRIS	181-03-0180 BX 0009 31089137
N00221 / 000454 NONE REPORT NONE 0	**11-14-1991** 11-29-1999 5090.3.A. NONE	HAZWRAP	SITE CHARACTERIZATION SUMMARY, VOLUME V - APPENDICES G, H, I, J, AND K	ADMIN RECORD		FRC - PERRIS	181-03-0180 BX 0009 31089137
N00221 / 000455 NONE REPORT NONE 0	**11-14-1991** 11-29-1999 5090.3.A. NONE	HAZWRAP	SITE CHARACTERIZATION SUMMARY, VOLUME VI - APPENDIX L, CERTIFICATES OF ANALYSIS	ADMIN RECORD		FRC - PERRIS	181-03-0180 BX 0009 31089137
N00221 / 000456 NONE REPORT NONE 0	**11-14-1991** 11-29-1999 5090.3.A. NONE	HAZWRAP	SITE CHARACTERIZATION SUMMARY, VOLUME VII - APPENDIX L, CERTIFICATES OF ANALYSIS	ADMIN RECORD		FRC - PERRIS	181-03-0180 BX 0009 31089137
N00221 / 000457 NONE REPORT NONE 0	**11-14-1991** 11-29-1999 5090.3.A. NONE	HAZWRAP	SITE CHARACTERIZATION SUMMARY, VOLUME VIII - APPENDIX L, CERTIFICATES OF ANALYSIS	ADMIN RECORD		FRC - PERRIS	181-03-0180 BX 0009 31089137

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N00221 / 000458 NONE REPORT NONE 0	**11-14-1991** 11-29-1999 5090.3.A. NONE	HAZWRAP	SITE CHARACTERIZATION SUMMARY, VOLUME IX - APPENDIX L, CERTIFICATES OF ANALYSIS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0010
N00221 / 000617 NONE CORRESPONDENCE NONE 0	**11-22-1991** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO AGENCY COMMENTS ON SAMPLING AND ANALYSIS PLAN (SAP) FOR LEAD OXIDE CONTAMINATED AREAS	ADMIN RECORD	IA B SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0012
N00221 / 000430 NONE CORRESPONDENCE NONE 0	**12-10-1991** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO AGENCY COMMENTS ON INTERPRETIVE DATA REVIEW AND ANALYSIS OF EXISTING GROUNDWATER DATA OF HISTORIC LANDFILL REPORT	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0008
N00221 / 000437 NONE REPORT NONE 0	**12-16-1991** 11-29-1999 5090.3.A. NONE	HAZWRAP	SAMPLING, CLEANING, AND INSPECTION OF STORM DRAINS WITHIN THE CONCORD ANNEX	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0008
N00221 / 000438 NONE CORRESPONDENCE NONE 0	**12-17-1991** 11-29-1999 5090.3.A. NONE	DTSC	AGENCY APPROVAL SITE INVESTIGATION (SI) DRAFT FINAL WORK PLAN (WP), AND HEALTH AND SAFETY PLAN (HASP) AND RESPONSE TO AGENCY COMMENTS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0008
N00221 / 000445 NONE REPORT NONE 0	**01-01-1992** 11-29-1999 5090.3.A. NONE	HAZWRAP	DATA VALIDATION SUMMARY FOR DECEMBER 1990 QUARTERLY SAMPLING FOR SANITARY LANDFILL AND DRY DOCK NO. 3, VOLUME III	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0008

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N00221 / 000446 NONE REPORT NONE 0	**01-01-1992** 11-29-1999 5090.3.A. NONE	HAZWRAP	DATA VALIDATION SUMMARY FOR DECEMBER 1990 QUARTERLY SAMPLING FOR SANITARY LANDFILL AND DRY DOCK NO. 3, VOLUME IV	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0008
N00221 / 000442 NONE REPORT NONE 0	**01-06-1992** 11-29-1999 5090.3.A. NONE	HAZWRAP	DISTRIBUTION AND ENVIRONMENTAL FATE OF METALS AND ORGANOTIN NEAR BUILDING 900, VOLUME 1: REPORT	ADMIN RECORD	IA F2 SITE 00004	FRC - PERRIS	181-03-0180 31089137	BX 0008
N00221 / 000443 NONE REPORT NONE 0	**01-06-1992** 11-29-1999 5090.3.A. NONE	HAZWRAP	DISTRIBUTION AND ENVIRONMENTAL FATE OF METALS AND ORGANOTIN NEAR BUILDING 900, VOLUME 2: APPENDIX A-D	ADMIN RECORD	IA F2 SITE 00004	FRC - PERRIS	181-03-0180 31089137	BX 0008
N00221 / 000444 NONE REPORT NONE 0	**01-06-1992** 11-29-1999 5090.3.A. NONE	HAZWRAP	DISTRIBUTION AND ENVIRONMENTAL FATE OF METALS AND ORGANOTIN NEAR BUILDING 900, VOLUME 3: APPENDIX E-K	ADMIN RECORD	IA F2 SITE 00004	FRC - PERRIS	181-03-0180 31089137	BX 0008
N00221 / 000431 NONE CORRESPONDENCE NONE 0	**01-07-1992** 11-29-1999 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION	RESPONSE TO AGENCY COMMENTS ON REPORT OF SAMPLNG, CLEANING, AND INSPECTION OF STORM DRAINS WITHIN CONCORD ANNEX FACILITY	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0008
N00221 / 000432 NONE CORRESPONDENCE NONE 0	**01-07-1992** 11-29-1999 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF REPORT SAMPLING, CLEANING, AND INSPECTION STORM DRAINS WITHIN CONCORD ANNEX FACILITY	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0008

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N00221 / 000433 NONE CORRESPONDENCE NONE 0	**01-14-1992** 11-29-1999 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION	SUBMISSION SAMPLING, CLEANING, AND INSPECTION STORM DRAINS WITHIN CONCORD ANNEX FACILITY	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0008
N00221 / 000439 NONE CORRESPONDENCE NONE 0	**01-15-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF FINAL REPORT ON DISTRIBUTION AND ENVIRONMENTAL FATE OF METALS AND ORGANOTIN IN MARE ISLAND STRAIT AT BUILDING 900 (VOLUMES I - III)	ADMIN RECORD	IA F2 SITE 00004	FRC - PERRIS	181-03-0180 31089137	BX 0008
N00221 / 000450 NONE REPORT NONE 0	**01-22-1992** 11-29-1999 5090.3.A. NONE	HAZWRAP	SITE CHARACTERIZATION SUMMARY, VOLUME I - TEXT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0009
N00221 / 000447 NONE CORRESPONDENCE NONE 0	**01-23-1992** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO AGENCY COMMENTS ON DRAFT FINAL REPORT ON DISTRIBUTION AND ENVIRONMENTAL FATE OF METALS AND ORGANOTIN IN MARE ISLAND STRAIT AT BUILDING 900	ADMIN RECORD	IA F2 SITE 00004	FRC - PERRIS	181-03-0180 31089137	BX 0008
N00221 / 000448 NONE CORRESPONDENCE NONE 0	**01-23-1992** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO AGENCY COMMENST ON DRAFT FINAL REPORT ON DISTRIBUTION AND ENVIRONMENTAL FATE OF METALS AND ORGANOTIN IN MARE ISLAND STRAIT AT BUILDING 900 AREA	ADMIN RECORD	IA F2 SITE 00004	FRC - PERRIS	181-03-0180 31089137	BX 0008
N00221 / 000460 NONE REPORT NONE 0	**01-27-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	AIR QUALITY SOLID WASTE ASSESSMENT TEST TECHNICAL MEMORANDUM (SWAT/TM)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0010

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N00221 / 000451 NONE REPORT NONE 0	**01-28-1992** 11-29-1999 5090.3.A. NONE	HAZWRAP	SITE CHARACTERIZATION SUMMARY, VOLUME II - TABLES AND FIGURES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0009
N00221 / 000459 NONE CORRESPONDENCE NONE 0	**01-30-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT REPORT ON GAS STREAM CHARACTERIZATION AND GAS MIGRATION TESTNG AT LANDFILL AND OIL SUMP SITE	ADMIN RECORD	IA H SITE 00001 SITE 00002	FRC - PERRIS	181-03-0180 31089137	BX 0010
N00221 / 000477 NONE REPORT NONE 0	**02-01-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	SEPTEMBER 1991 QUARTERLY SAMPLING FOR SANITARY LANDFILL - VOLUME I	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0010
N00221 / 000478 NONE REPORT NONE 0	**02-01-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	SEPTEMBER 1991 QUARTERLY SAMPLING FOR SANITARY LANDFILL - VOLUME II	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0010
N00221 / 000449 NONE CORRESPONDENCE NONE 0	**02-03-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF SITE CHARACTERIZATION SUMMARY FROM SI AND RI (VOLUMES I - IX)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0009
N00221 / 000464 NONE REPORT NONE 0	**02-03-1992** 11-29-1999 5090.3.C. NONE	PRC ENVIRONMENTAL MANAGEMENT	SEWAGE DIGESTER TANK REMOVAL ACTION (RM) PHASES III AND IV - INTERNAL DRAFT WORK PLAN (WP) ADDENDUM	SITE FILE	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0010

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N00221 / 000461 NONE CORRESPONDENCE NONE 0	**02-06-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF HAZARD RANKING SYSTEM (HRS) SITE DATA DRAFT REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0010
N00221 / 000527 NONE REPORT NONE 0	**02-06-1992** 11-29-1999 5090.3.A. NONE		NORTH BASE AREA INVESTIGATION - FINAL WORK PLAN (WP)	MISSING @ SWDIV		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000463 NONE CORRESPONDENCE NONE 0	**02-07-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT WORK PLAN (WP) DIGESTER TANK REMOVAL ACTION (RM) PHASES III/IV	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0010
N00221 / 000465 NONE CORRESPONDENCE NONE 0	**02-11-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT FACT SHEET FOR DIGESTER TANK REMOVAL ACTION (RM) PHASES III/IV	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0010
N00221 / 000466 NONE CORRESPONDENCE NONE 0	**02-11-1992** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO AGENCY COMMENTS ON REMEDIAL INVESTIGATION WORK PLAN (RI/WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0010
N00221 / 000479 NONE REPORT NONE 0	**03-06-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRAFT REPORT SITE INVESTIGATION (SI) OF BUILDING 593	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0010

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N00221 / 000480 NONE CORRESPONDENCE NONE 0	**03-06-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT REPORT SITE INVESTIGATION (SI) BUILDING 593	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0010
N00221 / 000504 NONE CORRESPONDENCE NONE 0	**03-11-1992** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO AGENCY COMMENTS ON SEWAGE DIGESTER TANKS REMOVAL ACTION (RM) DRAFT FINAL INTERIM REPORT	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0010
N00221 / 000503 NONE REPORT NONE 0	**03-20-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRAFT FACILITY LANDFILL SITE COMPREHENSIVE GROUNDWATER MONITORING PLAN - WORK PLAN (WP)	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0010
N00221 / 000491 NONE CORRESPONDENCE NONE 0	**03-24-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT FACILITY LANDFILL SITE COMPREHENSIVE GROUNDWATER MONITORING PLAN	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0010
N00221 / 000506 NONE REPORT NONE 0	**04-01-1992** 11-29-1999 5090.3.A. NONE	HAZWRAP	DATA VALIDATION SUMMARY FOR MARCH 1991 QUARTERLY SAMPLING	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0010
N00221 / 000507 NONE REPORT NONE 0	**04-01-1992** 11-29-1999 5090.3.A. NONE	HAZWRAP	DATA VALIDATION SUMMARY FOR JUNE 1991 QUARTERLY SAMPLING	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011

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N00221 / 000508 NONE CORRESPONDENCE NONE 0	**04-01-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF ACTIVITY FIELD DAILY LOGS FROM PHASE I REMEDIAL INVESTIGATION (RI) FIELD WORK	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000517 NONE REPORT NONE 0	**04-01-1992** 11-29-1999 5090.3.A. NONE	HAZWRAP	SITE CHARACTERIZATION SUMMARY, ADDENDUM I, DATA VALIDATION INTERPRETATION	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000518 NONE REPORT NONE 0	**04-01-1992** 11-29-1999 5090.3.A. NONE	HAZWRAP	SITE CHARACTERIZATION SUMMARY ADDENDUM II, VOLUME I, DATA VALIDATION (TEXT AND ATTACHMENTS A-G)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000519 NONE REPORT NONE 0	**04-01-1992** 11-29-1999 5090.3.A. NONE	HAZWRAP	SITE CHARACTERIZATION SUMMARY ADDENDUM II, VOLUME II, DATA VALIDATION (ATTACHMENTS H-M)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000510 NONE CORRESPONDENCE NONE 0	**04-09-1992** 11-29-1999 5090.3.A. NONE	U.S. EPA - SAN FRANCISCO, CA	EPA ACCEPTANCE OF DRAFT HAZARD RANKING SYSTEM (HRS) SITE DATA DATED 16 JULY 1991	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000513 NONE CORRESPONDENCE NONE 0	**04-14-1992** 11-29-1999 5090.3.A. NONE	BAAQMD	AGENCY COMMENTS ON DRAFT AIR QUALITY SOLID WASTE ASSESSMENT TEST (SWAT)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011

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N00221 / 000511 NONE CORRESPONDENCE NONE 0	**04-15-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF FACT SHEET AND PUBLIC NOTICE FOR DIGESTER TANK REMOVAL ACTION (RM) PHASES III AND IV	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000514 NONE CORRESPONDENCE NONE 0	**04-23-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DATA VALIDATION SUMMARY ADDENDUMS I AND II, SITE CHARACTERIZATION SUMMARY REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000521 NONE REPORT NONE 0	**04-27-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	AIR QUALITY SOLID WASTE ASSESSMENT TEST TECHNICAL MEMORANDUM (SWAT/TM)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000522 NONE CORRESPONDENCE NONE 0	**04-28-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF ADDITIONAL COPIES OF AIR QUALITY SWAT AT LANDFILL AND OIL SUMP SITE	ADMIN RECORD	IA H SITE 00001 SITE 00002	FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000697 NONE REPORT NONE 0	**05-01-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	PHASE II REMEDIAL INVESTIGATION (RI) - DRAFT QUALITY ASSURANCE PROJECT PLAN (QAPP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000648 NONE REPORT NONE 0	**05-28-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	SITE INVESTIGATION DRAFT FIELD WORK PLAN (SI/WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0012

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N00221 / 000531 NONE CORRESPONDENCE NONE 0	**05-29-1992** 11-29-1999 5090.3.A. NONE	NAVY	REQUEST FOR EXTENSION ON RESPONSE TO COMMENTS ON SITE CHARACTERIZATION SUMMARY REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000561 NONE REPORT NONE 0	**05-29-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	SEWAGE DIGESTER TANKS PHASE 3 AND 4 REMOVAL ACTION WORK PLAN ADDENDUM (RM/WP)	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000563 NONE CORRESPONDENCE NONE 0	**06-02-1992** 11-29-1999 5090.3.A. NONE	NAVY	NOTICE OF DELAY IN SUBMISSION OF FINAL SITE INSPECTION (SI) REPORT FOR BUILDING 593	ADMIN RECORD	BLDG. 593	FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000562 NONE REPORT NONE 0	**06-08-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRAFT WORK PLAN - INVESTIGATION DERIVED WASTE (IDW) MANAGEMENT PLAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000533 NONE CORRESPONDENCE NONE 0	**06-17-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF FINAL WORK PLAN (WP) ADDENDUM FOR PHASE 3 AND 4 SEWAGE DIGESTER TANKS REMOVAL ACTION (RM)	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000547 NONE CORRESPONDENCE NONE 0	**06-17-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF INVESTIGATION DERIVED WASTE (IDW) MANAGEMENT PLAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011

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N00221 / 000565 NONE CORRESPONDENCE NONE 0	**06-30-1992** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO AGENCY COMMENTS ON DRAFT WORK PLAN (WP) ADDENDUM FOR SEWAGE DIGESTER TANK REMOVAL ACTION (RM) PHASE III AND IV	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000566 NONE CORRESPONDENCE NONE 0	**06-30-1992** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO AGENCY COMMENTS ON DRAFT WORK PLAN (WP) ADDENDUM FOR SEWAGE DIGESTER TANK REMOVAL ACTION (RM) PHASE III AND IV	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000567 NONE CORRESPONDENCE NONE 0	**06-30-1992** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO AGENCY COMMENTS ON SITE CHARACTERIZATION SUMMARY REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000568 NONE CORRESPONDENCE NONE 0	**06-30-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT PHASE II REMEDIAL INVESTIGATION WORK PLANS (WP, FSP, HASP, CRP, AND DMP) (RI/WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000582 NONE CORRESPONDENCE NONE 0	**06-30-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT PHASE II REMEDIAL INVESTIGATION QUALITY ASSURANCE PROJECT PLAN (RI/QAPP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000529 NONE MINUTES NONE 0	**07-07-1992** 11-29-1999 5090.3.A. NONE	NAVY	MEETING MINUTES FROM 19 MAY 1992 PROJECT MEETING	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011

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N00221 / 000598 NONE REPORT NONE 0	**07-08-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	SLUDGE DIGESTER REMOVAL AND DISPOSAL ACTIVITY, APPENDIX A - HEALTH AND SAFETY PLAN (HASP)	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000616 NONE REPORT NONE 0	**07-13-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRY DOCK NO. 3 QUARTERLY SAMPLING REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0012
N00221 / 000599 NONE REPORT N62474-88-D-5086 0	**07-15-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT NAVFAC - SOUTHWEST DIVISION	JANUARY 1992 QUARTERLY SAMPLING OF INDUSTRIAL WASTEWATER TREATMENT PLANT (IWTP) SURFACE POND AND LANDFILL MONITORING WELLS, VOLUME I	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000600 NONE REPORT N62474-88-D-5086 0	**07-15-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT NAVFAC - SOUTHWEST DIVISION	JANUARY 1992 QUARTERLY SAMPLING OF INDUSTRIAL WASTEWATER TREATMENT PLANT (IWTP) SURFACE POND AND LANDFILL MONITORING WELLS, VOLUME II: APPENDICES B-E	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0012
N00221 / 000596 NONE CORRESPONDENCE NONE 0	**07-17-1992** 11-29-1999 5090.3.A. NONE	NAVY	AGENCY COMMENTS ON SITE INVESTIGATION (SI) REPORT OF BUILDING 593	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0011

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N00221 / 000597 NONE CORRESPONDENCE NONE 0	**07-17-1992** 11-29-1999 5090.3.A. NONE	NAVY	NOTICE OF DELAY IN SUBMISSION OF RESPONSE TO COMMENTS ON DRAFT FACILITY LANDFILL SITE COMPREHENSIVE GROUNDWATER MONITORING WORK PLAN (WP)	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0011
N00221 / 000601 NONE REPORT NONE 0	**07-17-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	LEAD OXIDE STUDY REPORT	ADMIN RECORD	IA B SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0012
N00221 / 000602 NONE CORRESPONDENCE NONE 0	**07-30-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT SITE INVESTIGATION (SI) LEAD OXIDE STUDY REPORT	ADMIN RECORD	IA B SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0012
N00221 / 000632 NONE MINUTES NONE 0	**08-14-1992** 11-29-1999 5090.3.A. NONE	NAVY	MEETING MINUTES - 10 JULY 92 PROJECT MEETING	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0012
N00221 / 000618 NONE CORRESPONDENCE NONE 0	**08-19-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF REVISED SECTION 4.8 OF PHASE II RI FIELD SAMPLING PLAN (SP) CONCERNING LEAD OXIDE AREAS	ADMIN RECORD	IA B SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0012
N00221 / 000650 NONE CORRESPONDENCE NONE 0	**08-26-1992** 11-29-1999 5090.3.A. NONE	NAVY	LETTER DESCRIBING REVISED SLUDGE DIGESTER SAMPLING PLAN (SP)	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0012

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N00221 / 000007 NONE CORRESPONDENCE N62474-88-D-5086 300	**09-03-1992** 08-11-2000 5090.3.A. 00210	PRC ENVIRONMENTAL MANAGEMENT NAVFAC - WESTERN DIVISION	SITE INVESTIGATION (SI) DRAFT FIELD WORK PLAN (FWP)	ADMIN RECORD	BLDG. 505 BLDG. 633 BLDG. 637 BLDG. 742 BLDG. 796	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000649 NONE REPORT NONE 0	**09-04-1992** 11-29-1999 5090.3.A. NONE		APPENDIX D, SITE INVESTIGATION HEALTH AND SAFETY PLAN (SI/HASP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0012
N00221 / 000634 NONE CORRESPONDENCE NONE 0	**09-10-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT FIELD WORK PLAN (WP), AND HEALTH AND SAFETY PLAN (HASP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0012
N00221 / 000652 NONE MINUTES NONE 0	**09-20-1992** 11-29-1999 5090.3.A. NONE	NAVY	MONTHLY MEETING MINUTES - 10 JULY 1992 AND 19 AUGUST 1992	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0012
N00221 / 000655 NONE REPORT N62474-88-D-5086 0	**09-29-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT NAVFAC - SOUTHWEST DIVISION	APRIL 1992 QUARTERLY SAMPLING INDUSTRIAL WASTEWATER TREATMENT PLANT (IWTP), SURFACE POND, AND LANDFILL MONITORING WELLS, VOLUME II: APPENDICES B-E	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0012
N00221 / 000656 NONE CORRESPONDENCE NONE 0	**09-29-1992** 11-29-1999 5090.3.A. NONE	DTSC	FEDERAL FACILITY SITE REMEDIATION AGREEMENT (FFSRA) - (SEE AR #638 - INTERNAL DRAFT AMENDED SITE MANAGEMENT PLAN AND #639 - DRAFT AMENDED SITE MANAGEMENT PLAN)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0012

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N00221 / 000654 NONE REPORT N62474-88-D-5086 0	**09-30-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT NAVFAC - SOUTHWEST DIVISION	APRIL 1992 QUARTERLY SAMPLING INDUSTRIAL WASTEWATER TREATMENT PLANT (IWTP), SURFACE POND, AND LANDFILL MONITORING WELLS, VOLUME I	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0012
N00221 / 000698 NONE REPORT NONE 0	**10-15-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	FINAL FACILITY LANDFILL SITE COMPREHENSIVE GROUNDWATER MONITORING PLAN WORK PLAN (WP) VOLUME II	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000714 NONE CORRESPONDENCE NONE 0	**10-16-1992** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO RWQCB'S COMMENTS ON DRAFT FACILITY LANDFILL SITE COMPREHENSIVE GROUNDWATER MONITORING PLAN	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000700 NONE CORRESPONDENCE NONE 0	**10-18-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF FINAL FACILITY LANDFILL SITE COMPREHENSIVE GROUNDWATER MONITORING PLAN WORK PLAN (WP) VOLUMES I AND II	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000713 NONE CORRESPONDENCE NONE 0	**10-20-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	SUBMISSION OF REVISED MISSING PAGES FOR FINAL FACILITY LANDFILL SITE COMPREHENSIVE GROUNDWATER MONITORING PLAN WORK PLAN (WP) VOLUME II	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000715 NONE REPORT NONE 0	**10-20-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	FINAL REPORT SITE INVESTIGATION (SI) OF BUILDING 593	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0013

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N00221 / 000716 NONE CORRESPONDENCE NONE 0	**10-20-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	RESPONSE TO COMMENTS ON DRAFT REPORT SITE INVESTIGATION (SI) OF BUILDING 593	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000717 NONE CORRESPONDENCE NONE 0	**10-21-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF FINAL REPORT SITE INVESTIGATION (SI) OF BUILDING 593	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000664 NONE REPORT NONE 0	**10-28-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	PHASE II REMEDIAL INVESTIGATION (RI), FINAL DATA MANAGEMENT PLAN (DMP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000665 NONE REPORT N62474-88-D-5086 0	**10-29-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT NAVFAC - WESTERN DIVISION	PHASE II REMEDIAL INVESTIGATION (RI), FINAL QUALITY ASSURANCE PROJECT PLAN (QAPP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000659 NONE REPORT NONE 0	**10-30-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	PHASE II REMEDIAL INVESTIGATION (RI), FINAL HEALTH AND SAFETY PLAN (HASP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0012
N00221 / 000730 NONE REPORT NONE 0	**11-13-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRAFT WORK PLAN/FIELD SAMPLING PLAN (WP/SP) FOR REMOVAL ACTION (RM) FOR CHROMIC ACID TANK SUMP AT BUILDING 225	ADMIN RECORD	IA C SITE 00015	FRC - PERRIS	181-03-0180 31089137	BX 0013

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N00221 / 000731 NONE REPORT NONE 0	**11-16-1992** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	HEALTH AND SAFETY PLAN FOR REMOVAL ACTION (HASP/RM) FOR CHROMIC ACID TANK SUMP, ELECTROPLATING SHOP AT BUILDING 225	ADMIN RECORD	IA C SITE 00015	FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000667 NONE CORRESPONDENCE NONE 0	**11-17-1992** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT REPORT REMOVAL ACTION (RM) FOR CHROMIC ACID TANK SUMP BUILDING 225	ADMIN RECORD	IA C SITE 00015	FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000680 NONE MINUTES NONE 0	**12-01-1992** 11-29-1999 5090.3.A. NONE	NAVY	MONTHLY MEETING MINUTES - 20 OCTOBER 1992	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000682 NONE MINUTES NONE 0	**01-04-1993** 11-29-1999 5090.3.A. NONE	NAVY	MONTHLY MEETING MINUTES - 20 NOVEMEBR 1992	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000660 NONE REPORT NONE 0	**01-12-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	PHASE II REMEDIAL INVESTIGATION (RI), FINAL PROJECT WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000661 NONE REPORT N62474-88-D-5086 0	**01-25-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT NAVFAC - WESTERN DIVISION	PHASE II REMEDIAL INVESTIGATION (RI), FINAL FIELD SAMPLING AND ANALYSIS PLAN (SAP), VOLUME I	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0013

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N00221 / 000662 NONE REPORT N62474-88-D-5086 0	**01-25-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT NAVFAC - WESTERN DIVISION	PHASE II REMEDIAL INVESTIGATION (RI), FINAL FIELD SAMPLING AND ANALYSIS PLAN (SAP), VOLUME II: TABLES AND FIGURES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000663 NONE REPORT N62474-88-D-5086 0	**01-25-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT NAVFAC - WESTERN DIVISION	PHASE II REMEDIAL INVESTIGATION (RI), FINAL FIELD SAMPLING AND ANALYSIS PLAN (SAP), VOLUME III: APPENDICES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000684 NONE CORRESPONDENCE NONE 0	**01-27-1993** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF FINAL REPORT PREPARATION OF WORK PLANS (WP) FOR PHASE II RI/FS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000732 NONE CORRESPONDENCE NONE 0	**01-27-1993** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO COMMENTS ON DRAFT WORK PLANS FOR PHASE II RI/FS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000657 NONE REPORT N62474-88-D-5086 0	**01-28-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT NAVFAC - SOUTHWEST DIVISION	JUNE 1992 QUARTERLY SAMPLING INDUSTRIAL WASTEWATER TREATMENT PLANT (IWTP), SURFACE POND, LANDFILL MONITORING WELLS, VOLUME I	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0012

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N00221 / 000658 NONE REPORT N62474-88-D-5086 0	**01-28-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT NAVFAC - SOUTHWEST DIVISION	JUNE 1992 QUARTERLY SAMPLING INDUSTRIAL WASTEWATER TREATMENT PLANT (IWTP), SURFACE POND, LANDFILL MONITORING WELLS, VOLUME II: APPENDICES B-E	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0012
N00221 / 000733 NONE CORRESPONDENCE NONE 0	**01-28-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	SUBMISSION OF JUNE 1992 QUARTERLY GROUNDWATER SAMPLING REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000734 NONE MINUTES NONE 0	**01-29-1993** 11-29-1999 5090.3.A. NONE	NAVY	MONTHLY MEETING MINUTES FOR 06 JANUARY 1993, AND REVISIONS TO 20 OCTOBER 1992 AND 20 NOVEMBER 1992 MINUTES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0013
N00221 / 000736 NONE CORRESPONDENCE NONE 0	**02-19-1993** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO COMMENTS ON TECHNICAL MEMORANDUM (TM) SLUDGE DIGESTER TANK REMOVAL ACTION (RM)	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000740 NONE REPORT NONE 0	**02-22-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	BASEWIDE SURVEY OF GROUNDWATER MONITORING WELLS VOLUME II, BORING LOGS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000737 NONE CORRESPONDENCE NONE 0	**02-26-1993** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO COMMENTS ON TECHNICAL MEMORANDUM (TM), AND HEALTH AND SAFETY PLAN (HASP) FOR BUILDING 690 ADDITION	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014

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N00221 / 000739 NONE CORRESPONDENCE NONE 0	**03-08-1993** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO COMMENTS ON LEAD OXIDE CHARACTERIZATION STUDY	ADMIN RECORD	IA B SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000741 NONE CORRESPONDENCE NONE 0	**03-09-1993** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO COMMENTS ON FACILITY LANDFILL SITE COMPREHENSIVE GROUNDWATER MONITORING PLAN	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000742 NONE MINUTES NONE 0	**03-10-1993** 11-29-1999 5090.3.A. NONE	NAVY	MONTHLY MEETING MINUTES - 02 FEBUARY 1993	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000744 NONE CORRESPONDENCE NONE 0	**03-31-1993** 11-29-1999 5090.3.A. NONE	NAVY	REQUEST FOR EXTENSION FOR SUBMITTAL OF DRAFT INITIAL SCREENING OF REMEDIAL ALTERNATIVES REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000746 NONE MINUTES NONE 0	**04-15-1993** 11-29-1999 5090.3.A. NONE	NAVY	MONTHLY MEETING MINUTES - 17 MARCH 1993	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000748 NONE CORRESPONDENCE NONE 0	**04-21-1993** 11-29-1999 5090.3.A. NONE	NAVY	REQUEST FOR AN EXTENSION FOR SUBMITTAL OF THE DETAILED ANALYSIS OF ALTERNATIVES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014

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N00221 / 000750 NONE REPORT N62474-88-D-5086 0	**04-23-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT NAVFAC - SOUTHWEST DIVISION	SEPTEMBER 1992 QUARTERLY SAMPLING REPORT FOR INDUSTRIAL WASTEWATER TREATMENT PLANT (IWTP) SURFACE POND AND LANDFILL MONITORING WELLS, VOLUME I: TEXT AND APPENDIX	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000751 NONE REPORT N62474-88-D-5086 0	**04-23-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT NAVFAC - SOUTHWEST DIVISION	SEPTEMBER 1992 QUARTERLY SAMPLING REPORT FOR INDUSTRIAL WASTEWATER TREATMENT PLANT (IWTP) SURFACE POND AND LANDFILL MONITORING WELLS, VOLUME II: APPENDICES B-E	ADMIN RECORD	IA H SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000752 NONE MINUTES NONE 0	**04-28-1993** 11-29-1999 5090.3.A. NONE	NAVY	MONTHLY MEETING MINUTES - 16 APRIL 1993	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000754 NONE CORRESPONDENCE NONE 0	**04-29-1993** 11-29-1999 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION	REQUEST FOR EXTENSION FOR SUBMITTAL OF FINAL FIELD SAMPLING AND ANALYSIS PLAN (SAP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000755 NONE CORRESPONDENCE NONE 0	**05-17-1993** 11-29-1999 5090.3.A. NONE	NAVY	COMPLIANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS REGARDING MANAGEMENT OF INVESTIGATION DERIVED WASTE (IDW)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000756 NONE CORRESPONDENCE NONE 0	**05-17-1993** 11-29-1999 5090.3.A. NONE	NAVY	NAVY RESPONSE TO AGENCY LETTER REGARDING QUANTITATION LIMITS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014

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N00221 / 000757 NONE CORRESPONDENCE NONE 0	**06-04-1993** 11-29-1999 5090.3.A. NONE	NAVY	DISPUTE RESOLUTION RE: DRAFT INITIAL SCREENING OF REMEDIAL ALTERNATIVES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000758 NONE CORRESPONDENCE NONE 0	**06-04-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	LETTER SUMMARIZING REMAINING FIELD WORK ON DIGESTER TANK SITE REMOVAL ACTION (RM) PHASES III AND IV	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000759 NONE CORRESPONDENCE NONE 0	**06-14-1993** 11-29-1999 5090.3.A. NONE	NAVY	REVISED FINAL WORK PLAN (WP) DIGESTER TANK SITE REMOVAL ACTION (RM) PHASES III AND IV	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000760 NONE CORRESPONDENCE NONE 0	**06-14-1993** 11-29-1999 5090.3.A. NONE	NAVY	CONFIRMATION OF REVISED SUBMITTAL DATE FOR DRAFT INITIAL SCREENING OF REMEDIAL ALTERNATIVES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000761 NONE MINUTES NONE 0	**06-14-1993** 11-29-1999 5090.3.A. NONE	NAVY	MONTHLY MEETING MINUTES - 18 MAY 1993	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000862 NONE REPORT NONE 0	**06-17-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRAFT INITIAL SCREENING OF REMEDIAL ALTERNATIVES REPORT - VOLUME I	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014

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N00221 / 000863 NONE REPORT NONE 0	**06-17-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRAFT INITIAL SCREENING OF REMEDIAL ALTERNATIVES REPORT - VOLUME II	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000864 NONE CORRESPONDENCE NONE 0	**06-24-1993** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT INITIAL SCREENING OF REMEDIAL ALTERNATIVES REPORT - VOLUME II	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0015
N00221 / 000764 NONE REPORT NONE 0	**06-30-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	PRELIMINARY ASSESSMENT/SITE INSPECTION (PA/SI) DRAFT FIELD WORK PLAN (WP) NON-RADIALOGICAL SITES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000765 NONE REPORT NONE 0	**06-30-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	PRELIMINARY ASSESSMENT/SITE INSPECTION (PA/SI) DRAFT FIELD WORK PLAN (WP) RADIOLOGICAL SITES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000766 NONE REPORT NONE 0	**06-30-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	PRELIMINARY ASSESSMENT/SITE INSPECTION (PA/SI) APPENDICES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000763 NONE CORRESPONDENCE NONE 0	**07-01-1993** 11-29-1999 5090.3.A. NONE	CRWQCB	EXTENSION OF INFORMAL DISPUTE RESOLUTION PERIOD	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014

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N00221 / 000767 NONE CORRESPONDENCE NONE 0	**07-06-1993** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF PA/SI DRAFT FIELD WORK PLANS, RADIOLOGICAL AND NON-RADIOLOGICAL SITES, AND APPENDICES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000779 NONE CORRESPONDENCE NONE 0	**07-30-1993** 11-29-1999 5090.3.A. NONE	CRWQCB	RESOLUTION OF DISPUTE OVER QUANTITATION LIMITS AND ACCEPTANCE OF FINAL PHASE II SAMPLING AND ANALYSIS PLAN (SAP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000780 NONE MINUTES NONE 0	**08-03-1993** 11-29-1999 5090.3.A. NONE	NAVY	MONTHLY MEETING MINUTES BETWEEN - 15 JUNE 1993 AND 09 JULY 1993	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000801 NONE CORRESPONDENCE NONE 0	**08-26-1993** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSES TO COMMENTS ON PHASE II RI/FS AND ANALYSIS PLAN: VOLUMES I, II, AND III	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000802 NONE CORRESPONDENCE NONE 0	**08-26-1993** 11-29-1999 5090.3.A. NONE	NAVY	EXTENSION OF THE COMMENT PERIOD FOR THE DRAFT INITIAL SCREENING OF REMEDIAL ALTERNATIVES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014
N00221 / 000803 NONE MINUTES NONE 0	**09-07-1993** 11-29-1999 5090.3.A. NONE	NAVY	MONTHLY MEETING MINUTES - 13 AUGUST 1993	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0014

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N00221 / 000879 NONE REPORT NONE 0	**09-16-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	FINAL WORK PLAN/FIELD SAMPLING (WP/SP) REMOVAL ACTION (RM) FOR BUILDING 225 CHROMIC ACID TANK SUMP	ADMIN RECORD INFO REPOSITORY	IA C SITE 00015	FRC - PERRIS	181-03-0180 31089137	BX 0015
N00221 / 000880 NONE REPORT NONE 0	**09-17-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	FINAL HEALTH AND SAFETY PLAN, REMOVAL ACTION FOR CHROMIC ACID SUMP, ELECTROPLATING SHOP, BUILDING 225	ADMIN RECORD	IA C SITE 00015	FRC - PERRIS	181-03-0180 31089137	BX 0015
N00221 / 000893 NONE CORRESPONDENCE NONE 0	**09-17-1993** 11-29-1999 5090.3.A. NONE	NAVY	NAVY RESPONSE TO DTSC COMMENTS ON FINAL WORK PLAN/FIELD SAMPLING PLAN (WP/SP) FOR BUILDING 225 CHROMIC ACID SUMP	ADMIN RECORD	IA C SITE 00015	FRC - PERRIS	181-03-0180 31089137	BX 0015
N00221 / 000878 NONE CORRESPONDENCE NONE 0	**09-21-1993** 11-29-1999 5090.3.A. NONE	NAVY	INVESTIGATION OF UNDERGROUND STORAGE TANKS, CLARIFY STATUS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0015
N00221 / 000881 NONE CORRESPONDENCE NONE 0	**09-29-1993** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF FINAL WORK PLAN/FIELD SAMPLING PLAN (WP/SP) FOR BUILDING 225 CHROMIC ACID TANK SUMP	ADMIN RECORD	IA C SITE 00015	FRC - PERRIS	181-03-0180 31089137	BX 0015
N00221 / 000939 NONE REPORT NONE 0	**10-01-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	FINAL PHASE II REMEDIAL INVESTIGATION FIELD SAMPLING AND ANALYSIS PLAN (/RISAP), VOLUME I: TEXT AND TABLES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0017

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N00221 / 000940 NONE REPORT NONE 0	**10-01-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	FINAL PHASE II REMEDIAL INVESTIGATION FIELD SAMPLING AND ANALYSIS PLAN (SAP), VOLUME II: FIGURES AND APPENDICES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 000894 NONE CORRESPONDENCE NONE 0	**10-06-1993** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF 22 SEPTEMBER 1993 MEETING MINUTES BETWEEN DTSC, RWQCB, NAVY AND PRC	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0015
N00221 / 000912 NONE CORRESPONDENCE NONE 0	**10-14-1993** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF FINAL PHASE II REMEDIAL INVESTIGATION FIELD SAMPLING AND ANALYSIS PLAN (RI/SAP), VOLUMES I AND II	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000913 NONE CORRESPONDENCE NONE 0	**10-25-1993** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF SITE INVESTIGATIONS (SI) AT BUILDINGS 505, 637/639, 633, 742, 796 AND 1300 AND PRELIMINARY ASSESSMENT (PA) AT NORTH SHORE PIERS AND SOUTH SHORE TIDA	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000914 NONE CORRESPONDENCE NONE 0	**10-29-1993** 11-29-1999 5090.3.A. NONE	DTSC	COMMENTS ON DRAFT INITIAL SCREENING OF REMEDIAL ALTERNATIVES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000916 NONE REPORT NONE 0	**12-03-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	PRELIMINARY ASSESSMENT FINAL FIELD WORK PLAN FOR RADIOLOGICAL SITES (PA/WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016

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N00221 / 000917 NONE REPORT NONE 0	**12-03-1993** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	PRELIMINARY ASSESSMENT/SITE INSPECTION FINAL FIELD WORK PLAN FOR NON-RADIOLOGICAL SITES (PA/SI/WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000915 NONE CORRESPONDENCE NONE 0	**12-06-1993** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT FINAL PRELIMINARY ASSESSMENT/SITE INSPECTION FIELD WORK PLAN FOR NON-RADIOLOGICAL SITES AND RADIOLOGICAL SITES (PA/SI/WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000897 NONE CORRESPONDENCE NONE 0	**01-06-1994** 11-29-1999 5090.3.A. NONE	ACHP	NO ADVERSE AFFECT DETERMINATION	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0015
N00221 / 000896 NONE CORRESPONDENCE NONE 0	**01-13-1994** 11-29-1999 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION	FACT SHEET AND RESTORATION ADVISORY BOARD (RAB) APPLICATION	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0015
N00221 / 000918 NONE CORRESPONDENCE NONE 0	**01-27-1994** 11-29-1999 5090.3.A. NONE	DTSC	COMMENTS ON DRAFT FINAL INSTALLATION RESTORATION PROGRAM COMMUNITY RELATIONS PLAN (CRP)	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000919 NONE CORRESPONDENCE NONE 0	**02-10-1994** 11-29-1999 5090.3.A. NONE	U.S. EPA - SAN FRANCISCO, CA	COMMENTS ON REMEDIAL INVESTIGATION (RI) PHASE II QUALITY ASSURANCE PROJECT PLAN (QAPP) AND QUALITY ASSURANCE (QA) ISSUES FROM PROJECT MANAGER'S MEETING OF 02 FEBR	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016

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N00221 / 000920 NONE CORRESPONDENCE NONE 0	**02-15-1994** 11-29-1999 5090.3.A. NONE	NAVY	NOTIFICATION OF CHANGE IN REMEDIAL PROJECT MANAGER (RPM) STAFF	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000921 NONE MINUTES N62474-88-D-5086 0	**02-28-1994** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT NAVFAC - SOUTHWEST DIVISION	MINUTES FROM RESTORATION ADVISORY BOARD (RAB) KICKOFF MEETING OF 03 FEBRUARY 1994	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000929 NONE REPORT NONE 0	**03-08-1994** 11-29-1999 5090.3.A. NONE	NAVY	BASE REALIGNMENT AND CLOSURE (BRAC) CLEANUP PLAN (BCP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000922 NONE MINUTES NONE 0	**03-22-1994** 11-29-1999 5090.3.A. NONE	NAVY	MONTHLY PROJECT MANAGERS MEETING MINUTES - REVISED MINUTES FROM 08 FEBRUARY 1994 AND MINUTES FROM 01 MARCH 1994 MEETING	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000924 NONE REPORT NONE 0	**03-22-1994** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRAFT DETAILED WORK PLAN FOR THE BASELINE HUMAN HEALTH RISK ASSESSMENT (WP,HHRA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000923 NONE CORRESPONDENCE NONE 0	**03-25-1994** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT DETAILED WORK PLAN FOR THE BASELINE HUMAN HEALTH RISK ASSESSMENT (WP/HHRA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016

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N00221 / 000926 NONE REPORT NONE 0	**04-07-1994** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	INVESTIGATION-DERIVED WASTE (IDW) MANAGEMENT PLAN, INTERIM FINAL	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000925 NONE CORRESPONDENCE NONE 0	**04-13-1994** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF INVESTIGATION-DERIVED WASTE (IDW) MANAGEMENT PLAN, INTERIM FINAL	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000927 NONE CORRESPONDENCE NONE 0	**04-25-1994** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF SCHEDULE OF REMOVAL ACTION (RM) ACTIVITIES AT THE ELECTROPLATING SHOP, BUILDING 225	ADMIN RECORD	IA C SITE 00015	FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000928 NONE CORRESPONDENCE NONE 0	**04-29-1994** 11-29-1999 5090.3.A. NONE	NAVY	DISTRIBUTION OF BASE REALIGNMENT AND CLOSURE (BRAC) CLEANUP PLAN (BCP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000930 NONE CORRESPONDENCE NONE 0	**05-01-1994** 11-29-1999 5090.3.A. NONE	NAVY	NOTIFICATION OF CHANGE IN REMEDIAL PROJECT MANAGER (RPM) STAFF	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000932 NONE REPORT NONE 0	**05-09-1994** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	REMOVAL ACTION (RM) DRAFT SUMMARY REPORT FOR SLUDGE DIGESTER TANKS PHASES 3 AND 4	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0016

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N00221 / 000931 NONE CORRESPONDENCE NONE 0	**05-13-1994** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF REMOVAL ACTION (RM) DRAFT SUMMARY REPORT FOR SLUDGE DIGESTER TANKS PHASES 3 AND 4	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000934 NONE REPORT NONE 0	**06-14-1994** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	FINAL REPORT FOR BASEWIDE SURVEY OF GROUNDWATER MONITORING WELLS	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000933 NONE CORRESPONDENCE NONE 0	**06-22-1994** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF FINAL REPORT FOR BASEWIDE SURVEY OF GROUNDWATER MONITORING WELLS	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0016
N00221 / 000944 NONE REPORT NONE 0	**08-08-1994** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	TECHNICAL REPORT INTERIM SITE DESCRIPTION REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 000935 NONE CORRESPONDENCE NONE 0	**08-14-1994** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF TECHNICAL MEMORANDUM (TM) AUGUST 1994 COMPLIANCE GROUNDWATER MONITORING	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 000936 NONE REPORT NONE 0	**08-23-1994** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	FEBRUARY 1994 BASEWIDE QUARTERLY GROUNDWATER SAMPLING REPORT	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0017

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N00221 / 000946 NONE REPORT NONE 0	**08-25-1994** 11-29-1999 5090.3.A. NONE	NAVY	DRAFT WORK PLAN FOR UNEXPLODED ORDNANCE SITE INVESTIGATION OF DREDGE SPOILS PONDS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 000938 NONE REPORT NONE 0	**08-31-1994** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	PHASE II REMEDIAL INVESTIGATION QUALITY ASSURANCE PROJECT PLAN (RI/QAPP) APPENDICES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 000954 NONE REPORT NONE 0	**08-31-1994** 11-29-1999 5090.3.A. NONE	NAVY	UNEXPLODED ORDNANCE SITE INVESTIGATION DRAFT HEALTH AND SAFETY PLAN (UXO/SI/HASP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 000942 NONE REPORT NONE 0	**09-01-1994** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	PRELIMINARY ASSESSMENT/SITE INSPECTION DRAFT SUMMARY REPORT FOR NON-RADIOLOGICAL SITES (PA/SI)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 000958 NONE REPORT NONE 0	**09-09-1994** 11-29-1999 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION	DRAFT ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR THE FORMER BASE EXCHANGE GASOLINE STATION	ADMIN RECORD	IA B SITE 00018	FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 000947 NONE REPORT NONE 0	**09-13-1994** 11-29-1999 5090.3.A. NONE	NAVY	DRAFT WORK PLAN (WP) FOR UNEXPLODED ORDNANCE SITE INVESTIGATION (UXO/SI) OF ABOVE GROUND MAGAZINE AREA	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0017

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N00221 / 000937 NONE CORRESPONDENCE NONE 0	**09-14-1994** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO AGENCY COMMENTS ON FINAL PHASE II QAPP AND EPA EVALUATION OF FIELD LABS AND SUBMISSION OF REVISED SECTIONS FOR PHASE II QAPP AND APPENDICES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 000962 NONE REPORT NONE 0	**09-19-1994** 11-29-1999 5090.3.A. NONE	NAVY	DRAFT ACTION MEMORANDUM (AM) FOR IR SITE 19, METAL PARTS CLEANING FACILITY	ADMIN RECORD	IA C SITE 00019	FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 000963 NONE REPORT NONE 0	**09-19-1994** 11-29-1999 5090.3.A. NONE	NAVY	DRAFT REMOVAL ACTION PLAN (RM/RAP) FOR IR SITE 19, METAL PARTS CLEANING FACILITY	ADMIN RECORD	IA C SITE 00019	FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 000941 NONE CORRESPONDENCE NONE 0	**09-21-1994** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF PRELIMINARY ASSESSMENT/SITE INSPECTION DRAFT SUMMARY REPORT FOR NON-RADIOLOGICAL SITES (PA/SI)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 000943 NONE CORRESPONDENCE NONE 0	**09-22-1994** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF TECHNICAL REPORT INTERIM SITE DESCRIPTION REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 000945 NONE CORRESPONDENCE NONE 0	**09-22-1994** 11-29-1999 5090.3.A. NONE	NAVFAC - EFA WEST NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF DRAFT WORK PLANS FOR UNEXPLODED ORDNANCE SITE INVESTIGATION (UXO/SI) OF DREDGE SPOILS PONDS AND ABOVE GROUND MAGAZINE AREA	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0017

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N00221 / 000948 NONE REPORT NONE 0	**09-22-1994** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	MAY 1994 BASEWIDE QUARTERLY GROUNDWATER SAMPLING REPORT	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 000949 NONE CORRESPONDENCE NONE 0	**09-23-1994** 11-29-1999 5090.3.A. NONE	NAVY	REVISED FEDERAL FACILITY SITE REMEDIATION AGREEMENT (FFSRA) SCHEDULE	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 000950 NONE CORRESPONDENCE NONE 0	**09-26-1994** 11-29-1999 5090.3.A. NONE	NAVY NAVFAC - SOUTHWEST DIVISION	CLARIFICATION OF REVISED FEDERAL FACILITY SITE REMEDIATION AGREEMENT SCHEDULE	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 000967 NONE REPORT NONE 0	**09-26-1994** 11-29-1999 5090.3.A. NONE	NAVY	DRAFT ACTION MEMORANDUM (AM) - SITE 07/20	ADMIN RECORD	IA C SITE 00007 SITE 00020	FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000951 NONE CORRESPONDENCE NONE 0	**09-28-1994** 11-29-1999 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION	DISTRIBUTION OF ERATA SHEET TO THE FINAL COMMUNITY RELATIONS PLAN (CRP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 000952 NONE MINUTES NONE 0	**09-28-1994** 11-29-1999 5090.3.A. NONE	NAVY	PROJECT MANAGER MEETING MINUTES - 02 AUGUST 1994 AND MONTHLY STATUS REPORT - AUGUST 1994	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0017

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N00221 / 000993 NONE REPORT NONE 0	**09-28-1994** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	REMOVAL ACTION (RM) FOR BUILDING 225 - WORK PLAN/FIELD SAMPLING PLAN (WP/SP)	INFO REPOSITORY	IA C SITE 00015	FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000953 NONE CORRESPONDENCE NONE 0	**09-30-1994** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF UNEXPLODED ORDNANCE SITE INVESTIGATION DRAFT HEALTH AND SAFETY PLAN (UXO/SI/HASP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0017

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N00221 / 000956 NONE REPORT NONE 0	**09-30-1994** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRAFT FINAL INSTALLATION RESTORATION (IR) SITES 01 THROUGH 24 DETAILED WORK PLAN FOR BASELINE HUMAN HEALTH RISK ASSESSMENTS (WP/HHRA)	ADMIN RECORD	BASEWIDE SITE 00001 SITE 00002 SITE 00003 SITE 00004 SITE 00005 SITE 00006 SITE 00007 SITE 00008 SITE 00009 SITE 00010 SITE 00011 SITE 00012 SITE 00013 SITE 00014 SITE 00015 SITE 00016 SITE 00017 SITE 00018 SITE 00019 SITE 00020 SITE 00021 SITE 00022 SITE 00023 SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 000960 NONE REPORT NONE 0	**09-30-1994** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	ACTION MEMORANDUM (AM), FORMER ELECTROPLATING SHOP	ADMIN RECORD	IA C SITE 00015	FRC - PERRIS	181-03-0180 31089137	BX 0017

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N00221 / 000970 NONE REPORT NONE 0	**09-30-1994** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	FINAL ACTION MEMORANDUM (AM) FORMER ELECTROPLATING SHOP	ADMIN RECORD	IA C SITE 00015	FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000955 NONE CORRESPONDENCE NONE 0	**10-04-1994** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT FINAL INSTALLATION RESTORATION (IR) SITES 01 THROUGH 24 DETAILED WORK PLAN FOR BASELINE HUMAN HEALTH RISK ASSESSMENTS (WP/HHRA)	ADMIN RECORD	BASEWIDE SITE 00001 SITE 00002 SITE 00003 SITE 00004 SITE 00005 SITE 00006 SITE 00007 SITE 00008 SITE 00009 SITE 00010 SITE 00011 SITE 00012 SITE 00013 SITE 00014 SITE 00015 SITE 00016 SITE 00017 SITE 00018 SITE 00019 SITE 00020 SITE 00021 SITE 00022 SITE 00023 SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0017

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N00221 / 000957 NONE CORRESPONDENCE NONE 0	**10-06-1994** 11-29-1999 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF DRAFT ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR THE FORMER BASE EXCHANGE GASOLINE STATION	ADMIN RECORD	IA B SITE 00018	FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 001002 NONE CORRESPONDENCE NONE 0	**10-06-1994** 11-29-1999 5090.3.A. NONE	RAB MEMBERS NAVFAC - SOUTHWEST DIVISION	COMMENTS ON UNEXPLODED ORDNANCE SITE INVESTIGATION OF DREDGE SPOILS AND ABOVE GROUND MAGAZINE AREA DRAFT WORK PLANS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 000959 NONE CORRESPONDENCE NONE 0	**10-12-1994** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF ACTION MEMORANDUM (AM), FORMER ELECTROPLATING SHOP	ADMIN RECORD	IA C SITE 00015	FRC - PERRIS	181-03-0180 31089137	BX 0017
N00221 / 003010 NONE CORRESPONDENCE N62474-88-D-5086 33	**10-17-1994** 11-29-1999 5090.3.A. 00144	HAUCK, W. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT DETAILED WORK PLAN (WP) FOR THE BASELINE HUMAN HEALTH RISK ASSESSMENT (HHRA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 000965 NONE CORRESPONDENCE NONE 0	**10-24-1994** 11-29-1999 5090.3.A. NONE	NAVY	BACKFILLING OF DIGESTER TANK EXCAVATIONS, SITE IR 24 REMOVAL ACTION (RM)	ADMIN RECORD	IA H SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000961 NONE CORRESPONDENCE NONE 0	**10-26-1994** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT ACTION MEMORANDUM (A,) AND REMOVAL ACTION PLAN (RM/RAP) FOR IR SITE 19, METAL PARTS CLEANING FACILITY	ADMIN RECORD	IA C SITE 00019	FRC - PERRIS	181-03-0180 31089137	BX 0017

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N00221 / 000964 NONE CORRESPONDENCE NONE 0	**10-31-1994** 11-29-1999 5090.3.A. NONE	NAVY	NOTIFICATION OF NEW REMEDIAL PROJECT MANAGER (RPM)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000969 NONE CORRESPONDENCE N62474-88-D-5086 0	**11-03-1994** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT NAVFAC - SOUTHWEST DIVISION	FINAL INVESTIGATION DERIVED WASTE MANAGEMENT PLAN (IDWMP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000968 NONE CORRESPONDENCE NONE 0	**11-04-1994** 11-29-1999 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF FINAL INVESTIGATION-DERIVED WASTE MANAGEMENT PLAN (IDWMP) AND RESPONSE TO AGENCY COMMENTS FINAL IDWMP	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 001047 NONE CORRESPONDENCE NONE 3	**11-10-1994** 11-29-1999 5090.3.A. NONE	MEDLIN, J. USF&WS CLARK, G. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON TIME CRITICAL REMOVAL ACTION (TCRA) FOR THE CONCORD ANNEX DISPOSAL AREA, SITE IR-5	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 000966 NONE CORRESPONDENCE NONE 0	**11-15-1994** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT ACTION MEMNORANDUM (AM), IR SITE 07/20	ADMIN RECORD	IA C SITE 00007 SITE 00020	FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000980 NONE REPORT NONE 0	**11-21-1994** 11-29-1999 5090.3.A. NONE	NAVY	REMOVAL ACTION PLAN (RM/RAP) INSTALLATION RESTORATION SITE 19 METAL PARTS CLEANING FACILITY	ADMIN RECORD	IA C SITE 00019	FRC - PERRIS	181-03-0180 31089137	BX 0018

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N00221 / 000981 NONE REPORT NONE 0	**11-21-1994** 11-29-1999 5090.3.A. NONE	NAVY	ACTION MEMORANDUM (AM) INSTALLATION RESTORATION SITE 19 METAL PARTS CLEANING FACILITY	ADMIN RECORD	IA C SITE 00019	FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 001003 NONE CORRESPONDENCE NONE 0	**11-21-1994** 11-29-1999 5090.3.A. NONE	DTSC	AGENCY COMMENTS ON UNEXPLODED ORDNANCE SITE INVESTIGATION OF ABOVE GROUND MAGAZINE AREA DRAFT WORK PLAN (UXO,SI,WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001004 NONE CORRESPONDENCE NONE 0	**11-21-1994** 11-29-1999 5090.3.A. NONE	DTSC NAVFAC - SOUTHWEST DIVISION	COMMENTS ON UNEXPLODED ORDNANCE SITE INVESTIGATION OF DREDGE SPOILS DRAFT WORK PLAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001048 NONE CORRESPONDENCE NONE 3	**11-23-1994** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON REMOVAL WORK PLAN (WP) FOR THE PROPOSED TIME CRITICAL REMOVAL ACTION (TCRA) FOR THE CONCORD ANNEX DISPOSAL AREA SITE IR-5, 06 OCTOBER 1994	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 002067 NONE CORRESPONDENCE NONE 6	**11-23-1994** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT PRELIMINARY ASSESSMENT/SITE INSPECTION (PA/SI) SUMMARY REPORT, NON-RADIOLOGICAL SITES - SEPTEMBER 1994	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 001005 NONE CORRESPONDENCE NONE 0	**11-30-1994** 11-29-1999 5090.3.A. NONE	U.S. EPA - SAN FRANCISCO, CA NAVFAC - SOUTHWEST DIVISION	COMMENTS ON UNEXPLODED ORDNANCE SITE INVESTIGATION OF DREDGE SPOILS PONDS DRAFT WORK PLAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019

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N00221 / 002068 NONE CORRESPONDENCE NONE 5	**11-30-1994** 11-29-1999 5090.3.A. NONE	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT SUMMARY PRELIMINARY ASSESSMENT/SITE INSPECTION (PA/SI) REPORT, NON-RADIOLOGICAL SITES - SEPTEMBER 1994	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 000975 NONE REPORT NONE 0	**12-01-1994** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	PRELIMINARY ASSESSMENT (PA) DRAFT SUMMARY REPORT ORDNANCE SITES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 002069 NONE CORRESPONDENCE NONE 2	**12-01-1994** 11-29-1999 5090.3.A. NONE	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON INTERIM SITE DESCRIPTION REPORT - 08 AUGUST 1994	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 002070 NONE CORRESPONDENCE NONE 56	**12-01-1994** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE TECHNICAL REPORT, INTERIM SITE DESCRIPTION REPORT - 08 AUGUST 1994	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 002071 NONE CORRESPONDENCE NONE 2	**12-01-1994** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON DRAFT SUMMARY PRELIMINARY ASSESSMENT/SITE INSPECTION (PA/SI) REPORT, NON-RADIOLOGICAL SITES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025

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N00221 / 001006 NONE CORRESPONDENCE NONE 0	**12-02-1994** 11-29-1999 5090.3.A. NONE	U.S. EPA - SAN FRANCISCO, CA	AGENCY COMMENTS ON UNEXPLODED ORDNANCE SITE INVESTIGATION OF ABOVE GROUND MAGAZINE AREA DRAFT WORK PLAN (UXO,SI,WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 003011 NONE CORRESPONDENCE NONE 4	**12-05-1994** 11-29-1999 5090.3.A. NONE	U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL INSTALLATION RESTORATION SITES 01 THROUGH 24, DETAILED WORK PLAN (WP) FOR BASELINE HUMAN HEALTH RISK ASSESSMENTS (HHRA) - 30 SEPTEMBER	ADMIN RECORD	SITE 00001 SITE 00002 SITE 00003 SITE 00004 SITE 00005 SITE 00006 SITE 00007 SITE 00008 SITE 00009 SITE 00010 SITE 00011 SITE 00012 SITE 00013 SITE 00014 SITE 00015 SITE 00016 SITE 00017 SITE 00018 SITE 00019 SITE 00020 SITE 00021 SITE 00022 SITE 00023 SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 000971 NONE CORRESPONDENCE NONE 0	**12-07-1994** 11-29-1999 5090.3.A. NONE	U.S. EPA - SAN FRANCISCO, CA	AGENCY COMMENTS ON REMOVAL WORK PLAN (WP) AND ACTION MEMORANDUM (AM) FOR PROPOSED TIME CRITICAL REMOVAL ACTION (TCRA) SITE IR 05, CONCORD ANNEX DISPOSAL AREA	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0018

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N00221 / 000972 NONE CORRESPONDENCE NONE 0	**12-07-1994** 11-29-1999 5090.3.A. NONE	DTSC	AGENCY COMMENTS ON IR SITES 1 THROUGH 24 DETAILED WORK PLAN (WP) FOR BASELINE HUMAN HEALTH RISK ASSESSMENT (HHRA), DRAFT FINAL	ADMIN RECORD	BASEWIDE SITE 00001 SITE 00002 SITE 00003 SITE 00004 SITE 00005 SITE 00006 SITE 00007 SITE 00008 SITE 00009 SITE 00010 SITE 00011 SITE 00012 SITE 00013 SITE 00014 SITE 00015 SITE 00016 SITE 00017 SITE 00018 SITE 00019 SITE 00020 SITE 00021 SITE 00022 SITE 00023 SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 001049 NONE CORRESPONDENCE NONE 5	**12-07-1994** 11-29-1999 5090.3.A. NONE	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON REMOVAL WORK PLAN (WP) AND ACTION MEMORANDUM (AM) FOR THE PROPOSED TIME CRITICAL REMOVAL ACTION (TCRA) FOR THE CONCORD ANNEX DISPOSAL AREA, SITE IR-5,	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0020

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N00221 / 000973 NONE CORRESPONDENCE NONE 0	**12-09-1994** 11-29-1999 5090.3.A. NONE	DTSC	AGENCY COMMENTS ON TECHNICAL MEMORANDUM (TM), SITE IR 03 AQUIFER TEST RESULTS	ADMIN RECORD	IA C SITE 00003	FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000974 NONE CORRESPONDENCE NONE 0	**12-09-1994** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT PA/SI SUMMARY REPORT ORDNANCE SITES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000976 NONE CORRESPONDENCE NONE 0	**12-22-1994** 11-29-1999 5090.3.A. NONE	CRWQCB NAVFAC - EFA WEST	AGENCY COMMENTS ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FORMER BASE EXCHANGE GASOLINE STATION	ADMIN RECORD	IA B SITE 00018	FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000977 NONE CORRESPONDENCE NONE 0	**12-30-1994** 11-29-1999 5090.3.A. NONE	U.S. EPA - SAN FRANCISCO, CA NAVFAC - EFA WEST	AGENCY COMMENTS ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FORMER BASE EXCHANGE GASOLINE STATION	ADMIN RECORD	IA B SITE 00018	FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000978 NONE CORRESPONDENCE NONE 0	**12-30-1994** 11-29-1999 5090.3.A. NONE	DTSC NAVFAC - SOUTHWEST DIVISION	AGENCY COMMENTS ON DRAFT FINAL INVESTIGATION-DERIVED WASTE (IDW) MANAGEMENT PLAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000979 NONE CORRESPONDENCE NONE 0	**12-30-1994** 11-29-1999 5090.3.A. NONE	CRWQCB NAVFAC - EFA WEST	AGENCY COMMENTS ON ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FORMER BASE EXCHANGE GASOLINE STATION	ADMIN RECORD	IA B SITE 00018	FRC - PERRIS	181-03-0180 31089137	BX 0018

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N00221 / 000994 NONE REPORT NONE 0	**01-01-1995** 11-29-1999 5090.3.A. NONE	NAVY	REMOVAL ACTION PLAN (RM/RAP) INSTALLATION RESTORATION SITE 07/20	INFO REPOSITORY	IA C SITE 00007 SITE 00020	FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000995 NONE REPORT NONE 0	**01-01-1995** 11-29-1999 5090.3.A. NONE	KJC	COMPLIANCE GROUNDWATER MONITORING REPORT	INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000982 NONE REPORT NONE 0	**01-06-1995** 11-29-1999 5090.3.A. NONE	NAVY	ACTION MEMORANDUM (AM) INSTALLATION RESTORATION SITE 07/20 REMOVAL OF BUILDINGS 463 AND 463A	ADMIN RECORD	IA C SITE 00007 SITE 00020	FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000985 NONE REPORT NONE 0	**01-27-1995** 11-29-1999 5090.3.A. NONE	NAVY	UNEXPLODED ORDNANCE SITE INVESTIGATION (UXO/SI) OF OFFSHORE AREAS DRAFT WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000983 NONE REPORT NONE 0	**02-01-1995** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	HEALTH AND SAFETY PLAN (HASP), ELECTROPLATING SHOP REMOVAL ACTION (RM), BUILDING 225	ADMIN RECORD	IA C SITE 00015	FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 002030 NONE REPORT N62474-88-D-5086 268	**02-01-1995** 11-29-1999 5090.3.A. 00228	SURBRUGG, J. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL SUMMARY REPORT, PRELIMINARY ASSESSMENT/SITE INSPECTION (PA/SI), NON-RADIOLOGICAL SITES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023

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N00221 / 001016 NONE CORRESPONDENCE NONE 0	**02-09-1995** 11-29-1999 5090.3.A. NONE	NAVY	INSTALLATION RESTORATION SITE 15, BUILDING 225 ELECTROPLATING SHOP; ACID PLATING TANK SUMP REMOVAL ACTION; REMOVAL ACTION WORK PLAN VARIANCES (RM/RAP/WP)	ADMIN RECORD	IA C SITE 00015	FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 002072 NONE CORRESPONDENCE NONE 4	**02-09-1995** 11-29-1999 5090.3.A. 00228	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT SUMMARY PRELIMINARY ASSESSMENT (PA) REPORT, ORDNANCE SITES - DECEMBER 1994	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 001012 NONE REPORT NONE 0	**02-13-1995** 11-29-1999 5090.3.A. NONE	NAVY	DRAFT FINAL SITE INVESTIGATION FOR UNEXPLODED ORDNANCE DREDGE SPOILS PONDS (SI/UXO)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001013 NONE REPORT NONE 0	**02-13-1995** 11-29-1999 5090.3.A. NONE	NAVY	DRAFT FINAL SITE INVESTIGATION FOR UNEXPLODED ORDNANCE ABOVE GROUND MAGAZINE AREA (SI/UXO)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 002073 NONE CORRESPONDENCE NONE 2	**02-13-1995** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF UNEXPLODED ORDNANCE SITE INVESTIGATION (UXO/SI) (1) DREDGE SPOILS PONDS DRAFT FINAL WORK PLAN (WP), (2) ABOVE GROUND MAGAZINE AREA DRAFT FINAL WORK	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 002074 NONE CORRESPONDENCE NONE 7	**02-13-1995** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO COMMENTS ON DRAFT UNEXPLODED ORDNANCE (UXO), DREDGE SPOILS POND SITE INVESTIGATION (SI) WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025

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N00221 / 002075 NONE CORRESPONDENCE NONE 8	**02-13-1995** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO COMMENTS ON DRAFT UNEXPLODED ORDNANCE (UXO), ABOVE GROUND MAGAZINE AREA SITE INVESTIGATION (SI) WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 000989 NONE REPORT NONE 0	**02-14-1995** 11-29-1999 5090.3.A. NONE	NAVY	DRAFT FINAL SITE SPECIFIC HEALTH AND SAFETY PLAN FOR UNEXPLODED ORDNANCE SITE INVESTIGATION (HASP/UXO,SI)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000984 NONE CORRESPONDENCE NONE 0	**02-15-1995** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF UNEXPLODED ORDNANCE SITE INVESTIGATION (UXO/SI)OF OFFSHORE AREAS DRAFT WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000986 NONE CORRESPONDENCE NONE 0	**02-15-1995** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT PHASE I ECOLOGICAL RISK ASSESSMENT WORK PLAN (ERA/WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000987 NONE REPORT NONE 0	**02-15-1995** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRAFT WORK PLAN (WP) PHASE I ECOLOGICAL RISK ASSESSMENT (ERA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 001050 NONE REPORT NONE 75	**02-15-1995** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SITE SPECIFIC HEALTH AND SAFETY PLAN (HASP), INSTALLATION RESTORATION SITE 05, TIME CRITICAL REMOVAL ACTION (TCRA) PART 4 OF THE REMOVAL WORK PLAN (WP)	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0020

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N00221 / 001051 NONE CORRESPONDENCE NONE 9	**02-17-1995** 11-29-1999 5090.3.A. NONE	CONGRESS HOUSE REPRESENTATIVE NAVY	RAP REQUIREMENT FOR REMOVAL ACTIONS (RM), SENATE BILL NO. 1706, 24 FEBRUARY 1994	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 002076 NONE CORRESPONDENCE NONE 5	**02-21-1995** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT SUMMARY REPORT, PRELIMINARY ASSESSMENT (PA), ORDNANCE SITES - DECEMBER 1994	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 000988 NONE CORRESPONDENCE NONE 0	**03-03-1995** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT FINAL SITE SPECIFIC HEALTH AND SAFETY PLAN FOR UNEXPLODED ORDNANCE SITE INVESTIGATION (HASP/UXO/SI)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 001052 NONE CORRESPONDENCE NONE 29	**03-06-1995** 11-29-1999 5090.3.A. NONE	HAWLEY, K. NAVY NAVY	REGULATORY COMMENT RESPONSES, ORDNANCE REMOVAL WORK PLAN (WP) FOR THE TIME CRITICAL REMOVAL ACTION (TCRA) AT IR SITE 05; INCLUDED: PART 1 RESPONSES TO US EPA, PART	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 001053 NONE CORRESPONDENCE NONE 2	**03-14-1995** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF ACTION MEMORANDUM (AM), ORDNANCE REMOVAL WORK PLAN, SITE SPECIFIC HEALTH AND SAFETY PLAN, AND REGULATORY COMMENT RESPONSES FOR TIME CRITICAL REMOVAL ACTION (TCRA)	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 001017 NONE CORRESPONDENCE NONE 0	**03-20-1995** 11-29-1999 5090.3.A. NONE	U.S. EPA - SAN FRANCISCO, CA	AGENCY COMMENTS ON GENERAL RADIOACTIVE MATERIAL (GRAM) RADIOLOGICAL SURVEY PLAN, DRAFT FINAL, 10 FEBRUARY 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019

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N00221 / 001018 NONE CORRESPONDENCE NONE 0	**03-21-1995** 11-29-1999 5090.3.A. NONE	DTSC	AGENCY COMMENTS ON GENERAL RADIOACTIVE MATERIAL (GRAM) RAADIOLOGICAL SURVEY PLAN, DRAFT FINAL, 10 FEBRUARY 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001054 NONE CORRESPONDENCE NONE 23	**03-21-1995** 11-29-1999 5090.3.A. NONE	POMEROY, D. NAVY BROWNING, J. USF&WS	ORDNANCE SURVEY AND REMOVAL PROJECT FOR INSTALLATION RESTORATION SITE 05	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 000990 NONE CORRESPONDENCE NONE 0	**03-22-1995** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT SUMMARY REPORT, VOLUMES I AND II, SITE INVESTIGATION (SI) AT BUILDING 505, 637/811, 633/635A/635B/635C/647, 742, AND 796	INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000991 NONE REPORT NONE 0	**03-22-1995** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRAFT SUMMARY REPORT, VOLUME I: TEXT, SITE INVESTIGATION (SI) AT BUILDING 505, 637/811, 633/635A/635B/635C/647, 742, AND 796	INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000992 NONE REPORT NONE 0	**03-22-1995** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRAFT SUMMARY REPORT, VOLUMES II: APPENDICES A-F, SITE INVESTIGATION (SI) AT BUILDING 505, 637/811, 633/635A/635B/635C/647, 742, AND 796	INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 001007 NONE CORRESPONDENCE NONE 0	**03-22-1995** 11-29-1999 5090.3.A. NONE	DTSC NAVFAC - SOUTHWEST DIVISION	COMMENTS ON UNEXPLODED ORDNANCE SITE INVESTIGATION OF DREDGE SPOILS PONDS DRAFT FINAL WORK PLAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019

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N00221 / 001008 NONE CORRESPONDENCE NONE 0	**03-22-1995** 11-29-1999 5090.3.A. NONE	DTSC	AGENCY COMMENTS ON UNEXPLODED ORDNANCE SITE INVESTIGATION OF ABOVE GROUND MAGAZINE AREA DRAFT FINAL WORK PLAN (UXO,SI,WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001019 NONE CORRESPONDENCE NONE 0	**03-24-1995** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	RESPONSES TO AGENCY COMMENTS ON THE DETAILED WORK PLAN FOR BASELINE HUMAN HEALTH RISK ASSESSMENTS (WP/HHRA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001020 NONE CORRESPONDENCE NONE 0	**03-24-1995** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	RESPONSES TO AGENCY COMMENTS ON THE DETAILED WORK PLAN FOR BASELINE HUMAN HEALTH RISK ASSESSMENTS (WP/HHRA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001021 NONE CORRESPONDENCE NONE 0	**03-27-1995** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF FINAL DRAFTS OF ACTION MEMORANDUM FOR FREE PRODUCT REMOVAL AT IR-03 AND REMOVAL ACTION PLAN (AM/RM/RAP)	ADMIN RECORD	IA C SITE 00003	FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001022 NONE REPORT NONE 0	**03-27-1995** 11-29-1999 5090.3.A. NONE	NAVY	ACTION MEMORANDUM, FREE PRODUCT REMOVAL ACTION, INSTALLATION RESTORATION SITE 03, BERTHS 4 AND 5 (AM/RM)	ADMIN RECORD	IA C SITE 00003	FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001023 NONE REPORT NONE 0	**03-27-1995** 11-29-1999 5090.3.A. NONE	NAVY	REMOVAL ACTION PLAN (RM/RAP), FREE PRODUCT REMOVAL ACTION, INSTALLATION RESTORATION SITE 03, BERTHS 4 AND 5, INCLUDING WORK PLAN AND HEALTH AND SAFETY PLAN (WP,HA	ADMIN RECORD	IA C SITE 00003	FRC - PERRIS	181-03-0180 31089137	BX 0019

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N00221 / 001024 NONE CORRESPONDENCE NONE 0	**03-27-1995** 11-29-1999 5090.3.A. NONE	NAVY	NAVY RESPONSE TO CA EPA COMMENTS TO ACTION MEMORANDUM (AM) AND WORK PLAN (WP) FOR FREE PRODUCT REMOVAL ACTION (RM), INSTALLATION RESTORATION SITE 03	ADMIN RECORD	IA C SITE 00003	FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001055 NONE CORRESPONDENCE NONE 1	**03-28-1995** 11-29-1999 5090.3.A. NONE	MEDLIN, J. USF&WS VENTURA, F. NAVY	COMMENT ON LETTER DATED 21 MARCH 1995, ORDNANCE SURVEY AND REMOVAL PROJECT FOR INSTALLATION RESTORATION SITE 05	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 000997 NONE REPORT NONE 0	**03-29-1995** 11-29-1999 5090.3.A. NONE	NAVY	DRAFT WORK PLAN UNEXPLODED ORDNANCE SITE INVESTIGATION (WP/UXO/SI) OF THE SOUTH SHORE AREA	INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 001009 NONE CORRESPONDENCE NONE 0	**04-03-1995** 11-29-1999 5090.3.A. NONE	U.S. EPA - SAN FRANCISCO, CA	AGENCY COMMENTS ON ACTION MEMORANDUM AND REMOVAL ACTION PLAN (AM/RM/RAP), IR SITE 13, RADIO OPERATIONS FACILITY	ADMIN RECORD	IA D SITE 00013	FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001031 NONE CORRESPONDENCE NONE 31	**04-03-1995** 11-29-1999 5090.3.A. NONE	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON DRAFT WORK PLAN (WP), PHASE 1 ECOLOGICAL RISK ASSESSMENT (ERA), 15 FEBRUARY 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001056 NONE CORRESPONDENCE NONE 2	**04-03-1995** 11-29-1999 5090.3.A. NONE	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON ORDNANCE REMOVAL ACTION MEMORANDUM (AM) (DATED 24 JANUARY 1995) AND WORK PLAN (WP) (DATED 06 MARCH 1995) FOR INSTALLATION SITE 05 (IR-5)	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0020

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N00221 / 002079 NONE CORRESPONDENCE NONE 14	**04-06-1995** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO COMMENTS ON THE DRAFT FINAL SUMMARY PRELIMINARY ASSESSMENT (PA) REPORT, NON-RADIOLOGICAL SITES - FEBRUARY 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 000996 NONE CORRESPONDENCE NONE 0	**04-11-1995** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT WORK PLAN (WP), UNEXPLODED ORDNANCE SITE INVESTIGATION (UXO/SI) OF THE SOUTH SHORE AREA	INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0018
N00221 / 000999 NONE REPORT NONE 0	**04-12-1995** 11-29-1999 5090.3.A. NONE	NAVY	DRAFT WORK PLAN, UNEXPLODED ORDNANCE SITE INVESTIGATION (WP/UXO/SI) OF THE UPLAND MAGAZINE AREA AND ORDNANCE RESERVOIR	INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001057 NONE CORRESPONDENCE NONE 4	**04-13-1995** 11-29-1999 5090.3.A. NONE	MURPHY, D. DTSC SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON DRAFT ORDNANCE REMOVAL WORK PLAN (WP), INSTALLATION RESTORATION SITE 05, DATED 06 MARCH 1995	ADMIN RECORD	SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 000998 NONE CORRESPONDENCE NONE 0	**04-14-1995** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT WORK PLAN, UNEXPLODED ORDNANCE SITE INVESTIGATION (WP/UXO/SI) OF THE UPLAND MAGAZINE AREA AND ORDNANCE RESERVOIR	INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 003012 NONE CORRESPONDENCE NONE 2	**04-14-1995** 11-29-1999 5090.3.A. NONE	MEDLIN, J. US FISH & WILDLIFE SERVICE CLARK, G. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT PHASE I ECOLOGICAL RISK ASSESSMENT WORK PLAN (ERA/WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025

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N00221 / 001058 NONE CORRESPONDENCE NONE 3	**04-17-1995** 11-29-1999 5090.3.A. NONE	KATHURIA, G. CRWQCB SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON ORDNANCE REMOVAL WORK PLAN (WP) FOR THE TIME CRITICAL REMOVAL ACTION (TCRA) AT INSTALLATION RESTORATION SITE 05, DATED 06 MARCH 1995	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 002080 NONE CORRESPONDENCE N62474-88-D-5086 23	**04-17-1995** 11-29-1999 5090.3.A. 00228	SURBRUGG, J. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT SUMMARY PRELIMINARY ASSESSMENT (PA) REPORT, ORDNANCE SITES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 001078 NONE CORRESPONDENCE NONE 11	**04-18-1995** 11-29-1999 5090.3.A. NONE	HACK, K. ARC CLARK, G. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON DRAFT PHASE I ECOLOGICAL RISK ASSESSMENT (ERA) WORK PLAN (WP) - FEBRUARY 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 003013 NONE CORRESPONDENCE NONE 13	**04-19-1995** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT WORK PLAN (WP), PHASE I, ECOLOGICAL RISK ASSESSMENT (ERA) - 15 FEBRUARY 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 001001 NONE REPORT NONE 0	**04-20-1995** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	DRAFT PHASE II REMEDIAL INVESTIGATION (RI) REPORT OPERABLE UNIT 1 (OU 1)	INFO REPOSITORY	IA E OU 0000001 SITE 00022	FRC - PERRIS	181-03-0180 31089137	BX 0019

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N00221 / 002081 NONE REPORT N62474-88-D-5086 26	**04-20-1995** 11-29-1999 5090.3.A. 00144	HAUCK, W. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	DRAFT TECHNICAL MEMORANDUM (TM), EXAMINATION OF GROUNDWATER FOR MUNICIPAL AND DOMESTIC SUPPLY	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 001010 NONE CORRESPONDENCE NONE 0	**04-24-1995** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO AGENCY COMMENTS ON REMOVAL ACTION PLAN AND WORK PLAN (RM/RAP/WP) FOR FREE PRODUCT REMOVAL ACTION AT IR SITE 03, BERTHS 4 AND 5	ADMIN RECORD	IA C SITE 00003	FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001000 NONE CORRESPONDENCE NONE 0	**04-29-1995** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF DRAFT PHASE II REMEDIAL INVESTIGATION (RI) REPORT OPERABLE UNIT 1 (OU 1)	INFO REPOSITORY	IA E OU 0000001 SITE 00022	FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001011 NONE CORRESPONDENCE NONE 0	**05-01-1995** 11-29-1999 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION	RESPONSE TO AGENCY COMMENTS ON UNEXPLODED ORDNANCE SITE INVESTIGATION OF DREDGE SPOILS AND ABOVE GROUND MAGAZINE AREA DRAFT FINAL WORK PLANS (UXO/SI/WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001030 NONE CORRESPONDENCE NONE 0	**05-04-1995** 11-29-1999 5090.3.A. NONE	U.S. EPA - SAN FRANCISCO, CA	AGENCY COMMENTS ON DRAFT RESPONSE TO AGENCY COMMENTS ON THE DETAILED WORK PLAN (WP) FOR BASELINE HUMAN HEALTH RISK ASSESSMENTS (HHRA)	INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 002077 NONE CORRESPONDENCE NONE 4	**05-13-1995** 11-29-1999 5090.3.A. NONE	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON DRAFT FINAL SUMMARY PRELIMINARY ASSESSMENT/SITE INSPECTION (PA/SI) REPORT, NON-RADIOLOGICAL SITES - MARCH 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025

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N00221 / 002078 NONE CORRESPONDENCE NONE 5	**05-13-1995** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL SUMMARY PRELIMINARY ASSESSMENT/SITE INSPECTION (PA/SI) REPORT, NON-RADIOLOGICAL SITES - FEBRUARY 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 001014 NONE CORRESPONDENCE NONE 0	**05-15-1995** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF PRELIMINARY ASSESSMENT (PA) DRAFT FINAL SUMMARY REPORT FOR ORDNANCE SITES	INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001015 NONE REPORT NONE 0	**05-15-1995** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT	PRELIMINARY ASSESSMENT (PA) DRAFT FINAL SUMMARY REPORT FOR ORDNANCE SITES	INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001025 NONE CORRESPONDENCE NONE 0	**05-19-1995** 11-29-1999 5090.3.A. NONE	NAVY	SUBMISSION OF PRELIMINARY ASSESSMENT/SITE INSPECTION (PA/SI) FINAL SUMMARY REPORT FOR NON-RADIOLOGICAL SITES	INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001026 NONE REPORT NONE 0	**05-19-1995** 11-29-1999 5090.3.A. NONE	NAVY	PRELIMINARY ASSESSMENT/SITE INSPECTION (PA/SI) FINAL SUMMARY REPORT NON-RADIOLOGICAL SITES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001079 NONE CORRESPONDENCE NONE 2	**05-30-1995** 11-29-1999 5090.3.A. NONE	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON DRAFT SITE INVESTIGATIONS (SI) AT BUILDINGS 637/811, BUILDINGS 633/635A/635B/635C/647, BUILDING 742 AREA, FORMER BUILDING 796, AND CONSTRUCTION DEBRIS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021

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N00221 / 001080 NONE CORRESPONDENCE NONE 4	**05-30-1995** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON DRAFT SUMMARY REPORT, VOLUMES I AND II, SITE INVESTIGATIONS (SI) AT BUILDINGS 637/811, BUILDINGS 633/635A/635B/635C/647, BUILDING 742 AREA, FORMER BUI	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 001027 NONE CORRESPONDENCE NONE 0	**05-31-1995** 11-29-1999 5090.3.A. NONE	NAVY	FINAL ACTION MEMORANDUM (AM) AND FINAL REMOVAL ACTION PLAN (RM/RAP) FOR FREE PRODUCT REMOVAL ACTION AT IR-03	INFO REPOSITORY	IA C SITE 00003	FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001028 NONE CORRESPONDENCE NONE 0	**06-01-1995** 11-29-1999 5090.3.A. NONE	U.S. EPA - SAN FRANCISCO, CA	AGENCY COMMENTS ON WORK PLAN (WP), GROUNDWATER SAMPLING FOR GENERAL RADIOACTIVE MATERIAL, RADIOLOGICAL SURVEY, 2ND QUARTER, 17 APRIL 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001029 NONE CORRESPONDENCE NONE 0	**06-02-1995** 11-29-1999 5090.3.A. NONE	DTSC	AGENCY COMMENTS ON MINSY DRAFT RESPONSES TO AGENCY COMMENTS ON THE DETAILED WORK PLAN (WP) FOR BASELINE HUMAN HEALTH RISK ASSESSMENT (HHRA), DRAFT FINAL	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001067 NONE REPORT NONE 70	**06-08-1995** 11-29-1999 5090.3.A. NONE	PECK, J. NAVFAC - EFA WEST NAVFAC - SOUTHWEST DIVISION	ENGINEERING EVALUATION/COST ANALYSIS (EE/CA), FREE PRODUCT REMOVAL ACTION BERTHS 4 AND 5	ADMIN RECORD	IA C SITE 00003	FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 001081 NONE CORRESPONDENCE NONE 2	**06-14-1995** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON SITE INVESTIGATION FOR UNEXPLODED ORNANCE (SI/UXO), OFFSHORE AREAS - 27 JANUARY 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021

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N00221 / 002082 NONE CORRESPONDENCE NONE 1	**06-16-1995** 11-29-1999 5090.3.A. NONE	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON DRAFT FINAL SUMMARY PRELIMINARY ASSESSMENT (PA) REPORT, ORDNANCE SITES - 15 MAY 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 002083 NONE CORRESPONDENCE NONE 4	**06-19-1995** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON DRAFT FINAL SUMMARY PRELIMINARY ASSESSMENT (PA) REPORT, ORDNANCE SITES - 15 MAY 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 002084 NONE CORRESPONDENCE NONE 3	**06-22-1995** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON FINAL SUMMARY PRELIMINARY ASSESSMENT/SITE INSPECTION (PA/SI) REPORT, NON-RADIOLOGICAL SITES - 19 MAY 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 001032 NONE CORRESPONDENCE N62474-88-D-5086 2	**06-23-1995** 11-29-1999 5090.3.A. 00306	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF DRAFT FINAL PHASE 1 ECOLOGICAL RISK ASSESSMENT WORK PLAN DATED 23 JUNE 1995; RESPONSES TO AGENCY COMMENTS ON DRAFT PHASE 1 ECOLOGICAL RISK ASSESSMEN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001033 NONE CORRESPONDENCE N62474-88-D-5086 8	**06-23-1995** 11-29-1999 5090.3.A. 00306	COLLINS, J. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE ECOLOGICAL RISK ASSESSMENT DRAFT WORK PLAN (ERA/WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019

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N00221 / 001034 NONE REPORT N62474-88-D-5086 92	**06-23-1995** 11-29-1999 5090.3.A. 00306	COLLINS, J. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL WORK PLAN, PHASE 1 ECOLOGICAL RISK ASSESSMENT (ERA/WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001037 NONE REPORT NONE 39	**06-26-1995** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	SITE INVESTIGATION FOR UNEXPLODED ORDNANCE (SI/UXO), OFFSHORE AREAS, DIKE 12 TO PIER 34, PIER 34 TO PIER 24, NORTH SHORE PIERS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001035 NONE CORRESPONDENCE NONE 3	**07-01-1995** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF SITE INVESTIGATION FOR UNEXPLODED ORDNANCE (UXO) FOR THE OFFSHORE AREAS, DRAFT FINAL WORK PLAN, AND RESPONSES TO COMMENTS ON DRAFT WORK PLANS FOR OF	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 002085 NONE CORRESPONDENCE NONE 2	**07-03-1995** 11-29-1999 5090.3.A. NONE	KATHURIA, G. CRWQCB SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT TECHNICAL MEMORANDUM (TM), EXAMINATION OF GROUNDWATER FOR MUNICIPAL AND DOMESTIC SUPPLY - 20 APRIL 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 001036 NONE CORRESPONDENCE NONE 6	**07-07-1995** 11-29-1999 5090.3.A. NONE	PIEPER, R. NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	RESPONSES TO REGULATOR COMMENTS ON DRAFT WORK PLANS FOR THE UNEXPLODED ORDNANCE SITE INVESTIGATION OF OFFSHORE, SOUTH SHORE, AND UPLAND MAGAZINE AREAS (WP/UXO/SI)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001059 NONE CORRESPONDENCE NONE 20	**07-12-1995** 11-29-1999 5090.3.A. NONE	HAWLEY, K. NAVY NAVY	REGULATORY COMMENT RESPONSES, ORDNANCE REMOVAL WORK PLAN FOR THE TIME CRITICAL REMOVAL ACTION (TCRA) AT IR SITE 05; INCLUDED: PART 1 RESPONSES TO US EPA, PART 2 RES	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0020

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N00221 / 001060 NONE REPORT NONE 15	**07-12-1995** 11-29-1999 5090.3.A. NONE	CAMPE, J. NAVY NAVY	DRAFT FINAL ACTION MEMORANDUM (AM), INSTALLATION RESTORATION SITE 05, CONCORD ANNEX DISPOSAL AREA	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 001061 NONE REPORT NONE 199	**07-13-1995** 11-29-1999 5090.3.A. NONE	HAWLEY, K. NAVY NAVY	ORDNANCE REMOVAL WORK PLAN AND INTERIM REMEDIAL ACTION PLAN FOR TIME CRITICAL REMOVAL ACTION (TCRA) AT IR SITE 05; INCLUDED: PART 1 REMOVAL WORK PLAN, PART 2 STAND	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 002086 NONE CORRESPONDENCE NONE 1	**07-13-1995** 11-29-1999 5090.3.A. NONE	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT TECHNICAL MEMORANDUM (TM), EXAMINATION OF GROUNDWATER FOR MUNICIPAL AND DOMESTIC SUPPLY - 20 APRIL 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 001040 NONE REPORT NONE 29	**07-14-1995** 11-29-1999 5090.3.A. NONE	WILLIAMS, H. NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	DRAFT WORK PLAN (WP), UNEXPLODED ORDNANCE SITE INVESTIGATION (UXO/SI) OF THE MANUFACTURING AREA	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001041 NONE REPORT NONE 50	**07-19-1995** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	SITE INVESTIGATION FOR UNEXPLODED ORDNANCE (SI/UXO), SMALL ARMS RANGES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001038 NONE CORRESPONDENCE NONE 2	**07-20-1995** 11-29-1999 5090.3.A. NONE	PIEPER, R. NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	VARIANCE TO MAGNETOMETER SEARCH METHOD FOR BURIED UNEXPLODED ORDNANCE (UXO) IN THE ABOVE GROUND MAGAZINE AREA	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019

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N00221 / 001039 NONE CORRESPONDENCE NONE 2	**07-24-1995** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF SITE INVESTIGATION (SI) OF THE MANUFACTURING AREA, DRAFT WORK PLAN (WP) DATED 14 JULY 1995; SITE INVESTIGATION OF SMALL ARMS RANGES, DRAFT WORK PLAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001042 NONE REPORT NONE 34	**07-24-1995** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	SITE INVESTIGATION FOR UNEXPLODED ORDNANCE (SI/UXO), SOUTH SHORE AREA, DRAFT FINAL WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001043 NONE REPORT NONE 41	**07-24-1995** 11-29-1999 5090.3.A. NONE	VALDIVIA, L. NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	UNEXPLODED ORDNANCE SITE INVESTIGATION (UXO/SI) OF THE UPLAND MAGAZINE AREA AND ORDNANCE RESERVOIR	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001045 NONE REPORT NONE 41	**07-24-1995** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	UNEXPLODED ORDNANCE SITE INVESTIGATION (UXO/SI) OF THE UPLAND MAGAZINE AREA AND ORDNANCE RESERVOIR, DRAFT FINAL WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 001046 NONE REPORT NONE 34	**07-24-1995** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	SITE INVESTIGATION FOR UNEXPLODED ORDNANCE (SI/UXO) SOUTH SHORE AREA, DRAFT FINAL WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 001062 NONE CORRESPONDENCE NONE 1	**07-24-1995** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION KATHURIA, G. CRWQCB	SUBMISSION OF INTERIM REMEDIAL ACTION PLAN (RAP); ACTION MEMORANDUM (AM) FOR IR SITE 05, ORDNANCE REMOVAL WORK PLAN AND INTERIM REMEDIAL ACTION PLAN, REGULATORY	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0020

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N00221 / 001083 NONE REPORT N62474-88-D-5086 94	**07-24-1995** 11-29-1999 5090.3.A. 00144	WERTER, J. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	FINAL SUPPLEMENT TO INSTALLATIONS RESTORATION SITES 01 THROUGH 24, DETAILED WORK PLAN (WP) FOR BASELINE HUMAN HEALTH RISK ASSESSMENTS (HHRA)	ADMIN RECORD	SITE 00001 SITE 00002 SITE 00003 SITE 00004 SITE 00005 SITE 00007 SITE 00008 SITE 00009 SITE 00010 SITE 00011 SITE 00012 SITE 00013 SITE 00014 SITE 00015 SITE 00016 SITE 00017 SITE 00018 SITE 00019 SITE 00020 SITE 00021 SITE 00022 SITE 00023 SITE 00024	FRC - PERRIS	181-03-0180 BX 0021 31089137

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N00221 / 001082 NONE CORRESPONDENCE N62474-88-D-5086 2	**07-25-1995** 11-29-1999 5090.3.A. 00144	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF FINAL SUPPLEMENT TO INSTALLATIONS RESTORATION SITES 01 THROUGH 24, DETAILED WORK PLAN FOR BASELINE HUMAN HELATH RISK ASSESSMENTS (HHRA) - 24 JULY 19	ADMIN RECORD	SITE 00001 SITE 00002 SITE 00003 SITE 00004 SITE 00005 SITE 00007 SITE 00008 SITE 00009 SITE 00010 SITE 00011 SITE 00012 SITE 00013 SITE 00014 SITE 00015 SITE 00016 SITE 00017 SITE 00018 SITE 00019 SITE 00020 SITE 00021 SITE 00022 SITE 00023 SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 001044 NONE CORRESPONDENCE NONE 2	**07-26-1995** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF SITE INVESTIGATION (SI) OF THE UPLAND MAGAZINE AREA AND ORDNANCE RESERVOIR, DRAFT FINAL WORK PLAN (WP) DATED 24 JULY 1995; SITE INVESTIGATION OF THE	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0019
N00221 / 001084 NONE CORRESPONDENCE NONE 12	**07-27-1995** 11-29-1999 5090.3.A. NONE	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON DRAFT FINAL WORK PLAN (WP), PHASE I ECOLOGICAL RISK ASSESSMENT (ERA) - 23 JUNE 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021

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N00221 / 002087 NONE CORRESPONDENCE NONE 4	**07-28-1995** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT PHASE II REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT NUMBER 1 (OU 1) - 20 APRIL 1995	ADMIN RECORD	OU 0000001	FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 001085 NONE CORRESPONDENCE N62474-88-D-5086 2	**08-03-1995** 11-29-1999 5090.3.A. 00210	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF DRAFT FINAL SUMMARY REPORT, SITE INVESTIGATIONS (SI) AT BUILDINGS 637/811, BUILDINGS 633/635A/635B/635C/647, BUILDING 742 AREA, FORMER BUILDING 796	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 001086 NONE REPORT N62474-88-D-5086 200	**08-03-1995** 11-29-1999 5090.3.A. 00210	WERTER, J. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL SUMMARY REPORT, SITE INVESTIGATIONS (SI) AT BUILDINGS 637/811, BUILDINGS 633/635A/635B/635C/647, BUILDING 742 AREA, FORMER BUILDING 796, AND CONSTRUCT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 001089 NONE CORRESPONDENCE N62474-88-D-5086 5	**08-03-1995** 11-29-1999 5090.3.A. 00210	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO COMMENTS ON DRAFT FINAL SUMMARY REPORT, SITE INVESTIGATIONS (SI) AT BUILDINGS 637/811, BUILDINGS 633/635A/635B/635C/647, BUILDING 742 AREA, FORMER BUI	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 002088 NONE CORRESPONDENCE NONE 6	**08-11-1995** 11-29-1999 5090.3.A. NONE	MEDLIN, J. USF&WS CLARK, G. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL WORK PLAN (WP), PHASE I ECOLOGICAL RISK ASSESSMENT (ERA) - 23 JUNE 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 002035 NONE CORRESPONDENCE NONE 1	**08-22-1995** 11-29-1999 5090.3.A. NONE	NAVY DTSC	RESPONSE TO COMMENTS ON THE MANUFACTURING AREA DRAFT WORK PLAN (14 JULY 1995) FOR THE UNEXPLODED ORDNANCE (UXO) SITE INVESTIGATION (SI) - 07 AUGUST 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023

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N00221 / 001087 NONE REPORT N62474-88-D-5086 200	**09-01-1995** 11-29-1999 5090.3.A. 00228	SURBRUGG, J. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	FINAL SUMMARY REPORT, PRELIMINARY ASSESSMENT (PA), ORDNANCE SITES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 001088 NONE CORRESPONDENCE N62474-88-D-5086 3	**09-11-1995** 11-29-1999 5090.3.A. 00306	SINATS, J. NAVFAC - SOUTHWEST DIVISION HACK, K. ARC	RESPONSE TO COMMENTS ON DRAFT PHASE I ECOLOGICAL RISK ASSESSMENT WORK PLAN (ERA/WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 002031 NONE CORRESPONDENCE NONE 3	**09-21-1995** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO COMMENTS ON THE PRELIMINARY ASSESSMENT/SITE INSPECTION (PA/SI) FINAL SUMMARY REPORT FOR NON-RADIOLOGICAL SITE - 19 MAY 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002032 NONE CORRESPONDENCE NONE 2	**09-27-1995** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO COMMENTS ON THE PRELIMINARY ASSESSMENT (PA) FINAL DRAFT SUMMARY REPORT FOR ORDNANCE SITES AND REPORT FINALIZATION	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 001069 NONE REPORT NONE 14	**09-29-1995** 11-29-1999 5090.3.A. NONE	CAMPE, J. NAVY NAVY	ACTION MEMORANDUM (AM), INSTALLATION RESTORATION SITE 05, CONCORD ANNEX DISPOSAL AREA	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 001070 NONE REPORT NONE 102	**09-29-1995** 11-29-1999 5090.3.A. NONE	HAWLEY, K. NAVY NAVY	ORDNANCE REMOVAL WORK PLAN AND INTERIM REMEDIAL ACTION PLAN FOR THE TIME CRITICAL REMOVAL ACTION (TCRA) AT INSTALLATION RESTORATION SITE 05; PART 1 - REMOVAL WORK PLAN,	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0020

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N00221 / 001064 NONE REPORT NONE 75	**10-05-1995** 11-29-1999 5090.3.A. NONE	MILLER, N. NAVY NAVY	REMOVAL ACTION PLAN (RM/RAP), INSTALLATION RESTORATION SITE 13, RADIO OPERATIONS FACILITY; INCLUDING: WORK PLAN (WP), FIELD SAMPLING PLAN (SP), HEALTH AND SAFETY	ADMIN RECORD	IA D SITE 00013	FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 001071 NONE REPORT NONE 11	**10-05-1995** 11-29-1999 5090.3.A. NONE	MILLER, N. NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	FINAL ACTION MEMORANDUM (AM) - INSTALLATION RESTORATION SITE 13, RADIO OPERATIONS FACILITY	ADMIN RECORD	IA D SITE 00013	FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 002002 NONE REPORT NONE 34	**10-05-1995** 11-29-1999 5090.3.A. NONE	MURPHY, D. DTSC SINATS, J. NAVFAC - SOUTHWEST DIVISION	INITIAL STUDY; STATE NEGATIVE DECLARATION TO IR-05 REMOVAL ACTION (RM)	ADMIN RECORD	SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 002003 NONE PUBLIC NOTICE NONE 2	**10-06-1995** 11-29-1999 5090.3.A. NONE	TIMES-HERALD PUBLIC INTEREST	PUBLIC NOTICE - ANNOUNCE PROPOSED REMOVAL ACTION (RM), INTERIM REMEDIAL ACTION PLAN (IRA/RAP) AND NEGATIVE DECLARATION	ADMIN RECORD	SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 001090 NONE CORRESPONDENCE N62474-88-D-5086 2	**10-10-1995** 11-29-1999 5090.3.A. 00306	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF REVISED DRAFT FINAL PHASE I ECOLOGICAL RISK ASSESSMENT WORK PLAN (ERA/WP) - 10 OCTOBER 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 001091 NONE REPORT N62474-88-D-5086 50	**10-10-1995** 11-29-1999 5090.3.A. 00306	ALBERT, A. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	REVISED DRAFT FINAL PHASE I ECOLOGICAL RISK ASSESSMENT WORK PLAN (ERA/WP) - 10 OCTOBER 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021

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N00221 / 001063 NONE CORRESPONDENCE NONE 2	**10-11-1995** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF REMOVAL ACTION PLAN (RM/RAP) FOR INSTALLATION RESTORATION SITE 13, RADIO OPERATIONS FACILITY	ADMIN RECORD	IA D SITE 00013	FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 001066 NONE CORRESPONDENCE NONE 2	**10-12-1995** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF ENGINEERING EVALUATION/COST ANALYSIS (EE/CA), FREE PRODUCT REMOVAL ACTION (RM), BERTHS 4 AND 5	ADMIN RECORD	IA C SITE 00003	FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 001092 NONE CORRESPONDENCE N62474-88-D-5086 2	**10-13-1995** 11-29-1999 5090.3.A. 00144	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF DRAFT FINAL PHASE II REMEDIAL INVESTIGATION (RI) REPORT FOR OPERABLE UNIT 1 (OU 1) - 13 OCTOBER 1995	ADMIN RECORD	OU 0000001	FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 001093 NONE REPORT N62474-88-D-5086 50	**10-13-1995** 11-29-1999 5090.3.A. 00144	WERTER, J. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL PHASE II REMEDIAL INVESTIGATION (RI) REPORT FOR OPERABLE UNIT 1 (OU 1) (SEE AR #29 - ADDENDUM TO RI)	ADMIN RECORD	OU 0000001	FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 002089 NONE CORRESPONDENCE NONE 2	**10-19-1995** 11-29-1999 5090.3.A. NONE	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON DRAFT SITE INVESTIGATION (SI) FOR UNEXPLODED ORDNANCE (UXO), SMALL ARMS RANGES - 19 JULY 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025

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N00221 / 002026 NONE CORRESPONDENCE NONE 10	**10-25-1995** 11-29-1999 5090.3.A. NONE	FUNG, A. NAVFAC - EFA WEST NAVFAC - SOUTHWEST DIVISION	STATEMENT OF WORK - 25 OCTOBER 1995: (1) GROUP 2 (REUSE ZONES 1, 4, AND 5) SITE SPECIFIC ENVIRONMENTAL BASELINE SURVEY (SSEBS)/FINDING OF SUITABILITY TO LEASE (FOSL)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 001094 NONE CORRESPONDENCE NONE 2	**10-27-1995** 11-29-1999 5090.3.A. NONE	LEONG, R. NSAS CLARK, G. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE REVISED DRAFT FINAL ECOLOGICAL RISK ASSESSMENT WORK PLAN (ERA/WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 001074 NONE REPORT N62474-88-D-5086 0	**10-31-1995** 11-29-1999 5090.3.A. 00222	WERTER, J. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	GROUNDWATER STATUS REPORT: A SUMMARY OF GROUNDWATER MONITORING FROM NOVEMBER 1992 TO MAY 1994, VOLUME 1 OF 3	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 001075 NONE REPORT N62474-88-D-5086 0	**10-31-1995** 11-29-1999 5090.3.A. 00222	WERTER, J. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	GROUNDWATER STATUS REPORT: A SUMMARY OF GROUNDWATER MONITORING FROM NOVEMBER 1992 TO MAY 1994, VOLUME 2 OF 3	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 001076 NONE REPORT N62474-88-D-5086 0	**10-31-1995** 11-29-1999 5090.3.A. 00222	WERTER, J. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	GROUNDWATER STATUS REPORT: A SUMMARY OF GROUNDWATER MONITORING FROM NOVEMBER 1992 TO MAY 1994, VOLUME 3 OF 3	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021

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N00221 / 001077 NONE REPORT N62474-88-D-5086 0	**10-31-1995** 11-29-1999 5090.3.A. 00222	WERTER, J. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	GROUNDWATER STATUS REPORT: A SUMMARY OF GROUNDWATER MONITORING FROM NOVEMBER 1992 TO MAY 1994, PLANS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 002037 NONE REPORT NONE 28	**11-06-1995** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS CLARK, G. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL WORK PLAN (UXO), UNEXPLODED ORDNANCE (UXO) SITE INVESTIGATION (SI) OF THE MANUFACTURING AREA	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002038 NONE REPORT NONE 50	**11-06-1995** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS CLARK, G. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL WORK PLAN (WP), SITE INVESTIGATION (SI) FOR UNEXPLODED ORDNANCE (UXO), SMALL ARMS RANGE	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002036 NONE CORRESPONDENCE NONE 4	**11-07-1995** 11-29-1999 5090.3.A. NONE	NAVY US EPA - SAN FRANCISCO	RESPONSE TO COMMENTS ON THE SMALL ARMS RANGE DRAFT WORK PLAN (WP) (19 JULY 1995) FOR THE UNEXPLODED ORDNANCE (UXO) SITE INVESTIGATION (SI) - 19 OCTOBER 1995)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002005 NONE REPORT NONE 91	**11-08-1995** 11-29-1999 5090.3.A. NONE	KELLER, E. NAVFAC - SOUTHWEST DIVISION SINATS, J. NAVFAC - SOUTHWEST DIVISION	DRAFT ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR THE ABRASIVE BLAST GRIT DISPOSAL AREA	ADMIN RECORD	SITE 00004	FRC - PERRIS	181-03-0180 31089137	BX 0022

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N00221 / 001073 NONE CORRESPONDENCE N62474-88-D-5086 2	**11-09-1995** 11-29-1999 5090.3.A. 00222	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF GROUNDWATER STATUS REPORT: A SUMMARY OF GROUNDWATER MONITORING FROM NOVEMBER 1992 TO MAY 1994, VOLUMES 1-3 AND PLANS	ADMIN RECORD		FRC - PERRIS	181-03-0180 BX 0020 31089137

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N00221 / 001065 NONE CORRESPONDENCE NONE 3	**11-13-1995** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	REQUEST FOR IDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR) FOR THE REMEDIAL INVESTIGATION AND FEASIBILITY STUDY (RI/FS)	ADMIN RECORD	IA A IA B IA C IA D IA F1 IA F2 IA G IA H SITE 00001 SITE 00002 SITE 00003 SITE 00004 SITE 00005 SITE 00006 SITE 00007 SITE 00008 SITE 00009 SITE 00010 SITE 00011 SITE 00012 SITE 00013 SITE 00014 SITE 00015 SITE 00016 SITE 00017 SITE 00018 SITE 00019 SITE 00020 SITE 00021 SITE 00023 SITE 00024	FRC - PERRIS	181-03-0180 BX 0020 31089137

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N00221 / 001068 NONE CORRESPONDENCE NONE 2	**11-13-1995** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF ACTION MEMORANDUM (AM), INSTALLATION RESTORATION SITE 05, CONCORD ANNEX DISPOSAL AREA; AND ORDNANCE REMOVAL WORK PLAN AND INTERIM REMEDIAL ACTION PLAN	ADMIN RECORD	IA G SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 001095 NONE CORRESPONDENCE NONE 5	**11-13-1995** 11-29-1999 5090.3.A. NONE	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE REVISED DRAFT FINAL, PHASE I ECOLOGICAL RISK ASSESSMENT WORK PLAN (ERA/WP) - 10 OCTOBER 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 002033 NONE CORRESPONDENCE NONE 27	**11-13-1995** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	REQUEST FOR IDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR) FOR THE REMEDIAL INVESTIGATION AND FEASIBILITY (RI/FS) FOR OPE	ADMIN RECORD INFO REPOSITORY	SITE 00001 SITE 00002 SITE 00003 SITE 00004 SITE 00005 SITE 00006 SITE 00007 SITE 00008 SITE 00009 SITE 00010 SITE 00011 SITE 00012 SITE 00013 SITE 00014 SITE 00015 SITE 00016 SITE 00017 SITE 00018 SITE 00019 SITE 00020 SITE 00021 SITE 00023 SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0023

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N00221 / 002090 NONE CORRESPONDENCE NONE 6	**11-14-1995** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO COMMENTS ON THE DRAFT TECHNICAL MEMORANDUM (TM), EXAMINATION OF GROUNDWATER FOR MUNICIPAL AND DOMESTIC SUPPLY - 20 APRIL 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 002034 NONE CORRESPONDENCE NONE 2	**11-15-1995** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF RESPONSE TO COMMENTS (14 AND 19 JULY 1995) AND DRAFT FINAL WORK PLANS FOR MANUFACTURING AREA AND SMALL ARMS RANGES (06 NOVEMBER 1995)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 001096 NONE CORRESPONDENCE NONE 8	**11-16-1995** 11-29-1999 5090.3.A. NONE	HACK, K. ARC CLARK, G. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE REVISED DRAFT FINAL, PHASE I ECOLOGICAL RISK ASSESSMENT (ERA) - 10 OCTOBER 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 002091 NONE CORRESPONDENCE NONE 2	**11-17-1995** 11-29-1999 5090.3.A. NONE	KATHURIA, G. CRWQCB SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL PHASE II REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT NUMBER 1 (OU 1) - 13 OCTOBER 1995	ADMIN RECORD	OU 0000001	FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 002004 NONE CORRESPONDENCE NONE 2	**11-21-1995** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF DRAFT ENGINEERING EVALUATION/COST ANALYSIS (EE/CA), FOR THE ABRASIVE BLAST GRIT DISPOSAL AREA - 08 NOVEMBER 1995	ADMIN RECORD	SITE 00004	FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 002092 NONE CORRESPONDENCE NONE 4	**11-22-1995** 11-29-1999 5090.3.A. NONE	HACK, K. ARC CLARK, G. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON DRAFT FINAL PHASE II REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT NUMBER 1 (OU 1) - 13 OCTOBER 1995	ADMIN RECORD	OU 0000001	FRC - PERRIS	181-03-0180 31089137	BX 0025

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N00221 / 001097 NONE CORRESPONDENCE NONE 2	**11-24-1995** 11-29-1999 5090.3.A. NONE	RAB MEMBERS CLARK, G. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE REVISED DRAFT FINAL, PHASE I ECOLOGICAL RISK ASSESSMENT WORK PLAN (ERA/WP) - 10 OCTOBER 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 001098 NONE CORRESPONDENCE NONE 13	**11-29-1995** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE REVISED DRAFT FINAL, PHASE I ECOLOGICAL RISK ASSESSMENT WORK PLAN (ERA/WP)- 10 OCTOBER 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 001072 NONE CORRESPONDENCE NONE 2	**11-30-1995** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF FINAL ACTION MEMORANDUM (AM) - INSTALLATION RESTORATION SITE 13, RADIO OPERATIONS FACILITY	ADMIN RECORD	IA D SITE 00013	FRC - PERRIS	181-03-0180 31089137	BX 0020
N00221 / 002021 NONE REPORT NONE 200	**12-11-1995** 11-29-1999 5090.3.A. NONE	RADIOLOGICAL ENG NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	ADMINISTRATIVE RECORD FOR THE RADIOLOGICAL DECOMMISSIONING, VOLUME 3 - QUALITY ASSURANCE (QA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002022 NONE REPORT NONE 544	**12-11-1995** 11-29-1999 5090.3.A. NONE	RADIOLOGICAL ENG NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	ADMINISTRATIVE RECORD FOR THE RADIOLOGICAL DECOMMISSIONING, VOLUME 5 - BASE CLEAN-UP TEAM CORRESPONDENCE	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023

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N00221 / 001099 NONE CORRESPONDENCE N62474-88-D-5086 2	**12-14-1995** 11-29-1999 5090.3.A. 00144	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF TECHNICAL MEMORANDUM (TM), ESTIMATION OF AMBIENT METAL CONCENTRATION IN SOILS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 002000 NONE REPORT N62474-88-D-5086 54	**12-14-1995** 11-29-1999 5090.3.A. 00144	WERTER, J. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	TECHNICAL MEMORANDUM (TM), ESTIMATION OF AMBIENT METAL CONCENTRATION IN SOILS (SEE AR #56 - UPDATE TO TECH MEMO)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 002006 NONE PUBLIC NOTICE NONE 3	**12-14-1995** 11-29-1999 5090.3.A. NONE	PIEPER, R. NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	PUBLIC NOTICE - PUBLIC COMMENT PERIOD FOR DIESEL FUEL CLEANUP STUDY, INSTALLATION RESTORATION SITE 03 (IR-03)	ADMIN RECORD	SITE 00003	FRC - PERRIS	181-03-0180 31089137	BX 0022
N00221 / 002024 NONE CORRESPONDENCE NONE 1	**01-03-1996** 11-29-1999 5090.3.A. NONE	CHRISTIAN, V. CRWQCB SINATS, J. NAVFAC - SOUTHWEST DIVISION	NEW REMEDIAL PROJECT MANAGER (RPM)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002025 NONE CORRESPONDENCE NONE 6	**01-05-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	LETTER OF INTENT FOR CONTAINERIZED MATERIAL DISPOSITION/REMOVAL FROM DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SCRAPYARD AND APPLICABLE OR RELEVANT AND A	ADMIN RECORD	SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002039 NONE CORRESPONDENCE NONE 3	**01-10-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	REVISED RESPONSE TO COMMENTS ON THE MANUFACTURING AREA, DRAFT WORK PLAN (WP) (14 JULY 1995)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023

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N00221 / 002093 NONE CORRESPONDENCE NONE 14	**01-10-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO COMMENTS ON THE DRAFT FINAL PHASE II REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 1 (OU 1) - 13 OCTOBER 1995	ADMIN RECORD	OU 0000001	FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 002001 NONE CORRESPONDENCE NONE 50	**01-19-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO COMMENTS ON THE DRAFT FINAL, PHASE I ECOLOGICAL RISK ASSESSMENT WORK PLAN (ERA/WP) - 23 JUNE 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0021
N00221 / 002040 NONE CORRESPONDENCE NONE 99	**01-19-1996** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002007 NONE REPORT NONE 100	**02-16-1996** 11-29-1999 5090.3.A. NONE	O'BRIEN, R. NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	QUALITY ASSURANCE PROJECT PLAN (QAPP) FOR THE GENERAL RADIOACTIVE MATERIAL (G-RAM) RADIOLOGICAL SURVEY PLAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0022
N00221 / 002041 NONE CORRESPONDENCE N62474-88-D-5086 40	**02-20-1996** 11-29-1999 5090.3.A. 00306	ALBERT, A. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE REVISED DRAFT FINAL ECOLOGICAL RISK ASSESSMENT WORK PLAN (ERA/WP) (10 OCTOBER 1995) - 19 FEBRUARY 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023

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N00221 / 002008 NONE CORRESPONDENCE NONE 6	**02-26-1996** 11-29-1999 5090.3.A. NONE	KATHURIA, G. CRWQCB SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON GROUNDWATER STATUS REPORT: A SUMMARY OF GROUNDWATER MONITORING FROM NOVEMBER 1992 TO MAY 1994 - OCTOBER 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0022
N00221 / 002020 NONE REPORT NONE 700	**02-28-1996** 11-29-1999 5090.3.A. NONE	RADIOLOGICAL ENG NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	RADIOLOGICAL SURVEY PLAN FOR THE RADIOLOGICAL DECOMMISSIONING, VOLUME I, BOOK 1 - SURVEY METHODOLOGY AND SPECIFICATIONS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002042 NONE CORRESPONDENCE NONE 5	**03-01-1996** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002043 NONE CORRESPONDENCE N62474-88-D-5086 2	**03-07-1996** 11-29-1999 5090.3.A. 00306	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF FINAL PHASE 1 ECOLOGICAL RISK ASSESSMENT WORK PLAN (ERA/WP) - 07 MARCH 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002044 NONE REPORT N62474-88-D-5086 90	**03-07-1996** 11-29-1999 5090.3.A. 00306	ALBERT, A. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	FINAL PHASE 1 ECOLOGICAL RISK ASSESSMENT WORK PLAN (ERA/WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023

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N00221 / 002010 NONE REPORT NONE 19	**03-13-1996** 11-29-1999 5090.3.A. NONE	MILLER, N. NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	REMOVAL ACTION (RM) SUMMARY REPORT, INSTALLATION RESTORATION SITE 19 (IR-19), METAL PARTS CLEANING FACILITY	ADMIN RECORD	SITE 00019	FRC - PERRIS	181-03-0180 31089137	BX 0022
N00221 / 002019 NONE CORRESPONDENCE NONE 13	**03-21-1996** 11-29-1999 5090.3.A. NONE	O'BRIEN, R. NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	SUBMITTAL OF ADMINISTRATIVE RECORD DOCUMENTS, FINAL INDEX OF ADMINISTRATIVE RECORD DOCUMENTS FOR THE NAVAL NUCLEAR PROPULSION PROGRAM (NNPP), RADIOLOGICAL DECOMMI	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0022
N00221 / 002009 NONE CORRESPONDENCE NONE 2	**03-27-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF REMOVAL ACTION (RM) SUMMARY REPORT, INSTALLATION RESTORATION SITE 19 (IR-19), METAL PARTS CLEANING FACILITY	ADMIN RECORD	SITE 00019	FRC - PERRIS	181-03-0180 31089137	BX 0022
N00221 / 002023 NONE CORRESPONDENCE NONE 5	**03-29-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SCHEDULE REVISION FOR RECORD OF DECISION (ROD) FOR INVESTIGATION AREA "E", GOLF COURSE AND UPLANDS MAGAZINE AREA	ADMIN RECORD	IA E	FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002027 NONE CORRESPONDENCE NONE 4	**03-29-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SCHEDULE REVISION FOR RECORD OF DECISION (ROD) FOR INVESTIGATIONS AREA "E" - GOLF COURSE AND UPLANDS MAGAZINE AREA	ADMIN RECORD	IA E SITE 00022	FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002045 NONE CORRESPONDENCE N62474-88-D-5086 3	**03-29-1996** 11-29-1999 5090.3.A. 00144	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO COMMENTS ON THE ESTIMATION OF AMBIENT METAL CONCENTRATIONS IN SOILS TECHNICAL MEMORANDUM (TM) - 14 DECEMBER 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023

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N00221 / 002011 NONE REPORT NONE 222	**04-01-1996** 11-29-1999 5090.3.A. NONE	RADIOLOGICAL ENG NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	RADIOLOGICAL FINAL REPORT FOR THE RADIOLOGICAL DECOMMISSIONING, VOLUME II, BOOK 1 OF 8 - RADIOLOGICAL WORK FACILITIES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0022
N00221 / 002012 NONE REPORT NONE 150	**04-01-1996** 11-29-1999 5090.3.A. NONE	RADIOLOGICAL ENG NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	RADIOLOGICAL FINAL REPORT FOR THE RADIOLOGICAL DECOMMISSIONING, VOLUME II, BOOK 2 OF 8 - RADIOACTIVE MATERIAL STORAGE AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0022
N00221 / 002013 NONE REPORT NONE 200	**04-01-1996** 11-29-1999 5090.3.A. NONE	RADIOLOGICAL ENG NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	RADIOLOGICAL FINAL REPORT FOR THE RADIOLOGICAL DECOMMISSIONING, VOLUME II, BOOK 3 OF 8 - DRY DOCKS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0022
N00221 / 002014 NONE REPORT NONE 200	**04-01-1996** 11-29-1999 5090.3.A. NONE	RADIOLOGICAL ENG NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	RADIOLOGICAL FINAL REPORT FOR THE RADIOLOGICAL DECOMMISSIONING, VOLUME II, BOOK 4 OF 8 - BERTH AND PIERS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0022
N00221 / 002015 NONE REPORT NONE 222	**04-01-1996** 11-29-1999 5090.3.A. NONE	RADIOLOGICAL ENG NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	RADIOLOGICAL FINAL REPORT FOR THE RADIOLOGICAL DECOMMISSIONING, VOLUME II, BOOK 5 OF 8 - OTHER PERMANENT FACILITIES (BUILDING WAYS #1 - BUILDING 239)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0022

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N00221 / 002016 NONE REPORT NONE 200	**04-01-1996** 11-29-1999 5090.3.A. NONE	RADIOLOGICAL ENG NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	RADIOLOGICAL FINAL REPORT FOR THE RADIOLOGICAL DECOMMISSIONING, VOLUME II, BOOK 6 OF 8 - OTHER PERMANENT FACILITIES (BUILDING 273 - BUILDING A-228)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0022
N00221 / 002017 NONE REPORT NONE 150	**04-01-1996** 11-29-1999 5090.3.A. NONE	RADIOLOGICAL ENG NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	RADIOLOGICAL FINAL REPORT FOR THE RADIOLOGICAL DECOMMISSIONING, VOLUME II, BOOK 7 OF 8 - REFUELING COMPLEXES AND PORTABLE FACILITIES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0022
N00221 / 002018 NONE REPORT NONE 222	**04-01-1996** 11-29-1999 5090.3.A. NONE	RADIOLOGICAL ENG NAVY SINATS, J. NAVFAC - SOUTHWEST DIVISION	RADIOLOGICAL FINAL REPORT FOR THE RADIOLOGICAL DECOMMISSIONING, VOLUME II, BOOK 8 OF 8 - MISCELLANEOUS AREAS AND ENVIRONMENTAL SURVEYS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0022
N00221 / 002096 NONE REPORT N62474-88-D-5086 92	**04-01-1996** 11-29-1999 5090.3.A. 00217	BOSCHE, J. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	ON-SCENE COORDINATION REPORT, BUILDING 225 REMOVAL ACTION (RM)	ADMIN RECORD	SITE 00015	FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 002094 NONE CORRESPONDENCE NONE 9	**04-05-1996** 11-29-1999 5090.3.A. NONE	TURNER, J. CA DEPT OF FISH & GAME GRIBBLE, C. DTSC - BERKELEY	REQUEST ON STATUS OF REVIEW LETTER DATED 24 JANUARY 1996 ON THE TECHNICAL MEMORANDUM (TM) ESTIMATION OF AMBIENT METAL CONCENTRATIONS IN SOILS DATED 14 DECEMBER 19	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025

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N00221 / 002095 NONE CORRESPONDENCE N62474-88-D-5086 2	**04-15-1996** 11-29-1999 5090.3.A. 00217	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF ON-SCENE COORDINATION REPORT, BUILDING 225 REMOVAL ACTION (RM) - 01 APRIL 1996	ADMIN RECORD	SITE 00015	FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 002097 NONE CORRESPONDENCE NONE 24	**04-18-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION CHRISTIAN, V. CRWQCB	RESPONSE TO COMMENTS (1) GROUNDWATER STATUS REPORT, (2) DENSE NONAQUEOUS PHASE LIQUID STUDY TECHNICAL MEMORANDUM (TM)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 002028 NONE CORRESPONDENCE NONE 4	**04-25-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	REQUEST FOR INVESTIGATION OF ADDITIONAL PRELIMINARY ASSESSMENT/SITE INVESTIGATION (PA/SI) SITES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002098 NONE REPORT NONE 37	**05-03-1996** 11-29-1999 5090.3.A. NONE	THOMPSON, J. SSPORTS NAVY	STATUS REPORT, FREE PRODUCT REMOVAL, INSTALLATION SITE IR03, 1ST QUARTER 1996	ADMIN RECORD	SITE 00003	FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 002099 NONE CORRESPONDENCE NONE 2	**05-03-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF REMOVAL ACTION SUMMARY REPORT, INSTALLATION RESTORATION SITE 07/20, PRE-TREATMENT PLANT AND ACID MIXING FACILITY - 14 APRIL 1996	ADMIN RECORD	SITE 00007 SITE 00020	FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003000 NONE REPORT NONE 21	**05-03-1996** 11-29-1999 5090.3.A. NONE	HAMILTON, S. SSPORTS NAVY	REMOVAL ACTION SUMMARY REPORT, INSTALLATION RESTORATION SITE 07/20, PRE-TREATMENT PLANT AND ACID MIXING FACILITY	ADMIN RECORD	SITE 00007 SITE 00020	FRC - PERRIS	181-03-0180 31089137	BX 0025

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N00221 / 002029 NONE CORRESPONDENCE NONE 5	**05-06-1996** 11-29-1999 5090.3.A. NONE	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON ECOLOGICAL RISK ASSESSMENT (ERA), DIKE 12 AND 14 AREAS BIOASSAY STANDARD OPERATION PROCEDURES (SOP), APPENDIX C, D AND E	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002046 NONE CORRESPONDENCE NONE 5	**05-06-1996** 11-29-1999 5090.3.A. NONE	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON ECOLOGICAL RISK ASSESSMENT (ERA), DIKES 12 AND 14 AREAS BIOASSAY STANDARD OPERATION PROCEDURES (SOP): APPENDIX C AND D	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002048 NONE REPORT N62474-88-D-5086 32	**05-10-1996** 11-29-1999 5090.3.A. 00144	WERTER, J. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	DRAFT TOXICITY EVALUATION FIELD SAMPLING AND ANALYSIS PLAN (SAP), DIKES 12 AND 14 AREAS, TECHNICAL MEMORANDUM (TM)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002047 NONE CORRESPONDENCE N62474-88-D-5086 2	**05-16-1996** 11-29-1999 5090.3.A. 00144	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF DRAFT TOXICITY EVALUATION FIELD SAMPLING AND ANALYSIS PLAN (SAP), DIKES 12 AND 14 AREAS, TECHNICAL MEMORANDUM (TM) -10 MAY 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002050 NONE REPORT NONE 29	**05-17-1996** 11-29-1999 5090.3.A. NONE	NEVILLE, W. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	DRAFT HEALTH AND SAFETY PLAN (HASP), ECOLOGICAL RISK ASSESSMENT (ERA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0024

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N00221 / 002058 NONE REPORT NONE 38	**05-17-1996** 11-29-1999 5090.3.A. NONE	HAMILTON, S. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	INTERIM SUMMARY REPORT, REMOVAL ACTION (RM), INSTALLATION RESTORATION SITE 13 (IR13), RADIO OPERATIONS FACILITY	ADMIN RECORD	SITE 00013	FRC - PERRIS	181-03-0180 31089137	BX 0024
N00221 / 002049 NONE CORRESPONDENCE NONE 2	**05-22-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF DRAFT HEALTH AND SAFETY PLAN (HASP), ECOLOGICAL RISK ASSESSMENT (ERA) - 17 MAY 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0023
N00221 / 002065 NONE CORRESPONDENCE NONE 3	**05-30-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION HACK, K. ARC	TIMELY RESPONSE BY NAVY TO REVIEW COMMENTS AND RECOMMENDATIONS PROVIDED BY THE MARE ISLAND RESTORATION ADVISORY BOARD (RAB)	INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 002051 NONE CORRESPONDENCE N62474-88-D-5086 2	**05-31-1996** 11-29-1999 5090.3.A. 00144	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF DRAFT DIKES 12 AND 14 AREAS (1) TOXICITY EVALUATION, QUALITY ASSURANCE PROJECT PLAN (QAPP) - 31 MAY 1996, (2) HEALTH AND SAFETY PLAN (HASP) - 31 MAY	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0024
N00221 / 002052 NONE REPORT N62474-88-D-5086 288	**05-31-1996** 11-29-1999 5090.3.A. 00144	PARTYMILLER, K. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	DRAFT TOXICITY EVALUATION QUALITY ASSURANCE PROJECT PLAN (QAPP), DIKES 12 AND 14 AREAS, TECHNICAL MEMORANDUM (TM)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0024

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N00221 / 002053 NONE REPORT N62474-88-D-5086 65	**05-31-1996** 11-29-1999 5090.3.A. 00144	SHERMAN, C. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	DRAFT HEALTH AND SAFETY PLAN (HASP), DIKES 12 AND 14 AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0024
N00221 / 002054 NONE CORRESPONDENCE N62474-88-D-5086 2	**06-03-1996** 11-29-1999 5090.3.A. 00144	SINATS, J. NAVFAC - SOUTHWEST DIVISION GAYNOR, B. BAAQMD	SUBMISSION OF DRAFT EXECUTIVE SUMMARY, REMEDIAL INVESTIGATION (RI) REPORT FOR OPERABLE UNIT NUMBER 2 (OU 2) - 03 JUNE 1996	ADMIN RECORD	OU 2	FRC - PERRIS	181-03-0180 31089137	BX 0024
N00221 / 002055 NONE REPORT N62474-88-D-5086 13	**06-03-1996** 11-29-1999 5090.3.A. 00144	WERTER, J. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	DRAFT EXECUTIVE SUMMARY, REMEDIAL INVESTIGATION (RI) REPORT FOR OPERABLE UNIT NUMBER 2 (OU 2)	ADMIN RECORD	OU 2	FRC - PERRIS	181-03-0180 31089137	BX 0024
N00221 / 002059 NONE CORRESPONDENCE N62474-88-D-5086 2	**06-03-1996** 11-29-1999 5090.3.A. 00144	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT NUMBER 2 (OU 2), VOLUMES 1 THROUGH 4 - 03 JUNE 1996	ADMIN RECORD	OU 2	FRC - PERRIS	181-03-0180 31089137	BX 0024
N00221 / 002060 NONE REPORT N62474-88-D-5086 500	**06-03-1996** 11-29-1999 5090.3.A. 00144	WERTER, J. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT NUMBER 2 (OU 2), VOLUME 1	ADMIN RECORD	OU 2	FRC - PERRIS	181-03-0180 31089137	BX 0024

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N00221 / 002061 NONE REPORT N62474-88-D-5086 500	**06-03-1996** 11-29-1999 5090.3.A. 00144	WERTER, J. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT NUMBER 2 (OU 2), VOLUME 2	ADMIN RECORD	OU 2	FRC - PERRIS	181-03-0180 31089137	BX 0024
N00221 / 002062 NONE REPORT N62474-88-D-5086 500	**06-03-1996** 11-29-1999 5090.3.A. 00144	WERTER, J. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT NUMBER 2 (OU 2), VOLUME 3	ADMIN RECORD	OU 2	FRC - PERRIS	181-03-0180 31089137	BX 0024
N00221 / 002063 NONE REPORT N62474-88-D-5086 300	**06-03-1996** 11-29-1999 5090.3.A. 00144	WERTER, J. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT NUMBER 2 (OU 2), VOLUME 4	ADMIN RECORD	OU 2	FRC - PERRIS	181-03-0180 31089137	BX 0024
N00221 / 002066 NONE CORRESPONDENCE NONE 14	**06-03-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUPPLEMENTAL ENVIRONMENTAL BASELINE SURVEY (EBS) AND FINDING OF SUITABILITY TO LEASE (FOSL) FOR ZONE 4 DRY DOCK 2	ADMIN RECORD	DRY DOCK 2 ZONE 4	FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 002056 NONE CORRESPONDENCE NONE 2	**06-10-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION TOLLSTRUP, M. CARB	SOLICITATION FOR APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) FROM NON-RESPONDENTS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0024

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N00221 / 002057 NONE CORRESPONDENCE NONE 2	**06-10-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF INTERIM SUMMARY REPORT, REMOVAL ACTION (RM), INSTALLATION RESTORATION SITE 13 (IR13), RADIO OPERATIONS FACILITY - 17 MAY 1996	ADMIN RECORD	SITE 00013	FRC - PERRIS	181-03-0180 31089137	BX 0024
N00221 / 003005 NONE REPORT NONE 129	**06-12-1996** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS NAVY	DRAFT SUMMARY REPORT, UNEXPLODED ORDNANCE SITE INVESTIGATION (UXO/SI)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 002064 NONE CORRESPONDENCE NONE 5	**06-13-1996** 11-29-1999 5090.3.A. NONE	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON DRAFT TOXICITY EVALUATION FILED SAMPLING AND ANALYSIS PLAN (SAP), DIKES 12 AND 14 AREAS, TECHNICAL MEMORANDUM (TM) - 10 MAY 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003001 NONE CORRESPONDENCE NONE 5	**06-13-1996** 11-29-1999 5090.3.A. NONE	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT TOXICITY EVALUTION FIELD SAMPLING AND ANALYSIS PLAN (SAP), DIKES 12 AND 14 AREAS, TECHNICAL MEMORANDUM (TM) - 10 MAY 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003002 NONE CORRESPONDENCE NONE 5	**06-20-1996** 11-29-1999 5090.3.A. NONE	SULLIVAN, L. NOAA CLARK, G. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT TOXICITY EVALUATION FIELD SAMPLING AND ANALYSIS PLAN (SAP), DIKES 12 AND 14 AREAS, TECHNICAL MEMORANDUM (TM) - 10 MAY 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003003 NONE CORRESPONDENCE NONE 3	**06-25-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO COMMENTS ON THE ESTIMATION OF AMBIENT METAL CONCENTRATIONS IN SOILS TECHNICAL MEMORANDUM (TM) - 14 DECEMBER 1995	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025

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N00221 / 003004 NONE CORRESPONDENCE NONE 2	**06-25-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT SUMMARY REPORT, UNEXPLODED ORDNANCE SITE INVESTIGATION (UXO/SI) - 12 JUNE 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003015 NONE CORRESPONDENCE NONE 2	**07-15-1996** 11-29-1999 5090.3.A. NONE	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT TOXICITY EVALUATION QUALITY ASSURANCE PROJECT PLAN (QAPP), DIKES 12 AND 14 AREAS, TECHNICAL MEMORANDUM (TM) - 31 MAY 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003006 NONE CORRESPONDENCE NONE 2	**07-16-1996** 11-29-1999 5090.3.A. NONE	GEE, H. NAVY GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF BASE REALIGNMENT AND CLOSURE (BRAC) CLEANUP PLAN (BCP), REVISION 3	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003007 NONE REPORT NONE 400	**07-16-1996** 11-29-1999 5090.3.A. NONE	GEE, H. NAVY GRIBBLE, C. DTSC - BERKELEY	BASE REALIGNMENT AND CLOSURE (BRAC) CLEANUP PLAN (BCP), REVISION 3	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003023 NONE REPORT NONE 20	**07-16-1996** 11-29-1999 5090.3.A. NONE	THOMPSON, J. SSPORTS NAVY	STATUS REPORT, FREE PRODUCT REMOVAL, INSTALLATION RESTORATION SITE IR03, 2ND QUARTER 1996	ADMIN RECORD	SITE 00003	FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003016 NONE CORRESPONDENCE NONE 13	**07-19-1996** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT TOXICITY EVALUATION, FIELD SAMPLING AND ANALYSIS PLAN (SAP), DIKES 12 AND 14 AREAS, TECHNICAL MEMORANDUM (TM) - 10 MAY 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025

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N00221 / 003017 NONE CORRESPONDENCE NONE 6	**07-19-1996** 11-29-1999 5090.3.A. NONE	HUETTEMAN, T. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION (RI) REPORT FOR OPERABLE UNIT NUMBER 2 (OU 2) - 03 JUNE 1996	ADMIN RECORD	OU 2	FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003008 NONE CORRESPONDENCE NONE 48	**07-23-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	ADDITIONAL RADIOLOGICAL INFORMATION CONCERNING REDIOACTIVE FALLOUT, BUILDING 629 STORAGE YARD	ADMIN RECORD	SITE 00008	FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003009 NONE CORRESPONDENCE NONE 15	**07-29-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	RADIOLOGICAL RELEASE FOR UNRESTRICTED USE OF DRY DOCK 2	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003021 NONE REPORT N62474-94-D-7609 9	**07-29-1996** 11-29-1999 5090.3.A. 00099	WALTERS, M. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	FINAL SAMPLING PLAN (SP) MEMORANDUM FOR SURFACE SOIL SAMPLING AT PROPOSED REMOVAL ACTION (RM) SITES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003014 NONE CORRESPONDENCE NONE 11	**08-09-1996** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION (RI) REPORT FOR OPERABLE UNIT NUMBER 2 (OU 2) - 03 JUNE 1996	ADMIN RECORD	OU 2	FRC - PERRIS	181-03-0180 31089137	BX 0025

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N00221 / 003020 NONE CORRESPONDENCE N62474-94-D-7609 1	**08-09-1996** 11-29-1999 5090.3.A. 00099	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF FINAL SAMPLING PLAN (SP) MEMORANDUM FOR SURFACE SOIL SAMPLING AT PROPOSED REMOVAL ACTION (RM) SITES - 29 JULY 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003022 NONE CORRESPONDENCE NONE 1	**08-13-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF STATUS REPORT, FREE PRODUCT REMOVAL, INSTALLATION RESTORATION SITE IR03, 2ND QUARTER 1996 - 16 JULY 1996	ADMIN RECORD	SITE 00003	FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003024 NONE CORRESPONDENCE N62474-88-D-5086 2	**08-16-1996** 11-29-1999 5090.3.A. 00008	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE FINAL SUPPLEMENTAL HEALTH AND SAFETY PLAN (HASP), DIKES 12 AND 14 AREAS - 16 AUGUST 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003025 NONE REPORT N62474-88-D-5086 23	**08-16-1996** 11-29-1999 5090.3.A. 00008	SHERMAN, C. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	FINAL SUPPLEMENTAL HEALTH AND SAFETY PLAN (HASP), DIKES 12 AND 14 AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003028 NONE REPORT NONE 54	**08-19-1996** 11-29-1999 5090.3.A. NONE	NEVILLE, W. SSPORTS NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL HEALTH AND SAFETY PLAN (HASP), ECOLOGICAL RISK ASSESSMENT (ERA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0026

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N00221 / 003018 NONE CORRESPONDENCE NONE 4	**08-30-1996** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) SITE INVESTIGATION - 12 JUNE 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003030 NONE REPORT NONE 48	**09-05-1996** 11-29-1999 5090.3.A. NONE	THOMPSON, J. SSPORTS NAVY	TECHNICAL MEMORANDUM (TM), AUTOMATED FREE PRODUCT REMOVAL, INSTALLATION RESTORATION SITE IR03	ADMIN RECORD	SITE 00003	FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003026 NONE CORRESPONDENCE NONE 12	**09-06-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - EFA WEST GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO COMMENTS ON THE ENGINEERING EVALUATION/COST ANALYSIS (EE/CA)	ADMIN RECORD	SITE 00004	FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003031 NONE CORRESPONDENCE N62474-94-D-7609 2	**09-16-1996** 11-29-1999 5090.3.A. 00010	SINATS, J. NAVFAC - SOUTHWEST DIVISION GAYNOR, B. BAAQMD	SUBMISSION OF THE DRAFT GROUP II AND GROUP III ACCELERATED STUDY, QUALITY ASSURANCE PROJECT PLAN (QAPP) - 16 SEPTEMBER 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003032 NONE REPORT N62474-94-D-7609 500	**09-16-1996** 11-29-1999 5090.3.A. 00010	RIESING, R. PRC ENVIRONMENTAL MANAGEMENT CLARK, G. NAVFAC - SOUTHWEST DIVISION	DRAFT GROUP II AND GROUP III ACCELERATED STUDY, QUALITY ASSURANCE PROJECT PLAN (QAPP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003035 NONE REPORT NONE 12	**09-17-1996** 11-29-1999 5090.3.A. NONE	PAGANNI, M. SSPORTS NAVY	DRAFT ACTION MEMORANDUM (AM), INSTALLATION RESTORATION SITE 08 (IR-08), LEAD OXIDE CONTAMINATED SITE	ADMIN RECORD	SITE 00008	FRC - PERRIS	181-03-0180 31089137	BX 0026

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N00221 / 003037 NONE REPORT NONE 9	**09-18-1996** 11-29-1999 5090.3.A. NONE	PAGANNI, M. SSPORTS NAVY	DRAFT FIELD SAMPLING PLAN (SP), INSTALLATION RESTORATION SITE 08 (IR-08), LEAD OXIDE CONTAMINATED SITE	ADMIN RECORD	SITE 00008	FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003019 NONE CORRESPONDENCE NONE 22	**09-22-1996** 11-29-1999 5090.3.C. NONE	FUNG, A. NAVY SSPORTS	REQUEST FOR FEE PROPOSALS AND SUBMISSION OF STATEMENT OF WORK FOR (1) INDIVIDUAL SEBS/FINDING OF SUITABILITY TO LEASE (FOSL)/FINDING OF SUITABILITY TO TRANSFER (FOST), (2) GROUP 4 SEBS/FOSL, (3) GROUP 5 SEBS/FOSL, (4) GROUP 4 AN	SITE FILE		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003038 NONE REPORT NONE 41	**09-24-1996** 11-29-1999 5090.3.A. NONE	PAGANNI, M. SSPORTS NAVY	DRAFT HEALTH AND SAFETY PLAN (HASP), INSTALLATION RESTORATION SITE 08 (IR-08), LEAD OXIDE CONTAMINATED SITE	ADMIN RECORD	SITE 00008	FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003027 NONE CORRESPONDENCE NONE 2	**09-25-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT FINAL HEALTH AND SAFETY PLAN, ECOLOGICAL RISK ASSESSMENT (ERA) - 19 AUGUST 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0025
N00221 / 003029 NONE CORRESPONDENCE NONE 2	**10-03-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE TECHNICAL MEMORANDUM (TM), AUTOMATED FREE PRODUCT REMOVAL, INSTALLATION RESTORATION SITE IR03 - 05 SEPTEMBER 1996	ADMIN RECORD	SITE 00003	FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003064 NONE REPORT N62474-88-D-5086 500	**10-07-1996** 11-29-1999 5090.3.A. 00008	WERTER, J. PRC ENVIRONMENTAL MANAGEMENT SINATS, J. NAVFAC - SOUTHWEST DIVISION	DRAFT PHASE 1 ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP), ONSHORE AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0026

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N00221 / 003063 NONE CORRESPONDENCE N62474-88-D-5086 2	**10-16-1996** 11-29-1999 5090.3.A. 00008	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT PHASE 1 ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP), ONSHORE AREAS - 07 OCTOBER 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003062 NONE REPORT NONE 40	**10-18-1996** 11-29-1999 5090.3.A. NONE	THOMPSON, J. SSPORTS NAVY	STATUS REPORT, FREE PRODUCT REMOVAL, INSTALLATION RESTORATION SITE IR03, 3RD QUARTER 1996	ADMIN RECORD	SITE 00003	FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003065 NONE REPORT N62474-88-D-5086 300	**11-20-1996** 11-29-1999 5090.3.A. 00144	RYAN, K. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	TECHNICAL MEMORANDUM (TM): TIDAL INFLUENCE STUDY	ADMIN RECORD	SITE 00001 SITE 00003 SITE 00005 SITE 00007 SITE 00009 SITE 00015 SITE 00020	FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003066 NONE REPORT N62474-94-D-7609 200	**11-20-1996** 11-29-1999 5090.3.A. 00010	BORNSTEIN, J. PRC ENVIRONMENTAL MANAGEMENT, INC. SINATS, J. NAVFAC - SOUTHWEST DIVISION	DRAFT GROUP II AND GROUP III ACCELERATED STUDY DATA MANAGEMENT PLAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003067 NONE REPORT N62474-88-D-5086 300	**11-20-1996** 11-29-1999 5090.3.A. 00222	RYAN, K. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	TECHNICAL MEMORANDUM: MONITORING WELL RECONDITIONING, REPLACEMENT, AND ABANDONMENT, AND DREDGE SPOILS MONITORING	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0026

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N00221 / 003068 NONE REPORT N62474-88-D-5086 45	**11-22-1996** 11-29-1999 5090.3.A. 00222	RYAN, K. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	TECHNICAL MEMORANDUM (TM): ESTIMATION OF AMBIENT METAL CONCENTRATIONS IN SHALLOW GROUNDWATER	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003036 NONE REPORT NONE 36	**12-04-1996** 11-29-1999 5090.3.A. NONE	PAGANNI, M. SSPORTS NAVY	DRAFT REMOVAL ACTION (RM) WORK PLAN (WP), INSTALLATION RESTORATION SITE 08 (IR-08), LEAD OXIDE CONTAMINATED SITE	ADMIN RECORD	SITE 00008	FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003078 NONE CORRESPONDENCE NONE 38	**12-05-1996** 11-29-1999 5090.3.A. NONE	PIEPER, R. NAVY NAVY	SSPORTS LTR DTD 05 DEC 1996, GENERAL RADIOACTIVE MATERIAL (G-RAM) RADIOLOGICAL FINAL RELEASE RPT, AND FINDING OF NO FURTHER ACTION REQUIRED FOR NEW DEFENSE MATERI	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003033 NONE CORRESPONDENCE NONE 2	**12-06-1996** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF DRAFT IR-08, BUILDING 629, REMOVAL ACTION (1) PUBLIC NOTICE, (2) ACTION MEMORANDUM (AM) - 17 SEP 96, (3) REMOVAL ACTION WORK PLAN - 04 DEC 96, (4) F	ADMIN RECORD	SITE 00008	FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003034 NONE PUBLIC NOTICE NONE 1	**12-09-1996** 11-29-1999 5090.3.A. NONE	NAVY PUBLIC INTEREST	DRAFT PUBLIC NOTICE OF INSTALLATION RESTORATION SITE 08 (IR-08) REMOVAL ACTION (RM)	ADMIN RECORD	SITE 00008	FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003039 NONE CORRESPONDENCE N62474-88-D-5086 2	**12-13-1996** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - WESTERN DIVISION	SUBMISSION OF RESPONSE TO COMMENTS ON THE DRAFT FINAL QUALITY ASSURANCE PROJECT PLAN (QAPP) FOR DIKES 12 AND 14 AREAS	ADMIN RECORD	AREA 00012 AREA 00014	FRC - PERRIS	181-03-0180 31089137	BX 0026

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N00221 / 003040 NONE CORRESPONDENCE N62474-88-D-5086 15	**12-13-1996** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - WESTERN DIVISION	RESPONSE TO COMMENTS ON THE DRAFT FINAL QUALITY ASSURANCE PROJECT PLAN (QAPP) FOR DIKES 12 AND 14 AREAS	ADMIN RECORD	AREA 00012 AREA 00014	FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003041 NONE CORRESPONDENCE N62474-88-D-5086 3	**12-13-1996** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	SUBMISSION OF RESPONSE TO COMMENTS ON THE DRAFT FINAL TOXICITY EVALUATION, FIELD SAMPLING AND ANALYSIS PLAN (SAP) FOR DIKES 12 AND 14 AREAS - 13 DECEMBER 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003042 NONE CORRESPONDENCE N62474-88-D-5086 16	**12-13-1996** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	RESPONSE TO COMMENTS ON THE DRAFT FINAL TOXICITY EVALUATION, FIELD SAMPLING AND ANALYSIS PLAN (SAP) FOR DIKES 12 AND 14 AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003069 NONE REPORT N62474-94-D-7609 500	**12-13-1996** 11-29-1999 5090.3.A. 00010	BORNSTEIN, J. PRC ENVIRONMENTAL MANAGEMENT, INC. HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	DRAFT GROUP II AND III ACCELERATED STUDY FIELD SAMPLING AND ANALYSIS PLAN (SAP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003043 NONE CORRESPONDENCE N62474-88-D-5086 2	**12-20-1996** 11-29-1999 5090.3.A. 00044	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	SUBMISSION OF THE FINAL TOXICITY EVALUATION, FIELD SAMPLING AND ANALYSIS PLAN (SAP), DIKES 12 AND 14 AREAS - 20 DECEMBER 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0026

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N00221 / 003044 NONE REPORT N62474-88-D-5086 48	**12-20-1996** 11-29-1999 5090.3.A. 00044	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	FINAL TOXICITY EVALUATION, FIELD SAMPLING AND ANALYSIS PLAN (SAP), DIKES 12 AND 14 AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003045 NONE REPORT N62474-88-D-5086 334	**12-20-1996** 11-29-1999 5090.3.A. 00044	PARTYMILLER, K. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	FINAL TOXICITY EVALUATION, QUALITY ASSURANCE PROJECT PLAN (QAPP), DIKES 12 AND 14 AREAS, TECHNICAL MEMORANDUM (TM)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003087 NONE REPORT N62474-94-D-7609 56	**12-20-1996** 11-29-1999 5090.3.A. 00024	RYAN, K. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	FINAL FEDERAL FACILITIES SITE REMEDIATION AGREEMENT SCHEDULE (FFSRA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003047 NONE REPORT N62474-88-D-5086 500	**12-24-1996** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 3 (OU 3), VOLUME 1 OF 12 - CHAPTERS 1 TO 5	ADMIN RECORD	OU 3	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003048 NONE REPORT N62474-88-D-5086 500	**12-24-1996** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 3 (OU 3), VOLUME 2 OF 12 - CHAPTERS 5 (CONTINUED) AND 6	ADMIN RECORD	OU 3	NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 003049 NONE REPORT N62474-88-D-5086 500	**12-24-1996** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 3 (OU 3), VOLUME 3 OF 12 - CHAPTERS 6 (CONTINUED), 7 AND 8	ADMIN RECORD	OU 3	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003050 NONE REPORT N62474-88-D-5086 500	**12-24-1996** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 3 (OU 3), VOLUME 4 OF 12 - CHAPTERS 9 TO 12	ADMIN RECORD	OU 3	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003051 NONE REPORT N62474-88-D-5086 500	**12-24-1996** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 3 (OU 3), VOLUME 5 OF 12 - CHAPTERS 12 (CONTINUED), AND 13	ADMIN RECORD	OU 3	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003052 NONE REPORT N62474-88-D-5086 500	**12-24-1996** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 3 (OU 3), VOLUME 6 OF 12 - CHAPTERS 13 (CONTINUED), AND 14 TO 16	ADMIN RECORD	OU 3	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003053 NONE REPORT N62474-88-D-5086 500	**12-24-1996** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 3 (OU 3), VOLUME 7 OF 12 - APPENDICES A TO D	ADMIN RECORD	OU 3	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003054 NONE REPORT N62474-88-D-5086 500	**12-24-1996** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 3 (OU 3), VOLUME 8 OF 12 - APPENDIX D (CONTINUED)	ADMIN RECORD	OU 3	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003055 NONE REPORT N62474-88-D-5086 500	**12-24-1996** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 3 (OU 3), VOLUME 9 OF 12 - APPENDIX D (CONTINUED)	ADMIN RECORD	OU 3	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003056 NONE REPORT N62474-88-D-5086 500	**12-24-1996** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 3 (OU 3), VOLUME 10 OF 12 - APPENDIX D (CONTINUED)	ADMIN RECORD	OU 3	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003057 NONE REPORT N62474-88-D-5086 500	**12-24-1996** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 3 (OU 3), VOLUME 11 OF 12 - APPENDICES D (CONTINUED), AND E TO J	ADMIN RECORD	OU 3	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003058 NONE REPORT N62474-88-D-5086 500	**12-24-1996** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 3 (OU 3), VOLUME 12 OF 12 - APPENDICES J (CONTINUED), AND K TO P	ADMIN RECORD	OU 3	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003059 NONE CORRESPONDENCE N62474-88-D-5086 70	**12-24-1996** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 3 (OU 3), OVERSIZED PLATES	ADMIN RECORD	OU 3	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003046 NONE CORRESPONDENCE NONE 3	**12-26-1996** 11-29-1999 5090.3.A. NONE	SULLIVAN, L. NOAA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT PHASE 1 ECOLOGICAL RISK ASSESSMENT (ERA), FIELD SAMPLING AND ANALYSIS PLAN (SAP), ONSHORE AREAS - 07 OCTOBER 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003061 NONE REPORT NONE 200	**12-31-1996** 11-29-1999 5090.3.A. NONE	PRC ENVIRONMENTAL MANAGEMENT SINATS, J. NAVFAC - SOUTHWEST DIVISION	DRAFT REVISION 4 BASE REALIGNMENT AND CLOSURE (BRAC) CLEANUP PLAN (BCP)	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003070 NONE CORRESPONDENCE NONE 6	**01-02-1997** 11-29-1999 5090.3.A. NONE	SULLIVAN, L. NOAA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE FRAMEWORK FOR ASSESSING BIOACCUMULATION AND CALCULATING RISK-BASED SCREENING CRITERIA IN AQUATIC AND TERRESTRIAL ENVIRONMENTS, DRAFT TECHNICAL MEM	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003071 NONE CORRESPONDENCE NONE 11	**01-06-1997** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE FRAMEWORK FOR ASSESSING BIOACCUMULATION AND CALCULATING RISK-BASED SCREENING CRITERIA IN AQUATIC AND TERRESTRIAL ENVIRONMENTS, DRAFT TECHNICAL MEM	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027

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N00221 / 003072 NONE CORRESPONDENCE NONE 15	**01-06-1997** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT TECHNICAL MEMORANDUM (TM), METHODOLOGY TO DETERMINE NATURAL ATTENUATION OF CONTAMINANTS IN SOILS AND GROUNDWATER FOR THE ECOLOGICAL RISK ASSESSMENT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003073 NONE CORRESPONDENCE NONE 9	**01-06-1997** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT ECOLOGICAL RISK ASSESSMENT (ERA) QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM, ONSHORE AREAS - 25 OCTOBER 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003074 NONE CORRESPONDENCE NONE 5	**01-06-1997** 11-29-1999 5090.3.A. NONE	GILL, M. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT RISK ASSESSMENT QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM, ONSHORE AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003075 NONE MINUTES NONE 15	**01-07-1997** 11-29-1999 5090.3.A. NONE	HILLSTROM, M. NAVY GRIBBLE, C. DTSC - BERKELEY	MONTHLY REMEDIAL PROJECT MANAGERS (RPM) MEETING MINUTES - 07 JANUARY 1997, AND FEBRUARY REMEDIAL PROJECT MANAGERS (RPM) MEETING AGENDA	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003080 NONE REPORT NONE 33	**01-07-1997** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	DRAFT UPLAND MAGAZINE AREA AND ORDNANCE RESERVIOR REPORTS, UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003081 NONE REPORT NONE 74	**01-07-1997** 11-29-1999 5090.3.A. NONE	BODENHAMER, W SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	DRAFT UPLAND MAGAZINE AREA AND ORDNANCE RESERVIOR REPORTS, SITE-SPECIFIC HEALTH AND SAFETY PLAN (HASP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027

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N00221 / 003082 NONE REPORT NONE 28	**01-07-1997** 11-29-1999 5090.3.A. NONE	ENGLEHART, H. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	DRAFT GENERIC ACTION MEMORANDUM (AM) ORDNANCE REMOVAL ACTIONS (RM)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003060 NONE CORRESPONDENCE NONE 2	**01-09-1997** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT REVISION 4 BASE REALIGNMENT AND CLOSURE (BRAC) CLEANUP PLAN (BCP) - 31 DECEMBER 1996	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0026
N00221 / 003076 NONE REPORT NONE 12	**01-09-1997** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION CHRISTIAN, V. CRWQCB	REPORT DETAILING SUBSTANTIVE REQUIREMENTS FOR WASTE DISCHARGE FOR MARE ISLAND SOIL TREATMENT FACILITY (STF) - 06 JUNE 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003077 NONE CORRESPONDENCE NONE 2	**01-09-1997** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF SSPORTS LTR DTD 05 DEC 1996, GENERAL RADIOACTIVE MATERIAL (G-RAM) RADIOLOGICAL FINAL RELEASE RPT, AND FINDING OF NO FURTHER ACTION REQUIRED FOR NEW	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003090 NONE CORRESPONDENCE NONE 2	**01-13-1997** 11-29-1999 5090.3.A. NONE	PIEPER, R. NAVFAC - EFA WEST NAVFAC - SOUTHWEST DIVISION	REVISED STATEMENT OF WORK (SOW), ECOLOGICAL RISK ASSESSMENT (ERA), 23 SITES, DIKES 12/14, AND ACTIVE AND INACTIVE DREDGE SPOILS PONDS; DRAFT WETLANDS DELINEATION	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003106 NONE REPORT NONE 135	**01-17-1997** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS NAVY	DRAFT FINAL SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) SITE INVESTIGATION (SI)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028

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N00221 / 003107 NONE CORRESPONDENCE NONE 4	**01-17-1997** 11-29-1999 5090.3.A. NONE	NAVY	RESPONSE TO COMMENTS TO DRAFT SUMMARY REPORT FOR THE UNEXPLODED ORDNANCE (UXO) SITE INVESTIGATION (SI) - 12 JUNE 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003079 NONE CORRESPONDENCE NONE 2	**01-21-1997** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMSSION OF THE DRAFT UPLAND MAGAZINE AREA AND ORDNANCE RESERVIOR REPORTS - 07 JAN 1997 (1) UNEXPLODED ORDNANCE INTRUSIVE INVESTIGATION WORK PLAN, (2) DRAFT SIT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003083 NONE CORRESPONDENCE NONE 2	**01-23-1997** 11-29-1999 5090.3.A. NONE	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF (1) RESPONSE TO COMMENTS FOR DIKES 12 AND 14 AREA, (2) ABBREVIATED FIELD SAMPLING AND ANALYSIS PLAN (SAP) FOR THE ORDNANCE RESERVIOR, OFFSHORE ECOLO	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003084 NONE CORRESPONDENCE N62474-88-D-5086 16	**01-23-1997** 11-29-1999 5090.3.A. 00008	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	RESPONSE TO COMMENTS ON DIKES 12 AND 14 AREA DOCUMENTS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003085 NONE CORRESPONDENCE N62474-94-D-7609 11	**01-23-1997** 11-29-1999 5090.3.A. 00082	THORST, A. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	ABBREVIATED FIELD SAMPLING AND ANALYSIS PLAN (SAP) FOR THE ORDNANCE RESERVIOR, OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027

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N00221 / 003086 NONE CORRESPONDENCE N62474-94-D-7609 2	**01-24-1997** 11-29-1999 5090.3.A. 00024	RYAN, K. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE FINAL FEDERAL FACILITIES SITE REMEDIATION AGREEMENT SCHEDULE (FFSRA) - 20 DECEMBER 1996	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003088 NONE CORRESPONDENCE N62474-94-D-7609 2	**01-24-1997** 11-29-1999 5090.3.A. 00099	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF DRAFT TECHNICAL MEMORANDUM (TM) SUPPORTING THE SELECTION OF THE CONTAINMENT PRESUMPTIVE REMEDY FOR THE FACILITY AND RCRA LANDFILLS - 24 JANUARY 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003089 NONE CORRESPONDENCE N62474-94-D-7609 150	**01-24-1997** 11-29-1999 5090.3.A. 00099	WERTER, J. TETRA TECH EM INC. HILLSTROM, M NAVFAC - SOUTHWEST DIVISION	DRAFT TECHNICAL MEMORANDUM (TM) SUPPORTING THE SELECTION OF THE CONTAINMENT PRESUMPTIVE REMEDY FOR THE FACILITY AND RCRA LANDFILLS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003091 NONE CORRESPONDENCE NONE 4	**01-27-1997** 11-29-1999 5090.3.A. NONE	GILL, M. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE FRAMEWORK FOR ASSESSING BIOREMEDIATION AND CALCULATING RISK-BASED SCREENING CRITERIA IN AQUATIC AND TERRESTRIAL ENVIRONMENTS DRAFT TECHNICAL MEMOR	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003092 NONE REPORT N62474-88-D-5086 500	**01-31-1997** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT VENTURA, F. NAVY	DRAFT FINAL REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 2 (OU2), VOLUME 1 OF 4	ADMIN RECORD	OU 2 SITE 00008 SITE 00010 SITE 00011 SITE 00013 SITE 00016 SITE 00018 SITE 00023	FRC - PERRIS	181-03-0180 31089137	BX 0027

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N00221 / 003093 NONE REPORT N62474-88-D-5086 500	**01-31-1997** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT VENTURA, F. NAVY	DRAFT FINAL REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 2 (OU2), VOLUME 2 OF 4	ADMIN RECORD	OU 2 SITE 00008 SITE 00010 SITE 00011 SITE 00013 SITE 00016 SITE 00018 SITE 00023	FRC - PERRIS	181-03-0180 31089137	BX 0027
N00221 / 003094 NONE REPORT N62474-88-D-5086 500	**01-31-1997** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT VENTURA, F. NAVY	DRAFT FINAL REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 2 (OU2), VOLUME 3 OF 4	ADMIN RECORD	OU 2 SITE 00008 SITE 00010 SITE 00011 SITE 00013 SITE 00016 SITE 00018 SITE 00023	FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003095 NONE REPORT N62474-88-D-5086 500	**01-31-1997** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT VENTURA, F. NAVY	DRAFT FINAL REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 2 (OU2), VOLUME 4 OF 4	ADMIN RECORD	OU 2 SITE 00008 SITE 00010 SITE 00011 SITE 00013 SITE 00016 SITE 00018 SITE 00023	FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003096 NONE CORRESPONDENCE N62474-88-D-5086 2	**02-06-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE RESPONSE TO COMMENTS ON THE DRAFT TECHNICAL MEMORANDUM, METHODOLOGY TO DETERMINE NATURAL ATTENUATION OF CONTAMINENTS IN SOILS AND GROUNDWATER FOR THE ECOLOGICAL RISK ASSESSMENT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028

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N00221 / 003097 NONE CORRESPONDENCE N62474-88-D-5086 36	**02-06-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT TECHNICAL MEMORANDUM, METHODOLOGY TO DETERMINE NATURAL ATTENUATION OF CONTAMINANTS IN SOILS AND GROUNDWATER FOR THE ECOLOGICAL RISK ASSESSMENT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003098 NONE CORRESPONDENCE N62474-88-D-5086 2	**02-06-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	SUBMISSION OF THE RESPONSE TO COMMENTS ON THE DRAFT ECOLOGICAL RISK ASSESSMENT (ERA) QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM, ONSHORE AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003099 NONE CORRESPONDENCE N62474-88-D-5086 7	**02-06-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	RESPONSE TO COMMENTS ON THE DRAFT ECOLOGICAL RISK ASSESSMENT (ERA) QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM, ONSHORE AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003103 NONE REPORT NONE 34	**02-14-1997** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS NAVY	FINAL UPLAND MAGAZINE AREA AND ORDNANCE RESERVIOR UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION WORK PLAN (WP)	ADMIN RECORD	AOC 000049 AOC 000050	FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003104 NONE REPORT NONE 77	**02-14-1997** 11-29-1999 5090.3.A. NONE	BODENHAMER, W SSPORTS NAVY	FINAL UPLAND MAGAZINE AREA AND ORDNANCE RESERVIOR SITE-SPECIFIC HEALTH AND SAFETY PLAN (HASP)	ADMIN RECORD	AOC 000049 AOC 000050	FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003109 NONE REPORT NONE 30	**02-21-1997** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	DRAFT SOUTH SHORE AREA UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028

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N00221 / 003110 NONE REPORT NONE 75	**02-21-1997** 11-29-1999 5090.3.A. NONE	ENGLEHART, H. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	DRAFT SOUTH SHORE AREA SITE SPECIFIC HEALTH AND SAFETY PLAN (HASP), PART 6 (APPENDIX C) OF THE UNEXPLODED ORDNANCE (UXO) TECHNICAL WORK DOCUMENT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003120 NONE REPORT NONE 31	**02-21-1997** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	DRAFT WESTERN MAGAZINE AREA UNEXPLODED ORNANCE (UXO) INTRUSIVE INVESTIGATION WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003121 NONE REPORT NONE 74	**02-21-1997** 11-29-1999 5090.3.A. NONE	ENGLEHART, H. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	DRAFT WESTERN MAGAZINE AREA SITE-SPECIFIC HEALTH AND SAFETY PLAN (HASP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003101 NONE CORRESPONDENCE N62474-88-D-5086 27	**02-26-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	RESPONSE TO COMMENTS ON THE FRAMEWORK FOR ASSESSING BIOACCUMULATION AND CALCULATING RISK-BASED SCREENING CRITERIA IN AQUATIC AND TERRESTRIAL ENVIRONMENTS DRAFT TE	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003100 NONE CORRESPONDENCE N62474-88-D-5086 3	**02-27-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	SUBMISSION OF THE RESPONSE TO COMMENTS ON THE FRAMEWORK FOR ASSESSING BIOACCUMULATION AND CALCULATING RISK-BASED SCREENING CRITERIA IN AQUATIC AND TERRESTRIAL ENV	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003102 NONE CORRESPONDENCE NONE 2	**02-27-1997** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE FINAL UPLAND MAGAZINE AREA AND ORDNANCE RESERVIOR UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION WORK PLAN (WP) - 14 FEBRUARY 1997, AND SITE	ADMIN RECORD	AOC 000049 AOC 000050	FRC - PERRIS	181-03-0180 31089137	BX 0028

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N00221 / 003105 NONE CORRESPONDENCE NONE 3	**02-28-1997** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT FINAL SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) SITE INVESTIGATION (SI) - 17 JANUARY 1997, AND THE RESPONSE TO COMMENTS TO DRAFT SUMMARY R	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003112 NONE FACT SHEET N62474-94-D-7609 5	**03-01-1997** 11-29-1999 5090.3.A. 00103	JUDY, D. PRC ENVIRONMENTAL MANAGEMENT VENTURA, F. NAVY	DRAFT PROPOSED PLAN FOR AREA E FACT SHEET	ADMIN RECORD	AREA E IA E	FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003108 NONE CORRESPONDENCE NONE 2	**03-05-1997** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT SOUTH SHORE AREA (1) UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION WORK PLAN (WP) AND (2) SITE SPECIFIC HEALTH AND SAFETY PLAN (HASP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003122 NONE CORRESPONDENCE N62474-88-D-5086 2	**03-05-1997** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	FINAL TECHNICAL MEMORANDUM (TM): TIDAL INFLUENCE STUDY, NO COMMENTS MAKING EXISTING DOCUMENT FINAL	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003111 NONE CORRESPONDENCE N62474-94-D-7609 2	**03-07-1997** 11-29-1999 5090.3.A. 00103	JUDY, D. PRC ENVIRONMENTAL MANAGEMENT VENTURA, F. NAVY	SUBMISSION OF THE DRAFT RECORD OF DECISION/REMEDIAL ACTION PLAN (ROD/RAP) AND PROPOSED PLAN FACT SHEET FOR AREA E - MARCH 1997	ADMIN RECORD	AREA E IA E	FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003113 NONE REPORT N62474-94-D-7609 27	**03-07-1997** 11-29-1999 5090.3.A. 00103	JUDY, D. PRC ENVIRONMENTAL MANAGEMENT VENTURA, F. NAVY	DRAFT RECORD OF DECISION/REMEDIAL ACTION PLAN (ROD/RAP) FOR AREA E	ADMIN RECORD	AREA E IA E	FRC - PERRIS	181-03-0180 31089137	BX 0028

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N00221 / 003114 NONE CORRESPONDENCE N62474-88-D-5086 7	**03-07-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	REVISED RESPONSE TO COMMENTS ON THE DRAFT ECOLOGICAL RISK ASSESSMENT (ERA) QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM, OHSHORE AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003123 NONE CORRESPONDENCE NONE 2	**03-07-1997** 11-29-1999 5090.3.A. NONE	GILL, M. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT TECHNICAL MEMORANDUM (TM) SUPPORTING THE SELECTION OF THE CONTAINMENT PRESUMPTIVE REMEDY FOR THE FACILITY AND RCRA LANDFILLS - 24 JANUARY 19	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003115 NONE CORRESPONDENCE N62474-88-D-5086 3	**03-10-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	SUBMISSION OF THE DRAFT FINAL ECOLOGICAL RISK ASSESSMENT (ERA) QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM, ONSHORE AREAS - 10 MARCH 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003116 NONE REPORT N62474-88-D-5086 200	**03-10-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	DRAFT FINAL ECOLOGICAL RISK ASSESSMENT (ERA) QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM, ONSHORE AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003117 NONE CORRESPONDENCE N62474-88-D-5086 3	**03-10-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	SUBMISSION OF THE DRAFT FINAL PROPOSED METHODOLOGY TO ESTIMATE THE DILUTION AND ATTENUATION OF CONTAMINANTS IN SOILS AND GROUNDWATER TECHNICAL MEMORANDUM (TM) - 1	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003118 NONE REPORT N62474-88-D-5086 44	**03-10-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	DRAFT FINAL PROPOSED METHODOLOGY TO ESTIMATE THE DILUTION AND ATTENUATION OF CONTAMINANTS IN SOILS AND GROUNDWATER TECHNICAL MEMORANDUM (TM)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028

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N00221 / 003129 NONE MINUTES N62474-94-D-7609 6	**03-12-1997** 11-29-1999 5090.3.A. 00082	THORST, A. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	FINAL MEETING MINUTES FOR THE ORDNANCE RESERVOIR AND DIKES 12 AND 14 AREA SAMPLING ECOLOGICAL RISK ASSESSMENT (ERA) - 31 JANUARY 1997	ADMIN RECORD	AOC 000049	FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003126 NONE REPORT NONE 25	**03-14-1997** 11-29-1999 5090.3.A. NONE	PAGANNI, M. SSPORTS PENDER, B. NAVFAC - SOUTHWEST DIVISION	FINAL REMOVAL ACTION WORK PLAN/ACTION MEMORANDUM (RM/AM), INSTALLATION RESTORATION SITE 08 (IR-8), LEAD OXIDE CONTAMINATED SITE	ADMIN RECORD	SITE 00008	FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003119 NONE CORRESPONDENCE NONE 2	**03-18-1997** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT WESTERN MAGAZINE AREA (1) UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION WORK PLAN (WP), AND (2) SITE-SPECIFIC HEALTH AND SAFETY PLAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003124 NONE CORRESPONDENCE N62474-88-D-5086 2	**03-20-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	RESPONSE TO COMMENTS ON THE DRAFT ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP) ONSHORE AREAS, DELAY SUBMISSION TO 21 APRIL 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003125 NONE CORRESPONDENCE NONE 2	**03-20-1997** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF FINAL REMOVAL ACTION WORK PLAN/ACTION MEMORANDUM (RM/AM), INSTALLATION RESTORATION SITE 08 (IR-8), LEAD OXIDE CONTAMINATED SITE - 14 MARCH 1997	ADMIN RECORD	SITE 00008	FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003127 NONE CORRESPONDENCE N62474-88-D-5086 7	**03-20-1997** 11-29-1999 5090.3.A. 00222	RYAN, K. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE TECHNICAL MEMORANDUM: MONITORING WELL RECONDITIONING, REPLACEMENT, AND ABANDONMENT, AND DREDGE SPOILS MONITORING	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028

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N00221 / 003128 NONE CORRESPONDENCE N62474-94-D-7609 7	**03-21-1997** 11-29-1999 5090.3.A. 00010	BORNSTEIN, J. PRC ENVIRONMENTAL MANAGEMENT, INC. HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT GROUP II AND GROUP III ACCELERATED STUDY QUALITY ASSURANCE PROJECT PLAN (QAPP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003130 NONE CORRESPONDENCE N62474-94-D-7609 3	**03-21-1997** 11-29-1999 5090.3.A. 00082	THORST, A. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	RESPONSE TO COMMENTS ON THE INTERNAL DRAFT OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003131 NONE CORRESPONDENCE N62474-94-D-7609 4	**03-21-1997** 11-29-1999 5090.3.A. 00082	THORST, A. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	SUBMISSION OF DRAFT OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP) AND DRAFT OFFSHORE ECOLOGICAL RISK ASSESSMENT QUALITY ASSURAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0028
N00221 / 003132 NONE REPORT N62474-94-D-7609 200	**03-21-1997** 11-29-1999 5090.3.A. 00082	THORST, A. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	DRAFT OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0029
N00221 / 003133 NONE REPORT N62474-94-D-7609 100	**03-21-1997** 11-29-1999 5090.3.A. 00082	THORST, A. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	DRAFT OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 003170 NONE CORRESPONDENCE N62474-94-D-7609 2	**03-21-1997** 11-29-1999 5090.3.A. 00010	BORNSTEIN, J. PRC ENVIRONMENTAL MANAGEMENT, INC. HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF RESPONSE TO COMMENTS ON THE DRAFT GROUP II AND GROUP III ACCELERATED STUDY QUALITY ASSURANCE PROJECT PLAN (QAPP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003171 NONE CORRESPONDENCE N62474-94-D-7609 3	**03-21-1997** 11-29-1999 5090.3.A. 00010	BORNSTEIN, J. PRC ENVIRONMENTAL MANAGEMENT, INC. HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT GROUP II AND GROUP III ACCELERATED STUDY QUALITY ASSURANCE PROJECT PLAN (QAPP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003206 NONE CORRESPONDENCE N62474-94-D-7609 7	**03-21-1997** 11-29-1999 5090.3.A. 00010	BORNSTEIN, J. PRC ENVIRONMENTAL MANAGEMENT, INC. HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT GROUP II AND GROUP III ACCELERATED STUDY QUALITY ASSURANCE PROJECT PLAN (QAPP) - 21 MARCH 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003134 NONE REPORT N62474-88-D-5086 500	**03-24-1997** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	BASELINE HUMAN HEALTH RISK ASSESSMENT (HHRA), OPERABLE UNIT 3 (OU3), VOLUME 1 OF 5, CHAPTERS 1 THROUGH 5	ADMIN RECORD	OU 3	FRC - PERRIS	181-03-0180 31089137	BX 0029

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N00221 / 003135 NONE REPORT N62474-88-D-5086 500	**03-24-1997** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	BASELINE HUMAN HEALTH RISK ASSESSMENT (HHRA), OPERABLE UNIT 3 (OU3), VOLUME 2 OF 5, CHAPTERS 6 TO 14, APPENDICES A TO C	ADMIN RECORD	OU 3	FRC - PERRIS	181-03-0180 31089137	BX 0029
N00221 / 003136 NONE REPORT N62474-88-D-5086 500	**03-24-1997** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	BASELINE HUMAN HEALTH RISK ASSESSMENT (HHRA), OPERABLE UNIT 3 (OU3), VOLUME 3 OF 5, APPENDIX D	ADMIN RECORD	OU 3	FRC - PERRIS	181-03-0180 31089137	BX 0029
N00221 / 003137 NONE REPORT N62474-88-D-5086 500	**03-24-1997** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	BASELINE HUMAN HEALTH RISK ASSESSMENT (HHRA), OPERABLE UNIT 3 (OU3), VOLUME 4 OF 5, APPENDIX D (CONTINUED)	ADMIN RECORD	OU 3	FRC - PERRIS	181-03-0180 31089137	BX 0029
N00221 / 003138 NONE REPORT N62474-88-D-5086 500	**03-24-1997** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	BASELINE HUMAN HEALTH RISK ASSESSMENT (HHRA), OPERABLE UNIT 3 (OU3), VOLUME 5 OF 5, APPENDIX D (CONTINUED)	ADMIN RECORD	OU 3	FRC - PERRIS	181-03-0180 31089137	BX 0029
N00221 / 003139 NONE CORRESPONDENCE N62474-88-D-5086 3	**03-28-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	SUBMISSION OF THE FINAL RESPONSE TO COMMENTS ON FRAMEWORK FOR ASSESSING BIOACCUMULATION AND CALCULATING RISK-BASED SCREENING CRITERIA IN AQUATIC AND TERRESTRIAL E	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0029

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N00221 / 003140 NONE CORRESPONDENCE N62474-88-D-5086 30	**03-28-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	FINAL RESPONSE TO COMMENTS ON FRAMEWORK FOR ASSESSING BIOACCUMULATION AND CALCULATING RISK-BASED SCREENING CRITERIA IN AQUATIC AND TERRESTRIAL ENVIRONMENTS DRAFT	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003141 NONE CORRESPONDENCE N62474-88-D-5086 3	**03-28-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	SUBMISSION OF THE DRAFT FINAL BIOACCUMULATION AND FOOD-CHAIN ANALYSIS IN TERRESTRIAL AND AQUATIC HABITATS: THEIR ROLE IN THE ECOLOGICAL RISK ASSESSMENT (ERA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0029
N00221 / 003142 NONE REPORT N62474-88-D-5086 86	**03-28-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	DRAFT FINAL BIOACCUMULATION AND FOOD-CHAIN ANALYSIS IN TERRESTRIAL AND AQUATIC HABITATS: THEIR ROLE IN THE ECOLOGICAL RISK ASSESSMENT (ERA)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003143 NONE CORRESPONDENCE N62474-88-D-5086 2	**04-10-1997** 11-29-1999 5090.3.A. 00010	BORNSTEIN, J. PRC ENVIRONMENTAL MANAGEMENT, INC. HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE FINAL GROUP II AND III ACCELERATED STUDY DATA MANAGEMENT PLAN (DMP) - 10 APRIL 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0029
N00221 / 003144 NONE REPORT N62474-88-D-5086 94	**04-10-1997** 11-29-1999 5090.3.A. 00010	BORNSTEIN, J. PRC ENVIRONMENTAL MANAGEMENT, INC. HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	FINAL GROUP II AND III ACCELERATED STUDY DATA MANAGEMENT PLAN (DMP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0029

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N00221 / 003233 NONE CORRESPONDENCE NONE 3	**04-10-1997** 11-29-1999 5090.3.A. NONE	GILL, M. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL BIOACCUMULATION AND FOOD-CHAIN ANALYSIS IN TERRESTRIAL AND AQUATIC HABITATS, THEIR ROLL IN THE ECOLOGICAL RISK ASSESSMENT (ERA) AT MAR	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003161 NONE REPORT NONE 30	**04-14-1997** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	FINAL WESTERN MAGAZINE AREA UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003163 NONE REPORT NONE 29	**04-14-1997** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	FINAL SOUTH SHORE AREA UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003164 NONE REPORT NONE 74	**04-14-1997** 11-29-1999 5090.3.A. NONE	ENGLEHART, H. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	FINAL SOUTH SHORE AREA SITE SPECIFIC HEALTH AND SAFETY PLAN (HASP), PART 6 (APPENDIX C) OF THE UNEXPLODED ORDNANCE (UXO) TECHNICAL WORK DOCUMENT FOR SITES AT MARE	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003145 NONE CORRESPONDENCE NONE 2	**04-15-1997** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT REMOVAL ACTION WORK PLAN/ACTION MEMORANDUM (RM/WP/AM), INSTALLATION RESTORATION SITE 16, SUBSITE B4, LEAD OXIDE CONTAMINATED SITE - 03 APR	ADMIN RECORD	SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0029
N00221 / 003146 NONE REPORT NONE 29	**04-15-1997** 11-29-1999 5090.3.A. NONE	PAGANNI, M. SSPORTS VENTURA, F. NAVY	DRAFT REMOVAL ACTION WORK PLAN/ACTION MEMORANDUM (RM/WP/AM), INSTALLATION RESTORATION SITE 16, SUBSITE B4, LEAD OXIDE CONTAMINATED SITE	ADMIN RECORD	SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0029

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N00221 / 003155 NONE REPORT N62474-88-D-5086 12	**04-18-1997** 11-29-1999 5090.3.A. 00144	RYAN, K. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	FINAL SITE-SPECIFIC HEALTH AND SAFETY PLAN (HASP) SUPPLEMENT, REVISION 1	ADMIN RECORD	SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003147 NONE CORRESPONDENCE NONE 8	**04-21-1997** 11-29-1999 5090.3.A. NONE	GILL, M. U.S. EPA - SAN FRANCISCO, CA BAKER, W. NAVY	COMMENTS ON THE DRAFT OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP) - 21 MARCH 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0029
N00221 / 003148 NONE CORRESPONDENCE NONE 3	**04-21-1997** 11-29-1999 5090.3.A. NONE	GILL, M. U.S. EPA - SAN FRANCISCO, CA BAKER, W. NAVY	COMMENTS ON THE DRAFT OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) QUALITY ASSURANCE PROJECT PLAN (QAPP) - 21 MARCH 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0029
N00221 / 003149 NONE CORRESPONDENCE N62474-88-D-5086 3	**04-21-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	SUBMISSION OF THE DRAFT FINAL PHASE 1 ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP), ONSHORE AREAS - 21 APRIL 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0029
N00221 / 003150 NONE REPORT N62474-88-D-5086 300	**04-21-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	DRAFT FINAL PHASE 1 ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP), ONSHORE AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003151 NONE CORRESPONDENCE N62474-94-D-7609 2	**04-21-1997** 11-29-1999 5090.3.A. 00010	BORNSTEIN, J. PRC ENVIRONMENTAL MANAGEMENT, INC. HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE DRAFT FINAL GROUP II AND III ACCELERATED STUDY QUALITY ASSURANCE PROJECT PLAN (QAPP) - 21 APRIL 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030

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N00221 / 003152 NONE REPORT N62474-94-D-7609 600	**04-21-1997** 11-29-1999 5090.3.A. 00010	RIESING, R. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL GROUP II AND III ACCELERATED STUDY QUALITY ASSURANCE PROJECT PLAN (QAPP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003156 NONE CORRESPONDENCE NONE 3	**04-21-1997** 11-29-1999 5090.3.A. NONE	GILL, M. U.S. EPA - SAN FRANCISCO, CA BAKER, W. NAVY	COMMENTS ON THE DRAFT OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) QUALITY ASSURANCE PROJECT PLAN (QAPP) - 21 MARCH 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003157 NONE CORRESPONDENCE NONE 8	**04-21-1997** 11-29-1999 5090.3.A. NONE	GILL, M. U.S. EPA - SAN FRANCISCO, CA BAKER, W. NAVY	COMMENTS ON THE DRAFT OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP) - 21 MARCH 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003162 NONE REPORT NONE 73	**04-21-1997** 11-29-1999 5090.3.A. NONE	ENGLEHART, H. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	FINAL WESTERN MAGAZINE AREA SITE SPECIFIC HEALTH AND SAFETY PLAN (HASP), PART 6 (APPENDIX A) OF THE UNEXPLODED ORDNANCE (UXO) TECHNICAL WORK DOCUMENT FOR SITES AT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003153 NONE CORRESPONDENCE N62474-94-D-7609 2	**04-22-1997** 11-29-1999 5090.3.A. 00010	BORNSTEIN, J. PRC ENVIRONMENTAL MANAGEMENT, INC. HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF OMITTED FIGURES 4-1, 4-2, AND 4-3, TO THE DRAFT FINAL GROUP II AND III ACCELERATED STUDY QUALITY ASSURANCE PROJECT PLAN (QAPP) - 21 APRIL 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030

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N00221 / 003154 NONE CORRESPONDENCE N62474-88-D-5086 45	**04-25-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	RESPONSE TO COMMENTS ON THE DRAFT PHASE 1 ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP), ONSHORE AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003158 NONE CORRESPONDENCE NONE 19	**04-25-1997** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE OFF SHORE ECOLOGICAL RISK ASSESSMENT (ERA), (1) FIELD SAMPLING AND ANALYSIS PLAN (SAP), AND (2) QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM - 2	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003203 NONE REPORT NONE 134	**04-28-1997** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	FINAL SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) SITE INVESTIGATION (SI)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003159 NONE CORRESPONDENCE NONE 4	**04-29-1997** 11-29-1999 5090.3.A. NONE	SULLIVAN, L. NOAA BAKER, W. NAVY	COMMENTS ON THE OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) DRAFT FIELD SAMPLING AND ANALYSIS PLAN (SAP) - 21 MARCH 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003172 NONE CORRESPONDENCE NONE 1	**04-29-1997** 11-29-1999 5090.3.A. NONE	GILL, M. U.S. EPA - SAN FRANCISCO, CA HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL GROUP II AND III ACCELERATED STUDY QUALITY ASSURANCE PROJECT PLAN (QAPP) - 21 APRIL 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003190 NONE REPORT NONE 44	**04-29-1997** 11-29-1999 5090.3.A. NONE	PAGANNI, M. SSPORTS PENDER, B. NAVFAC - SOUTHWEST DIVISION	TECHNICAL WORK DOCUMENT, INSTALLATION RESTORATION SITE 08 (IR08) LEAD OXIDE CONTAMINATED SITE	ADMIN RECORD	SITE 00008	FRC - PERRIS	181-03-0180 31089137	BX 0031

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N00221 / 003160 NONE CORRESPONDENCE NONE 2	**05-05-1997** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE FINAL WESTERN MAGAZINE AREA (1) UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION WORK PLAN (WP) - 14 APRIL 1997, AND (2) SITE SPECIFIC HEALTH AND SAFETY PLAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003173 NONE CORRESPONDENCE NONE 2	**05-09-1997** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE GROUP 2 AND 3 ACCELERATED STUDY FIELD SAMPLING AND ANALYSIS PLAN (SAP) - 13 DECEMBER 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003174 NONE CORRESPONDENCE N62474-94-D-7609 2	**05-13-1997** 11-29-1999 5090.3.A. 00129	FOSTER, M. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE PHASE II QUARTERLY GROUNDWATER MONITORING PROGRAM, DRAFT WORK PLAN (WP) - 13 MAY 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003175 NONE REPORT N62474-94-D-7609 22	**05-13-1997** 11-29-1999 5090.3.A. 00129	FOSTER, M. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	PHASE II QUARTERLY GROUNDWATER MONITORING PROGRAM, DRAFT WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003196 NONE REPORT NONE 103	**05-14-1997** 11-29-1999 5090.3.A. NONE	IBARRA, V. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	REMOVAL WORK PLAN (WP), EXTENSION OF REMOVAL ACTION (RM), INSTALLATION RESTORATION SITE 13 (IR13), RADIO OPERATIONS FACILITY	ADMIN RECORD	SITE 00013	FRC - PERRIS	181-03-0180 31089137	BX 0031

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N00221 / 003182 NONE REPORT N62474-94-D-7609 122	**05-19-1997** 11-29-1999 5090.3.A. 00082	THORST, A. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003176 NONE CORRESPONDENCE N62474-94-D-7609 3	**05-20-1997** 11-29-1999 5090.3.A. 00082	THORST, A. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	SUBMISSION OF THE DRAFT OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM - 20 MAY 1997, AND RESPONSE TO COMMENTS ON THE DR	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003177 NONE CORRESPONDENCE N62474-94-D-7609 6	**05-20-1997** 11-29-1999 5090.3.A. 00082	THORST, A. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	RESPONSE TO COMMENTS ON THE DRAFT OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003178 NONE REPORT N62474-94-D-7609 100	**05-20-1997** 11-29-1999 5090.3.A. 00082	THORST, A. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	DRAFT OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003180 NONE CORRESPONDENCE N62474-94-D-7609 30	**05-20-1997** 11-29-1999 5090.3.A. 00082	THORST, A. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	RESPONSE TO COMMENTS ON THE DRAFT OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003181 NONE CORRESPONDENCE N62474-94-D-7609 3	**05-20-1997** 11-29-1999 5090.3.A. 00082	THORST, A. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	EXECUTIVE SUMMARY OF THE OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030

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N00221 / 003165 NONE CORRESPONDENCE NONE 22	**05-21-1997** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL PHASE I ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP), ONSHORE AREAS - 21 APRIL 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003179 NONE CORRESPONDENCE N62474-94-D-7609 3	**05-21-1997** 11-29-1999 5090.3.A. 00082	THORST, A. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	SUBMISSION OF THE OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP) - 19 MAY 1997, EXECUTIVE SUMMARY - 20 MAY 1997, AND RESPONSE TO	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003183 NONE CORRESPONDENCE N62474-94-D-7609 2	**05-21-1997** 11-29-1999 5090.3.A. 00010	BORNSTEIN, J. PRC ENVIRONMENTAL MANAGEMENT, INC. HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE FINAL GROUP II AND III ACCELERATED STUDY QUALITY ASSURANCE PROJECT PLAN (QAPP) - 21 MAY 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003184 NONE REPORT N62474-94-D-7609 1000	**05-21-1997** 11-29-1999 5090.3.A. 00010	BORNSTEIN, J. PRC ENVIRONMENTAL MANAGEMENT, INC. HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	FINAL GROUP II AND III ACCELERATED STUDY QUALITY ASSURANCE PROJECT PLAN (QAPP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003166 NONE REPORT N62474-88-D-5086 81	**05-27-1997** 11-29-1999 5090.3.A. 00144	PARTYMILLER, K. PRC ENVIRONMENTAL MANAGEMENT BROWN, J. NAVY	DRAFT FINAL ECOLOGICAL RISK ASSESSMENT (ERA), QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM, ONSHORE AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030

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N00221 / 003185 NONE CORRESPONDENCE NONE 1	**05-30-1997** 11-29-1999 5090.3.A. NONE	GILL, M. U.S. EPA - SAN FRANCISCO, CA BAKER, W. NAVY	COMMENTS ON THE DRAFT FINAL OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) QUALITY ASSURANCE PROJECT PLAN (QAPP) - 20 MAY 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003186 NONE CORRESPONDENCE NONE 1	**05-30-1997** 11-29-1999 5090.3.A. NONE	GILL, M. U.S. EPA - SAN FRANCISCO, CA BAKER, W. NAVY	COMMENTS ON THE DRAFT FINAL OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP) - 20 MAY 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003167 NONE CORRESPONDENCE N62474-88-D-5086 2	**06-02-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	SUBMISSION OF THE DRAFT FINAL ECOLOGICAL RISK ASSESSMENT (ERA) QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM, ONSHORE AREAS - 27 MAY 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003168 NONE CORRESPONDENCE N62474-88-D-5086 3	**06-02-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	SUBMISSION OF THE REVISIONS TO THE DRAFT FINAL, PHASE 1 ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP), ONSHORE AREAS - 02 JUNE 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003169 NONE REPORT N62474-88-D-5086 114	**06-02-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	REVISIONS TO THE DRAFT FINAL, PHASE 1 ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP), ONSHORE AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030
N00221 / 003187 NONE CORRESPONDENCE NONE 28	**06-04-1997** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) QUALITY ASSURANCE PROJECT PLAN (QAPP) - 20 MAY 1997, FIELD SAMPLING AND ANALYSIS PLAN (SAP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0030

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N00221 / 003209 NONE CORRESPONDENCE N62474-94-D-7609 4	**06-05-1997** 11-29-1999 5090.3.A. 00082	RIESING, R. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - SOUTHWEST DIVISION	FINAL OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA), QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM, COVER PAGE	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003188 NONE REPORT N62474-88-D-5086 15	**06-06-1997** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT PENDER, B. NAVFAC - SOUTHWEST DIVISION	FINAL CONFIRMATION SAMPLING PLAN (SP) FOR REMOVAL ACTION (RM)	ADMIN RECORD	SITE 00008	FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003189 NONE CORRESPONDENCE N62474-88-D-5086 2	**06-06-1997** 11-29-1999 5090.3.A. 00144	PENDER, B. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT CONFIRMATION SAMPLING PLAN (SP) FOR THE IR08 REMOVAL ACTION (RM)	ADMIN RECORD	SITE 00008	FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003191 NONE CORRESPONDENCE N62474-88-D-5086 2	**06-09-1997** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE DRAFT TECHNICAL MEMORANDUM (TM), ASSESSMENT OF BENEFICIAL USES OF GROUNDWATER - 09 JUNE 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003192 NONE REPORT N62474-88-D-5086 75	**06-09-1997** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	DRAFT TECHNICAL MEMORANDUM (TM), ASSESSMENT OF BENEFICIAL USES OF GROUNDWATER	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031

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N00221 / 003219 NONE MINUTES N62474-88-D-5086 6	**06-09-1997** 11-29-1999 5090.3.A. 00144	NAVY	MEETING MINUTES, ONSHORE AND OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003194 NONE REPORT N62474-88-D-5086 37	**06-12-1997** 11-29-1999 5090.3.A. 00222	WERTER, J. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	GEOTECHNICAL FIELD AND LABORATORY WORK PLAN (WP) FOR CONCEPTUAL DESIGN AND FEASIBILITY STUDY (FS) OF FINAL CLOSURE AND CONTAINMENT OF THE IR01 FACILITY AND RCRA L	ADMIN RECORD	SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003193 NONE CORRESPONDENCE N62474-88-D-5086 2	**06-13-1997** 11-29-1999 5090.3.A. 00222	WERTER, J. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE GEOTECHNICAL FIELD AND LABORATORY WORK PLAN (WP) FOR CONCEPTUAL DESIGN AND FEASIBILITY STUDY (FS) OF FINAL CLOSURE AND CONTAINMENT OF THE IR01 F	ADMIN RECORD	SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003205 NONE REPORT NONE 42	**06-13-1997** 11-29-1999 5090.3.A. NONE	SAFRAZIAN, D. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	DRAFT SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION, UPLAND MAGAZINE AREA AND ORDNANCE RESERVIOR	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003197 NONE CORRESPONDENCE N62474-88-D-5086 3	**06-19-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	SUBMISSION OF THE RESPONSE TO COMMENTS ON THE DRAFT FINAL PHASE 1 ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP), ONSHORE AREAS - 19 JUNE	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031

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N00221 / 003198 NONE CORRESPONDENCE N62474-88-D-5086 36	**06-19-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	RESPONSE TO COMMENTS ON THE DRAFT FINAL PHASE 1 ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP), ONSHORE AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003199 NONE CORRESPONDENCE N62474-88-D-5086 12	**06-19-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	RESPONSE TO COMMENTS ON THE REVISED DRAFT FINAL PHASE 1 ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP), ONSHORE AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003200 NONE CORRESPONDENCE N62474-88-D-5086 3	**06-19-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVY	SUBMISSION OF THE FINAL PHASE 1 ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP), ONSHORE AREAS - 19 JUNE 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003201 NONE REPORT N62474-88-D-5086 500	**06-19-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - SOUTHWEST DIVISION	FINAL PHASE 1 ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (FSAP), ONSHORE AREAS - 19 JUNE 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003195 NONE CORRESPONDENCE NONE 2	**06-20-1997** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE REMOVAL WORK PLAN (WP), EXTENSION OF REMOVAL ACTION (RM), INSTALLATION RESTORATION SITE 13 (IR13), RADIO OPERATIONS FACILITY - 14 MAY 1997	ADMIN RECORD	SITE 00013	FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003202 NONE CORRESPONDENCE NONE 2	**06-25-1997** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE FINAL SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) SITE INVESTIGATION (SI) - 28 APRIL 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031

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N00221 / 003220 NONE CORRESPONDENCE N62474-94-D-7609 2	**06-27-1997** 11-29-1999 5090.3.A. 00010	BORNSTEIN, J. PRC ENVIRONMENTAL MANAGEMENT, INC. HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE RESPONSE TO COMMENTS ON DRAFT GROUP II AND III ACCELERATED STUDY FIELD SAMPLING AND ANALYSIS PLAN (SAP) - 31 DECEMBER 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003221 NONE CORRESPONDENCE N62474-94-D-7609 20	**06-27-1997** 11-29-1999 5090.3.A. 00010	BORNSTEIN, J. PRC ENVIRONMENTAL MANAGEMENT, INC. HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON DRAFT GROUP II AND III ACCELERATED STUDY FIELD SAMPLING AND ANALYSIS PLAN (SAP) - 13 DECEMBER 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003204 NONE CORRESPONDENCE NONE 2	**06-30-1997** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION, UPLAND MAGAZINE AREA AND ORDNANCE RESERVIOR - 13 JUNE 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003207 NONE CORRESPONDENCE N62474-88-D-5086 2	**06-30-1997** 11-29-1999 5090.3.A. 00222	RYAN, K. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE DRAFT BASEWIDE CONFIRMATION SAMPLING PLAN FOR ONSHORE INTRUSIVE INVESTIGATION UNEXPLODED ORDNANCE (UXO) REMOVAL ACTIONS (RM) - 30 JUNE 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003208 NONE REPORT N62474-88-D-5086 20	**06-30-1997** 11-29-1999 5090.3.A. 00222	RYAN, K. PRC ENVIRONMENTAL MANAGEMENT BERNAL, E. NAVY	DRAFT BASEWIDE CONFIRMATION SAMPLING PLAN (SP) FOR ONSHORE INTRUSIVE INVESTIGATION UNEXPLODED ORDNANCE (UXO) REMOVAL ACTIONS (RM)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031

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N00221 / 003210 NONE CORRESPONDENCE N62474-94-D-7609 3	**07-11-1997** 11-29-1999 5090.3.A. 00028	THORST, A. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE FINAL OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA), FIELD SAMPLING AND ANALYSIS PLAN (SAP), AND RESPONSE TO COMMENTS ON THE DRAFT FINAL FIELD SAP A	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003211 NONE CORRESPONDENCE N62474-94-D-7609 11	**07-11-1997** 11-29-1999 5090.3.A. 00028	THORST, A. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT FINAL OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA), FIELD SAMPLING AND ANALYSIS PLAN (SAP) AND QUALITY ASSURANCE PROJECT PLAN (QAPP	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003212 NONE REPORT N62474-94-D-7609 200	**07-11-1997** 11-29-1999 5090.3.A. 00028	THORST, A. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - SOUTHWEST DIVISION	FINAL OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA), FIELD SAMPLING AND ANALYSIS PLAN (SAP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003213 NONE CORRESPONDENCE N62474-88-D-5086 1	**07-16-1997** 11-29-1999 5090.3.A. 00222	RYAN, K. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE FINAL BASEWIDE SAMPLING PLAN (SP) FOR SELECTED ONSHORE INTRUSIVE INVESTIGATIONS AT UNEXPLODED ORDNANCE (UXO) LOCATIONS - 16 JULY 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003214 NONE REPORT N62474-88-D-5086 26	**07-16-1997** 11-29-1999 5090.3.A. 00222	RYAN, K. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - SOUTHWEST DIVISION	FINAL BASEWIDE SAMPLING PLAN FOR SELECTED ONSHORE INTRUSIVE INVESTIGATIONS AT UNEXPLODED ORDNANCE (UXO) LOCATIONS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031

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N00221 / 003215 NONE CORRESPONDENCE N62474-88-D-5086 7	**07-18-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT FINAL ECOLOGICAL RISK ASSESSMENT (ERA), QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM, ONSHORE AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003216 NONE CORRESPONDENCE N62474-88-D-5086 3	**07-18-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE FINAL ECOLOGICAL RISK ASSESSMENT (ERA), QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM, ONSHORE AREAS - 18 JULY 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003217 NONE REPORT N62474-88-D-5086 79	**07-18-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - SOUTHWEST DIVISION	FINAL ECOLOGICAL RISK ASSESSMENT (ERA), QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM, ONSHORE AREAS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003218 NONE CORRESPONDENCE N62474-88-D-5086 2	**07-30-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE MEETING MINUTES, ONSHORE AND OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) - 06 JUNE 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003224 NONE CORRESPONDENCE N62474-88-D-5086 1	**07-30-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE MEETING MINUTES FOR THE ONSHORE AND OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) PLANS - 09 JUNE 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031

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N00221 / 003222 NONE CORRESPONDENCE N62474-94-D-7609 5	**08-05-1997** 11-29-1999 5090.3.A. 00010	BORNSTEIN, J. PRC ENVIRONMENTAL MANAGEMENT, INC. HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE DRAFT FINAL GROUP II AND III ACCELERATED STUDY FIELD SAMPLING AND ANALYSIS PLAN (SAP) - 05 AUGUST 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003223 NONE REPORT N62474-94-D-7609 1000	**08-05-1997** 11-29-1999 5090.3.A. 00010	BORNSTEIN, J. PRC ENVIRONMENTAL MANAGEMENT, INC. HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL GROUP II AND III ACCELERATED STUDY FIELD SAMPLING AND ANALYSIS PLAN (SAP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003227 NONE REPORT NONE 40	**08-08-1997** 11-29-1999 5090.3.A. NONE	SAFRAZION, D. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	FINAL SUMMARY REPORT FOR THE UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION OF THE UPLAND MAGAZINE AREA AND ORDNANCE RESERVIOR	ADMIN RECORD	AOC 000049 AOC 000050	FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003225 NONE CORRESPONDENCE NONE 2	**08-28-1997** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE RESPONSE TO COMMENTS ON THE DRAFT SUMMARY REPORT FOR THE UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION OF THE UPLAND MAGAZINE AREA AND ORDNA	ADMIN RECORD	AOC 000049 AOC 000050	FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003226 NONE CORRESPONDENCE NONE 1	**08-28-1997** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO COMMENTS ON THE DRAFT SUMMARY REPORT FOR THE UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION OF THE UPLAND MAGAZINE AREA AND ORDNANCE RESERVIOR - 13	ADMIN RECORD	AOC 000049 AOC 000050	FRC - PERRIS	181-03-0180 31089137	BX 0031

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N00221 / 003228 NONE CORRESPONDENCE N62474-88-D-5086 15	**08-29-1997** 11-29-1999 5090.3.A. 00144	WILSON, P. PRC ENVIRONMENTAL MANAGEMENT BAKER, W. NAVFAC - SOUTHWEST DIVISION	TECHNICAL MEMORANDUM (TM), GREENSAND CHARACTERIZATION	ADMIN RECORD	SITE 00004	FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003232 NONE REPORT N62474-94-D-7609 150	**09-01-1997** 11-29-1999 5090.3.A. 00136	MCCARTNEY, R. URIBE BAKER, W. NAVFAC - SOUTHWEST DIVISION	HEALTH AND SAFETY PLAN (HASP) ADDENDUM, GROUP II AND III INVESTIGATIONS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003229 NONE CORRESPONDENCE N62474-94-D-7609 2	**09-04-1997** 11-29-1999 5090.3.A. 00136	BORNSTEIN, J. TETRA TECH EM, INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE DRAFT FIELD SAMPLING AND ANALYSIS PLAN (FSAP) SUPPLEMENT FOR THE INTERTIDAL AND SUBTIDAL SEDIMENTS OF IR04 (INVESTIGATION AREA F2) AND THE DREDG	ADMIN RECORD	IA F2 IA I SITE 00004 SWMU 63	FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003230 NONE REPORT N62474-94-D-7609 33	**09-04-1997** 11-29-1999 5090.3.A. 00136	BORNSTEIN, J. TETRA TECH EM, INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	DRAFT FIELD SAMPLING AND ANALYSIS PLAN (SAP) SUPPLEMENT FOR THE INTERTIDAL AND SUBTIDAL SEDIMENTS OF INVESTIGATION AREA F2 AND THE DREDGE SPOIL PONDS	ADMIN RECORD	IA F2 IA I SITE 00004 SWMU 63	FRC - PERRIS	181-03-0180 31089137	BX 0031
N00221 / 003231 NONE CORRESPONDENCE N62474-94-D-7609 1	**09-09-1997** 11-29-1999 5090.3.A. 00136	BORNSTEIN, J. TETRA TECH EM, INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE HEALTH AND SAFETY PLAN (HASP) ADDENDUM, GROUP II AND III INVESTIGATIONS - SEPTEMBER 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0031

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N00221 / 003240 NONE REPORT NONE 30	**09-18-1997** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	DRAFT UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION WORK PLAN (WP) FOR THE DREDGE SPOILS PONDS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003241 NONE REPORT NONE 77	**09-18-1997** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	DRAFT UNEXPLODED ORDNANCE (UXO) SITE-SPECIFIC HEALTH AND SAFETY PLAN (HASP) FOR THE DREDGE SPOILS PONDS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003234 NONE MINUTES N62474-88-D-5086 16	**09-19-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. TETRA TECH BAKER, W. NAVFAC - SOUTHWEST DIVISION	MEETING MINUTES, OFFSHORE SEDIMENT SCREENING GUIDELINES AND EXAMPLE FOR DIKE 12/14 AREA	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003235 NONE CORRESPONDENCE NONE 6	**09-19-1997** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL GROUP II AND III ACCELERATED STUDY, FIELD SAMPLING AND ANALYSIS PLAN (SAP) - 05 AUGUST 1997, AND THE RESPONSE TO COMMENTS ON THE DRAFT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003236 NONE CORRESPONDENCE NONE 25	**09-25-1997** 11-29-1999 5090.3.A. NONE	HILLSTROM, M. NAVY GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO COMMENTS ON THE GEOTECHNICAL FIELD AND LABORATORY WORK PLAN (WP) FOR CONCEPTUAL DESIGN AND FEASIBILITY OF FINAL CLOSURE AND CONTAINMENT OF THE IR01 FA	ADMIN RECORD	SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003238 NONE REPORT N62474-94-D-7609 100	**10-06-1997** 11-29-1999 5090.3.A. 00067	HAROUN, L. TETRA TECH BERNAL, E. NAVY	DRAFT FINAL TECHNICAL MEMORANDUM (TM) SAMPLING RESULTS AND FOCUSED HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT (ERA) FOR AREA E	ADMIN RECORD	AREA E IA E	FRC - PERRIS	181-03-0180 31089137	BX 0032

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N00221 / 003237 NONE CORRESPONDENCE N62474-94-D-7609 3	**10-07-1997** 11-29-1999 5090.3.A. 00067	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT FINAL TECHNICAL MEMORANDUM (TM) SAMPLING RESULTS AND FOCUSED HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT (ERA) FOR AREA E - 06 OCTOBER 199	ADMIN RECORD	AREA E IA E	FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003239 NONE CORRESPONDENCE NONE 2	**10-14-1997** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION WORK PLAN (WP) AND SITE-SPECIFIC HEALTH AND SAFETY PLAN (HASP) FOR THE DREDGE SPOILS PON	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003242 NONE CORRESPONDENCE N62474-94-D-7609 2	**10-20-1997** 11-29-1999 5090.3.A. 00156	BAUR, P. TETRA TECH VENTURA, F. NAVY	SUBMISSION OF THE DRAFT CONFIRMATION FIELD SAMPLING AND ANALYSIS PLAN (SAP) FOR INSTALLATION RESTORATION SITE 13 (IR13), REMOVAL ACTION (RM) EXTENSION - 20 OCTOBE	ADMIN RECORD	SITE 00013	FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003243 NONE REPORT N62474-94-D-7609 17	**10-20-1997** 11-29-1999 5090.3.A. 00156	BAUR, P. TETRA TECH VENTURA, F. NAVY	DRAFT CONFIRMATION FIELD SAMPLING AND ANALYSIS PLAN (SAP) FOR INSTALLATION RESTORATION SITE 13 (IR13), REMOVAL ACTION (RM) EXTENSION	ADMIN RECORD	SITE 00013	FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003247 NONE CORRESPONDENCE NONE 3	**10-23-1997** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMPLETION OF ALL MARE ISLAND NAVAL SHIPYARD GENERAL RADIOACTIVE MATERIAL (G-RAM) SURVEYS, LIST OF APPROVED NAVY DOCUMENTS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003248 NONE CORRESPONDENCE N62474-88-D-5086 9	**10-31-1997** 11-29-1999 5090.3.A. 00144	MELMON, S. PRC ENVIRONMENTAL MANAGEMENT HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT TECHNICAL MEMORANDUM (TM), ASSESSMENT OF BENEFICIAL USES OF GROUNDWATER	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032

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N00221 / 003244 NONE CORRESPONDENCE NONE 5	**11-03-1997** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAT FINAL BIOACCUMULATION AND FOOD-CHAIN ANALYSIS IN TERRESTRIAL AND AQUATIC HABITATS: THEIR ROLE IN THE ECOLOGICAL RISK ASSESSMENT (ERA) AND RES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003249 NONE CORRESPONDENCE NONE 57	**11-04-1997** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE PHASE II QUARTERLY GROUNDWATER MONITORING PROGRAM, DRAFT WORK PLAN (WP) - 13 MAY 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003250 NONE CORRESPONDENCE NONE 9	**11-05-1997** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT BASELINE HUMAN HEALTH RISK ASSESSMENT (HHRA), ADDENDUM TO THE REMEDIAL INVESTIGATION (RI) REPORT FOR OPERABLE UNIT 3 (OU3) - 24 MARCH 1997	ADMIN RECORD	OU 3	FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003245 NONE CORRESPONDENCE N62474-94-D-7609 2	**11-06-1997** 11-29-1999 5090.3.A. 00156	BAUR, P. TETRA TECH VENTURA, F. NAVY	SUBMISSION OF THE FINAL CONFIRMATION FIELD SAMPLING AND ANALYSIS PLAN (SAP) FOR INSTALLATION RESTORATION SITE 13 (IR13) REMOVAL ACTION (RM) EXTENSION - 06 NOVEMBE	ADMIN RECORD	SITE 00013	FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003246 NONE REPORT N62474-94-D-7609 17	**11-06-1997** 11-29-1999 5090.3.A. 00156	BAUR, P. TETRA TECH VENTURA, F. NAVY	FINAL CONFIRMATION FIELD SAMPLING AND ANALYSIS PLAN (SAP) FOR INSTALLATION RESTORATION SITE 13 (IR13) REMOVAL ACTION (RM) EXTENSION	ADMIN RECORD	SITE 00013	FRC - PERRIS	181-03-0180 31089137	BX 0032

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N00221 / 003251 NONE CORRESPONDENCE NONE 5	**11-06-1997** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 2 (OU2) - 31 JANUARY 1997	ADMIN RECORD	OU 2	FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003252 NONE CORRESPONDENCE NONE 51	**11-07-1997** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION (RI) REPORT, OPERABLE UNIT 3 - 24 DECEMBER 1996	ADMIN RECORD	OU 3	FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003253 NONE CORRESPONDENCE NONE 8	**11-09-1997** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL PROPOSED METHODOLOGY TO ESTIMATE THE DILUTION AND ATTENUATION OF CONTAMINANTS IN SOILS AND GROUNDWATER - 10 MARCH 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003254 NONE CORRESPONDENCE N62474-94-D-7609 9	**11-10-1997** 11-29-1999 5090.3.A. 00010	BORNSTEIN, J. TETRA TECH EM, INC. HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT FINAL GROUP II AND III ACCELERATED STUDY FIELD SAMPLING AND ANALYSIS PLAN (SAP) - 12 NOVEMBER 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003255 NONE CORRESPONDENCE NONE 5	**11-14-1997** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT TECHNICAL MEMORANDUM (TM), ESTIMATION OF AMBIENT METAL CONCENTRATIONS IN SHALLOW GROUNDWATER - 22 NOVEMBER 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032

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N00221 / 003256 NONE MINUTES N62474-94-D-7609 13	**11-26-1997** 11-29-1999 5090.3.A. 00136	BORNSTEIN, J. TETRA TECH EM, INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	MEETING MINUTES FROM CONFERENCE CALL REGARDING COMMENTS RECEIVED ON THE FIELD SAMPLING AND ANALYSIS PLAN (SAP) SUPPLEMENT FOR THE INTERTIDAL AND SUBTIDAL SEDIMENT	ADMIN RECORD	SITE 00004	FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003257 NONE CORRESPONDENCE N62474-88-D-5086 10	**11-26-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. TETRA TECH BAKER, W. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT FINAL BIOACCUMULATION AND FOOD-CHAIN ANALYSIS IN TERRESTRIAL AND AQUATIC HABITATS: THEIR ROLE IN THE ECOLOGICAL RISK ASSESSMENT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003266 NONE REPORT NONE 30	**12-03-1997** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS PENDER, B. NAVFAC - WESTERN DIVISION	FINAL UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION WORK PLAN (WP), DREDGE SPOILS PONDS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003267 NONE REPORT NONE 80	**12-03-1997** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS PENDER, B. NAVFAC - SOUTHWEST DIVISION	FINAL SITE-SPECIFIC HEALTH AND SAFETY PLAN (HASP), DREDGE SPOILS PONDS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003258 NONE CORRESPONDENCE N62474-88-D-5086 9	**12-08-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. TETRA TECH BAKER, W. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT FINAL, MARE ISLAND PROPOSED METHODOLOGY TO ESTIMATE THE DILUTION AND ATTENUATION OF CONTAMINANTS IN SOILS AND GROUNDWATER, TECHN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003259 NONE CORRESPONDENCE N62474-94-D-7609 11	**12-19-1997** 11-29-1999 5090.3.A. 00136	BORNSTEIN, J. TETRA TECH EM, INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT FIELD SAMPLING AND ANALYSIS PLAN (FSAP) SUPPLEMENT FOR THE INTERTIDAL AND SUBTIDAL SEDIMENTS OF INSTALLATION RESTORATION SITE 0	ADMIN RECORD	SITE 00004 SWMU 63	FRC - PERRIS	181-03-0180 31089137	BX 0032

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N00221 / 003263 NONE REPORT NONE 100	**12-19-1997** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT SUMMARY REPORT FOR THE UNEXPLODED ORDNANCE (UXO), TIME CRITICAL REMOVAL ACTION (RM), AT INSTALLATION RESTORATION SITE 5 (IR5)	ADMIN RECORD	SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003260 NONE CORRESPONDENCE N62474-94-D-7609 3	**12-29-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE FINAL BIOACCUMULATION AND FOOD-CHAIN ANALYSIS IN TERRESTRIAL AND AQUATIC HABITATS: THEIR ROLE IN THE ECOLOGICAL RISK ASSESSMENT (ERA) AT MARE IS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003261 NONE REPORT N62474-94-D-7609 86	**12-29-1997** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	FINAL BIOACCUMULATION AND FOOD-CHAIN ANALYSIS IN TERRESTRIAL AND AQUATIC HABITATS: THEIR ROLE IN THE ECOLOGICAL RISK ASSESSMENT (ERA) AT MARE ISLAND	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003262 NONE CORRESPONDENCE NONE 2	**01-07-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT SUMMARY REPORT FOR THE UNEXPLODED ORDNANCE (UXO), TIME CRITICAL REMOVAL ACTION (RM), AT INSTALLATION RESTORATION SITE 5 (IR5) - 19 DECEMBE	ADMIN RECORD	SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003271 NONE REPORT NONE 33	**01-07-1998** 11-29-1999 5090.3.A. NONE	PAGANNI, M. SSPORTS VENTURA, F. NAVY	DRAFT REMOVAL ACTION WORK PLAN/ACTION MEMORANDUM (RM/WP/AM), INSTALLATION RESTORATION SITE 16, SUBSITE B4, LEAD OXIDE CONTAMINATED SITE	ADMIN RECORD	SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0032

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N00221 / 001260 NONE REPORT NONE 15	**01-08-1998** 11-25-2008 5090.3.C. NONE	IBARRA, V. SSPORTS ENVIRONMENTAL DETACHMENT HILLSTROM, M. NAVFAC - EFA WEST	DRAFT BASIS OF DESIGN SHORT TERM SOIL STORAGE FACILITY	SITE FILE	OU 00002 OU 00003 SITE 00004 SITE 00016 SITE 00016 SUBSITE B1 SITE 00016 SUBSITE B2 SITE 00016 SUBSITE B3 SITE 00016 SUBSITE B5	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003265 NONE CORRESPONDENCE NONE 2	**01-08-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF (1) FINAL UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION WORK PLAN (WP) AND (2) FINAL SITE-SPECIFIC HEALTH AND SAFETY PLAN (HASP) FOR THE DREDGE	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003264 NONE CORRESPONDENCE N62474-88-D-5086 3	**01-09-1998** 11-29-1999 5090.3.A. 00144	DEMETRIOS, V. TETRA TECH BAKER, W. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE FINAL PROPOSED METHODOLOGY TO ESTIMATE THE DILUTION AND ATTENUATION OF CONTAMINANTS IN SOILS AND GROUNDWATER TECHNICAL MEMORANDUM (TM) - 09 JANU	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003268 NONE CORRESPONDENCE N62474-94-D-7609 3	**01-19-1998** 11-29-1999 5090.3.A. 00136	BORNSTEIN, J. TETRA TECH EM, INC. BAKER, W. NAVFAC - WESTERN DIVISION	SUBMISSION OF THE DRAFT FINAL FIELD SAMPLING AND ANALYSIS PLAN (SAP) SUPPLEMENT FOR THE INTERTIDAL AND SUBTIDAL SEDIMENTS OF INVESTIGATION AREA F2 AND THE DREDGE SPOIL PONDS	ADMIN RECORD	IA F2 IA I SITE 00004	FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003269 NONE REPORT N62474-94-D-7609 33	**01-19-1998** 11-29-1999 5090.3.A. 00136	BORNSTEIN, J. TETRA TECH EM, INC. BAKER, W. NAVFAC - WESTERN DIVISION	DRAFT FINAL FIELD SAMPLING AND ANALYSIS PLAN (SAP) SUPPLEMENT FOR THE INTERTIDAL AND SUBTIDAL SEDIMENTS OF IR04 (INVESTIGATION AREA F2) AND THE DREDGE SPOIL PONDS	ADMIN RECORD	IA F2 IA I	FRC - PERRIS	181-03-0180 31089137	BX 0032

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N00221 / 003316 NONE CORRESPONDENCE NONE 1	**01-20-1998** 11-29-1999 5090.3.A. NONE	MISHEK, D. CRWQCB PENDER, B. NAVFAC - SOUTHWEST DIVISION	TRANSFER OF MARE ISLAND RPM RESPONSIBILITIES, FROM MR. VINCE CHRISTEN TO MR. MICHAEL ROCHETTE	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003277 NONE CORRESPONDENCE N62474-94-D-7609 2	**02-02-1998** 11-29-1999 5090.3.A. 00129	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE RESPONSE TO COMMENTS ON THE PHASE II QUARTERLY GROUNDWATER MONITORING PROGRAM DRAFT WORK PLAN (WP), 13 MAY 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003278 NONE CORRESPONDENCE N62474-94-D-7609 28	**02-02-1998** 11-29-1999 5090.3.A. 00129	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE PHASE II QUARTERLY GROUNDWATER MONITORING PROGRAM DRAFT WORK PLAN (WP), 13 MAY 1997	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003279 NONE CORRESPONDENCE N62474-88-D-5086 2	**02-02-1998** 11-29-1999 5090.3.A. 00222	MELMON, S. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE RESPONSE TO COMMENTS ON THE TECHNICAL MEMORANDUM (TM), ESTIMATION OF AMBIENT METAL CONCENTRATION IN SHALLOW GROUNDWATER, 15 NOVEMBER 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003280 NONE CORRESPONDENCE N62474-88-D-5086 12	**02-02-1998** 11-29-1999 5090.3.A. 00222	MELMON, S. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE TECHNICAL MEMORANDUM (TM), ESTIMATION OF AMBIENT METAL CONCENTRATION IN SHALLOW GROUNDWATER, 15 NOVEMBER 1996	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003270 NONE CORRESPONDENCE NONE 2	**02-06-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT REMOVAL ACTION WORK PLAN/ACTION MEMORANDUM (RM/WP/AM), INSTALLATION RESTORATION SITE 16, SUBSITE B4, LEAD OXIDE CONTAMINATED SITE - 07 JAN	ADMIN RECORD	SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0032

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N00221 / 003272 NONE CORRESPONDENCE N62474-94-D-7609 2	**02-20-1998** 11-29-1999 5090.3.A. 00156	BAUR, P. TETRA TECH VENTURA, F. NAVY	SUBMISSION OF THE DRAFT CONFIRMATION SAMPLING AND ANALYSIS PLAN (SAP) FOR INSTALLATION RESTORATION SITE 16 (IR16) SUBSITE B4 REMOVAL ACTION (RM) - 20 FEBRUARY 199	ADMIN RECORD	SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003273 NONE REPORT N62474-94-D-7609 21	**02-20-1998** 11-29-1999 5090.3.A. 00156	BAUR, P. TETRA TECH VENTURA, F. NAVY	DRAFT CONFIRMATION SAMPLING AND ANALYSIS PLAN (SAP) FOR INSTALLATION RESTORATION SITE 16 (IR16) SUBSITE B4 REMOVAL ACTION (RM)	ADMIN RECORD	SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003275 NONE REPORT NONE 33	**02-25-1998** 11-29-1999 5090.3.A. NONE	PAGANNI, M. SSPORTS VENTURA, F. NAVY	FINAL VERSION OF THE REMOVAL ACTION WORK PLAN/ACTION MEMORANDUM (RM/WP/AM), INSTALLATION RESTORATION SITE 16 (IR16), SUBSITE B4, LEAD OXIDE CONTAMINATED SITE	ADMIN RECORD	SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003276 NONE REPORT N62474-94-D-7609 1000	**03-09-1998** 11-29-1999 5090.3.A. 00129	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	NOVEMBER 1997 PHASE II QUARTERLY GROUNDWATER SAMPLING REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003274 NONE CORRESPONDENCE NONE 2	**03-12-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE FINAL VERSION OF THE REMOVAL ACTION WORK PLAN/ACTION MEMORANDUM (RM/WP/AM), INSTALLATION RESTORATION SITE 16 (IR16), SUBSITE B4, LEAD OXIDE CONT	ADMIN RECORD	SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003281 NONE MINUTES N62474-94-D-7609 22	**03-20-1998** 11-29-1999 5090.3.A. 00132	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	MINUTES OF THE SCOPING MEETINGS FOR THE GROUP II AND III SITES OF INVESTIGATION AREAS C (REUSE AREAS 04 AND 05) AND H (10 FEBRUARY 1998, 17 FEBRUARY 1998, AND 03	ADMIN RECORD	IA C	FRC - PERRIS	181-03-0180 31089137	BX 0032

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N00221 / 003283 NONE REPORT N62474-94-D-7609 1000	**04-06-1998** 11-29-1999 5090.3.A. 00131	WERTER, J. TETRA TECH NAVY	DRAFT GEOTECHNICAL ENGINEERING EVALUATION (EE) REPORT FOR INSTALLATION RESTORATION SITE 01 FACILITY AND RCRA LANDFILL	ADMIN RECORD	SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003282 NONE CORRESPONDENCE N62474-94-D-7609 2	**04-08-1998** 11-29-1999 5090.3.A. 00131	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT GEOTECHNICAL ENGINEERING EVALUATION (EE) REPORT FOR INSTALLATION RESTORATION SITE 01 FACILITY AND RCRA LANDFILL - 06 APRIL 1998	ADMIN RECORD	SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0032
N00221 / 003289 NONE CORRESPONDENCE NONE 2	**04-13-1998** 11-29-1999 5090.3.A. NONE	ARTHUR, B. U.S. EPA - SAN FRANCISCO, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE NAVY'S RESPONSE TO COMMENTS ON THE TECHNICAL MEMORANDUM (TM), ESTIMATION OF AMBIENT METAL CONCENTRATIONS IN SHALLOW GROUNDWATER	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003317 NONE CORRESPONDENCE NONE 2	**04-13-1998** 11-29-1999 5090.3.A. NONE	ARTHUR, B. U.S. EPA - SAN FRANCISCO, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE RESPONSE TO COMMENTS ON THE TECHNICAL MEMORANDUM (TM), ESTIMATION OF AMBIENT METAL CONCENTRATIONS IN SHALLOW GROUNDWATER	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003284 NONE CORRESPONDENCE N62474-94-D-7609 8	**04-15-1998** 11-29-1999 5090.3.A. 00136	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	IDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR) FOR THE DREDGE SPOILS PONDS INVESTIGATION AREA I	ADMIN RECORD	IA I	FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003286 NONE CORRESPONDENCE N62474-94-D-7609 2	**04-16-1998** 11-29-1999 5090.3.A. 00082	THORST, A. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE DRAFT OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT (ERA) VOLUMES 1 AND 2	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0033

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N00221 / 003287 NONE REPORT N62474-94-D-7609 500	**04-16-1998** 11-29-1999 5090.3.A. 00082	THORST, A. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	DRAFT OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT (ERA), VOLUME 1; TEXT, FIGURES, AND TABLES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003288 NONE REPORT N62474-94-D-7609 1000	**04-16-1998** 11-29-1999 5090.3.A. 00082	THORST, A. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	DRAFT OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT (ERA), VOLUME 2; APPENDICES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003290 NONE CORRESPONDENCE NONE 12	**04-16-1998** 11-29-1999 5090.3.A. NONE	ARTHUR, B. U.S. EPA - SAN FRANCISCO, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE MEETING MINUTES FOR THE GROUP II, III ROUND 2 SCOPING MEETINGS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003285 NONE CORRESPONDENCE NONE 4	**04-22-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	IDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR) FOR BUILDING 455 AREA, GROUP II AND III SITE	ADMIN RECORD	SITE 00025	FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003295 NONE REPORT NONE 29	**04-24-1998** 11-29-1999 5090.3.A. NONE	LIETO, J. SSPORTS VENTURA, F. NAVY	DRAFT REMOVAL ACTION WORK PLAN/ACTION MEMORANDUM (RM/WP/AM), INSTALLATION RESTORATION SITE 16, SUBSITES B1 AND B2, LEAD OXIDE AREAS	ADMIN RECORD	SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0033

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N00221 / 001261 NONE REPORT NONE 25	**05-01-1998** 11-25-2008 5090.3.B. NONE	IBARRA, V. SSPORTS ENVIRONMENTAL DETACHMENT HILLSTROM, M. NAVFAC - EFA WEST	FINAL BASIS OF DESIGN SHORT TERM SOIL STORAGE FACILITY	POST DECISION FILE	OU 00002 OU 00003 SITE 00004 SITE 00016 SITE 00016 SUBSITE B1 SITE 00016 SUBSITE B2 SITE 00016 SUBSITE B3 SITE 00016 SUBSITE B5	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003291 NONE CORRESPONDENCE N62474-94-D-7609 2	**05-07-1998** 11-29-1999 5090.3.A. 00156	BAUR, P. TETRA TECH VENTURA, F. NAVY	SUBMISSION OF THE FINAL CONFIRMATION SAMPLING AND ANALYSIS PLAN (SAP) FOR INSTALLATION RESTORATION SITE 16 (IR16) SUBSITE B4 REMOVAL ACTION (RM) - 07 MAY 1998, AN	ADMIN RECORD	SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003292 NONE CORRESPONDENCE N62474-94-D-7609 2	**05-07-1998** 11-29-1999 5090.3.A. 00156	BAUR, P. TETRA TECH VENTURA, F. NAVY	RESPONSE TO COMMENTS ON THE DRAFT CONFIRMATION SAMPLING AND ANALYSIS PLAN (SAP) FOR INSTALLATION RESTORATION SITE 16 (IR16) SUBSITE B4 REMOVAL ACTION (RM) - 20	ADMIN RECORD	SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003294 NONE PUBLIC NOTICE NONE 1	**05-07-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	DRAFT PUBLIC NOTICE ON THE REMOVAL ACTION WORK PLAN/ACTION MEMORANDUM (RM/WP/AM), INSTALLATION RESTORATION SITE 16, SUBSITES B1 AND B2, LEAD OXIDE AREAS	ADMIN RECORD	SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003300 NONE CORRESPONDENCE NONE 3	**05-08-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	FINAL REQUEST FOR THE FINAL IDENTIFICATION OF THE STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR) FOR THE FEASIBILITY STUDY (FS) OF REMEDIAL ALTERNATIVES	ADMIN RECORD	SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0033

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N00221 / 003293 NONE CORRESPONDENCE NONE 2	**05-11-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT REMOVAL ACTION WORK PLAN/ACTION MEMORANDUM (RM/WP/AM), INSTALLATION RESTORATION SITE 16, SUBSITES B1 AND B2, LEAD OXIDE AREAS - 24 APRIL 1	ADMIN RECORD	SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003297 NONE REPORT NONE 75	**05-22-1998** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS PENDER, B. NAVFAC - SOUTHWEST DIVISION	FINAL SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) TIME CRITICAL REMOVAL ACTION (RM), INSTALLATION RESTORATION SITE 5 (IR05)	ADMIN RECORD	SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003301 NONE CORRESPONDENCE NONE 2	**05-26-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO COMMENTS TO THE DRAFT FINAL GROUP II AND III ACCELERATED STUDY FIELD SAMPLING AND ANALYSIS PLAN (SAP) - 13 MAY 1998, REVISED	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003302 NONE MINUTES N62474-94-D-7609 30	**05-26-1998** 11-29-1999 5090.3.A. 00197	DEMETRIOS, V. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	MEETING MINUTES FROM THE ONSHORE AND OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) ON 26 MAY 1998	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003299 NONE REPORT NONE 38	**06-01-1998** 11-29-1999 5090.3.A. NONE	PAGANNI, M. SSPORTS LAURICELLA, C. NAVFAC - SOUTHWEST DIVISION	DRAFT REMOVAL ACTION WORK PLAN/ACTION MEMORANDUM (RM/WP/AM), INSTALLATION RESTORATION SITE 17 (IR17), FORMER PAINT MANUFACTURING FACILITY	ADMIN RECORD	SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003296 NONE CORRESPONDENCE NONE 2	**06-02-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE FINAL SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) TIME CRITICAL REMOVAL ACTION (RM), INSTALLATION RESTORATION SITE 5 (IR05) - 22 MAY 1998	ADMIN RECORD	SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0033

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N00221 / 003298 NONE CORRESPONDENCE NONE 2	**06-04-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT REMOVAL ACTION WORK PLAN/ACTION MEMORANDUM (RM/WP/AM), INSTALLATION RESTORATION SITE 17 (IR17), FORMER PAINT MANUFACTURING FACILITY - 01 J	ADMIN RECORD	SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003303 NONE CORRESPONDENCE N62474-94-D-7609 10	**06-04-1998** 11-29-1999 5090.3.A. 00082	THORST, A. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS FROM THE MAY 7, 1998 MEETING PRESENTATION OF THE OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT (ERA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003304 NONE CORRESPONDENCE NONE 27	**06-09-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO COMMENTS ON THE GROUP II/III DRAFT MEETING MINUTES AND SCOPING PROCESS FOR SCOPING MEETINGS CONDUCTED ON 09 DECEMBER, 27 JANUARY, 10/17/24 FEBRUARY, A	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003307 NONE REPORT N62474-94-D-7609 500	**06-12-1998** 11-29-1999 5090.3.A. 00140	RASH, M. TETRA TECH PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) FOR IR08	ADMIN RECORD	SITE 00008	FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003305 NONE CORRESPONDENCE NONE 8	**06-15-1998** 11-29-1999 5090.3.A. NONE	KLOC, K. ARC BAKER, W. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT OFFSHORE ECOLOGICAL RISK ASSESSMENT (ERA) - 16 APRIL 1998	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003308 NONE REPORT N62474-94-D-7609 200	**06-25-1998** 11-29-1999 5090.3.A. 00198	WERTER, J. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	DRAFT FEASIBILITY STUDY (FS) REPORT FOR FACILITY/RCRA LANDFILL	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0034

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N00221 / 003306 NONE REPORT N62474-94-D-7609 26	**06-26-1998** 11-29-1999 5090.3.A. 00223	RASH, M. TETRA TECH LAURICELLA, C. NAVFAC - SOUTHWEST DIVISION	DRAFT CONFIRMATION FIELD SAMPLING AND ANALYSIS PLAN (SAP) FOR INSTALLATION RESTORATION SITE 17 (IR17) AND PRODUCT DISTRIBUTION PIPELINE REMOVAL ACTION (RM)	ADMIN RECORD	SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0033
N00221 / 003309 NONE REPORT N62474-94-D-7609 500	**06-26-1998** 11-29-1999 5090.3.A. 00129	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	DRAFT LONG-TERM GROUNDWATER MONITORING PLAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003310 NONE REPORT N62474-94-D-7609 200	**06-30-1998** 11-29-1999 5090.3.A. 00214	BRICKNELL, K. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	DRAFT TREATABILITY STUDY WORK PLAN (TS/WP), IR02 FORMER WASTE OIL DISPOSAL SUMPS	ADMIN RECORD	SITE 00002	FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003311 NONE PUBLIC NOTICE NONE 2	**07-01-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION PUBLIC INTEREST	PUBLIC NOTICE - INSTALLATION RESTORATION REMOVAL ACTION (RM) AT SITE 16, SUBSITE B4 (IR16-B4)	ADMIN RECORD	SITE 00016	FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003312 NONE CORRESPONDENCE NONE 50	**07-06-1998** 11-29-1999 5090.3.A. NONE	ARTHUR, B. U.S. EPA - SAN FRANCISCO, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT (ERA) REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003313 NONE REPORT N62474-94-D-7609 200	**07-09-1998** 11-29-1999 5090.3.A. 00129	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	FEBRUARY/MARCH 1998 PHASE II QUARTERLY GROUNDWATER SAMPLING REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0034

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N00221 / 003314 NONE CORRESPONDENCE NONE 35	**07-17-1998** 11-29-1999 5090.3.A. NONE	HARLOW, D. US DEPT OF THE INTERIOR BAKER, W. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT (ERA) REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003315 NONE CORRESPONDENCE NONE 40	**07-17-1998** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	SOLICITATION FOR APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003318 NONE CORRESPONDENCE NONE 41	**07-17-1998** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS)	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003320 NONE REPORT NONE 38	**07-17-1998** 11-29-1999 5090.3.A. NONE	PAGANNI, M. SSPORTS LAURICELLA, C. NAVFAC - SOUTHWEST DIVISION	FINAL REMOVAL ACTION WORK PLAN/ACTION MEMORANDUM (RM/WP/AM), INSTALLATION RESTORATION SITE 17 (IR17), FORMER PAINT MANUFACTURING FACILITY	ADMIN RECORD	SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003340 NONE REPORT N62474-94-D-7609 40	**07-17-1998** 11-29-1999 5090.3.A. 00233	WILSON, P. TETRA TECH EM INC. PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT TECHNICAL MEMORANDUM (TM) FATE AND TRANSPORT OF GROUNDWATER CONTAMINANTS AT IR17 AND THE BUILDING 503 AREA FOR CERFA RECLASSIFICATION ASSESSMENT	ADMIN RECORD	BLDG. 503 SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0035

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N00221 / 003321 NONE REPORT NONE 83	**07-21-1998** 11-29-1999 5090.3.A. NONE	LIETO, J. SSPORTS LAURICELLA, C. NAVFAC - SOUTHWEST DIVISION	FINAL TECHNICAL WORK DOCUMENT, SOIL REMOVAL ACTION (RM), FORMER PAINT MANUFACTURING FACILITY, INSTALLATION RESTORATION SITE 17 (IR17)	ADMIN RECORD	SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003322 NONE CORRESPONDENCE NONE 27	**07-21-1998** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS)	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003319 NONE CORRESPONDENCE NONE 2	**07-22-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE FINAL (1) REMOVAL ACTION WORK PLAN/ACTION MEMORANDUM (RM/WP/AM) FOR SITE 17 - 17 JULY 1998, AND (2) TECHNICAL WORK DOCUMENT FOR SITE 17 - 21 JUL	ADMIN RECORD	SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003323 NONE REPORT N62474-94-D-7609 150	**07-24-1998** 11-29-1999 5090.3.A. 00131	WERTER, J. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	DRAFT CONCEPTUAL DESIGN LANDFILL CAP FOR IR01 FACILITY AND RCRA LANDFILLS	ADMIN RECORD	SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003341 NONE REPORT N62474-94-D-7609 100	**07-27-1998** 11-29-1999 5090.3.A. 00233	WILSON, P. TETRA TECH PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT TECHNICAL MEMORANDU (TM) ESTIMATION OF AMBIENT CONCENTRATIONS OF POLYNUCLEAR AROMATIC HYDROCARBONS IN SOIL	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003342 NONE REPORT N62474-94-D-7609 44	**07-27-1998** 11-29-1999 5090.3.A. 00233	WILSON, P. TETRA TECH EM INC. PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT TECHNICAL MEMORANDUM (TM) HUMAN HEALTH RISKS FROM EXPOSURE TO RESIDUAL PCB	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035

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N00221 / 003324 NONE REPORT NONE 81	**07-28-1998** 11-29-1999 5090.3.A. NONE	PAGANNI, M. SSPORTS PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT SUMMARY REPORT, INSTALLATION RESTORATION SITE 08 (IR08), LEAD OXIDE CONTAMINATED SITE	ADMIN RECORD	SITE 00008	FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 001262 NONE REPORT NONE 70	**07-31-1998** 11-25-2008 5090.3.C. NONE	PENBERTHY, J. SSPORTS ENVIRONMENTAL DETACHMENT NAVFAC - SOUTHWEST DIVISION	DRAFT TECHNICAL WORK DOCUMENT FOR THE REMEDIATION OF PRESENT DAY (INCLUDES SITE HEALTH AND SAFETY PLAN (HSP) AND FILED SAMPLING PLAN (FSP))	SITE FILE	RANGE 1 RANGE 10 RANGE 1A RANGE 2 RANGE 2A RANGE 3 RANGE 3A RANGE 4 RANGE 5 RANGE 6 RANGE 7 RANGE 8 RANGE 8A RANGE 9	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003328 NONE REPORT NONE 47	**07-31-1998** 11-29-1999 5090.3.A. NONE	SAFRAZIAN, D. SSPORTS PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION, WESTERN MAGAZINE AREA	ADMIN RECORD	AOC 000062	FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003325 NONE CORRESPONDENCE NONE 15	**08-04-1998** 11-29-1999 5090.3.A. NONE	SULLIVAN, L. NOAA BAKER, W. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT (ERA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0034

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N00221 / 003326 NONE CORRESPONDENCE NONE 2	**08-06-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT SUMMARY REPORT, INSTALLATION RESTORATION SITE 08 (IR08), LEAD OXIDE CONTAMINATED SITE - 28 JULY 1998	ADMIN RECORD	SITE 00008	FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003327 NONE CORRESPONDENCE NONE 2	**08-06-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION, WESTERN MAGAZINE AREA - 31 JULY 1998	ADMIN RECORD	AOC 000062	FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003330 NONE CORRESPONDENCE NONE 4	**08-06-1998** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT TREATABILITY STUDY WORK PLAN (TS/WP), SITE IR02, FORMER WASTE OIL DISPOSAL SUMPS - 30 JUNE 1998	ADMIN RECORD	SITE 00002	FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003329 NONE CORRESPONDENCE N62474-94-D-7609 50	**08-07-1998** 11-29-1999 5090.3.A. 00233	WILSON, P. TETRA TECH EM INC. PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT TECHNICAL MEMORANDUM (TM), FOCUSED HUMAN HEALTH RISK ASSESSMENT OF GREENSAND	ADMIN RECORD	SITE 00014	FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003331 NONE CORRESPONDENCE N62474-94-D-7609 50	**08-07-1998** 11-29-1999 5090.3.A. 00199	WERTER, J. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE SLOPE STABILITY MODEL PARAMETERS AND DRAFT GEOTECHNICAL ENGINEERING EVALUATION (EE) REPORT FOR IR01 FACILITY AND RCRA LANDFILLS - 07 A	ADMIN RECORD	SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0034

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N00221 / 003332 NONE CORRESPONDENCE NONE 17	**08-07-1998** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT LONG TERM GROUNDWATER MONITORING PLAN - 26 JUNE 1998	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003333 NONE CORRESPONDENCE N62474-94-D-7609 14	**08-07-1998** 11-29-1999 5090.3.A. 00199	WERTER, J. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT LANDFILL GAS FIELD SAMPLING AND ANALYSIS PLAN (SAP) FOR THE RCRA/FACILITY LANDFILL AND LANDFILL GAS QUALITY ASSURANCE PROJECT PL	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003334 NONE REPORT N62474-94-D-7609 100	**08-07-1998** 11-29-1999 5090.3.A. 00199	WERTER, J. TETRA TECH EM INC. HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL LANDFILL GAS FIELD SAMPLING AND ANALYSIS PLAN (SAP) FOR RCRA/FACILITY LANDFILL	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003335 NONE REPORT N62474-94-D-7609 50	**08-07-1998** 11-29-1999 5090.3.A. 00199	WERTER, J. TETRA TECH EM INC. HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL LANDFILL GAS QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM FOR RCRA/FACILITY LANDFILL	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003336 NONE CORRESPONDENCE NONE 4	**08-10-1998** 11-29-1999 5090.3.A. NONE	ARTHUR, B. U.S. EPA - SAN FRANCISCO, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE LONG TERM GROUNDWATER MONITORING PLAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0034

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N00221 / 003337 NONE CORRESPONDENCE N62474-94-D-7609 100	**08-25-1998** 11-29-1999 5090.3.A. 00132	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	IDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR), INVESTIGATION AREA C2	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003338 NONE CORRESPONDENCE NONE 6	**08-25-1998** 11-29-1999 5090.3.A. NONE	ARTHUR, B. U.S. EPA - SAN FRANCISCO, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FEASIBILITY STUDY (FS) REPORT FOR FACILITY/RCRA LANDFILL	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 003339 NONE CORRESPONDENCE NONE 4	**08-31-1998** 11-29-1999 5090.3.A. NONE	ARTHUR, B. U.S. EPA - SAN FRANCISCO, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT TREATABILITY STUDY WORK PLAN (TS/WP), IR02, FORMER WASTE OIL DISPOSAL SUMPS	ADMIN RECORD	SITE 00002	FRC - PERRIS	181-03-0180 31089137	BX 0034
N00221 / 001259 NONE REPORT NONE 40	**09-11-1998** 11-25-2008 5090.3.A. NONE	MAGGINI, L. SSPORTS ENVIRONMENTAL DETACHMENT NAVFAC - SOUTHWEST DIVISION	FINAL UNEXPLODED ORDNANCE (UXO) PRELIMINARY ASSESSMENT	ADMIN RECORD	IA H	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003351 NONE CORRESPONDENCE NONE 3	**09-15-1998** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL LANDFILL FOR RCRA/FACILITY LANDFILL - 07 AUGUST 1998	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035

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N00221 / 003343 NONE REPORT N62474-94-D-7609 30	**09-17-1998** 11-29-1999 5090.3.A. 00233	RASH, M. TETRA TECH EM INC. LAURICELLA, C. NAVFAC - SOUTHWEST DIVISION	FINAL CONFIRMATION FIELD SAMPLING AND ANALYSIS PLAN (SAP) FOR INSTALLATION RESTORATION SITE 17 AND PRODUCT DISTRIBUTION PIPELINE REMOVAL ACTION (RM)	ADMIN RECORD	SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003345 NONE CORRESPONDENCE N62474-94-D-7609 100	**09-17-1998** 11-29-1999 5090.3.A. 00001	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	REQUEST FOR INDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR) FOR INVESTIGATION AREA H	ADMIN RECORD	IA H	FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003352 NONE CORRESPONDENCE NONE 6	**09-21-1998** 11-29-1999 5090.3.A. NONE	ARTHUR, B. U.S. EPA - SAN FRANCISCO, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT GEOTECHNICAL ENGINEERING EVALUATION REPORT (EE)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003346 NONE CORRESPONDENCE N62474-94-D-7609 10	**09-22-1998** 11-29-1999 5090.3.A. 00214	BRICKNELL, K. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS TO THE TREATABILITY STUDY WORK PLAN (TS/WP) FOR IR02, FORMER WASTE OIL DISPOSAL SUMPS	ADMIN RECORD	SITE 00002	FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003347 NONE REPORT N62474-94-D-7609 250	**09-22-1998** 11-29-1999 5090.3.A. 00214	BRICKNELL, K. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	FINAL TREATABILITY STUDY WORK PLAN (TS/WP), IR02, FORMER WASTE OIL DISPOSAL SUMPS	ADMIN RECORD	SITE 00002	FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003380 NONE REPORT N62474-94-D-7609 300	**09-22-1998** 11-29-1999 5090.3.A. 00214	BRICKNELL, K. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	FINAL TREATABILITY STUDY (TS), IR02, FORMER WASTE OIL DISPOSAL SUMPS	ADMIN RECORD	SITE 00002	FRC - PERRIS	181-03-0180 31089137	BX 0037

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N00221 / 003344 NONE CORRESPONDENCE N62474-94-D-7609 22	**09-23-1998** 11-29-1999 5090.3.A. 00139	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	REQUEST FOR THE IDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS)	ADMIN RECORD	BLDG 0000503 IA A SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003348 NONE CORRESPONDENCE N62474-94-D-7609 18	**09-30-1998** 11-29-1999 5090.3.A. 00136	BORNSTEIN, J. TETRA TECH EM, INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	ADDENDUM TO THE BASEWIDE SAMPLING PLAN (SP) FOR SELECTED ONSHORE INTRUSIVE INVESTIGATION AT UNEXPLODED ORDNANCE (UXO) LOCATIONS	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003356 NONE REPORT NONE 50	**09-30-1998** 11-29-1999 5090.3.A. NONE	MIKKELSEN, M. SSPORTS PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT PRODUCTION MANUFACTURING AREA AT MARE ISLAND, UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003349 NONE CORRESPONDENCE N62474-94-D-7609 2	**10-02-1998** 11-29-1999 5090.3.A. 00129	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE MAY/JUNE 1998 PHASE II QUARTERLY GROUNDWATER SAMPLING REPORT - 05 OCTOBER 1998	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003381 NONE CORRESPONDENCE N62474-94-D-7609 2	**10-02-1998** 11-29-1999 5090.3.A. 00235	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE DRAFT WORK PLAN (WP), THREE-DIMENSIONAL DISTRIBUTION OF FREE PRODUCT AT THE FORMER WASTE OIL DISPOSAL SUMPS (IR02)	ADMIN RECORD	SITE 00002	FRC - PERRIS	181-03-0180 31089137	BX 0037
N00221 / 003382 NONE REPORT N62474-94-D-7609 100	**10-02-1998** 11-29-1999 5090.3.A. 00235	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	DRAFT WORK PLAN (WP), THREE-DIMENSIONAL DISTRIBUTION OF FREE PRODUCT AT THE FORMER WASTE OIL DISPOSAL SUMPS (IR02)	ADMIN RECORD	SITE 00002	FRC - PERRIS	181-03-0180 31089137	BX 0037

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N00221 / 003350 NONE REPORT N62474-94-D-7609 500	**10-05-1998** 11-29-1999 5090.3.A. 00129	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	MAY/JUNE 1998 PHASE II QUARTERLY GROUNDWATER SAMPLING REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003353 NONE REPORT NONE 250	**10-09-1998** 11-29-1999 5090.3.A. 00101	MURRAY, M. ECC NAVY	DRAFT WORK PLAN (WP), PILOT STUDY FOR UXO RESPONSE AT SEVERAL SITES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003354 NONE REPORT NONE 50	**10-09-1998** 11-29-1999 5090.3.A. 00101	MURRAY, M. ENVIRONMENTAL CHEMICAL CORP. NAVFAC - WESTERN DIVISION	DRAFT ABBREVIATED SITE HEALTH AND SAFETY PLAN (HASP), PILOT STUDY FOR UXO RESPONSE AT SEVERAL SITES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003355 NONE CORRESPONDENCE NONE 2	**10-14-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT PRODUCTION MANUFACTURING AREA AT MARE ISLAND, UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION WORK PLAN (WP) - 30 SEPTEMBER 1998	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003383 NONE CORRESPONDENCE NONE 2	**10-14-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT PRODUCTION MANUFACTURING AREA (1) UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION WORK PLAN (WP) - 30 SEPTEMBER 1998, (2) SITE-SPECIFIC	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0037
N00221 / 003364 NONE REPORT NONE 50	**10-16-1998** 11-29-1999 5090.3.A. NONE	SAFRAZIAN, D. SSPORTS PENDER, B. NAVFAC - SOUTHWEST DIVISION	FINAL SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION, WESTERN MAGAZINE AREA	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035

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N00221 / 003357 NONE REPORT NONE 13	**10-19-1998** 11-29-1999 5090.3.A. NONE	IBARRA, V. SSPORTS VENTURA, F. NAVY	ADDENDUM TO THE REMOVAL WORK PLAN (WP), EXTENSION OF REMOVAL ACTION (RM), INSTALLATION RESTORATION SITE 13, RADIO OPERATIONS FACILITY	ADMIN RECORD	SITE 00013	FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003358 NONE CORRESPONDENCE N62474-94-D-7609 15	**10-28-1998** 11-29-1999 5090.3.A. 00139	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	REQUEST FOR INDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR), INVESTIGATION AREA C1	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 001280 NONE REPORT N62742-98-D-1809 90	**11-03-1998** 01-23-2009 5090.3.C. NONE	ENVIRONMENTAL CHEMICAL CORPORATION SHUSTERICH, L. NAVFAC - PACIFIC DIVISION	DRAFT PROGRAM MANAGEMENT PLANS, CORPORATE HEALTH AND SAFETY PLAN, INVESTIGATION AND RESPONSE ACTION FOR UNEXPLAINED ORDINANCE (UXO) AND ORDNANCE RELATED MATERIALS	SITE FILE		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003360 NONE REPORT N62742-98-D-1809 200	**11-04-1998** 11-29-1999 5090.3.A. 00001	VOHRA, M. ECC PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) FOR UXO RESPONSE AT SEVERAL SITES; SITE HEALTH AND SAFETY PLAN (HASP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003361 NONE REPORT N62742-98-D-1809 200	**11-04-1998** 11-29-1999 5090.3.A. 00001	VOHRA, M. ECC PENDER, B. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) FOR UXO RESPONSE AT SEVERAL SITES; SITE WORK PLAN (WP), QUALITY CONTROL PLAN (QCP), AND FIELD SAMPLING PLAN (SP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003362 NONE REPORT N62742-98-D-1809 44	**11-06-1998** 11-29-1999 5090.3.A. 00001	VOHRA, M. ECC PENDER, B. NAVFAC - SOUTHWEST DIVISION	FINAL PILOT STUDY FOR UXO RESPONSE AT SEVERAL SITES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035

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N00221 / 003460 NONE REPORT N62742-98-D-1809 175	**11-06-1998** 05-04-2000 5090.3.A. 00101	M. VOHRA ENVIRONMENTAL CHEMICAL CORP. NAVFAC - WESTERN DIVISION	FINAL - WORK PLAN PILOT STUDY FOR UXO RESPONSE AT SEVERAL SITES (CONSIDERED FINAL SUBMISSION PER JURIS SINATS, EFAW RPM)	ADMIN RECORD	AREA H AREA K SITE 00001 SITE 00002	FRC - PERRIS	181-03-0180 31089137	BX 0040
N00221 / 003359 NONE CORRESPONDENCE NONE 20	**11-10-1998** 11-29-1999 5090.3.A. NONE	KENNEDY, J. NAVY NAVY	CONSISTENCY REVIEW FOR THE DEMOLITION OF BUILDINGS A-187 AND A-265, NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003384 NONE CORRESPONDENCE NONE 9	**12-04-1998** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT INTERIM GROUNDWATER MONITORING PLAN - 14 OCTOBER 1998	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0037
N00221 / 003363 NONE CORRESPONDENCE NONE 2	**12-14-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE FINAL SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION, WESTERN MAGAZINE AREA - 16 OCTOBER 1998	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003365 NONE CORRESPONDENCE NONE 2	**12-16-1998** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE FINAL UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION, PRODUCTION MANUFACTURING AREA (1) WORK PLAN (WP), AND (2) SITE SPECIFIC HEALTH AND SAFE	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003466 NONE REPORT N62742-98-D-1809 150	**12-16-1998** 05-04-2000 5090.3.A. 00001	M. MURRAY ENVIRONMENTAL CHEMICAL CORP. NAVFAC - WESTERN DIVISION	DRAFT - PILOT STUDY FINAL REPORT ORDNANCE AND EXPLOSIVES (OE) RESPONSE AT SEVERAL SITES (2 VOLUMES) VOL. I = REPORT & APPX. A; VOL. II = APPX. B & C)	ADMIN RECORD	AREA H AREA K SITE 00001 SITE 00002	FRC - PERRIS	181-03-0180 31089137	BX 0041

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N00221 / 003366 NONE REPORT NONE 50	**12-18-1998** 11-29-1999 5090.3.A. NONE	MIKKELSEN, M. SSPORTS PENDER, B. NAVFAC - SOUTHWEST DIVISION	FINAL UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION, PRODUCTION MANUFACTURING AREA WORK PLAN (WP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003367 NONE REPORT NONE 150	**12-18-1998** 11-29-1999 5090.3.A. NONE	MIKKELSEN, M. SSPORTS PENDER, B. NAVFAC - SOUTHWEST DIVISION	FINAL UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION, PRODUCTION MANUFACTURING AREA SITE SPECIFIC HEALTH AND SAFETY PLAN (HASP)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003369 NONE REPORT N62474-94-D-7609 500	**12-21-1998** 11-29-1999 5090.3.A. 00228	WILSON, P. TETRA TECH LAURICELLA, C. NAVFAC - SOUTHWEST DIVISION	FINAL TREATABILITY STUDY WORK PLAN (TS/WP) FOR INSTALLATION RESTORATION (IR) SITE 17 AND THE BUILDING 503 AREA	ADMIN RECORD	SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003368 NONE CORRESPONDENCE N62474-94-D-7609 4	**12-29-1998** 11-29-1999 5090.3.A. 00082	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT FINAL OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT (ERA) AND RESPONSE TO COMMENTS ON THE DRAFT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0035
N00221 / 003373 NONE REPORT N62474-94-D-7609 2000	**12-29-1998** 11-29-1999 5090.3.A. 00082	THORST, A. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT (ERA) VOLUME 1 OF 2, TEXT, FIGURES, AND TABLES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0036
N00221 / 003374 NONE REPORT N62474-94-D-7609 1000	**12-29-1998** 11-29-1999 5090.3.A. 00082	THORST, A. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT (ERA) VOLUME 2 OF 2, APPENDICES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0036

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N00221 / 003375 NONE CORRESPONDENCE N62474-94-D-7609 97	**12-29-1998** 11-29-1999 5090.3.A. 00082	THORST, A. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT (ERA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0036
N00221 / 003385 NONE CORRESPONDENCE N62474-94-D-7609 4	**12-29-1998** 11-29-1999 5090.3.A. 00082	SCHONHOLTZ, R. RAB MEMBERS BAKER, W. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE RESPONSE TO COMMENTS ON THE DRAFT OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT (ERA) - 29 DECEMBER 1998	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0037
N00221 / 003370 NONE CORRESPONDENCE N62474-94-D-7609 19	**12-30-1998** 11-29-1999 5090.3.A. 00139	PENDER, B. NAVY GRIBBLE, C. DTSC - BERKELEY	REQUEST FOR INDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR), INVESTIGATION AREA A2	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0036
N00221 / 001198 NONE PUBLIC NOTICE NONE 6	**01-01-1999** 06-17-2008 5090.3.A. NONE	TETRA TECH EM, INC. NAVFAC - EFA WEST	CLEAN TIPS - WINTER 1999 (NEWSLETTER OF TETRA TECH EM INC.'S CLEAN PROGRAM) [SEE COMMENTS.]	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003392 NONE REPORT N62474-94-D-7609 500	**01-01-1999** 11-29-1999 5090.3.A. 00129	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	AUGUST 1998 PHASE II QUARTERLY GROUNDWATER SAMPLING AND ANNUAL SUMMARY REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0037
N00221 / 003371 NONE CORRESPONDENCE N62474-94-D-7609 26	**01-06-1999** 11-29-1999 5090.3.A. 00136	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	REQUEST FOR INDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR) FOR A PORTION OF INVESTIGATION AREA I AND INVESTIGATION AREAS F1 & F2	ADMIN RECORD	IA F1 IA F2 IA I	FRC - PERRIS	181-03-0180 31089137	BX 0036

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N00221 / 003372 NONE CORRESPONDENCE N62474-94-D-7609 3	**01-07-1999** 11-29-1999 5090.3.A. 00082	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT FINAL OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT (ERA) VOLUMES 1 AND 2 - DECEMBER 1998, AND THE RESPONSE TO COMMENTS ON THE DRAFT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0036
N00221 / 003387 NONE REPORT NONE 1000	**01-26-1999** 11-29-1999 5090.3.A. NONE	WERTER, J. TETRA TECH PENDER, B. NAVFAC - SOUTHWEST DIVISION	FINAL GEOTECHNICAL ENGINEERING EVALUATION (EE) REPORT FOR IR01 FACILITY AND RCRA LANDFILLS, VOLUME I OF II	ADMIN RECORD	SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0037
N00221 / 003388 NONE REPORT NONE 1000	**01-26-1999** 11-29-1999 5090.3.A. NONE	WERTER, J. TETRA TECH PENDER, B. NAVFAC - SOUTHWEST DIVISION	FINAL GEOTECHNICAL ENGINEERING EVALUATION (EE) REPORT FOR IR01 FACILITY AND RCRA LANDFILLS, VOLUME II OF II	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0037
N00221 / 003391 NONE CORRESPONDENCE N62474-94-D-7609 2	**01-26-1999** 11-29-1999 5090.3.A. 00129	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE AUGUST 1998 PHASE II QUARTERLY GROUNDWATER SAMPLING AND ANNUAL SUMMARY REPORT - JANUARY 1999	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0037
N00221 / 003376 NONE CORRESPONDENCE N62474-94-D-7609 2	**01-27-1999** 11-29-1999 5090.3.A. 00197	DEMETRIOS, V. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE DRAFT ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA), VOLUMES 1 THROUGH 3	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0036
N00221 / 003377 NONE REPORT N62474-94-D-7609 3000	**01-27-1999** 11-29-1999 5090.3.A. 00197	DEMETRIOS, V. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	DRAFT ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA), VOLUME 1 OF 3, SECTIONS 1.0 THROUGH 7.0; TEXT, FIGURES, AND TABLES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0036

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N00221 / 003378 NONE REPORT N62474-94-D-7609 3000	**01-27-1999** 11-29-1999 5090.3.A. 00197	DEMETRIOS, V. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	DRAFT ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA), VOLUME 2 OF 3, SECTIONS 8.0 THROUGH 15.0 AND APPENDIX A; TEXT, FIGURES, AND TABLES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0036
N00221 / 003379 NONE REPORT N62474-94-D-7609 3000	**01-27-1999** 11-29-1999 5090.3.A. 00197	DEMETRIOS, V. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	DRAFT ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA), VOLUME 2 OF 3, APPENDICES B THROUGH K	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0037
N00221 / 003386 NONE CORRESPONDENCE NONE 2	**01-29-1999** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE FINAL GEOTECHNICAL ENGINEERING EVALUATION (EE) REPORT FOR IR01 FACILITY AND RCRA LANDFILLS - 26 JANUARY 1999	ADMIN RECORD	SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0037
N00221 / 003390 NONE CORRESPONDENCE NONE 3	**02-10-1999** 11-29-1999 5090.3.A. NONE	GOUDE, C. USDOI BAKER, W. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON RESPONSE TO COMMENTS ON THE DRAFT OFFSHORE AREAS ECOLOGICAL RISK AREA (ERA) - 07 JANUARY 1999	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0037
N00221 / 003410 NONE MINUTES NONE 10	**02-16-1999** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION	MEETING MINUTES, SCOPING MEETING FOR THE ROUND 4 INVESTIGATION OF GROUPS II AND III SITES IN INVESTIGATION AREAS C2 (REUSE ZONES 04 AND 05) AND H	ADMIN RECORD	IA C IA H	FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003393 NONE CORRESPONDENCE N62474-94-D-7609 2	**02-17-1999** 11-29-1999 5090.3.A. 00235	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE DRAFT REMEDIAL INVESTIGATION (RI) RCRA/FACILITY LANDFILL REPORT, VOLUMES 1-3	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0037

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N00221 / 003394 NONE REPORT N62474-94-D-7609 500	**02-17-1999** 11-29-1999 5090.3.A. 00235	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) RCRA/FACILITY LANDFILL REPORT, VOLUME 1 OF 3, TEXT, TABLES, AND FIGURES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003395 NONE REPORT N62474-94-D-7609 500	**02-17-1999** 11-29-1999 5090.3.A. 00235	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) RCRA/FACILITY LANDFILL REPORT, VOLUME 2 OF 3, APPENDICES A-F	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003396 NONE REPORT N62474-94-D-7609 500	**02-17-1999** 11-29-1999 5090.3.A. 00235	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION (RI) RCRA/FACILITY LANDFILL REPORT, VOLUME 3 OF 3, APPENDICES F-I	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003411 NONE CORRESPONDENCE NONE 18	**02-17-1999** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO COMMENTS ON THE GEOTECHNICAL ENGINEERING EVALUATION (EE) REPORT FOR INSTALLATION RESTORATION SITE 01 (IR01) FACILITY AND RCRA LANDFILLS	ADMIN RECORD	SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003389 NONE CORRESPONDENCE NONE 2	**02-18-1999** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO COMMENTS ON THE FINAL UNEXPLODED ORDNANCE INVESTIGATION WORK PLAN (UOIIWP) AND SITE SPECIFIC TECHNICAL WORK DOCUMENT (TWD), APPENDIX E, FOR THE ORDNAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0037
N00221 / 003397 NONE CORRESPONDENCE NONE 26	**02-25-1999** 11-29-1999 5090.3.A. NONE	GARVEY, E. BAAQMD PENDER, B. NAVFAC - SOUTHWEST DIVISION	SOLICITATION FOR APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0038

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N00221 / 003398 NONE CORRESPONDENCE N62474-94-D-7609 8	**02-25-1999** 11-29-1999 5090.3.A. 00138	DEMETRIOS, V. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	DRAFT ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP) ADDENDUM ATTACHMENT FOR WETLANDS B AND D IN INVESTIGATION AREA H	ADMIN RECORD	IA H	FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003399 NONE CORRESPONDENCE N62474-94-D-7609 38	**03-02-1999** 11-29-1999 5090.3.A. 00136	BORNSTEIN, J. TETRA TECH EM, INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	DRAFT 2,4,6-TRINITROPHENOL (PICRIC ACID) TECHNICAL MEMORANDUM (TM) - 02 MARCH 1999	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003400 NONE CORRESPONDENCE NONE 1	**03-03-1999** 11-29-1999 5090.3.A. NONE	O'LOUGHLIN, J. RAB MEMBERS LOGAR, R. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT ECOLOGICAL RISK ASSESSMENT (ERA) ONSHORE ISSUES - 27 JANUARY 1999	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003401 NONE CORRESPONDENCE NONE 2	**03-10-1999** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	TCLP AND WET DATA FOR INSTALLATION RESTORATION SITE 4 (IR04) (SANDBLAST TECHNICAL MEMORANDUM) (TM)	ADMIN RECORD	SITE 00004	FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003407 NONE CORRESPONDENCE NONE 2	**03-11-1999** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE RESPONSE TO COMMENTS ON THE 1998 TO 1999 INTERIM GROUNDWATER MONITORING PLAN (SEE AR# 3459 FOR COPY OF ENCLOSURE)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0038

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N00221 / 003402 NONE CORRESPONDENCE N62474-94-D-7609 9	**03-12-1999** 11-29-1999 5090.3.A. 00138	DEMETRIOS, V. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP) ADDENDUM ATTACHMENT FOR WETLANDS B AND D IN INVESTIGATION AREA H	ADMIN RECORD	IA H	FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003403 NONE CORRESPONDENCE N62474-94-D-7609 6	**03-12-1999** 11-29-1999 5090.3.A. 00138	DEMETRIOS, V. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP) ADDENDUM ATTACHMENT FOR WETLANDS B AND D - INVESTIGATION AREA H	ADMIN RECORD	IA H	FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003412 NONE CORRESPONDENCE N62474-94-D-7609 2	**03-17-1999** 11-29-1999 5090.3.A. 00129	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUMMARY OF ANALYTES FOR THE 1999 BASEWIDE GROUNDWATER MONITORING EVENT	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003404 NONE CORRESPONDENCE NONE 19	**03-18-1999** 11-29-1999 5090.3.A. NONE	ARTHUR, B. U.S. EPA - SAN FRANCISCO, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT (ERA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003405 NONE CORRESPONDENCE NONE 3	**03-20-1999** 11-29-1999 5090.3.A. NONE	O'LOUGHLIN, J. RAB MEMBERS BAKER, W. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0038

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N00221 / 003406 NONE CORRESPONDENCE NONE 13	**03-25-1999** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL OFFSHORE ECOLOGICAL RISK ASSESSMENT - 29 DECEMBER 1998	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003408 NONE CORRESPONDENCE NONE 3	**03-30-1999** 11-29-1999 5090.3.A. NONE	O'LOUGHLIN, J. RAB MEMBERS BAKER, W. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003409 NONE CORRESPONDENCE NONE 7	**03-30-1999** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	NAVY'S POSITION REGARDING NO FURTHER ACTION (NFA) AT THE FORMER NORTH BUILDINGS WAYS AREA	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003413 NONE CORRESPONDENCE N62474-94-D-7609 9	**04-01-1999** 11-29-1999 5090.3.A. 00199	WERTER, J. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	PROPOSED GAS SAMPLING POINTS FOR THE FACILITY/RCRA LANDFILL	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003415 NONE REPORT N62474-94-D-7609 50	**04-05-1999** 11-29-1999 5090.3.A. 00235	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	WORK PLAN (WP), THREE-DIMENSIONAL DISTRIBUTION OF RESIDUAL PETROLEUM HYDROCARBONS AT THE FORMER WASTE OIL DISPOSAL SUMPS (IR02)	ADMIN RECORD	SITE 00002	FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003414 NONE CORRESPONDENCE N62474-94-D-7609 2	**04-06-1999** 11-29-1999 5090.3.A. 00235	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE WORK PLAN (WP), THREE-DIMENSIONAL DISTRIBUTION OF RESIDUAL PETROLEUM HYDROCARBONS AT THE FORMER WASTE OIL DISPOSAL SUMPS (IR02)	ADMIN RECORD	SITE 00002	FRC - PERRIS	181-03-0180 31089137	BX 0038

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N00221 / 003416 NONE CORRESPONDENCE NONE 3	**04-12-1999** 11-29-1999 5090.3.A. NONE	SCHONHOLTZ, R. RAB MEMBERS BAKER, W. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003417 NONE CORRESPONDENCE NONE 7	**04-27-1999** 11-29-1999 5090.3.A. NONE	KLOC, K. ARC BAKER, W. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA) - 27 JANUARY 1999	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003418 NONE CORRESPONDENCE NONE 9	**04-28-1999** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BAKER, W. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA) - 27 JANUARY 1999	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003419 NONE CORRESPONDENCE N62474-94-D-7609 3	**05-07-1999** 11-29-1999 5090.3.A. 00197	DEMETRIOS, VIRGIL TETRA TECH EM INC. BAKER, WINTON NAVFAC - SOUTHWEST DIVISION	DRAFT USE OF BIOACCUMULATION FACTOR TO IDENTIFY CHEMICALS OF ECOLOGICAL CONCERN FOR THE ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003435 NONE CORRESPONDENCE NONE 3	**05-20-1999** 11-29-1999 5090.3.A. NONE	ARTHUR, B. U.S. EPA - SAN FRANCISCO, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE RESPONSE TO COMMENTS ON THE 1998 TO 1999 INTERIM GROUNDWATER MONITORING PLAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0039

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N00221 / 003420 NONE CORRESPONDENCE NONE 10	**06-01-1999** 11-29-1999 5090.3.A. NONE	ARTHUR, B. U.S. EPA - SAN FRANCISCO, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0038
N00221 / 003421 NONE REPORT NONE 16	**06-07-1999** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	FINAL PRODUCTION MANUFACTURING AREA SITE SPECIFIC HEALTH AND SAFETY PLAN (HASP) CHANGE 1 - MARCH 11, 1999	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003429 NONE REPORT N62474-94-D-7609 300	**06-11-1999** 11-29-1999 5090.3.A. 00253	KORFAS, D. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	JANUARY 1999 INTERIM FACILITY-WIDE GROUNDWATER MONITORING PROGRAM QUARTERLY REPORT	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003461 NONE REPORT N62742-98-D-1809 100	**06-15-1999** 05-04-2000 5090.3.A. 00001	M. VOHRA ENVIRONMENTAL CHEMICAL CORP. NAVFAC - WESTERN DIVISION	DRAFT - PROJECT QUALITY CONTROL PLAN ORDNANCE AND EXPLOSIVES (OE) REMEDIAL INVESTIGATION	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0040
N00221 / 003462 NONE REPORT N62742-98-D-1809 120	**06-15-1999** 05-04-2000 5090.3.A. 00001	M. VOHRA ENVIRONMENTAL CHEMICAL CORP. NAVFAC - WESTERN DIVISION	DRAFT - FIELD SAMPLING AND ANALYSIS PLAN ORDNANCE AND EXPLOSIVES (OE) REMEDIAL INVESTIGATION	ADMIN RECORD	SITE 00001 SITE 00002 SITE 00028 SITE 00031 SITE 00032 SITE 00033 SWMU 25 SWMU 31 SWMU 53 SWMU 58	FRC - PERRIS	181-03-0180 31089137	BX 0041

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N00221 / 003463 NONE REPORT N62742-98-D-1809 60	**06-15-1999** 05-04-2000 5090.3.A. 00001	M. VOHRA ENVIRONMENTAL CHEMICAL CORP. NAVFAC - WESTERN DIVISION	DRAFT - WORK PLAN ORDNANCE AND EXPLOSIVE (OE) REMEDIAL INVESTIGAITON	ADMIN RECORD	SITE 00001 SITE 00002 SITE 00025 SITE 00028 SITE 00031 SITE 00032 SITE 00033 SWMU 53 SWMU 58	FRC - PERRIS	181-03-0180 31089137	BX 0041
N00221 / 003468 NONE REPORT N62742-98-D-1809 200	**06-15-1999** 05-08-2000 5090.3.A. 00001	LAZARUS, B. ENVIRONMENTAL CHEMICAL CORP. NAVFAC - WESTERN DIVISION	DRAFT - HEALTH & SAFETY PLAN REMEDIAL INVESTIGATION FOR OE RESPONSE AT SEVERAL SITES	ADMIN RECORD	SITE 00001 SITE 00002 SITE 00028 SITE 00031 SITE 00032 SITE 00033 SWMU 25 SWMU 31 SWMU 53 SWMU 58	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003422 NONE CORRESPONDENCE NONE 6	**06-17-1999** 11-29-1999 5090.3.A. NONE	ARTHUR, B. U.S. EPA - SAN FRANCISCO, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT 2, 4, 6-TRINITROPHENOL (PICRIC ACID) TECHNICAL MEMORANDUM (TM)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003428 NONE CORRESPONDENCE N62474-94-D-7609 2	**06-18-1999** 11-29-1999 5090.3.A. 00253	KORFAS, D. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE JANUARY 1999 INTERIM FACILITY-WIDE GROUNDWATER MONITORING PROGRAM QUARTERLY REPORT - 11 JUNE 1999	ADMIN RECORD	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0039

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N00221 / 003423 NONE CORRESPONDENCE NONE 9	**06-21-1999** 11-29-1999 5090.3.A. NONE	GOUDE, C. US FISH & WILDLIFE SERVICE BAKER, W. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA) REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 002425 NONE CORRESPONDENCE N62474-94-D-7609 50	**06-24-1999** 11-29-1999 5090.3.A. 00197	DEMETRIOS, V. TETRA TECH BAKER, W. NAVY	PRELIMINARY DRAFT FOLLOW-UP ACTION ITEMS FROM THE MAY 11, 1999 CONFERENCE CALL WITH REGULATORY AGENCIES TO ADDRESS ECOLOGICAL CONCERNS FOR INVESTIGATION AREA A2	ADMIN RECORD	IA A	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003424 NONE CORRESPONDENCE NONE 6	**06-24-1999** 11-29-1999 5090.3.A. NONE	HAYES, M. RAB MEMBERS BAKER, W. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA) - 27 JANUARY 1999	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003430 NONE CORRESPONDENCE N62474-94-D-7609 2	**06-28-1999** 11-29-1999 5090.3.A. 00214	BRICKNELL, K. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	SUBMISSION OF THE DRAFT TREATABILITY INVESTIGATION TECHNICAL MEMORANDUM (TM), IR02 FORMER WASTE OIL DISPOSAL SUMPS - 28 JUNE 1999	ADMIN RECORD	SITE 00002	FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003431 NONE REPORT N62474-94-D-7609 200	**06-28-1999** 11-29-1999 5090.3.A. 00214	BRICKNELL, K. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	DRAFT TREATABILITY INVESTIGATION TECHNICAL MEMORANDUM, FORMER WASTE OIL DISPOSAL SUMPS	ADMIN RECORD	SITE 00002	FRC - PERRIS	181-03-0180 31089137	BX 0039

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N00221 / 003425 NONE CORRESPONDENCE NONE 16	**07-06-1999** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE NAVY'S RESPONSE TO COMMENTS ON THE 1998 TO 1999 INTERIM GROUNDWATER MONITORING PLAN	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003426 NONE CORRESPONDENCE N62474-94-D-7609 100	**07-07-1999** 11-29-1999 5090.3.A. 00197	DEMETRIOS, V. TETRA TECH BAKER, W. NAVFAC - SOUTHWEST DIVISION	DRAFT FOLLOW-UP ACTION ITEMS FROM 11 MAY 1999 CONFERENCE CALL WITH THE REGULATORY AGENCIES TO ADDRESS ECOLOGICAL CONCERNS FROM INVESTIGATION AREA A2	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003427 NONE CORRESPONDENCE NONE 4	**07-20-1999** 11-29-1999 5090.3.A. NONE	ROCHETTE, M. CRWQCB PENDER, B. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA) REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003436 NONE REPORT N62474-94-D-7609 500	**07-23-1999** 11-29-1999 5090.3.A. 00235	FOSTER, M. TETRA TECH HILLSTROM, M. NAVFAC - SOUTHWEST DIVISION	HYDROGEOLOGIC INVESTIGATION, INVESTIGATION AREAS H1 AND I	ADMIN RECORD	IA H IA I	FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003464 NONE REPORT N62742-98-D-1809 60	**07-29-1999** 05-04-2000 5090.3.A. 00001	M. VOHRA ENVIRONMENTAL CHEMICAL CORP. NAVFAC - WESTERN DIVISION	HEALTH AND SAFETY PLAN VALIDATION OF DETECTION SYSTEMS TEST PROGRAM	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0041

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N00221 / 003465 NONE REPORT N62742-98-D-1809 60	**07-29-1999** 05-04-2000 5090.3.A. 00001	M. VOHRA ENVIRONMENTAL CHEMICAL CORP. NAVFAC - WESTERN DIVISION	TEST PLAN VALIDATION OF DETECTION SYSTEMS TEST PROGRAM	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0041
N00221 / 003432 NONE CORRESPONDENCE N62474-94-D-7609 23	**08-05-1999** 11-29-1999 5090.3.A. 00138	DEMETRIOS, V. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	DRAFT ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA) FIELD SAMPLING AND ANALYSIS PLAN (SAP) ADDENDUM	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003433 NONE CORRESPONDENCE N62474-94-D-7609 60	**08-06-1999** 11-29-1999 5090.3.A. 00138	DEMETRIOS, V. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	DRAFT FOLLOW-UP ACTION ITEMS FROM THE JULY 14, 1999, REGULATORY AGENCY MEETING FOR THE ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003434 NONE CORRESPONDENCE N62474-94-D-7609 48	**08-06-1999** 11-29-1999 5090.3.A. 00138	DEMETRIOS, V. TETRA TECH BAKER, W. NAVFAC - SOUTHWEST DIVISION	REVISED ENCLOSURE 5, POINT HAZARD QUOTIENTS IN INVESTIGATION AREA A2, DRAFT FOLLOW-UP ACTION ITEMS FROM THE MAY 11, 1999 CONFERENCE CALL WITH REGULATORY AGENCIES	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003437 NONE CORRESPONDENCE NONE 2	**08-09-1999** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE SUMMARY OF CONFIRMATION AND CHARACTERIZATION SAMPLING FOR INSTALLATION RESTORATION SITE 17 REMOVAL ACTION AND FUEL OIL PIPELINE EXCAVATION	ADMIN RECORD	SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0039

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N00221 / 001258 NONE REPORT NONE 60	**08-13-1999** 11-25-2008 5090.3.A. NONE	PENBERTHY, J. SSPORTS ENVIRONMENTAL DETACHMENT NAVFAC - SOUTHWEST DIVISION	FINAL SCREENING ALTERNATIVES FEASIBILITY STUDY FOR REMEDIAL ACTION AT THE PRESENT DAY	ADMIN RECORD	RANGE 1 RANGE 10 RANGE 1A RANGE 2 RANGE 2A RANGE 3 RANGE 3A RANGE 4 RANGE 5 RANGE 7 RANGE 8 RANGE 6 RANGE 8A RANGE 9	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003438 NONE CORRESPONDENCE NONE 4	**08-16-1999** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	PROPERTY TRANSFER REQUIREMENTS RELATED TO UNEXPLODED ORDNANCE, UPLAND MAGAZINE AREA, INVESTIGATIVE AREA E	ADMIN RECORD	AREA E IA E	FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 001279 6140-COR-049 REPORT N62742-98-D-1809 500	**08-19-1999** 01-23-2009 5090.3.C. CTO 0001	ENVIRONMENTAL CHEMICAL CORPORATION NAVFAC - PACIFIC DIVISION	CORPORATE HEALTH & SAFETY PLAN, ORDNANCE EXPLOSIVE (OE) AT SEVERAL SITES	SITE FILE		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003439 NONE CORRESPONDENCE NONE 9	**08-24-1999** 11-29-1999 5090.3.A. NONE	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO COMMENTS ON THE FINAL TECHNICAL MEMORANDUM, HUMAN HEALTH RISK AND ECOLOGICAL ASSESSMENT ON GREENSAND	ADMIN RECORD	SITE 00004 SITE 00014 SITE 00023	FRC - PERRIS	181-03-0180 31089137	BX 0039

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N00221 / 003440 NONE CORRESPONDENCE NONE 3	**08-25-1999** 11-29-1999 5090.3.A. NONE	ELLIS, S. CA DEPT OF FISH & GAME BAKER, W. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT ONSHORE ECOLOGICAL RISK ASSESSMENT REPORT	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003441 NONE CORRESPONDENCE N62474-94-D-7609 5	**08-26-1999** 11-29-1999 5090.3.A. 00156	BAUR, P. TETRA TECH VENTURA, F. NAVY	CONFIRMATION SAMPLING ADDENDUM FOR INSTALLATION RESTORATION SITE 13	ADMIN RECORD	SITE 00013	FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003442 NONE CORRESPONDENCE NONE 8	**08-30-1999** 11-29-1999 5090.3.A. NONE	ARTHUR, B. U.S. EPA - SAN FRANCISCO, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION, RCRA/FACILITY LANDFILL	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003443 NONE CORRESPONDENCE N62474-94-D-7609 7	**08-30-1999** 11-29-1999 5090.3.A. 00139	PENDER, B. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	IDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR), INVESTIGATION AREA C1	ADMIN RECORD	IA C	FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003444 NONE CORRESPONDENCE NONE 5	**08-31-1999** 11-29-1999 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA SINATS, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE FOLLOW-UP ACTION ITEMS FROM THE MAY 11, 1999 CONFERENCE CALL ON INVESTIGATION AREA A2 DATED JULY 06, 1999	ADMIN RECORD	IA A	FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003446 NONE REPORT NONE 100	**09-03-1999** 11-29-1999 5090.3.A. NONE	MAGGINI, L. SSPORTS SINATS, J. NAVFAC - SOUTHWEST DIVISION	DRAFT SUMMARY REPORT, UNEXPLODED ORDNANCE INTRUSIVE INVESTIGATION, SOUTH SHORE AREA (SEE AR #149 - REVISED DRAFT)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0039

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N00221 / 003448 NONE REPORT NONE 50	**09-03-1999** 11-29-1999 5090.3.A. NONE	LIETO, J. SSPORTS LAURICELLA, C. NAVFAC - SOUTHWEST DIVISION	DRAFT SUMMARY REPORT, FORMER PAINT MANUFACTURING FACILITY, INSTALLATION RESTORATION SITE 17	ADMIN RECORD	SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003445 NONE CORRESPONDENCE NONE 2	**09-07-1999** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT SUMMARY REPORT, UNEXPLODED ORDNANCE INTRUSIVE INVESTIGATION, SOUTH SHORE AREA - 03 SEPTEMBER 1999	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003447 NONE CORRESPONDENCE NONE 2	**09-13-1999** 11-29-1999 5090.3.A. NONE	SINATS, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	SUBMISSION OF THE DRAFT SUMMARY REPORT, FORMER PAINT MANUFACTURING FACILITY, INSTALLATION RESTORATION SITE 17 - 03 SEPTEMBER 1999	ADMIN RECORD	SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003467 NONE REPORT N62742-98-D-1809 150	**09-13-1999** 05-04-2000 5090.3.A. 00001	VOHRA, M. ENVIRONMENTAL CHEMICAL CORP. NAVFAC - WESTERN DIVISION	PILOT STUDY FINAL REPORT, VOLUMES I AND II OF II (INCLUDES REPLACEMENT PAGES CONVERTING THE DRAFT FINAL DATED 20 APRIL 1999 TO FINAL, AND REVIEW COMMENTS ON THE DRAFT FINAL) [***SEE COMMENTS]	ADMIN RECORD	AREA H AREA K SITE 00001 SITE 00002	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003449 NONE CORRESPONDENCE N62474-94-D-7609 3	**09-15-1999** 11-29-1999 5090.3.A. 00138	DEMETRIOS, V. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA), FIELD SAMPLING AND ANALYSIS PLAN (SAP) ADDENDUM	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003469 EFAW SER 6323/9153 CORRESPONDENCE NONE 2	**10-13-1999** 05-08-2000 5090.3.A. NONE	J. SINATS NAVFAC - WESTERN DIVISION VARIOUS	WORK PLANS FOR SOIL ASSESSMENT, MAINTENANCE ACTION AND POSTEXCAVATION CONFIRMATION SAMPLING FOR LEAD BASED PAINT IN SOIL (WITHOUT ENCLOSURES)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 003450 NONE MINUTES N62474-94-D-7609 10	**10-15-1999** 11-29-1999 5090.3.A. 00197	DEMETRIOS, V. TETRA TECH EM INC. BAKER, W. NAVFAC - SOUTHWEST DIVISION	MEETING MINUTES FROM THE SEPTEMBER 1, 1999 CONFERENCE CALL ON THE ONSHORE ECOLOGICAL RISK ASSESSMENT (ERA)	ADMIN RECORD		FRC - PERRIS	181-03-0180 31089137	BX 0039
N00221 / 003458 NONE REPORT N62474-94-D-7609 75	**10-19-1999** 03-28-2000 5090.3.A. 00253	D. KORFAS TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	MAY 1999 INTERIM FACILITY-WIDE GROUNDWATER MONITORING PROGRAM QUARTERLY REQPORT (SEE COMMENT FIELD REGARDING THE WELL NUMBERS IN THE SITE FIELD)	ADMIN RECORD	01W33A 01W33BN 01W33C 01W34AN 01W34BN 01W34CN 01W35A 01W35B 01W36A 01W36B 01W37A 01W37B 01W38A 01W38B 01W39A 01W39B 01W40A 01W40B OU 2 OU 3 SITE 00001	FRC - PERRIS	181-03-0180 31089137	BX 0040
N00221 / 003457 NONE REPORT N62474-94-D-7609 100	**10-27-1999** 03-28-2000 5090.3.A. 00214	K. BRICKNELL TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	TREATABILITY INVESTIGATION TECHNICAL MEMORANDUM FORMER WASTE OIL DISPOSAL SUMPS	ADMIN RECORD	OU 3 SITE 00002	FRC - PERRIS	181-03-0180 31089137	BX 0040

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N00221 / 003454 NONE CORRESPONDENCE N62474-94-D-7609 4	**11-01-1999** 02-15-2000 5090.3.A. 00146	J. SINATS NAVFAC - WESTERN DIVISION C. GRIBBLE DTSC. BERKELEY, CA	IDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR) FOR THE INVESTIGATION AREA F2 FEASIBILITY STUDY. (WITH ENCLOSURE)	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0040
N00221 / 003453 NONE CORRESPONDENCE N62474-94-D-7609 0	**11-04-1999** 01-21-2000 5090.3.A. 139*	J. SINATS NAVFAC - WESTERN DIVISION C. GRIBBLE CAL EPA, BERKELEY, CA	REQUEST FOR STATE ACTION-SPECIFIC ARARS AND FINAL REQUEST FOR IDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS INVESTIGATION AREA A1	ADMIN RECORD	AREA A1 BLDG. 503 SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0040
N00221 / 003452 NONE REPORT N62474-94-D-7609 500	**11-12-1999** 01-20-2000 5090.3.A. 00139	P. WILSON TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT INVESTIGATION AREA FORMER NORTH BUILDING WAYS AREA REMEDIAL INVESTIGATION	ADMIN RECORD	BLDG. 491 BLDG. 585 BLDG. 587 BLDG. 589 BLDG. 593 BLDG. 641 BLDG. 643 IA A2	FRC - PERRIS	181-03-0180 31089137	BX 0040
N00221 / 001263 NONE REPORT N62742-98-D-1809 200	**11-23-1999** 11-25-2008 5090.3.C. 00001	VOHRA, M. ENVIRONMENTAL CHEMICAL CORPORATION NAVFAC - PACIFIC DIVISION	DRAFT VALIDATION OF DETECTION SYSTEMS FINAL REPORT	SITE FILE	BERTH 0002 BERTH 0003 DIKE 12 DIKE 14 PIER 24	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003451 NONE REPORT N62474-94-D-7609 150	**12-23-1999** 01-20-2000 5090.3.A. 00228	P. WILSON TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	FINAL - TECHNICAL MEMORANDUM TREATABILITY STUDY (DRAFT ACCEPTED AS FINAL PER LETTER DATED 4/3/00 - LETTER FILED WITH DOCUMENT)	ADMIN RECORD	BLDG. 503 SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0039

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N00221 / 003455 11785.003.001.0002 REPORT NONE 110	**01-03-2000** 02-15-2000 5090.3.A. NONE	M. PAGANINI ROY F. WESTON, INC. NAVFAC - WESTERN DIVISION	REMOVAL ACTION SUMMARY REPORT - FOR THE LEAD OXIDE CONTAMINATED SITE	ADMIN RECORD INFO REPOSITORY	SITE 00025	FRC - PERRIS	181-03-0180 BX 0040 31089137
N00221 / 000004 NONE REPORT N62474-94-D-7609 150	**01-07-2000** 08-08-2000 5090.3.A. 00067	L. HAROUN TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	FINAL TECHNICAL MEMORANDUM SAMPLING RESULTS AND FOCUSED HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT FOR INVESTIGATION AREA E, INCLUDES FAX TRANSMITTAL LETTER REGARDING DTSC APPROVING THE REPORT AS FINAL DOCUMENT	ADMIN RECORD INFO REPOSITORY	AREA E SITE 00022	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003459 SWDIV SER 06CM.MH/046 CORRESPONDENCE N62474-94-D-7609 4	**01-25-2000** 03-28-2000 5090.3.A. NONE	F. ALJABI NAVFAC - SOUTHWEST DIVISION C. GRIBBLE DTSC, BERKELEY, CA	LETTER FORWARDING RESPONSE TO COMMENTS TO DTSC ON THE 1998 TO 1999 INTERIM GROUNDWATER MONITORING PLAN (WITH ENCLOSURE) (*SEE COMMENTS BELOW RE: SITE FIELD)	ADMIN RECORD	01W15* 01W26* 01W28* 01W32* 01W37B* 01W38C* 01W42* 01W45* 01W47A* 01W47C* 01W48A* 01W51* 06W01* 06W02* 06W03* 06W04* 06W05* 06W06* 06W07* 08P01* 08W01* 08W02* 12W01* 12W02* 12W03* 16P01* 16W06* BLDG. 117 BLDG. 225 BLDG. 334 BLDG. 519 BLDG. 567 BLDG. 814 BLDG. 866 OU 3	FRC - PERRIS	181-03-0180 BX 0040 31089137

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					SITE 00001 SITE 00002 SITE 00003 SITE 00005 SITE 00006 SITE 00007 SITE 00008 SITE 00009 SITE 00011 SITE 00012 SITE 00015 SITE 00016 SITE 00017 SITE 00018 SITE 00019 SITE 00020 SITE 00021 SITE 00023 SITE 00024		
N00221 / 000003 NONE REPORT N62474-94-D-7609 300	**03-01-2000** 08-08-2000 5090.3.A. 00298	BORNSTEIN, J. TETRA TECH EM, INC. NAVFAC - SOUTHWEST DIVISION	FINAL MAINTENANCE ACTION REPORT FOR LEAD IN SOIL FROM LEAD BASED PAINT AT GOLF COURSE, FRESH WATER TANKS 188A AND 188B INCLUDES TRANSMITTAL LETTER WITH DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY	TANK 188A TANK 188B	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003470 SWDIV SER 06CM.MH/0137 CORRESPONDENCE NONE 5	**03-06-2000** 05-08-2000 5090.3.A. NONE	F. ALJABI NAVFAC - SOUTHWEST DIVISION C. GRIBBLE EPA, BERKELEY, CA	NOTIFICATION THAT NAVY HAS NOT RECEIVED COMMENTS ON THE DRAFT LANDFILL GAS INVESTIGATION TRANSMITTED ON 22 DECEMBER 1999 - ANY COMMENTS RECEIVED WILL BE ADDRESS IN THE ASSOCIATED FEASIBILITY STUDY	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000311 NONE CORRESPONDENCE NONE 1	**03-20-2000** 07-14-2003 5090.3.A. NONE	ARTHUR, B. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT REMOVAL ACTION SUMMARY REPORT FOR THE LEAD OXIDE CONTAMINATED SITE	ADMIN RECORD INFO REPOSITORY	SITE 00025	FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 003456 NONE REPORT N62474-94-D-7609 750	**03-20-2000** 03-28-2000 5090.3.A. 00253	D. KORFAS TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	JUNE/JULY 1999 INTERIM FACILITY-WIDE GROUNDWATER MONITORING PROGRAM QUARTERLY REPORT (3 VOLUMES) VOL 1 = TEXT, TABLES, FIGURES & PLATES; VOL 2 = APPX. A - F; VOL 3 = APPX. G & H)	ADMIN RECORD	AREA 00001 AREA 00002 AREA 00003 AREA 00004 AREA 00005 AREA 00006 AREA 00007 AREA 00008 AREA 00009 SITE 00001 SITE 00003 SITE 00005 SITE 00006 SITE 00007 SITE 00012 SITE 00015 SITE 00016-B1 SITE 00016-B2 SITE 00016-B3 SITE 00016-B4 SITE 00016-B5 SITE 00017 SITE 00018 SITE 00020 SITE 00021 SITE 00023 SITE 00024	FRC - PERRIS	181-03-0180 31089137	BX 0040

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N00221 / 000312 NONE CORRESPONDENCE NONE 1	**03-27-2000** 07-14-2003 5090.3.A. NONE	ARTHUR, B. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE FINAL TECHINCAL MEMORANDUM, GROUNDWATER ASSESSMENT FOR PROPERTY TRANSFER IN REUSE ZONE 1	ADMIN RECORD INFO REPOSITORY	ZONE 1	FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000313 NONE CORRESPONDENCE NONE 2	**03-27-2000** 07-15-2003 5090.3.A. NONE	ARTHUR, B. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE INVESTIGATION AREA D POLYCHLORINATED BIPHENYLS (PCB) SITES	ADMIN RECORD INFO REPOSITORY	AREA D	FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000415 NONE CORRESPONDENCE NONE 1	**04-07-2000** 07-15-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE FINAL TECHINCAL MEMORANDUM, GROUNDWATER ASSESSMENT FOR PROPERTY TRANSFER IN REUSE ZONE 1	ADMIN RECORD INFO REPOSITORY	ZONE 1	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000009 NONE MINUTES NONE 24	**04-11-2000** 08-30-2000 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES OF 27 JANUARY 2000	ADMIN RECORD INFO REPOSITORY	BLDG. 505 SITE 00008 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000417 NONE CORRESPONDENCE NONE 10	**05-01-2000** 07-15-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	TRANSMITTAL LETTER FOR THE DRAFT REMEDIAL ACTION PLANS FOR INVESTIGATION AREA E AND INVESTIGATION AREA A1	ADMIN RECORD INFO REPOSITORY	AREA A1 AREA E	FRC - PERRIS	181-03-0185 41031808	BX 0009

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N00221 / 000314 NONE CORRESPONDENCE NONE 1	**05-04-2000** 07-15-2003 5090.3.A. NONE	ARTHUR, B. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE RESULTS OF THE SITE INVESTIGATION AT THE SANITARY WASTEWATER PUMP STATIONS DOM-1, DOM-2, AND DOM-17, AGENCY CONCURS THAT NO FURTHER INVESTIGATION IS REQUIRED	ADMIN RECORD INFO REPOSITORY	DOM-1 DOM-17 DOM-2	FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000418 NONE CORRESPONDENCE NONE 1	**05-04-2000** 07-15-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT RESULTS OF THE SITE INVESTIGATION AT SANITAY SEWER MUMP STATION (DOM)-17	ADMIN RECORD INFO REPOSITORY	DOM-1 DOM-17 DOM-2	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000010 NONE MINUTES NONE 16	**05-10-2000** 08-30-2000 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES OF 24 FEBRUARY 2000	ADMIN RECORD INFO REPOSITORY	SITE 00008 TANK 188A TANK 188B	NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 003471 NONE REPORT N62474-94-D-7609 150	**05-16-2000** 06-16-2000 5090.3.A. 00292	V. DEMETRIOS TETRA TECH EM INC. VARIOUS	DRAFT FINAL - FINDING OF SUITABILITY TO TRANSFER (FOST) ECONOMIC DEVELOPMENT CONVEYANCE (GOLF COURSE)	ADMIN RECORD	BLDG. 1274 BLDG. 1276 BLDG. 650 BLDG. 658 BLDG. A139 BLDG. A140 BLDG. A141 BLDG. A156 BLDG. A171 BLDG. A199 BLDG. A206 BLDG. A207 BLDG. A208 BLDG. A209 BLDG. A210 BLDG. A211 BLDG. A212 BLDG. A213 BLDG. A218 BLDG. A219 BLDG. A252 BLDG. A295 PARCEL 11-A1 PARCEL 11-A2 PARCEL 11-A3 PARCEL 11-A4 PARCEL 11-A5 PARCEL X SWMU 106 UST 658 UST 658S UST 658S2	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003472 SWDIV SER 06CM.JD/0366 CORRESPONDENCE NONE 6	**05-16-2000** 06-16-2000 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE DTSC, BERKELEY, CA	TRANSMITTAL OF RESPONSE TO REGULATORY COMMENTS TO THE DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) ECONOMIC DEVELOPMENT CONVEYANCE PARCEL X (GOLF COURSE) DATED 14 JANUARY 2000 (W/ENCLOSURES) (DO NOT HAVE COMMENTS OR DRAFT FOST DATED 14 JAN 2000)	ADMIN RECORD	PARCEL X	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000495 NONE CORRESPONDENCE NONE 3	**05-30-2000** 07-22-2003 5090.3.A. NONE	S. GOLDBECK BCDC - SAN FRANCISCO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	LETTER REQUESTING TO PLACE THE SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION (BCDC) ON ALL PERTINENT LISTS FOR DOCUMENT DISTRIBUTION AND MEETING NOTIFICATIONS FOR THE PORTIONS OF THE MARE ISLAND CLEANUP PROJECT WITHIN THEIR JURISDICTION	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000315 NONE CORRESPONDENCE NONE 3	**06-01-2000** 07-15-2003 5090.3.A. NONE	ARTHUR, B. U.S. EPA - SAN FRANCISCO, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	COMPILATION OF U.S. EPA COMMENTS ON THE DRAFT FINAL REMEDIAL INVESTIGATION	ADMIN RECORD INFO REPOSITORY	SITE 00008	FRC - PERRIS	181-03-0185 41031808	BX 0008

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N00221 / 003473 NONE REPORT N62474-94-D-7609 225	**06-05-2000** 06-16-2000 5090.3.C. 00292	V. DEMETRIOS TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	INTERNAL DRAFT - FINDING OF SUITABILITY TO TRANSFER (FOST) 15 PARCELS OF PARCEL XV (XV-A)	SITE FILE	AST 000571-2 AST T-4 BLDG. 00503 BLDG. 00547 BLDG. 00571 BLDG. 00577 BLDG. 00579 BLDG. 00609 BLDG. 00611 BLDG. 00613 BLDG. 00615 BLDG. 00617 BLDG. 00619 BLDG. 00621 BLDG. 00623 BLDG. 00653 BLDG. 00655 BLDG. 00673 BLDG. 00721 BLDG. 00747 BLDG. 00753 BLDG. 00755 BLDG. 00763 BLDG. 00769 BLDG. 00771 BLDG. 00773 BLDG. 00777 BLDG. 00791 BLDG. 01013 BLDG. 01015 BLDG. 01017 BLDG. 01019 BLDG. 01021 BLDG. 01023 BLDG. 01025	NAVFAC SOUTHWEST - BLDG. 1	

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					BLDG. 01325		
					BLDG. 793		
					BLDG. 805		
					BLDG. 857		
					BLDG. 897		
					BLDG. 955		
					BLDG. 957		
					BLDG. 959		
					BLDG. 959A		
					BLDG. 989		
					BLDG. 991		
					BLDG. 995		
					BLDG. 997		
					BLDG. 999		
					BLDG. AA12		
					BLDG. TK04		
					PARCEL 01-C		
					PARCEL 01-D1		
					PARCEL 01-D2		
					PARCEL 01-E		
					PARCEL 01-F		
					PARCEL 01-G		
					PARCEL 01-HA		
					PARCEL 01-HB		
					PARCEL 01-J1		
					PARCEL 01-J2A		
					PARCEL 01-J2B		
					PARCEL 01-J3		
					PARCEL 01-J4		
					PARCEL 01-K		
					PARCEL 01-L1A		
					PARCEL 01-L1B		
					PARCEL 01-L2A		
					PARCEL 01-L2B		
					PARCEL 01-L3A		

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					PARCEL 01-L3B PARCEL 01-M PARCEL 01-N PARCEL 01-O PARCEL 01-P PARCEL 01-Q1 PARCEL 01-Q2 PARCEL 02-D3 PARCEL 02-D5 PARCEL 02-E2 PARCEL 17-C PARCEL 17-E PARCEL 18-A PARCEL XV-A SITE 00001 SITE 00008 SITE 00017 SWMU 106 SWMU 108 SWMU 124 SWMU 93 UST 577S UST 655 UST 655-1 UST 993 UST 999		
N00221 / 000011 NONE MINUTES NONE 31	**06-07-2000** 08-30-2000 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES OF 30 MARCH 2000	ADMIN RECORD INFO REPOSITORY	SITE 00008	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000002 NONE CORRESPONDENCE NONE 6	**06-12-2000** 08-08-2000 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE DTSC - BERKELEY	THE OCTOBER 1999 FACILITY-WIDE GROUNDWATER MONITORING PROGRAM QUARTERLY REPORT BEING FORWARDED TO REGULATOR FOR INFORMATION W/OUT ENCLOSURE (MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000496 NONE CORRESPONDENCE NONE 2	**06-27-2000** 07-22-2003 5090.3.A. NONE	ARC ECOLOGY J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL REMEDIAL INVESTIGATION	ADMIN RECORD INFO REPOSITORY	SITE 00008	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000014 NONE CORRESPONDENCE N62474-94-D-7609 130	**06-30-2000** 08-30-2000 5090.3.A. 00253	V. EARLY TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT FIELD SAMPLING PLAN FOR RCRA/FACILITY LANDFILL GROUNDWATER MONITORING	ADMIN RECORD INFO REPOSITORY	SITE 00006	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000015 NONE CORRESPONDENCE N62474-94-D-7609 120	**06-30-2000** 08-30-2000 5090.3.A. 00253	V. EARLY TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT QUALITY ASSURANCE PROJECT PLAN (QAPP) FOR RCRA/FACILITY LANDFILL GROUNDWATER MONITORING	ADMIN RECORD INFO REPOSITORY	SITE 00006	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000037 SWDIV SER 06CM.MH/0090 REPORT NONE 500	**06-30-2000** 01-30-2001 5090.3.A. NONE	R. STETTLER PWC, SAN DIEGO, CA NAVFAC - SOUTHWEST DIVISION	SITE CHARACTERIZATION REPORT, FORMER WASTE OIL DISPOSAL SUMPS - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (MAILING LIST IS SENSITIVE) {SEE AR #39 - SWDIV TRANSMITTAL LETTER BY J. DUNAWAY}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000012 NONE MINUTES NONE 25	**07-03-2000** 08-30-2000 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES OF 27 APRIL 2000	ADMIN RECORD INFO REPOSITORY	BLDG. 503 BLDG. 505 BLDG. 655 PARCEL 10 PARCEL 15 SITE 00002 SITE 00008 SITE 00015 SITE 00017 UST 243/231 UST 637	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000006 NONE REPORT N62742-98-D-1809 150	**07-07-2000** 08-08-2000 5090.3.A. 00001	T. BERNITT ENVIRONMENTAL CHEMICAL CORP NAVFAC - WESTERN DIVISION	FINAL REPORT, VALIDATION OF DETECTION SYSTEMS (VDS) TEST PROGRAM INCLUDES TRANSMITTAL LETTER TO VARIOUS AGENCIES (MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000018 NONE REPORT N62474-94-D-7609 400	**07-07-2000** 09-11-2000 5090.3.A. 00253	V. EARLY TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT JANUARY 2000 FACILITY-WIDE GROUNDWATER MONITORING PROGRAM QUARTERLY REPORT	ADMIN RECORD INFO REPOSITORY	BLDG. 108 BLDG. 386 BLDG. 388 BLDG. 690 BLDG. A-187 BLDG. A-215 BLDG. A-216 BLDG. A-267 SITE 00001 SITE 00004 SITE 00005 SITE 00007 SITE 00014 SITE 00017 SITE 00020 SITE 00021	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003475 DS.0213.14889 REPORT N62474-94-D-7609 150	**07-21-2000** 09-25-2000 5090.3.A. 00213	EASTER, C. TETRA TECH EM INC. D. ROLLEFSON NAVFAC - SOUTHWEST DIVISION	DRAFT - SITE ASSESSMENT SUMMARY REPORT	ADMIN RECORD	772	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000001 NONE CORRESPONDENCE NONE 6	**07-26-2000** 08-08-2000 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE DTSC - BERKELEY	LETTER TO REGULATOR FOR REVIEW AND COMMENT OF THE FIELD SAMPLING PLAN AND THE QUALITY ASSURANCE PROJECT PLAN FOR THE RCRA/FACILITY LANDFILL GROUNDWATER MONITORING DATED JUNE 30, 2000 W/OUT ENCLOSURE (MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000005 NONE REPORT N62474-94-D-7609 100	**07-31-2000** 08-08-2000 5090.3.A. 00292	V. DEMETRIOS TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	FINAL FINDING OF SUITABILITY TO TRANSFER (FOST) ECONOMIC DEVELOPMENT CONVEYANCE (EDC) PARCEL X (GOLF COURSE) INCLUDES TRANSMITTAL LETTER TO VARIOUS AGENCIES (MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL 08-B1 PARCEL 09-A PARCEL 09-B PARCEL 09-C PARCEL 11-A1 PARCEL 11-A2 PARCEL 11-A3 PARCEL 11-A4 PARCEL 11-A5 PARCEL 12-A4 PARCEL 12-A5	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000019 NONE MINUTES NONE 30	**07-31-2000** 09-28-2000 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES OF 29 JUNE 2000	ADMIN RECORD INFO REPOSITORY	AREA A1 AREA E BLDG. 213 BLDG. 513 PARCEL 10 PARCEL X SITE 00003 SITE 00008 SITE 00024 SITE 00025 SITE 00026 SITE 00027	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000008 DS.0380.14986 REPORT N62474-94-D-7609 100	**08-11-2000** 08-17-2000 5090.3.A. 00380	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	PRELIMINARY DRAFT FINDING OF SUITABILITY FOR EARLY TRANSFER (FOSET) OF THE EASTERN EARLY TRANSFER PARCEL	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000317 NONE CORRESPONDENCE NONE 20	**08-16-2000** 07-15-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	LETTER REQUESTING A MEETING TO DISCUSS THE COMMENTS ON THE DRAFT FINAL OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT - COMMENTS ENCLOSED	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000318 NONE CORRESPONDENCE NONE 1	**08-18-2000** 07-15-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	LETTER ANNOUNCING CHANGE IN EPA REMEDIAL PROJECT MANAGER FROM B. ARTHUR TO E. ROTH	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009

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N00221 / 000013 NONE MINUTES NONE 26	**08-21-2000** 08-30-2000 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES OF 25 MAY 2000	ADMIN RECORD INFO REPOSITORY	AREA A1 AREA E BLDG. 571 BLDG. 655 BLDG. 99 BLDG. H1 PARCEL 10 PARCEL 15 SITE 00001 SITE 00004 SITE 00017 SITE 00022 UST 655-1 UST 993 UST 999	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000419 NONE CORRESPONDENCE NONE 10	**08-25-2000** 07-15-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL REMEDIAL INVESTIGATION REPORT	ADMIN RECORD INFO REPOSITORY	SITE 00008	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 003474 SWDIV SER 06CM.JD/0691 CORRESPONDENCE NONE 6	**08-28-2000** 09-25-2000 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION L. KOLB CRWQCB, OAKLAND, CA	RESPONSE TO CRWQCB LETTER DATED 26 JUNE 2000 (FILE NO. 2129.2011(MBR)) REGARDING REGULATORY OVERSIGHT SUPPORT (W/O ENCLOSURE) (PORTIONS OF MAILING LIST CONSIDERED CONFIDENTIAL)	ADMIN RECORD SENSITIVE	SITE 00023 UST 772	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000016 SWDIV SER 06CM.JD/696 CORRESPONDENCE NONE 5	**08-29-2000** 09-07-2000 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE DTSC, BERKELEY, CA	RESPONSE TO DTSC ELECTRONIC LETTER OF 7 FEBRUARY 2000, REGARDING PROPOSED REVISIONS TO THE COMMUNITY RELATIONS PLAN (CRP) (MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000017 SWDIV SER 06CM.DR/697 CORRESPONDENCE NONE 17	**08-29-2000** 09-11-2000 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE CALIFORNIA EPA, BERKELEY, CA	NOTIFICATION THAT THE DEPT. OF THE NAVY IS TRANSFERRING UST SITE 772, ABOVE GROUND STORAGE TANK (AST) SITE 636, & ASSOCIATED UNDERGROUND PIPING SYSTEM FROM THE CERCLA PROGRAM TO THE UST PROGRAM (WITH ENCLOSURE) (MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	AST 000636 UST 772	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000021 NONE MINUTES NONE 28	**09-21-2000** 10-27-2000 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES OF 20 JULY 2000	ADMIN RECORD INFO REPOSITORY	PARCEL 10	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000026 DS.0293.14322 CORRESPONDENCE N62474-94-D-7609 4	**10-01-2000** 12-21-2000 5090.3.A. 00293	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	DRAFT PROPOSED PLAN	ADMIN RECORD	SITE 00022	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000020 DS.0292.14788 REPORT N62474-94-D-7609 250	**10-02-2000** 10-16-2000 5090.3.A. 00292	DEMETRIOS, V. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	PRELIMINARY DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) 15 PARCELS OF PARCEL XV (XV-A)	ADMIN RECORD INFO REPOSITORY	BLDG. 1017 BLDG. 1019 BLDG. 1021 BLDG. 1023 BLDG. 1025 BLDG. 1325 BLDG. 503 BLDG. 547 BLDG. 571 BLDG. 577 BLDG. 653 BLDG. 655 BLDG. 673 BLDG. 753 BLDG. 755 BLDG. 791 BLDG. 793 BLDG. 805 BLDG. 959 BLDG. 959A BLDG. 989 BLDG. 991 BLDG. 999 BLDG. TK04 SITE 00001 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000027 SWDIV SER 06CM.JD/0806 CORRESPONDENCE NONE 2	**10-03-2000** 12-21-2000 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE DTSC, BERKELEY, CA	TRANSMITTAL OF DRAFT TECHNICAL MEMORANDUM, PROPOSED PLAN AND RECORD OF DECISION	ADMIN RECORD	OU 0000001 SITE 00022	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000028 DS.0293.14322 CORRESPONDENCE N62474-94-D-7609 22	**10-04-2000** 12-21-2000 5090.3.A. 00293	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT RECORD OF DECISION	ADMIN RECORD INFO REPOSITORY	A-249 A-250 SITE 00022	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000029 DS.0293.14322 REPORT N62474-94-D-7609 14	**10-04-2000** 12-21-2000 5090.3.A. 00293	R. BATRA TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	ADDENDUM TO THE DRAFT FINAL PHASE II REMEDIAL INVESTIGATION REPORT - HUMAN HEALTH RISK ASSESSMENT (SEE AR #1093 - DRAFT FINAL RI)	ADMIN RECORD	A-249 A-250 SITE 00022	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000319 NONE CORRESPONDENCE NONE 3	**10-10-2000** 07-15-2003 5090.3.A. NONE	ROTH, E. U.S. EPA - SAN FRANCISCO, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	LETTER TRANSFERRING TITLE TO PROPERTY PRIOR TO CLEANUP USING THE FINDING OF SUITABILITY FOR EARLY TRANSFER (FOSET) PROCESS	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000290 NONE CORRESPONDENCE NONE 17	**10-16-2000** 07-14-2003 5090.3.A. NONE	MISHEK, D. CRWQCB - SAN FRANCISCO PHILLIPS, R. NAVFAC - SOUTHWEST DIVISION	TENTATIVE ORDER CONCERNING THE ADOPTION OF SITE CLEANUP REQUIREMENTS	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000046 DS.0374.15625 & SWDIV SER 06CM.JD\0113 CORRESPONDENCE N62474-94-D-7609 40	**10-20-2000** 03-06-2001 5090.3.A. 00374	H. DAWSON TETRA TECH EM INC. J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	DRAFT FIELD SAMPLING PLAN FOR BASE WIDE CONFIRMATION SAMPLING OF POLYCHLORINATED BIPHENYLS (PCB'S) AT ABATEMENT LOCATIONS - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (MAILING LIST IS SENSITIVE) {SEE AR #47 - DRAFT QAPP}	ADMIN RECORD INFO REPOSITORY SENSITIVE	BASEWIDE	NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000047 DS.0374.15627 & SWDIV SER 06CM.JD\0113 CORRESPONDENCE N62474-94-D-7609 100	**10-20-2000** 03-06-2001 5090.3.A. 00374	H. DAWSON TETRA TECH EM INC. J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	DRAFT QUALITY ASSURANCE PROJECT PLAN (QAPP) FOR BASEWIDE CONFIRMATION SAMPLING OF POLYCHLORINATED BIPHENYLS (PCB'S) AT ABATEMENT LOCATIONS - INCLUDES SWDIV TRANSMITTAL LETTER (MAILING LIST IS SENSITIVE) {SEE AR #46 - DRAFT FIELD SAMPLING PLAN}	ADMIN RECORD INFO REPOSITORY SENSITIVE	BASEWIDE	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000022 DS.0292.14789 REPORT N62474-94-D-7609 350	**10-31-2000** 11-06-2000 5090.3.A. 00292	S. CARDINALE TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) - PARCEL XV-A {SEE AR #23 - SUBMITTAL LETTER BY D. DEMARS}	ADMIN RECORD INFO REPOSITORY	PARCEL 01-E PARCEL 01-F PARCEL 01-G PARCEL 01-HA PARCEL 01-J2A PARCEL 01-J3 PARCEL 01-J4 PARCEL 01-K PARCEL 01-L1A PARCEL 01-L2A PARCEL 01-L3A PARCEL 01-M PARCEL 01-O PARCEL 01-P PARCEL 01-Q1 PARCEL XV-A	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000023 SWDIV SER 06CM.JD\0903 CORRESPONDENCE NONE 4	**11-01-2000** 11-09-2000 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE DTSC, BERKELEY, CA	SUBMITTAL OF THE DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) ECONOMIC DEVELOPMENT CONVEYANCE PARCEL XV-A TO REGULATOR FOR REVIEW AND COMMENTS (MAILING LIST IS SENSITIVE) {SEE AR #22 - DRAFT FOST}	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL XV-A	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000025 DS.0293.14319 CORRESPONDENCE N62474-94-D-7609 4	**11-01-2000** 12-19-2000 5090.3.A. 00293	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	FINAL PROPOSED PLAN	ADMIN RECORD INFO REPOSITORY	SITE 00022	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000497 NONE CORRESPONDENCE NONE 3	**11-06-2000** 07-22-2003 5090.3.A. NONE	D. BAILEY DHS - SACRAMENTO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	LETTER ENCOURAGING THE NAVY TO KEEP ANY POTENTIAL OWNERS OF THE PROPERTY INFORMED OF THE POSSIBILITIES OF RADIOLOGICAL RESTRICTIONS	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000498 NONE CORRESPONDENCE NONE 2	**11-09-2000** 07-22-2003 5090.3.A. NONE	PIERCE, D. DOI - SACRAMENTO MOORE, S. NAVFAC - SOUTHWEST DIVISION	AGENCY RECOMMENDS THAT THE FINAL OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT NO BE USED AS THE BASIS FOR A "NO FURTHER ACTION" DECISION	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000420 NONE CORRESPONDENCE NONE 10	**11-20-2000** 07-15-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE FINAL OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000024 NONE MINUTES NONE 33	**11-21-2000** 12-13-2000 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES OF 31 AUGUST 2000	ADMIN RECORD INFO REPOSITORY	BLDG. 655 BLDG. 993 SITE 00001	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000297 NONE CORRESPONDENCE NONE 20	**12-06-2000** 07-14-2003 5090.3.A. NONE	BARSAMIAN, L. CRWQCB - SAN FRANCISCO PHILLIPS, R. NAVFAC - SOUTHWEST DIVISION	SITE CLEANUP REQUIREMENTS WITH NOTICE OF EXEMPTION ATTACHED	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0008

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N00221 / 000030 SWDIV SER 06CM.JD/1033 REPORT N00024-99-D-8137 100	**12-08-2000** 01-02-2001 5090.3.A. DO 0011	MAGGINI, L. ROY F. WESTON, INC. NAVFAC - SOUTHWEST	DRAFT SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION, DREDGE SPOILS PONDS (INCLUDES TRANSMITTAL LETTER TO U.S. EPA) (PORTION OF MAILING LIST IS SENSITIVE) [SEE RECORD # 1236 - REVISED DRAFT SUMMARY REPORT] *SEE COMMENTS	ADMIN RECORD SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000041 DS.0253.16360 & SWDIV SER 06CM.MH/0031 REPORT N62474-94-D-7609 680	**12-08-2000** 02-19-2001 5090.3.A. 00253	TETRA TECH EM INC. M. HILLSTROM NAVFAC - SOUTHWEST DIVISION	MAY 2000 FACILITY WIDE GROUNDWATER MONITORING PROGRAM QUARTERLY REPORT - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00001	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000042 DS.0293.16028 REPORT N62474-94-D-7609 40	**12-15-2000** 02-19-2001 5090.3.A. 00293	TETRA TECH EM INC. J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	FINAL RECORD OF DECISION FOR SITE 22	ADMIN RECORD INFO REPOSITORY	SITE 00022	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000320 NONE CORRESPONDENCE NONE 3	**12-20-2000** 07-15-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA E. ESTRELLA NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINDING OF SUITABILITY FOR EARLY TRANSFER (FOSET) OF THE EASTERN EARLY TRANSFER PARCEL (EETP)	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 BX 0009 41031808
N00221 / 000032 DS.0136.15397 CORRESPONDENCE N62474-94-D-7609 70	**01-01-2001** 01-11-2001 5090.3.A. 00136	BORNSTEIN, J. TETRA TECH EM, INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	DRAFT FIELD SAMPLING AND ANALYSIS PLAN - ADDITIONAL SAMPLING INVESTIGATION AREA F2 {SEE AR #34 - DRAFT QAPP}	ADMIN RECORD INFO REPOSITORY	IA F2 SITE 00004	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000034 DS.0136.15398 CORRESPONDENCE N62474-94-D-7609 130	**01-01-2001** 01-23-2001 5090.3.A. 00136	BORNSTEIN, J. TETRA TECH EM, INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	DRAFT QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDITIONAL SAMPLING INVESTIGATION AREA F2 {SEE AR #32 - DRAFT FIELD SAMPLING PLAN}	ADMIN RECORD INFO REPOSITORY	F2 SITE 00004	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000031 SWDIV SER 06CM.JD\0018 CORRESPONDENCE NONE 2	**01-04-2001** 01-11-2001 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE DTSC, BERKELEY, CA	SUBMISSION OF THE FINAL RECORD OF DECISION (ROD) DATED 15 DECEMBER 2000 TO DTSC AND RWQCB FOR THEIR SIGNATURE	ADMIN RECORD INFO REPOSITORY	SITE 00022	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000035 DS.0292.14790 & SWDIV SER 06CM.JD/0057 REPORT N62474-94-D-7609 230	**01-04-2001** 01-23-2001 5090.3.A. 00292	S. CARDINALE TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	FINAL FINDING OF SUITABILITY TO TRANSFER (FOST) PARCEL XV-A - INCLUDES TRANSMITTAL LETTER BY L. DUCHNAK	ADMIN RECORD INFO REPOSITORY	PARCEL 01-E PARCEL 01-F PARCEL 01-G PARCEL 01-HA PARCEL 01-J2A PARCEL 01-J3 PARCEL 01-J4 PARCEL 01-K PARCEL 01-L1A PARCEL 01-L2A PARCEL 01-L3A PARCEL 01-M PARCEL 01-O PARCEL 01-P PARCEL 01-Q1 PARCEL XV-2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000033 DS.0380.14987 REPORT N62474-94-D-7609 120	**01-05-2001** 01-11-2001 5090.3.A. 00380	M. FOSTER TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT FINDING OF SUITABILITY FOR EARLY TRANSFER (FOSET) OF THE EASTERN EARLY TRANSFER PARCEL	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000068 DS.0380.14988 PUBLIC NOTICE N62474-94-D-7609 3	**01-05-2001** 08-04-2001 5090.3.A. 00380	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	PUBLIC NOTICE OF THE PUBLIC REVIEW PERIOD FOR THE DRAFT FINDING OF SUITABILITY FOR EARLY TRANSFER (FOSET) OF THE EASTERN EARLY TRANSFER PARCEL	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0003
N00221 / 000039 SWDIV SER 06CM.MH/0090 CORRESPONDENCE NONE 6	**01-24-2001** 02-19-2001 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIPPLE DTSC, BERKELEY, CA	TRANSMITTAL OF THE SITE CHARACTERIZATION REPORT, FORMER WASTE OIL DISPOSAL SUMPS (MAILING LIST IS SENSITIVE) {SEE AR #37 - SITE CHARACTERIZATION REPORT}	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00002	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000038 DS.0263.14700 REPORT N62474-94-D-7609 3000	**01-31-2001** 02-07-2001 5090.3.A. 00263	MCCONATHY, B. TETRA TECH EM INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT - INCLUDES VOLUMES I THROUGH III {SEE AR #40 - SWDIV TRANSMITTAL LETTER BY J. DUNAWAY} [SEE AR #120 - MINUTES OF DISCUSSION OF RESPONSES TO COMMENTS]	ADMIN RECORD INFO REPOSITORY	SITE 00001 SITE 00008 SITE 00010 SITE 00013 SITE 00014 SITE 00016 SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0001
N00221 / 000045 DS.0139.12582 & SWDIV SER 06CM.JD/0195 REPORT N62474-94-D-7609 3500	**02-01-2001** 03-06-2001 5090.3.A. 00139	V. EARLY TETRA TECH EM INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	DRAFT INVESTIGATION AREA A1, REMEDIAL INVESTIGATION - VOLUMES I THROUGH III, INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (MAILING LIST IS SENSITIVE) [SEE AR #81 - RESPONSE TO COMMENTS)	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA A1 BLDG. 503 SITE 00017	FRC - PERRIS	181-03-0180 31089137	BX 0001 BX 0002
N00221 / 000040 SWDIV SER 06CM.JD/0145 CORRESPONDENCE NONE 4	**02-05-2001** 02-19-2001 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIPPLE DTSC, BERKELEY, CA	TRANSMITTAL OF THE DRAFT FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT (MAILING LIST IS SENSITIVE) {SEE AR #38 - DRAFT FINAL ASSESSMENT}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000048 TC.0140.10769 & SWDIV SER 06CM.JD/0146 CORRESPONDENCE N62474-94-D-7609 26	**02-05-2001** 03-09-2001 5090.3.A. 00140	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE DTSC, BERKELEY, CA	RESPONSE TO AGENCY COMMENTS ON THE DRAFT FINAL REMEDIAL INVESTIGATION REPORT - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00008	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000043 SWDIV SER 06CM.JD/0173 CORRESPONDENCE NONE 6	**02-09-2001** 02-19-2001 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIPPLE DTSC, BERKELEY, CA	TRANSMITTAL OF THE FINAL RECORD OF DECISION (ROD) FOR SITE 22 (MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00022	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000044 DS.0380.15525 REPORT N62474-94-D-7609 250	**02-15-2001** 03-02-2001 5090.3.A. 00380	M. FOSTER TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT - FINDING OF SUITABILITY TO TRANSFER (FOST) - TRANSFER PARCEL VII-A	ADMIN RECORD INFO REPOSITORY	PARCEL VII-A	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000421 NONE CORRESPONDENCE NONE 2	**02-15-2001** 07-15-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION, DREDGE SPOILS PONDS	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000066 TC.0380.11038 PUBLIC NOTICE N62474-94-D-7609 3	**02-16-2001** 08-04-2001 5090.3.A. 00380	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	PUBLIC NOTICE OF THE PUBLIC REVIEW PERIOD FOR THE DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) PARCEL VII-A	ADMIN RECORD INFO REPOSITORY	PARCEL VII-A	FRC - PERRIS	181-03-0180 31089137	BX 0003

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N00221 / 000422 NONE CORRESPONDENCE NONE 2	**03-05-2001** 07-15-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT - FINDING OF SUITABILITY TO TRANSFER (FOST) - TRANSFER PARCEL VII-A	ADMIN RECORD INFO REPOSITORY	PARCEL VII-A	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000321 NONE CORRESPONDENCE NONE 2	**03-06-2001** 07-15-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) ECONOMIC DEVELOPMENT CONVEYANCE PARCEL VII-A	ADMIN RECORD INFO REPOSITORY	PARCEL VII-A	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000050 NONE MINUTES NONE 16	**03-14-2001** 03-29-2001 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES FROM MEETING HELD 14 DECEMBER 2000	ADMIN RECORD INFO REPOSITORY	PARCEL 7-A SITE 00022	FRC - PERRIS	181-03-0180 31089137	BX 0002
N00221 / 000049 NONE MINUTES NONE 17	**03-19-2001** 03-29-2001 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES FROM MEETING HELD 11 JANUARY 2001	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0002
N00221 / 000053 FWDS-RACII-01-0114 & SWDIV SER 06CM.DR/0309 CORRESPONDENCE N44255-95-D-6030 70	**03-20-2001** 04-11-2001 5090.3.A. DO094	C. YOUNG FOSTER WHEELER D. ROLLEFSON NAVFAC - SOUTHWEST DIVISION	WORK PLAN GEOPHYSICAL SURVEY, LAND SURVEY AND MAPPING, AND EXPLORATORY EXCAVATION, REVISION 0 - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY	ADMIN RECORD INFO REPOSITORY	SITE 00023	FRC - PERRIS	181-03-0180 31089137	BX 0002

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N00221 / 000434 NONE CORRESPONDENCE NONE 2	**03-25-2001** 07-15-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE WORK PLAN GEOPHYSICAL SURVEY, LAND SURVEY AND MAPPING, AND EXPLORATORY EXCAVATION, REVISION 0	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 003574 DS.0082.16955 & SWDIV SER 06CM.JD/0326 CORRESPONDENCE N62474-94-D-7609 25	**03-27-2001** 09-19-2005 5090.3.A. 00082	MCCONATHY, B. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT RESPONSES TO COMMENTS ON THE FINAL OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT [PORTION OF MAILING LIST IS CONFIDENTIAL]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000052 1185 CORRESPONDENCE N62474-98-D-2076 19	**03-30-2001** 04-09-2001 5090.3.A. 00012	IT CORPORATION NAVFAC - SOUTHWEST DIVISION	FINAL SAMPLING AND ANALYSIS PLAN - CLEANING OF STORM DRAINS, REVISION 0	ADMIN RECORD INFO REPOSITORY	BLDG. 742	FRC - PERRIS	181-03-0180 31089137	BX 0002
N00221 / 000051 DS.0253.16362 & SWDIV SER 06CM.JD/0348 REPORT N62474-94-D-7609 150	**04-03-2001** 04-09-2001 5090.3.A. 00253	R. BATRA TETRA TECH EM INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	FINAL AUGUST 2000 FACILITY-WIDE GROUNDWATER MONITORING PROGRAM QUARTERLY REPORT - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	BASEWIDE	FRC - PERRIS	181-03-0180 31089137	BX 0002
N00221 / 000322 NONE CORRESPONDENCE NONE 1	**04-04-2001** 07-15-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT ENVIRONMENTAL SERVICES COOPERATIVE AGREEMENT	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009

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N00221 / 000435 NONE CORRESPONDENCE NONE 2	**04-12-2001** 07-15-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE PHASE IA ABATEMENT/DECONSTRUCTION PROJECT SOIL SAMPLING RESULTS AND REMOVAL OF DOMESTIC PUMP STATION NUMBER 16	ADMIN RECORD INFO REPOSITORY	PHASE IA STATION 16	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000054 DS.0378.15485 & SWDIV SER 06CM.DR/0339 CORRESPONDENCE N62474-94-D-7609 210	**04-16-2001** 04-30-2001 5090.3.A. 00378	M. RAINWATER TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT COMMUNITY RELATIONS PLAN - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE		FRC - PERRIS	181-03-0180 31089137	BX 0002
N00221 / 000323 NONE CORRESPONDENCE NONE 10	**04-19-2001** 07-15-2003 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT QUALITY ASSURANCE PROJECT PLAN AND FIELD SAMPLING AND ANALYSIS PLAN FOR THE ADDITIONAL SAMLING INVESTIGATION AREA F4	ADMIN RECORD INFO REPOSITORY	AREA F4	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000055 DS.0233.16887/SWDIV SER 06CM.JD/0463 CORRESPONDENCE N62474-94-D-7609 15	**04-30-2001** 05-04-2001 5090.3.A. 00233	K. RYAN TETRA TECH EM INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	DRAFT PRELIMINARY REMEDIATION GOALS FOR LEAD INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE		FRC - PERRIS	181-03-0180 31089137	BX 0002
N00221 / 000056 DS.0233.16156/SWDIV SER 06CM.JD/0462 CORRESPONDENCE N62474-94-D-7609 15	**05-01-2001** 05-04-2001 5090.3.A. 00233	K. RYAN TETRA TECH EM INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	DRAFT DEVELOPMENT OF AMBIENT LIMITS FOR IRON IN NATIVE AND FILL SOILS INCLUDES SWDIV TRANSMITTAL BY J. DUNAWAY (MAILING LIST IS SENSITIVE) [SEE AR #2000 - TECH MEMO)	ADMIN RECORD INFO REPOSITORY SENSITIVE		FRC - PERRIS	181-03-0180 31089137	BX 0002

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N00221 / 000057 FWSD-RACII-01-0174 CORRESPONDENCE N44255-95-D-6030 300	**05-02-2001** 05-04-2001 5090.3.A. DO094	K. WEINGARDT FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	DRAFT WORK PLAN, UNDERGROUND FUEL OIL PIPING AND TPH CONTAMINATED SOIL REMOVAL (MARE ISLAND ELEMENTARY SCHOOL), REVISION 0	ADMIN RECORD INFO REPOSITORY	AST 000636 BLDG. 748 SITE 00023 UST 772	FRC - PERRIS	181-03-0180 31089137	BX 0002
N00221 / 000058 FWSD-RACII-01-0176 CORRESPONDENCE N44255-95-D-6030 100	**05-02-2001** 05-04-2001 5090.3.A. DO094	K. WEINGARDT FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	DRAFT SITE SPECIFIC HEALTH AND SAFETY PLAN, UNDERGROUND FUEL OIL PIPING AND TPH CONTAMINATED SOIL REMOVAL FOR THE MARE ISLAND ELEMENTARY SCHOOL, REVISION 0	ADMIN RECORD INFO REPOSITORY	BLDG. 2001 UST 772	FRC - PERRIS	181-03-0180 31089137	BX 0002
N00221 / 000060 SWDIV SER 06CM.JD/0491 CORRESPONDENCE N00024-D-99-8137 100	**05-07-2001** 08-04-2001 5090.3.A. DO 44	ROY F. WESTON, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL WORK PLAN FOR HIGH-DENSITY RADIOLOGICAL SCAN SURVEY IN PONDS 1, 2N, 2M, 2S, 3E, 3W, 4N, 4M, 4S, & 7 AND RADIOLOGICAL SCREENING OF SOIL EXCAVATIONS AT OUTFALLS 3E CURRENT, 3E HISTORIC, 3W HISTORIC, 3W SOUTHERN, 4M, & 4S NORTHERN	ADMIN RECORD INFO REPOSITORY SENSITIVE		FRC - PERRIS	181-03-0180 31089137	BX 0002
N00221 / 000061 DS.0380.15656 & SWDIV SER 06CM.EE/0507 REPORT N62474-94-D-7609 300	**05-09-2001** 08-04-2001 5090.3.A. 00380	FOSTER, M. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	FINAL - FINDING OF SUITABILITY TO TRANSFER (FOST), TRANSFER PARCEL VII-A - INCLUDES SWDIV TRANSMITTAL LETTER BY L. DOUCHAND & ENVIRONMENTAL BASELINE SURVEY PARCELS (ENCLOSURE 2) [MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL VII-A	FRC - PERRIS CHECKED OUT BY BROOKS PAULY, RPM (619-532-0789) FOR MARIE DREYER, RPM - BRAC PMO - 619/ 532-0904 26 JAN 2010	181-03-0180 31089137	BX 0002
N00221 / 000298 NONE REPORT NONE 20	**05-10-2001** 07-14-2003 5090.3.A. NONE	BARSAMIAN, L. CRWQCB - SAN FRANCISCO NAVFAC - SOUTHWEST DIVISION	CLEANUP AND ABATEMENT ORDER (CAO) NO. 01-049 FOR DISCHARGERS OF AQUATIC PESTICIDES TO WATERS OF THE UNITED STATES	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0008

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N00221 / 000351 NONE CORRESPONDENCE NONE 3	**05-10-2001** 07-15-2003 5090.3.A. NONE	P. BISON U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	LETTER IN RESPONSE TO EMAIL REGARDING WHETHER THE ENCAPSULATED POLYCHLORINATED BIPHENYL (PCB) CONTAMINATED CONCRETE MEETS THE DEFINITION OF "TOTALLY ENCLOSED" - ONLY PCB EQUIPMENT THAT IS INTACT AND NONLEAKING QUALIFIES AS TOTALLY ENCLOSED	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000436 NONE CORRESPONDENCE NONE 4	**05-12-2001** 07-16-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT COMMUNITY RELATIONS PLAN	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000063 DS.0136.13259 & SWDIV SER 06CM.JD/0489 REPORT N62474-94-D-7609 2500	**05-14-2001** 08-04-2001 5090.3.A. 00136	TETRA TECH EM INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	DRAFT INVESTIGATION AREA I REMEDIAL INVESTIGATION REPORT (3 VOLUMES) - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00005	FRC - PERRIS	181-03-0180 31089137	BX 0003
N00221 / 000352 NONE CORRESPONDENCE NONE 20	**05-15-2001** 07-15-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT INVESTIGATION AREA A1 INSTALLATION RESTORATION SITE 17 AND BUILDING 503 REMEDIAL INVESTIGATION	ADMIN RECORD INFO REPOSITORY	AREA A1 BLDG. 503 SITE 00017	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000062 DS.0380.17081 & TC.0380.11017 REPORT N62474-94-D-7609 300	**05-17-2001** 08-04-2001 5090.3.A. 00380	FOSTER, M. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL - FINDING OF SUITABILITY FOR EARLY TRANSFER (FOSET) OF THE EASTERN EARLY TRANSFER PARCEL - INCLUDES ELECTRONIC VERSION DATED 05/29/01	ADMIN RECORD INFO REPOSITORY	SITE 00008 SITE 00011 SITE 00013 SITE 00015 SITE 00016 SITE 00019	FRC - PERRIS	181-03-0180 31089137	BX 0002

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N00221 / 000065 TC.0380.11037 PUBLIC NOTICE N62474-94-D-7609 3	**05-19-2001** 08-04-2001 5090.3.A. 00380	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	PUBLIC NOTICE OF THE SIGNING OF THE FINDING OF SUITABILITY FOR EARLY TRANSFER (FOSET) OF THE EASTERN EARLY TRANSFER PARCEL	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0003
N00221 / 000064 NONE MINUTES NONE 22	**05-21-2001** 08-04-2001 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	FINAL RESTORATION ADVISORY BOARD MEETING MINUTES FROM MEETING HELD ON 22 FEBRUARY 2001	ADMIN RECORD INFO REPOSITORY	AREA H1 PARCEL 7A SITE 00017 SITE 00022	FRC - PERRIS	181-03-0180 31089137	BX 0003
N00221 / 000067 TC.0380.11039 PUBLIC NOTICE N62474-94-D-7609 3	**05-29-2001** 08-04-2001 5090.3.A. 00380	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	PUBLIC NOTICE OF THE SIGNING OF THE FINDING OF SUITABILITY TO TRANSFER (FOST), TRANSFER PARCEL VII-A	ADMIN RECORD INFO REPOSITORY	PARCEL VII-A	FRC - PERRIS REQUESTED FROM FRC BY D. SILVA ON 10/9/09 FOR MARIE DREYER, RPM - BRAC PMO - 619/ 532-0904	181-03-0180 31089137	BX 0003
N00221 / 000440 NONE CORRESPONDENCE NONE 10	**06-12-2001** 07-16-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION REPORT FOR INVESTIGATION AREA A2	ADMIN RECORD INFO REPOSITORY	AREA A2	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000441 NONE CORRESPONDENCE NONE 5	**06-12-2001** 07-16-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION REPORT FOR INVESTIGATION AREA A1 INSTALLATION RESTORATION SITE 17 AND BUILDING 503	ADMIN RECORD INFO REPOSITORY	AREA A1 BLDG. 503 SITE 00017	FRC - PERRIS	181-03-0185 41031808	BX 0009

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N00221 / 000299 NONE CORRESPONDENCE NONE 3	**06-18-2001** 07-14-2003 5090.3.A. NONE	ROCHETTE, M. CRWQCB - SAN FRANCISCO DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	RWQCB COMMENTS ON THE DRAFT FINAL FINDING OF SUITABILITY FOR EARLY TRANSFER (FOSET) OF THE EASTERN EARLY TRANSFER PARCEL	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000358 NONE CORRESPONDENCE NONE 3	**06-18-2001** 07-15-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL FINDING OF SUITABILITY FOR EARLY TRANSFER (FOSET) OF THE EASTERN EARLY TRANSFER PARCEL (EETP)	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000088 SWDIV SER 06CM.JD/0664 CORRESPONDENCE NONE 4	**06-21-2001** 11-20-2001 5090.3.A. NONE	DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION VARIOUS AGENCIES	TRANSMITTAL OF THE REVISED "SITE BOUNDARIES" MAP (CONTAINS TRANSMITTAL LETTER FROM J. DUNAWAY WITH SOME SENSITIVE ADDRESSES)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00023	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000059 NONE MINUTES NONE 25	**06-22-2001** 08-04-2001 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	FINAL RESTORATION ADVISORY BOARD MEETING MINUTES FROM MEETING HELD 26 APRIL 2001	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0180 31089137	BX 0002
N00221 / 000069 DS.0253.16364 & SWDIV SER 06CM.JD/0692 REPORT N62474-94-D-7609 300	**06-29-2001** 08-04-2001 5090.3.A. 00253	R. BATRA TETRA TECH EM INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	FINAL NOVEMBER 2000 FACILITY WIDE GROUNDWATER MONITORING PROGRAM, QUARTERLY AND ANNUAL SUMMARY REPORT - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE		FRC - PERRIS	181-03-0180 31089137	BX 0003

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N00221 / 000072 DS.0136.17177 & SWDIV SER 06CM.JD/0770 CORRESPONDENCE N62474-94-D-7609 150	**07-01-2001** 08-04-2001 5090.3.A. 00136	BORNSTEIN, J. TETRA TECH EM, INC. GODSEY, D. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL FIELD SAMPLING AND ANALYSIS PLAN, ADDITIONAL SAMPLING INVESTIGATION AREA F2 - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY & NAVY'S RESPONSE TO EPA COMMENTS ON THE DRAFT FSAP/QAPP (DCN: DS.0136.17230) [MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00004	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000073 DS.0136.17178 & SWDIV SER 06CM.JD/0771 CORRESPONDENCE N62474-94-D-7609 250	**07-01-2001** 08-04-2001 5090.3.A. 00136	BORNSTEIN, J. TETRA TECH EM, INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL QUALITY ASSURANCE PROJECT PLAN, ADDITIONAL SAMPLING INVESTIGATION AREA F2 - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (MAILING LIST IS SENSITIVE) {SEE AR #72 - DRAFT FINAL FSAP}	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00004	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000090 DS.0136.17362 CORRESPONDENCE N62474-94-D-7609 250	**07-01-2001** 11-21-2001 5090.3.A. 00136	GORMAN, C. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	FINAL QUALITY ASSURANCE PROJECT PLAN; ADDITIONAL SAMPLING INVESTIGATION AREA F2 (CONTAINS TRANSMITTAL LETTER FROM J. DUNAWAY WITH SOME SENSITIVE ADDRESSES)	ADMIN RECORD INFO REPOSITORY SENSITIVE	BERTH 0024 BLDG. 1300 BLDG. 724 BLDG. 778 BLDG. 782 BLDG. 900 BLDG. 918 BLDG. A215 BLDG. A220 BLDG. A221 BLDG. A222 BLDG. A223 BLDG. A917 IA F2 SITE 00004	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000300 NONE CORRESPONDENCE NONE 10	**07-05-2001** 07-14-2003 5090.3.A. NONE	LEE, S. CRWQCB - SAN FRANCISCO KRETTECOS, C. DON - VALLEJO	TENTATIVE ORDER RESCINDING ORDER NO. 96-156 WITH ENCLOSURES	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 BX 0008 41031808

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N00221 / 000070 SWDIV SER 06CC.EF/0694 REPORT NONE 250	**07-06-2001** 08-04-2001 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION VARIOUS AGENCIES	DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), ECONOMIC DEVELOPMENT CONVEYANCE FOR PARCEL XXI-A (CAUSEWAY & MAIN ENTRANCE) - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL XXI-A	FRC - PERRIS	181-03-0180 31089137	BX 0003
N00221 / 000074 SWDIV SER 06CM.JD/0675 CORRESPONDENCE NONE 50	**07-06-2001** 08-04-2001 5090.3.A. NONE	CH2MHILL NAVFAC - SOUTHWEST DIVISION	DRAFT COMMUNITY RELATIONS PLAN - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000077 TC.0179.11204 PUBLIC NOTICE N62474-94-D-7609 3	**07-06-2001** 09-25-2001 5090.3.A. 00179	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	TIMES-HERALD PUBLIC NOTICE: NAVY TO SIGN A FINDING OF SUITABILITY TO TRANSFER (FOST) FOR ECONOMIC DEVELOPMENT CONVEYANCE (EDC) TRANSFER PARCEL XXI-A	ADMIN RECORD INFO REPOSITORY	PARCEL XXI-A	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000359 NONE CORRESPONDENCE NONE 2	**07-11-2001** 07-15-2003 5090.3.A. NONE	P. BISSON U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	LETTER REQUESTING A RESPONSE REGARDING SALE OR TRANSFER OF PROPERTY WHICH CONTAINS ENCAPSULATED CONCRETE CONTAMINATED WITH POLYCHLORINATED BIPHENYLS (PCB)	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000683 FWSD-RACII-01-0263 CORRESPONDENCE N44255-95-D-6030 200	**07-11-2001** 02-12-2004 5090.3.A. DO 0094	R. MARGOTTO FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	FINAL SITE SPECIFIC HEALTH AND SAFETY PLAN, UNDERGROUND FUEL OIL PIPING AND TPH CONTAMINATED SOIL REMOVAL FOR THE MARE ISLAND ELEMENTARY SCHOOL, REVISION 0	ADMIN RECORD	AST 000636 UST 772	NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000685 FWSD-RACII-01-0262 CORRESPONDENCE N44255-95-D-6030 400	**07-11-2001** 02-12-2004 5090.3.A. DO 0094	K. WEINGARDT FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	FINAL WORK PLAN, UNDERGROUND FUEL OIL PIPING AND TPH CONTAMINATED SOIL REMOVAL (MARE ISLAND ELEMENTARY SCHOOL), REVISION 0 - INCLUDES RESPONSE TO COMMENTS ON THE DRAFT VERSION AND ADDITIONAL CHANGES PAGE	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000071 DS.0140.12751 & SWDIV SER 06CM.JD/0735 REPORT N62474-94-D-7609 1500	**07-20-2001** 08-04-2001 5090.3.A. 00140	M. RASH TETRA TECH EM INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	FINAL REMEDIAL INVESTIGATION REPORT FOR SITE 8 - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (MAILING LIST IS SENSITIVE), VOLUMES I & II OF II	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00008	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000075 NONE MINUTES NONE 39	**07-24-2001** 08-06-2001 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	FINAL RESTORATION ADVISORY BOARD MEETING MINUTES FROM MEETING HELD ON 31 MAY 2001	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000471 NONE CORRESPONDENCE NONE 1	**07-30-2001** 07-21-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	LETTER RESPONDING TO 06/21/01 LETTER REQUESTING A REVISION TO THE SITE 23 BOUNDARY AND DTSC STATES THAT THEY HAVE NO OBJECTIONS TO THE NAVY'S REQUEST TO REDEFINE THE BOUNDARY OF SITE 23 AS PROPOSED	ADMIN RECORD INFO REPOSITORY	SITE 00023	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000076 DS.0380.14989 & SWDIV SER 06CM.JD/0804 REPORT N62474-94-D-7609 400	**07-31-2001** 08-13-2001 5090.3.A. 00380	FOSTER, M. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	FINAL - FINDING OF SUITABILITY FOR EARLY TRANSFER (FOSET) OF THE EASTERN EARLY TRANSFER PARCEL - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (THE MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00008 SITE 00011 SITE 00013 SITE 00015 SITE 00016 SITE 00019	NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000366 NONE CORRESPONDENCE NONE 20	**08-01-2001** 07-15-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL ONSHORE AREAS ECOLOGICAL RISK ASSESSMENT	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000481 NONE CORRESPONDENCE NONE 10	**08-08-2001** 07-21-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT SOIL AND GROUNDWATER MANAGEMENT PLAN	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000301 NONE CORRESPONDENCE NONE 3	**08-10-2001** 07-14-2003 5090.3.A. NONE	G. RILEY CRWQCB - SAN FRANCISCO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS FOR THE DRAFT REMEDIAL ACTION PLAN FOR INVESTIGATION AREA D2	ADMIN RECORD INFO REPOSITORY	AREA D2	FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000302 NONE CORRESPONDENCE NONE 3	**08-10-2001** 07-14-2003 5090.3.A. NONE	G. RILEY CRWQCB - SAN FRANCISCO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE TECHNICAL MEMORANDUM: INVESTIGATION AREA A3 SITE IDENTIFICATION	ADMIN RECORD INFO REPOSITORY	AREA A3	FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000303 NONE CORRESPONDENCE NONE 3	**08-10-2001** 07-14-2003 5090.3.A. NONE	G. RILEY CRWQCB - SAN FRANCISCO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT COMMUNITY RELATIONS PLAN FOR THE EASTERN EARLY TRANFER PARCEL (EETP)	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0008

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N00221 / 000535 NONE CORRESPONDENCE NONE 3	**08-17-2001** 08-18-2003 5090.3.A. NONE	G. RILEY CRWQCB - SAN FRANCISCO M. KLEINER ROY F. WESTON, INC.	COMMENTS ON THE UST STATUS AND REQUEST FOR CLOSURE FOR UNDERGROUND STORAGE TANKS (UST) SITE 505, 505-1, 505-2, 505-3, INSTALLATION RESTORATION (IR) SITE 5 AND IR 5-2 WITHIN INVESTIGATION AREA I	ADMIN RECORD INFO REPOSITORY	SITE 00005 UST 000505 UST 000505-1 UST 000505-2 UST 000505-3	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000367 NONE CORRESPONDENCE NONE 3	**08-20-2001** 07-15-2003 5090.3.A. NONE	P. BISSON U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	LETTER ILLUSTRATING HOW TO REVIEW CLEANUP PLANS UNDER TSCA, REQUESTING A COMPREHENSIVE REVIEW OF SUCH PLANS AND ACTIVITIES FOR THE THE EETP WITH A SUMMARY PROVIDED TO EPA, AND REQUESTING COPIES OF EXISTING DOCUMENTS THAT WILL ENHANCE UNDERSTANDING	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000392 NONE CORRESPONDENCE NONE 2	**08-20-2001** 07-15-2003 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE SITE IDENTIFICATION TECHNICAL MEMORANDUM FOR INVESTIGATION AREA A3	ADMIN RECORD INFO REPOSITORY	AREA A3	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000087 DS.0378.15486 & 15486-1 CORRESPONDENCE N62474-94-D-7609 250	**08-23-2001** 11-20-2001 5090.3.A. 00378	M. RAINWATER TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	FINAL COMMUNITY RELATIONS PLAN {INCLUDES REPLACEMENT PAGES & TWO TRANSMITTAL LETTERS; FOR DOCUMENT AND FOR REPLACEMENT PAGES} (CONTAINS TRANSMITTAL LETTER FROM J. DUNAWAY WITH SOME SENSITIVE ADDRESSES)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000098 NONE MINUTES NONE 29	**08-23-2001** 01-04-2002 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	MEETING MINUTES FROM THE RESTORATION ADVISORY BOARD (RAB) MEETING HELD ON 23 AUGUST 2001	ADMIN RECORD INFO REPOSITORY	SITE 00005	FRC - PERRIS	181-03-0185 41031808	BX 0001

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N00221 / 000080 TC.0139.11158 AND SWDIV SER 06CM.JD/0887 CORRESPONDENCE N62474-94-D-7609 26	**08-24-2001** 11-02-2001 5090.3.A. 00139	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	RESPONSES TO REGULATORY AGENCY COMMENTS ON THE DRAFT FORMER NORTH BUILDING WAYS AREA REMEDIAL INVESTIGATION, INVESTIGATION AREA (INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY) [SEE AR # 3452 - DRAFT RI] {PORTION OF MAILING LIST IS SENSITIVE}	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA A2	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000081 TC.0139.11157 AND SWDIV SER 06CM.JD/0887 CORRESPONDENCE N62474-94-D-7609 35	**08-24-2001** 11-02-2001 5090.3.A. 00139	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	RESPONSES TO AGENCY COMMENTS ON THE DRAFT INVESTIGATION AREA A1, SITE 17 AND BUILDING 503 AREA REMEDIAL INVESTIGATION INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (SEE AR #45 - DRAFT RI AREA A1) [PORTION OF MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA A1 BLDG. 503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000082 TC.0179.10975 CORRESPONDENCE N62474-94-D-7609 40	**08-24-2001** 11-02-2001 5090.3.A. 00179	DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION VARIOUS AGENCIES	TECHNICAL MEMORANDUM - RESULTS OF THE PRELIMINARY ASSESSMENT AND SITE INSPECTION AT THE FORMER SKEET RANGE AND RECOMMENDATION FOR CLOSURE	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000304 NONE CORRESPONDENCE NONE 3	**08-24-2001** 07-14-2003 5090.3.A. NONE	BARSAMIAN, L. CRWQCB - SAN FRANCISCO KRETTECOS, C. DON - VALLEJO	FINAL ORDER RESCINDING ORDER NO. 96-156, WASTE DISCHARGE REQUIREMENTS FOR PEGASUS, INC. AND THE U.S. NAVY	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000086 SWDIV SER 06CM.JD/0890 CORRESPONDENCE NONE 2	**08-27-2001** 11-20-2001 5090.3.A. NONE	L. DOUCHAND NAVFAC - SOUTHWEST DIVISION D. MURPHY DTSC - BERKELEY	LETTER FORMALLY STATING NAVY'S COMMITMENT TO NEGOTIATING AND EXECUTING A NEW FEDERAL FACILITY SITE REMEDAITION AGREEMENT WITH DTSC; ALSO REQUEST TO DTSC TO NOT DELAY THE EARLY TRANSFERS SCHEDULED FOR DECEMBER 2001	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000393 NONE CORRESPONDENCE NONE 20	**08-30-2001** 07-15-2003 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT INVESTIGATION AREA I REMEDIAL INVESTIGATION REPORT	ADMIN RECORD INFO REPOSITORY	AREA I	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000089 DS.0136.17361 CORRESPONDENCE N62474-94-D-7609 250	**09-01-2001** 11-21-2001 5090.3.A. 00136	GORMAN, C. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	FINAL FIELD SAMPLING AND ANALYSIS PLAN; ADDITIONAL SAMPLING INVESTIGATION AREA F2 (CONTAINS TRANSMITTAL LETTER FROM J. DUNAWAY WITH SOME SENSITIVE ADDRESSES)	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA F2 SITE 00004	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000399 NONE CORRESPONDENCE NONE 2	**09-07-2001** 07-15-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE SAMPLING AND ANALYSIS PLAN (SAP) AND QUALITY ASSURANCE PROJECT PLAN (QAPP) FOR INVESTIATION AREA F2	ADMIN RECORD INFO REPOSITORY	AREA F2	FRC - PERRIS	181-03-0185 41031808	BX 0009

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N00221 / 001236 NONE REPORT N00024-99-D-8137 75	**09-07-2001** 09-29-2008 5090.3.A. DO 0011	ROY F. WESTON, INC. NAVFAC - SOUTHWEST	REVISED DRAFT SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION DREDGE SPOILS PONDS (CD COPY ENCLOSED) [SEE RECORD # 30 - DRAFT SUMMARY REPORT, AND # 1241 - NAVFAC SW TRANSMITTAL LETTER]	ADMIN RECORD	DREDGE POND 1 DREDGE POND 2M DREDGE POND 2N DREDGE POND 2S DREDGE POND 3E DREDGE POND 3W DREDGE POND 4M DREDGE POND 4N DREDGE POND 4S DREDGE POND 7	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001241 NONE CORRESPONDENCE NONE 4	**09-10-2001** 10-07-2008 5090.3.A. NONE	DUNAWAY, J. NAVFAC - SOUTHWEST GRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF THE REVISED DRAFT SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION DREDGE SPOILS PONDS (PORTION OF THE MAILING LIST IS SENSITIVE) [W/OUT ENCLOSURE] {SEE RECORD # 1236 - REVISED DRAFT SUMMARY REPORT}	ADMIN RECORD SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000078 DS.0082.16959 & SWDIV SER 06CM.JD/0960 CORRESPONDENCE N62474-94-D-7609 50	**09-12-2001** 09-25-2001 5090.3.A. 00082	MCCONATHY, B. TETRA TECH EM INC. GODSEY, D. NAVFAC - SOUTHWEST DIVISION	DRAFT TECHNICAL MEMORANDUM RISK TO FISHES AND VERTEBRATES FROM OFFSHORE SEDIMENTS - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (MAILING LIST IS SENSITIVE) {SEE AR #107 - RESPONSE TO COMMENTS}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000482 NONE CORRESPONDENCE NONE 10	**09-12-2001** 07-21-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT GOUNDWATER REMEDIAL INVESTIGATION, INVESTIGATION AREA H1	ADMIN RECORD INFO REPOSITORY	IA H1	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000483 NONE CORRESPONDENCE NONE 10	**09-19-2001** 07-21-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA W. KARLOVITZ ROY F. WESTON, INC	COMMENTS ON THE DRAFT ORDNANCE AND EXPLOSIVES (OE), CONFIRMATION SURVEY WORK PLAN	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000079 NONE MINUTES NONE 29	**09-24-2001** 11-02-2001 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	FINAL RESTORATION ADVISORY BOARD MEETING MINUTES FROM MEETING HELD 28 JUNE 2001	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000084 12371.001.044 AND SWDIV SER 06CM.JD/1018 REPORT N00024-99-D-8137 200	**09-24-2001** 11-02-2001 5090.3.A. DO 0044	R. LENEKER ROY F. WESTON, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT SUMMARY REPORT, RADIOLOGICAL INVESTIGATION DREDGE SPOILS PONDS INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY [PORTION OF MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000305 NONE CORRESPONDENCE NONE 3	**09-24-2001** 07-14-2003 5090.3.A. NONE	G. RILEY CRWQCB - SAN FRANCISCO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT INVESTIGATION AREA I REMEDIAL INVESTIGATION	ADMIN RECORD INFO REPOSITORY	AREA I	FRC - PERRIS	181-03-0185 41031808	BX 0008

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N00221 / 000484 NONE CORRESPONDENCE NONE 20	**09-24-2001** 07-21-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT REPORT	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000485 NONE CORRESPONDENCE NONE 1	**09-26-2001** 07-21-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE FINAL FINDING OF SUITABILITY TO TRANSFER (FOST) PARCEL XV-A	ADMIN RECORD INFO REPOSITORY	PARCEL XV-A	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000099 NONE MINUTES NONE 31	**09-27-2001** 01-04-2002 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	MEETING MINUTES FROM THE RESTORATION ADVISORY BOARD (RAB) MEETING HELD ON 27 SEPTEMBER 2001	ADMIN RECORD INFO REPOSITORY	SITE 00005	FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000486 NONE CORRESPONDENCE NONE 1	**09-27-2001** 07-21-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO FURTHER COMMENTS ON THE FINAL FINDING OF SUITABILITY TO TRANSFER (FOST), TRANSFER PARCEL VII-A	ADMIN RECORD INFO REPOSITORY	PARCEL VII-A	FRC - PERRIS REQUESTED FROM FRC BY D. SILVA ON 10/9/09 FOR MARIE DREYER, RPM - BRAC PMO - 619/ 532-0904	181-03-0185 41031808	BX 0009
N00221 / 000083 DS.0253.16366 AND SWDIV SER 06CM.JD/1025 REPORT N62474-94-D-7609 400	**09-28-2001** 11-02-2001 5090.3.A. 00253	R. BATRA TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	FINAL FEBRUARY 2001 RCRA/FACILITY LANDFILL AREA GROUNDWATER MONITORING PROGRAM, QUARTERLY REPORT INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY [PORTION OF MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00001	NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000487 NONE CORRESPONDENCE NONE 1	**09-28-2001** 07-21-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO FURTHER COMMENTS ON THE FINAL FINDING OF SUITABILITY TO TRANSFER (FOST), TRANSFER PARCEL XXI-A	ADMIN RECORD INFO REPOSITORY	PARCEL XXI-A	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000100 TC.0179.11221 & SWDIV SER 06CM.JD/1063 CORRESPONDENCE N62474-94-D-7609 50	**10-05-2001** 01-04-2002 5090.3.A. 00179	MCCONATHY, B. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT TECHNICAL MEMORANDUM CLARIFICATION TO THE ORDNANCE PRELIMINARY ASSESSMENT (DATED SEPTEMBER 1995): FILL HISTORY AT FARRAGUT VILLAGE AREA	ADMIN RECORD INFO REPOSITORY SENSITIVE		FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000085 TC.0082.11257 MINUTES N62474-94-D-7609 10	**10-19-2001** 11-02-2001 5090.3.A. 00082	MCCONATHY, B. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT MEETING SUMMARY FROM 9 OCTOBER 2001 MEETING ON THE TECHNICAL MEMORANDUM ON RISK TO FISHES AND VERTEBRATES FROM OFFSHORE SEDIMENTS	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000400 NONE CORRESPONDENCE NONE 2	**10-22-2001** 07-15-2003 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS FOR THE DRAFT REMEDIAL ACTION PLAN FOR INVESTIGATION AREA D2	ADMIN RECORD INFO REPOSITORY	AREA D2	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000499 NONE CORRESPONDENCE NONE 2	**10-23-2001** 07-22-2003 5090.3.A. NONE	D. BAILEY DHS - SACRAMENTO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT RADIOLOGICAL INVESTIGATION SUMMARY REPORT FOR THE DREDGE SPOILS PONDS	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009

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N00221 / 000413 NONE CORRESPONDENCE NONE 20	**10-24-2001** 07-15-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT TECHNICAL MEMORANDUM RISK TO FISHES AND VERTEBRATES FROM OFFSHORE SEDIMENTS	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000494 NONE CORRESPONDENCE NONE 1	**10-30-2001** 07-21-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO FURTHER COMMENTS ON THE FINAL COMMUNITY RELATIONS PLAN	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000091 DS.0380.17358 REPORT N62474-94-D-7609 200	**10-31-2001** 11-21-2001 5090.3.A. 00380	FOSTER, M. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT FINDING OF SUITABILITY FOR EARLY TRANSFER (FOSET) OF THE WESTERN EARLY TRANSFER PARCEL (CONTAINS TRANSMITTAL LETTER FROM J. DUNAWAY WITH SOME SENSITIVE ADDRESSES)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000118 DS.0380.14992 PUBLIC NOTICE N62474-94-D-7609 5	**11-03-2001** 06-24-2002 5090.3.A. 00380	TIMES-HERALD GENERAL PUBLIC	PUBLIC NOTICE OF THE PUBLIC REVIEW PERIOD FOR THE DRAFT FINDING OF SUITABILITY FOR EARLY TRANSFER (FOSET) OF THE WESTERN EARLY TRANSFER PARCEL (SEE AR #91 - DRAFT FOSET)	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0001

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N00221 / 000092 NONE CORRESPONDENCE NONE 400	**11-05-2001** 11-21-2001 5090.3.A. NONE	J. MORRIS CH2M HILL VARIOUS AGENCIES	FINAL SOIL AND GROUNDWATER MANAGEMENT PLAN (CONTAINS TRANSMITTAL LETTER FROM J. MORRIS WITH SOME SENSITIVE ADDRESSES)	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. 108 BLDG. 116 BLDG. 121 BLDG. 1310 BLDG. 213 BLDG. 386 BLDG. 388 BLDG. 390 BLDG. 455 BLDG. 569 BLDG. 678 BLDG. 680 BLDG. 690 BLDG. 866 IA B IA C1 IA C2 IA D1 SITE 00001 SITE 00003 SITE 00007 SITE 00008 SITE 00009 SITE 00010 SITE 00011 SITE 00012 SITE 00013 SITE 00014 SITE 00015 SITE 00016 SITE 00018 SITE 00019 SITE 00020 SITE 00021 SITE 00023	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000493 NONE CORRESPONDENCE NONE 2	**11-11-2001** 07-21-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE REVISED DRAFT SUMMARY REPORT, UNEXPLODED ORDNANCE INTRUSIVE INVESTIGATION	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000500 NONE CORRESPONDENCE NONE 10	**11-13-2001** 07-22-2003 5090.3.A. NONE	D. PIERCE DOI - SACRAMENTO D. GODSEY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT TECHNICAL MEMORANDUM RISK TO FISHES AND VERTEBRATES FROM OFFSHORE SEDIMENTS	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000306 NONE CORRESPONDENCE NONE 3	**11-20-2001** 07-14-2003 5090.3.A. NONE	G. RILEY CRWQCB - SAN FRANCISCO W. KARLOVITZ ROY F. WESTON, INC.	COMMENTS ON THE DRAFT FEASIBILITY STUDY, INVESTIGATION AREA I AND J, AND THE SUBMERGED LANDS	ADMIN RECORD INFO REPOSITORY	AREA I AREA J	FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000492 NONE CORRESPONDENCE NONE 6	**11-21-2001** 07-21-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT TECHNICAL MEMORANDUM RISK TO FISHES AND VERTEBRATES FROM OFFSHORE SEDIMENTS	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000095 TC.0082.11308 MINUTES N62474-94-D-7609 6	**11-27-2001** 12-11-2001 5090.3.A. 00082	MCCONATHY, B. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT MEETING SUMMARY - DISCUSSION OF INVERTEBRATE RISK CHARACTERIZATION FOR THE OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT; 6 NOVEMBER 2001	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0001

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N00221 / 000096 TC.0179.11309 & SWDIV SER 06CM.JD/1253 CORRESPONDENCE N62474-94-D-7609 150	**11-28-2001** 12-11-2001 5090.3.A. 00179	MCCONATHY, B. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	FINAL TECHNICAL MEMORANDUM - CLARIFICATION TO THE ORDNANCE PRELIMINARY ASSESSMENT (DATED SEPTEMBER 1995): FILL HISTORY AT FARRAGUT VILLAGE AREA; INCLUDES TRANSMITTAL LETTER FROM J. DUNAWAY (DISTRIBUTION LIST CONTAINS SOME SENSITIVE ADDRESSES)	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA D2	FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000488 NONE CORRESPONDENCE NONE 1	**11-30-2001** 07-21-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO FURTHER COMMENTS ON THE FINAL TECHNICAL MEMORANDUM, CLARIFICATION TO THE ORDNANCE PRELIMINARY ASSESSMENT: FILL HISTORY AT FARRAGUT VILLAGE AREA	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000489 NONE CORRESPONDENCE NONE 2	**12-01-2001** 07-21-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINDING OF SUITABILITY FOR EARLY TRANSFER (FOSET) OF THE WESTERN EARLY TRANSFER PARCEL	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000307 NONE CORRESPONDENCE NONE 1	**12-03-2001** 07-14-2003 5090.3.A. NONE	MISHEK, D. CRWQCB - SAN FRANCISCO DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	DESIGNATION OF G. RILEY AS THE NEW RWQCB PROJECT MANAGER	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000093 12371.001.044 & SWDIV SER 06CM.JD/1269 REPORT N00024-99-D-8137 300	**12-04-2001** 12-10-2001 5090.3.A. DO 44	R. LENEKER ROY F. WESTON, INC. NAVFAC - SOUTHWEST DIVISION	FINAL SUMMARY REPORT, RADIOLOGICAL INVESTIGATION DREDGE SPOILS PONDS; INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY [PORTION OF MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000308 NONE CORRESPONDENCE NONE 3	**12-04-2001** 07-14-2003 5090.3.A. NONE	G. RILEY CRWQCB - SAN FRANCISCO J. HILL NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINDING SUITABILITY FOR EARLY TRANSFER (FOST) FOR THE WESTERN EARLY TRANSFER PARCEL	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000094 DS.0139.17366 & SWDIV SER 06CM.JD/1275 CORRESPONDENCE N62474-94-D-7609 250	**12-05-2001** 12-10-2001 5090.3.A. 00139	R. LAGO TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN AND QUALITY ASSURANCE PROJECT PLAN) FOR GROUNDWATER DATA GAP INVESTIGATION ACTIVITIES; CONTAINS TRANSMITTAL LETTER FROM J. DUNAWAY (DISTRIBUTION LIST CONTAINS SENSITIVE ADDRESSES)	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. 503 SITE 00017	FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000097 SWDIV SER 06CM.JD/1299 REPORT N00024-99-D-8137 275	**12-07-2001** 12-13-2001 5090.3.A. DO 11	L. MAGGIA ROY F. WESTON, INC. NAVFAC - SOUTHWEST DIVISION	FINAL SUMMARY REPORT - UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION, DREDGE SPOILS PONDS; INCLUDES TRANSMITTAL LETTER FROM J. DUNAWAY (PARTS OF DISTRIBUTION LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE		FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000414 NONE CORRESPONDENCE NONE 3	**12-07-2001** 07-15-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINDING OF SUITABILITY FOR EARLY TRANSFER (FOSET) OF THE WESTERN EARLY TRANSFER PARCEL	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000309 NONE CORRESPONDENCE NONE 2	**12-11-2001** 07-14-2003 5090.3.A. NONE	RILEY, G. CRWQCB - SAN FRANCISCO KARLOVITZ, W. ROY F. WESTON, INC.	RESPONSE TO AGENCY COMMENTS ON THE COMMENTS ON THE DRAFT FEASIBILITY STUDY, INVESTIGATION AREA I AND J, AND THE SUBMERGED LANDS	ADMIN RECORD INFO REPOSITORY	AREA I AREA J	FRC - PERRIS	181-03-0185 41031808	BX 0008

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N00221 / 000189 TC.0179.11318 REPORT N62474-94-D-7609 33	**12-12-2001** 11-07-2002 5090.3.A. 00179	MCCONATHY, B. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	BRIEFING PAPER - SUMMARY OF ENVIRONMENTAL CONDITIONS PARCEL VII-A EXCLUSION PARCEL 2	ADMIN RECORD INFO REPOSITORY	IA E	FRC - PERRIS	181-03-0185 41031808	BX 0005
N00221 / 000310 NONE CORRESPONDENCE NONE 1	**12-17-2001** 07-14-2003 5090.3.A. NONE	RILEY, G. CRWQCB - SAN FRANCISCO KARLOVITZ, W. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO AGENCY COMMENTS ON THE DRAFT FEASIBILITY STUDY, INVESTIGATION AREA I AND J, AND THE SUBMERGED LANDS	ADMIN RECORD INFO REPOSITORY	AREA I AREA J	FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000490 NONE CORRESPONDENCE NONE 1	**12-17-2001** 07-21-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA W. ALVES NAVY - LOS ALAMITOS	LETTER IN AGREEMENT WITH THE 11/26/01 RWQCB LETTER ON THE CONTAMINATION ISSUES AND THE ARMY RESERVE INTEREST IN DREDGING SEDIMENTS IN SLIPS 22 NORTH THROUGH 23 SOUTH BUT TO A DEPTH NOT TO EXCEET 32 FEET WITH NOTIFICATION REQUESTED	ADMIN RECORD INFO REPOSITORY	22 NORTH 23 SOUTH	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000207 DS.0253.16368 & SWDIV SER 06CM.DC/1364 REPORT N62474-94-D-7609 150	**12-28-2001** 11-12-2002 5090.3.A. 00253	V. EARLY TETRA TECH EM INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	FINAL MAY 2001 RESOURCE CONSERVATION AND RECOVERY ACT/FACILITY LANDFILL GROUNDWATER MONITORING PROGRAM, QUARTERLY REPORT - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD INFO REPOSITORY SENSITIVE		FRC - PERRIS	181-03-0185 41031808	BX 0005
N00221 / 000624 NONE CORRESPONDENCE NONE 2	**01-02-2002** 08-19-2003 5090.3.A. NONE	L. LOIZOS ARC ECOLOGY J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT SAMPLING AND ANALYSIS PLAN FOR GROUNDWATER DATA GAP INVESTIGATION ACTIVITIES, INSTALLATION RESTORATION SITE 17 AND BUILDING 503 AREA	ADMIN RECORD INFO REPOSITORY	BLDG. 503 SITE 00017	FRC - PERRIS	181-03-0185 41031808	BX 0010

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N00221 / 000102 NONE MINUTES NONE 31	**01-03-2002** 04-22-2002 5090.3.A. NONE	CLIFFORD, R. CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL MEETING MINUTES FROM THE RESTORATION ADVISORY BOARD MEETING HELD ON 03 JANUARY 2002	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000629 NONE CORRESPONDENCE NONE 2	**01-04-2002** 08-08-2003 5090.3.A. NONE	G. RILEY CRWQCB - SAN FRANCISCO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT POST-CONSTRUCTION REPORT, STORM DRAIN CLEANING	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000578 NONE CORRESPONDENCE NONE 2	**01-06-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE FINAL SUMMARY REPORT - UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION, DREDGE SPOILS PONDS	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000579 NONE CORRESPONDENCE NONE 1	**01-07-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO FURTHER COMMENTS ON THE FINAL SUMMARY REPORT, RADIOLOGICAL INVESTIGATION DREDGE SPOILS PONDS	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000580 NONE CORRESPONDENCE NONE 1	**01-22-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO FURTHER COMMENTS ON THE FINAL SUMMARY REPORT - UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION, DREDGE SPOILS PONDS	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010

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N00221 / 000541 NONE CORRESPONDENCE NONE 4	**01-23-2002** 08-18-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT SITE INSPECTION REPORT MANHOLE D1-C85 AND OUTFALLS 22, 23, 25, AND 26 INVESTIGATION AREA C2	ADMIN RECORD INFO REPOSITORY	IA C2 MANHOLE D1-C85 OUTFALL 22 OUTFALL 23 OUTFALL 25 OUTFALL 26	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000542 NONE CORRESPONDENCE NONE 2	**01-24-2002** 08-18-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE REMEDIAL INVESTIGATION FOR INVESTIGATION AREA A2	ADMIN RECORD INFO REPOSITORY	AREA A1 AREA A2	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000581 NONE CORRESPONDENCE NONE 2	**01-24-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT STORM DRAIN CLEANING POST-CONSTRUCTION REPORT	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000543 NONE CORRESPONDENCE NONE 2	**02-04-2002** 08-18-2003 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT CLOSURE REPORT - UNDERGROUND FUEL OIL PIPING AND TPH CONTAMINATED SOIL REMOVAL (MARE ISLAND ELEMENTARY SCHOOL)	ADMIN RECORD INFO REPOSITORY	AREA 00002 AREA 00003	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000583 NONE CORRESPONDENCE NONE 2	**02-05-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION AREA ADEQUATE EXCEPT FOR THE PROPOSED WELL LOCATION	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 IA A1 SITE 00017	FRC - PERRIS	181-03-0185 41031808	BX 0010

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N00221 / 000584 NONE CORRESPONDENCE NONE 2	**02-05-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO FURTHER COMMENTS ON THE TECHNICAL MEMORANDUM - RESULTS OF THE PRELIMINARY ASSESSMENT AND SITE INSPECTION AT THE FORMER SKEET RANGE AND RECOMMENDATION FOR CLOSURE	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000190 DS.0380.14993 & 14993-1 & SWDIV SER 06CM.JD/0156 REPORT N62474-94-D-7609 200	**02-14-2002** 11-07-2002 5090.3.A. 00380	FOSTER, M. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	FINAL FINDING OF SUITABILITY FOR EARLY TRANSFER OF THE WESTERN EARLY TRANSFER (FOSET) PARCEL [INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY WHICH CONTAINS SOME CONFIDENTIAL ADDRESSES]	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0005
N00221 / 000501 NONE CORRESPONDENCE NONE 2	**02-18-2002** 08-08-2003 5090.3.A. NONE	G. RILEY CRWQCB - SAN FRANCISCO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	LETTER DOCUMENTING DISCUSSION RESULTS WHERE ANALYTICAL DATA WILL BE COLLECTED FROM GROUNDWATER AT SEVERAL LOCATIONS WITHIN INVESTIGATION AREA (IA) D2	ADMIN RECORD INFO REPOSITORY	AREA D2	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000192 DS.0263.14702 CORRESPONDENCE N62474-94-D-7609 98	**02-20-2002** 11-07-2002 5090.3.A. 00263	MOWAT, F. TETRA TECH EM INC. GODSEY, D. NAVFAC - SOUTHWEST DIVISION	DRAFT RESPONSES TO AGENCY COMMENTS ON THE DRAFT FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT [INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY WHICH CONTAINS SOME CONFIDENTIAL ADDRESSES]	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA F2 IA H1 IA H2 IA I IA J SITE 00001 SITE 00002 SITE 00004 SITE 00005 SITE 00006 SITE 00010 SITE 00013 SITE 00016 SITE 00024	FRC - PERRIS	181-03-0185 41031808	BX 0005

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N00221 / 001237 2928 REPORT N62474-98-D-2076 600	**02-20-2002** 09-29-2008 5090.3.A. 00034	BOURGEOIS, P. IT CORPORATION NAVFAC - SOUTHWEST	FINAL POST-CONSTRUCTION REPORT, STORM DRAIN CLEANING (INCLUDES RESPONSES TO COMMENTS ON THE DRAFT DATED 09 OCTOBER 2001 AND CD COPY)	ADMIN RECORD	OUTFALL 24 OUTFALL 25 OUTFALL 26 OUTFALL 27	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000194 TC.0378.11405 CORRESPONDENCE N62474-94-D-7609 150	**02-22-2002** 11-12-2002 5090.3.A. 00378	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD ORIENTATION PACKET [INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY & M. HAYES]	ADMIN RECORD INFO REPOSITORY	BLDG. 108 BLDG. 116 BLDG. 121 BLDG. 1310 BLDG. 213 BLDG. 386 BLDG. 388 BLDG. 390 BLDG. 455 BLDG. 461 BLDG. 503 BLDG. 569 BLDG. 678 BLDG. 680 BLDG. 690 BLDG. 866 BLDG. 900 IA A1 IA A2 IA B IA C1 IA C2 IA D IA E IA F1 IA F2 IA G IA H1 IA H2 IA I IA J IA K IA L SITE 00001 SITE 00002	FRC - PERRIS	181-03-0185 BX 0005 41031808

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					SITE 00003 SITE 00004 SITE 00005 SITE 00006 SITE 00007 SITE 00008 SITE 00009 SITE 00010 SITE 00011 SITE 00012 SITE 00013 SITE 00014 SITE 00015 SITE 00016 SITE 00017 SITE 00018 SITE 00019 SITE 00020 SITE 00021 SITE 00022 SITE 00023 SITE 00024			
N00221 / 000116 NONE MINUTES NONE 29	**02-28-2002** 04-25-2002 5090.3.A. NONE	CLIFFORD, R. CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	FINAL MEETING MINUTES FROM THE RESTORATION ADVISORY BOARD MEETING HELD ON 28 FEBRUARY 2002	ADMIN RECORD INFO REPOSITORY	PARCEL 7A	FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000544 NONE CORRESPONDENCE NONE 1	**03-06-2002** 08-18-2003 5090.3.A. NONE	ROTH, E. U.S. EPA - SAN FRANCISCO, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO FURTHER REMEDIAL ACTION IS NEEDED AT PARCEL VIIA. HOWEVER, A DEED RESTRICTION IS REQUIRED DUE TO THE REMAINING PCB CONCENTRATIONS.	ADMIN RECORD INFO REPOSITORY	PARCEL VIIA	FRC - PERRIS	181-03-0185 41031808	BX 0010

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N00221 / 000112 DS.0132.17622 & SWDIV SER 06CM.JD/0218 CORRESPONDENCE N62474-94-D-7609 140	**03-07-2002** 04-24-2002 5090.3.A. 00132	R. BATRA TETRA TECH EM INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	DRAFT SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN AND QUALITY ASSURANCE PROJECT PLAN) FOR ADDITIONAL FIELD SAMPLING NEAR MANHOLE D1-C85 AND OUTFALLS 21, 22, 25 AND 26 - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY [MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	MANHOLE C85 MANHOLE D1 OUTFALL 21 OUTFALL 22 OUTFALL 25 OUTFALL 26	FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000103 TC.0233.11399 & SWDIV SER 06CM.JD/0221 REPORT N62474-94-D-7609 160	**03-08-2002** 04-22-2002 5090.3.A. 00233	K. BRICKNELL TETRA TECH EM INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	DRAFT HUMAN HEALTH RISK ASSESSMENT ON GREENSAND AT MARE ISLAND ELEMENTARY SCHOOL, ADDENDUM TO THE FINAL TECHNICAL MEMORANDUM, HUMAN HEALTH RISK AND ECOLOGICAL ASSESSMENT ON GREENSAND - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00004 SITE 00023	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000106 TC.0082.11424 & SWDIV SER 06CM.JD/0236 MINUTES N62474-94-D-7609 18	**03-11-2002** 04-23-2002 5090.3.A. 00082	MCCONATHY, B. TETRA TECH EM INC. GODSEY, D. NAVFAC - SOUTHWEST DIVISION	DRAFT SUMMARY OF FEBRUARY 27, 2002, MEETING TO DISCUSS THE PRELIMINARY REVISED FINAL OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT AND ONSHORE ECOLOGICAL RISK ASSESSMENT - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY [MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY SENSITIVE		FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000107 DS.0082.17662 & SWDIV SER 06CM.JD/0235 CORRESPONDENCE N62474-94-D-7609 40	**03-11-2002** 04-23-2002 5090.3.A. 00082	MCCONATHY, B. TETRA TECH EM INC. GODSEY, D. NAVFAC - SOUTHWEST DIVISION	DRAFT RESPONSES TO DTSC, HERD, EPA AND U.S. FISH & WILDLIFE SERVICE COMMENTS ON THE TECHNICAL MEMORANDUM RISK TO FISHES AND VERTEBRATES FROM OFFSHORE SEDIMENTS - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY [MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY SENSITIVE		FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000502 NONE CORRESPONDENCE NONE 3	**03-12-2002** 08-08-2003 5090.3.A. NONE	G. RILEY CRWQCB - SAN FRANCISCO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT CLOSURE REPORT, UNDERGROUND FUEL OIL PIPING AND TPH CONTAMINATED SOIL REMOVAL	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009

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N00221 / 000108 DS.0139.17669 & SWDIV SER 06CM.JD/0261 CORRESPONDENCE N62474-94-D-7609 250	**03-18-2002** 04-23-2002 5090.3.A. 00139	GORMAN, C. TETRA TECH EM INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN AND QUALITY ASSURANCE PROJECT PLAN) FOR GROUNDWATER DATA GAP INVESTIGATION ACTIVITIES AT SITE 17 AND BUILDING 503 AREA	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. 503 SITE 00017	FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000117 NONE MINUTES NONE 29	**03-28-2002** 06-24-2002 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	MINUTES FROM THE RESTORATION ADVISORY BOARD (RAB) MEETING HELD ON 28 MARCH 2002	ADMIN RECORD INFO REPOSITORY	AREA J	FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000505 NONE CORRESPONDENCE NONE 2	**03-29-2002** 08-08-2003 5090.3.A. NONE	RILEY, G. CRWQCB - SAN FRANCISCO KARLOVITZ, W. ROY F. WESTON, INC.	RESPONSE TO COMMENTS ON THE DRAFT FINAL REMEDIAL INVESTIGATION, THE WESTERN SUBMERGED LANDS	ADMIN RECORD INFO REPOSITORY	IA I IA J	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000585 NONE CORRESPONDENCE NONE 1	**04-11-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE BRIEFING PAPER - SUMMARY OF ENVIRONMENTAL CONDITIONS PARCEL VII-A EXCLUSION PARCEL 2 - PCB CONTAMINATION SHOULD BE FURTHER DELINEATED WITH ADDITIONAL CONCRETE SAMPLING	ADMIN RECORD INFO REPOSITORY	PARCEL 2 PARCEL V-II-A	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000113 TC.0233.11505 & SWDIV SER 06CM.JD/0384 CORRESPONDENCE N62474-94-D-7609 200	**04-19-2002** 04-24-2002 5090.3.A. 00233	BRICKNELL, K. TETRA TECH EM INC. GODSEY, D. NAVFAC - SOUTHWEST DIVISION	FINAL COMPILATION OF TECHNICAL MEMORANDA ON AMBIENT ANALYSES OF METALS IN SOILS AND GROUNDWATER - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY [MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY SENSITIVE		FRC - PERRIS	181-03-0185 41031808	BX 0001

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N00221 / 000126 NONE MINUTES NONE 37	**04-25-2002** 07-20-2002 5090.3.A. NONE	CLIFFORD, R. CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	DRAFT MEETING MINUTES FROM THE RESTORATION ADVISORY BOARD MEETING HELD ON 25 APRIL 2002	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000125 DS.0132.17624 CORRESPONDENCE N62474-94-D-7609 275	**04-26-2002** 06-24-2002 5090.3.A. 00132	R. BATRA TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	FINAL SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN AND QUALITY ASSURANCE PROJECT PLAN) FOR ADDITIONAL FIELD SAMPLING NEAR MANHOLE D1-C85 AND OUTFALLS 21, 22, 25, AND 26 {INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY}	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. 680 BLDG. 742 IA C2 MANHOLE D1-C85 OUTFALL 21 OUTFALL 22 OUTFALL 25 OUTFALL 26	FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000122 DS.0136.16881 CORRESPONDENCE N62474-94-D-7609 250	**04-30-2002** 06-24-2002 5090.3.A. 00136	GORMAN, C. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN AND QUALITY ASSURANCE PROJECT PLAN) FOR ADDITIONAL SAMPLING INVESTIGATION AREA F1	ADMIN RECORD INFO REPOSITORY	BLDG. A159 BLDG. A17 BLDG. A187 BLDG. A215 BLDG. A216 BLDG. A220 BLDG. A221 BLDG. A222 BLDG. A223 BLDG. A248 BLDG. A265 BLDG. A267 BLDG. A271 BLDG. A71 BLDG. A75 BLDG. A76 BLDG. A80 IA F1	FRC - PERRIS	181-03-0185 41031808	BX 0001

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N00221 / 000515 NONE CORRESPONDENCE NONE 3	**05-02-2002** 08-12-2003 5090.3.A. NONE	G. RILEY CRWQCB - SAN FRANCISCO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN AND QUALITY ASSURANCE PROJECT PLAN) FOR ADDITIONAL FIELD SAMPLING NEAR MANHOLE D1-C85 AND OUTFALLS 21, 22, 25 AND 26	ADMIN RECORD INFO REPOSITORY	BLDG. 742 MANHOLE D1-C85 OUTFALL 21 OUTFALL 22 OUTFALL 25 OUTFALL 26	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000625 NONE CORRESPONDENCE NONE 3	**05-06-2002** 08-19-2003 5090.3.A. NONE	D. BAILEY DHS - SACRAMENTO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT ADDENDUM FIELD SAMPLING AND ANALYSIS PLAN - ADDITIONAL SAMPLING INVESTIGATION AREA F2	ADMIN RECORD INFO REPOSITORY	AREA F2	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000572 NONE CORRESPONDENCE NONE 3	**05-08-2002** 08-18-2003 5090.3.A. NONE	ROTH, E. U.S. EPA - SAN FRANCISCO, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	LETTER REGARDING ADDITIONAL SAMPLING BE CONDUCTED TO FURTHER CHARACTERIZE THE OFFSHORE SEDIMENTS	ADMIN RECORD INFO REPOSITORY	OUTFALL 22 OUTFALL STS-21 OUTFALL STS-22 OUTFALL STS-23 OUTFALL STS-24 OUTFALL STS-25 OUTFALL STS-26 OUTFALL STS-27 OUTFALL STS-50	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000120 TC.0082.11532 MINUTES N62474-94-D-7609 30	**05-10-2002** 06-24-2002 5090.3.A. 00082	MCCONATHY, B. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT SUMMARY OF MEETING HELD 24 APRIL 2002 - DISCUSSION OF RESPONSES TO COMMENTS ON THE RISK TO FISHES TECHNICAL MEMORANDUM AND THE DRAFT FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT	ADMIN RECORD INFO REPOSITORY	AREA 00012 AREA 00014 IA F2 SITE 00004	FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000545 NONE CORRESPONDENCE NONE 2	**05-10-2002** 08-18-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE OFFSHORE ECOLOGICAL RISK ASSESSMENT	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010

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N00221 / 000119 DS.0132.17623 CORRESPONDENCE N62474-94-D-7609 6	**05-13-2002** 06-24-2002 5090.3.A. 00132	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN AND QUALITY ASSURANCE PROJECT PLAN) FOR ADDITIONAL FIELD SAMPLING NEAR MANHOLE D1-C85 AND OUTFALLS 21, 22, 25 AND 26 (SEE AR #112 - SAMPLING AND ANALYSIS PLAN)	ADMIN RECORD INFO REPOSITORY	BLDG. 742 MANHOLE D1-C85 OUTFALL 21 OUTFALL 22 OUTFALL 25 OUTFALL 26	FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000626 NONE CORRESPONDENCE NONE 2	**05-15-2002** 08-19-2003 5090.3.A. NONE	M. HOOVER FISH AND WILDLIFE - SACRAMENTO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	LETTER IN RESPONSE TO NAVY'S REQUEST TO IDENTIFY SPECIFIC SAMPLING CELLS IN THE MARE ISLAND OFF SHORE AREAS WHERE THE SERVICE HAS CONCERNS REGARDING CONTAMINANT CONCENTRATIONS AND EFFECTS	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000546 NONE CORRESPONDENCE NONE 2	**05-16-2002** 08-18-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN AND QUALITY ASSURANCE PROJECT PLAN) FOR GROUNDWATER DATA GAP INVESTIGATION ACTIVITIES AT SITE 17 AND BUILDING 503 AREA	ADMIN RECORD INFO REPOSITORY	BLDG. 503 SITE 00017	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000036 NONE MINUTES NONE 44	**05-30-2002** 09-24-2002 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	MINUTES FROM THE RESTORATION ADVISORY BOARD (RAB) MEETING HELD ON 30 MAY 2002	ADMIN RECORD INFO REPOSITORY	BLDG. 213 IA I	FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000548 NONE CORRESPONDENCE NONE 6	**06-04-2002** 08-18-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN AND QUALITY ASSURANCE PROJECT PLAN) FOR ADDITIONAL SAMPLING INVESTIGATION AREA F1	ADMIN RECORD INFO REPOSITORY	AREA F1 BLDG. A159 BLDG. A17 BLDG. A248 BLDG. A76	FRC - PERRIS	181-03-0185 41031808	BX 0010

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N00221 / 000586 NONE CORRESPONDENCE NONE 9	**06-05-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT CLOSURE REPORT - UNDERGROUND FUEL OIL PIPING AND TPH CONTAMINATED SOIL REMOVAL AT THE MARE ISLAND ELEMENTARY SCHOOL (WITH ENCLOSURES)	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000587 NONE CORRESPONDENCE NONE 7	**06-11-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT HUMAN HEALTH RISK ASSESSMENT ON GREENSAND AT MARE ISLAND ELEMENTARY SCHOOL	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000588 NONE CORRESPONDENCE NONE 6	**06-12-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT INVESTIGATION AREA FORMER NORTH BUILDING WAYS AREA, DRAFT FINAL REMEDIAL INVESTIGATION REPORT (SEE AR # 3452 - DRAFT RI REPORT AND AR # 110 - FINAL RI REPORT) [SEE COMMENTS.]	ADMIN RECORD INFO REPOSITORY	IA A2	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000549 NONE CORRESPONDENCE NONE 3	**06-14-2002** 08-18-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA C. GRIBBLE DTSC - BERKELEY	COMMENTS ON THE DRAFT TREATABILITY STUDY WORK PLAN FOR WASTE DISPOSAL SUMP/LEAD OXIDE STORAGE AND DISPOSAL AREA	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000195 TC.0233.11550 REPORT N62474-94-D-7609 8	**06-26-2002** 11-12-2002 5090.3.A. 00233	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT POINT PAPER - AMBIENT GROUNDWATER TECHNICAL MEMORANDUM	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0005

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N00221 / 000157 NONE MINUTES NONE 38	**06-27-2002** 09-24-2002 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	MINUTES FROM THE RESTORATION ADVISORY BOARD (RAB) MEETING HELD ON 27 JUNE 2002	ADMIN RECORD INFO REPOSITORY	BLDG. 759 IA A1 IA A3 IA I IA J SITE 00004 SITE 00008 SITE 00017 UST 627-1 UST 627-2 UST 759	FRC - PERRIS	181-03-0185 41031808	BX 0003
N00221 / 000129 0002 CORRESPONDENCE N68711-01-MDC-1061 300	**07-01-2002** 07-26-2002 5090.3.A. NONE	E. POPEK ROY F. WESTON, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT QUALITY ASSURANCE PROJECT PLAN (QAPP) FOR REMEDIATION AGREEMENT SITES	ADMIN RECORD INFO REPOSITORY	IA 1H SITE 00001 SITE 00002 SITE 00005 SITE 00006 SITE 00014 SITE 00016 SITE 00024	FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000130 0003 CORRESPONDENCE N68711-01-MDC-1061 300	**07-01-2002** 07-26-2002 5090.3.A. NONE	L. MAGGINI ROY F. WESTON, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT SITE-SPECIFIC HEALTH AND SAFETY PLAN FOR REMEDIATION AGREEMENT SITES	ADMIN RECORD INFO REPOSITORY	IA H1 SITE 00001 SITE 00002 SITE 00005 SITE 00006 SITE 00016 SITE 00024	FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000138 0006 CORRESPONDENCE N68711-01-MDC-1061 300	**07-01-2002** 07-26-2002 5090.3.A. NONE	O. DOUGLASS ROY F. WESTON, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT CONSTRUCTION QUALITY CONTROL PLAN FOR REMEDIATION AGREEMENT SITES	ADMIN RECORD INFO REPOSITORY	IA H1 SITE 00001 SITE 00002 SITE 00005 SITE 00006 SITE 00014 SITE 00016 SITE 00024	FRC - PERRIS	181-03-0185 41031808	BX 0001

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N00221 / 000589 NONE CORRESPONDENCE NONE 2	**07-01-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO FURTHER COMMENTS ON THE REMEDIAL INVESTIGATION FOR SITE 8	ADMIN RECORD INFO REPOSITORY	SITE 00008	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000627 NONE CORRESPONDENCE NONE 2	**07-08-2002** 08-19-2003 5090.3.A. NONE	LOIZOS, L. ARC ECOLOGY DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL INVESTIGATION AREA, FORMER NORTH BUILDING WAYS AREA REMEDIAL INVESTIGATION (SEE AR # 110 - FINAL RI REPORT) [SEE COMMENTS.]	ADMIN RECORD INFO REPOSITORY	IA A2	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000550 NONE CORRESPONDENCE NONE 4	**07-12-2002** 08-18-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION, PRODUCTION MANUFACTURING AREA AND INSTALLATION RESTORATION SITE 4	ADMIN RECORD INFO REPOSITORY	SITE 00004	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000127 NONE REPORT N62742-98-D-1809 250	**07-17-2002** 07-26-2002 5090.3.A. 00001	CALUYA, F. ENVIRONMENTAL CHEMICAL CORP. NAVFAC - SOUTHWEST DIVISION	DRAFT CONCEPTUAL SITE MODEL FOR THE SOUTHERN OFFSHORE ORDNANCE SITES (INCLUDES SWDIV TRANSMITTAL FROM J. DUNAWAY)	ADMIN RECORD INFO REPOSITORY	DIKE 14 PIER 34 SITE 00005	FRC - PERRIS	181-03-0185 41031808	BX 0001

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N00221 / 000144 DS.0263.17557-1 REPORT N62474-94-D-7609 2000	**07-23-2002** 08-07-2002 5090.3.A. 00263	MOWAT, F. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT, VOLUMES 1 - 3, REVISION 1; INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY CONTAINING SOME SENSITIVE ADDRESSES	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. 108 BLDG. 116 BLDG. 121 BLDG. 1310 BLDG. 386 BLDG. 388 BLDG. 390 BLDG. 455 BLDG. 461 BLDG. 503 BLDG. 569 BLDG. 678 BLDG. 680 BLDG. 690 BLDG. 866 IA A1 IA A2 IA B IA C1 IA C2 IA D IA H1 IA H2 IA I IA J SITE 00001 SITE 00002 SITE 00005 SITE 00006 SITE 00008 SITE 00009 SITE 00010 SITE 00011 SITE 00012 SITE 00013	FRC - PERRIS	181-03-0185 41031808	BX 0002 BX 0003

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					SITE 00014 SITE 00016 SITE 00017 SITE 00019 SITE 00021 SITE 00022 SITE 00023 SITE 00024			
N00221 / 000147 TC.0233.11658 CORRESPONDENCE N62474-94-D-7609 39	**07-25-2002** 08-08-2002 5090.3.A. 00233	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT HUMAN HEALTH RISK ASSESSMENT ON GREENSAND AT MARE ISLAND ELEMENTARY SCHOOL, ADDENDUM TO THE FINAL TECHNICAL MEMORANDUM, HUMAN HEALTH RISK AND ECOLOGICAL ASSESSMENT ON GREENSAND W/ATTACHMENT	ADMIN RECORD INFO REPOSITORY	SITE 00004 SITE 00023	FRC - PERRIS	181-03-0185 41031808	BX 0003
N00221 / 000516 NONE CORRESPONDENCE NONE 2	**07-29-2002** 08-12-2003 5090.3.A. NONE	RILEY, G. CRWQCB - SAN FRANCISCO DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	LETTER REQUESTING THE NAVY SUBMIT A TECHNICAL REPORT DETAILING THE STORM DRAIN SYSTEM IN IA F1 WITHIN 60 DAYS	ADMIN RECORD INFO REPOSITORY	AREA F1	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000551 NONE CORRESPONDENCE NONE 4	**07-30-2002** 08-18-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT ENGINEERING EVALUATION/COST ANALYSIS/REMOVAL ACTION WORK PLAN - OPERATION OF MARE ISLAND ORDNANCE STORAGE AND TREATMENT FACILITIES	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000552 NONE CORRESPONDENCE NONE 2	**07-30-2002** 08-18-2003 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT HUMAN HEALTH RISK ASSESSMENT ON GREENSAND AT MARE ISLAND ELEMENTARY SCHOOL, ADDENDUM TO THE FINAL TECHNICAL MEMORANDUM, HUMAN HEALTH RISK AND ECOLOGICAL ASSESSMENT ON GREENSAND	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010

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N00221 / 000148 DS.0374.15629 MAP N62474-94-D-7609 3	**07-31-2002** 08-08-2002 5090.3.A. 00374	H. DAWSON TETRA TECH EM INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	BASEWIDE PCB FIGURE D-SHEET SIZE MAP WHICH INCLUDES ALL PCB CONFIRMATION SAMPLING PROGRAM SITES AND SAMPLE LOCATIONS AT ACTIVITY	ADMIN RECORD INFO REPOSITORY	BASEWIDE	FRC - PERRIS	181-03-0185 41031808	BX 0003
N00221 / 000139 0007 CORRESPONDENCE N68711-01-MDC-1061 150	**08-01-2002** 08-07-2002 5090.3.A. NONE	L. MAGGINI ROY F. WESTON, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT INDUSTRIAL WASTEWATER AND SANITARY SEWAGE TREATMENT PLANTS BUILDING DEMOLITION (PHASE 1) WORK PLAN	ADMIN RECORD INFO REPOSITORY	BLDG. 867 BLDG. 869 BLDG. 871 BLDG. 919 BLDG. 969 IA H1	FRC - PERRIS	181-03-0185 41031808	BX 0001
N00221 / 000153 0008 CORRESPONDENCE N68711-01-MDC-1061 50	**08-01-2002** 09-04-2002 5090.3.A. NONE	E. POPEK ROY F. WESTON, INC. DTSC - BERKELEY	DRAFT SITE CONTROL PLAN - WESTERN EARLY TRANSFER PARCEL	ADMIN RECORD INFO REPOSITORY	IA H1 IA J SITE 00005	FRC - PERRIS	181-03-0185 41031808	BX 0003
N00221 / 000528 NONE CORRESPONDENCE NONE 1	**08-01-2002** 08-12-2003 5090.3.A. NONE	J. KAISER CRWQCB - SAN FRANCISCO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	LETTER DESIGNATING G. RILEY AS THE RWQCB PROJECT MANAGER FOR MARE ISLAND	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009

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N00221 / 000143 DS.0082.16957 REPORT N62474-94-D-7609 550	**08-02-2002** 08-07-2002 5090.3.A. 00082	MCCONATHY, B. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	REVISED FINAL OFFSHORE AREAS ECOLOGICAL RISK ASSESSMENT, VOLUMES 1 & 2; INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY WHICH CONTAINS SOME SENSITIVE ADDRESSES	ADMIN RECORD INFO REPOSITORY SENSITIVE	BERTH 0001 BERTH 0002 BERTH 0024 BLDG. 108 BLDG. 116 BLDG. 121 BLDG. 213 BLDG. 334 BLDG. 386 BLDG. 455 BLDG. 461 BLDG. 516 BLDG. 569 BLDG. 678 BLDG. 680 BLDG. 690 BLDG. 900 BLDG. A159 BLDG. A17 BLDG. A187 BLDG. A215 BLDG. A216 BLDG. A222 BLDG. A248 BLDG. A256 BLDG. A267 BLDG. A71 BLDG. A75 BLDG. A76 BLDG. A80 DIKE 12 DIKE 14 IA A2 IA B IA C1	FRC - PERRIS	181-03-0185 BX 0002 41031808

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					IA C2 IA F1 IA F2 IA H1 IA H2 IA I SITE 00001 SITE 00003 SITE 00004 SITE 00005 SITE 00007 SITE 00009 SITE 00012 SITE 00015 SITE 00016 SITE 00018 SITE 00019 SITE 00020 SITE 00021			
N00221 / 000149 NONE REPORT N68711-97-POC-7019 250	**08-05-2002** 08-12-2002 5090.3.A. NONE	L. MAGGINI ROY F. WESTON, INC. NAVFAC - SOUTHWEST DIVISION	REVISED DRAFT SUMMARY REPORT, UNEXPLODED ORDNANCE INTRUSIVE INVESTIGATION, SOUTH SHORE AREA - INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY WITH SOME SENSITIVE ADDRESSES (SEE AR #3446 - ORIGINAL DRAFT)	ADMIN RECORD INFO REPOSITORY SENSITIVE		FRC - PERRIS	181-03-0185 41031808	BX 0003
N00221 / 000110 DS.0139.12645 & SWDIV SER 06CM.JD/0260 REPORT N62474-94-D-7609 2000	**08-08-2002** 04-23-2002 5090.3.A. 00139	GORMAN, C. TETRA TECH EM INC. GODSEY, D. NAVFAC - SOUTHWEST DIVISION	FINAL FORMER NORTH BUILDING WAYS REMEDIAL INVESTIGATION, VOLUMES I AND II OF II (INCLUDES SWDIV TRANSMITTAL LETTER) [PORTION OF THE MAILING LIST IS SENSITIVE] {***SEE COMMENTS}	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA A2	FRC - PERRIS	181-03-0185 41031808	BX 0001

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N00221 / 000156 SWDIV SER 06CM.PM.0839 REPORT N68711-99-POC-9004 400	**08-12-2002** 09-04-2002 5090.3.A. DO 0111	L. MAGGINI ROY F. WESTON, INC. NAVFAC - SOUTHWEST DIVISION	FINAL SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION, PRODUCTION MANUFACTURING AREA AND INSTALLATION RESTORATION SITE 4 (INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY WHICH INCLUDES SOME SENSITIVE ADDRESSES)	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. A159 BLDG. A187 BLDG. A265 SITE 00004	FRC - PERRIS	181-03-0185 41031808	BX 0003
N00221 / 000553 NONE CORRESPONDENCE NONE 2	**08-19-2002** 08-18-2003 5090.3.A. NONE	M.SCHUTZ U.S. EPA - SAN FRANCISCO, CA V. SCHUMAN PRIVATE CITIZEN	LETTER IN RESPONSE TO REQUEST FOR FREEDOM OF INFORMATION ACT INQUIRY OF 12 JULY 2002	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000154 0007 CORRESPONDENCE N68711-01-MDC-1061 250	**08-20-2002** 09-04-2002 5090.3.A. NONE	L. MAGGINI ROY F. WESTON, INC. NAVFAC - SOUTHWEST DIVISION	FINAL INDUSTRIAL WASTEWATER AND SANITARY SEWAGE TREATMENT PLANTS BUILDING DEMOLITION (PHASE 1) WORK PLAN	ADMIN RECORD INFO REPOSITORY	BLDG. 867 BLDG. 871 BLDG. 919 BLDG. 969 IA H1	FRC - PERRIS	181-03-0185 41031808	BX 0003
N00221 / 000590 NONE CORRESPONDENCE NONE 7	**08-23-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT ENGINEERING EVALUATION/COST ANALYSIS/REMOVAL ACTION WORK PLAN AND DRAFT ACTION MEMORANDUM, OPERATION OF MARE ISLAND ORDNANCE STORAGE AND TREATMENT FACILITIES	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000591 NONE CORRESPONDENCE NONE 2	**08-24-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT CONCEPTUAL SITE MODEL FOR THE SOUTHERN OFFSHORE ORDNANCE SITES	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010

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N00221 / 000182 NONE MINUTES NONE 42	**08-29-2002** 11-07-2002 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	FINAL MINUTES FROM RESTORATION ADVISORY BOARD MEETING OF 29 AUGUST 2002	ADMIN RECORD INFO REPOSITORY	BLDG. A265 SITE 00004	FRC - PERRIS	181-03-0185 41031808	BX 0005
N00221 / 000592 NONE CORRESPONDENCE NONE 7	**08-30-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT HUMAN HEALTH RISK ASSESSMENT ON GREENSAND AT MARE ISLAND ELEMENTARY SCHOOL	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000554 NONE CORRESPONDENCE NONE 2	**09-05-2002** 08-18-2003 5090.3.A. NONE	M. SCHUTZ U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	FOLLOW UP LETTER REGARDING M. WEINTRAUBS VISIT ON 11 APRIL 2002 AND HIS DETERMINATION OF THE POLYCHLORINATED BIPHENYLS (PCB) CONTAMINATION NOT SUBJECT TO REQUIREMENTS OF THE TOXIC SUBSTANCES CONTROL ACT (TSCA)	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000555 NONE CORRESPONDENCE NONE 3	**09-06-2002** 08-18-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT CONCEPTUAL SITE MODEL FOR THE SOUTHERN OFFSHORE ORDNANCE SITES	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000556 NONE CORRESPONDENCE NONE 3	**09-10-2002** 08-18-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT UNEXPLODED ORDNANCE INTRUSIVE INVESTIGATION SUMMARY REPORT, SOUTH SHORE AREA	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010

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N00221 / 000162 W.O. NO.: 12826-001-001-0002 REPORT NONE 3000	**09-13-2002** 09-24-2002 5090.3.A. NONE	SKILES, A. ROY. F WESTON, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT REMEDIAL INVESTIGATION REPORT FOR INVESTIGATION AREA H1 (SOIL AND SURFACE WATER), THE FORMER ORDNANCE AND BURNING AREA, AND THE WESTERN MAGAZINE AREA, VOLUMES 1-6 OF 6	ADMIN RECORD INFO REPOSITORY	BLDG. A-281 IA H1 SITE 00005	FRC - PERRIS	181-03-0185 41031808	BX 0004 BX 0005
N00221 / 000159 FWSD-RACII-02-0363 REPORT N44255-95-D-6030 500	**09-17-2002** 09-24-2002 5090.3.A. DO 94	K. WEINGARDT FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	FINAL CLOSURE REPORT - UNDERGROUND FUEL OIL PIPING AND TPH CONTAMINATED SOIL REMOVAL (MARE ISLAND ELEMENTARY SCHOOL), REVISION 0	ADMIN RECORD INFO REPOSITORY SENSITIVE	AST 000636 BLDG. 121 BLDG. 748 SITE 00023 UST 772	FRC - PERRIS	181-03-0185 41031808	BX 0003
N00221 / 000593 NONE CORRESPONDENCE NONE 4	**09-18-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT PRELIMINARY REMEDIATION GOALS FOR LEAD	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010

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N00221 / 000173 DS.0179.17790 CORRESPONDENCE N62474-94-D-7609 50	**09-20-2002** 10-31-2002 5090.3.A. 00179	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	ATTACHMENT C - DRAFT SITE MANAGEMENT PLAN, FY 2003 [INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY]	ADMIN RECORD INFO REPOSITORY	BLDG. 503 BLDG. 900 BLDG. A155 IA A1 IA A2 IA C2 IA F1 IA F2 IA G IA H1 IA H2 IA I IA K MANHOLE D1-C85 SITE 00001 SITE 00002 SITE 00004 SITE 00005 SITE 00006 SITE 00014 SITE 00016 SITE 00017	FRC - PERRIS	181-03-0185 41031808	BX 0005
N00221 / 000160 W.O. NO.: 12826-001-001-0002 CORRESPONDENCE NONE 11	**09-24-2002** 09-24-2002 5090.3.A. NONE	ROY F. WESTON, INC. NAVFAC - SOUTHWEST DIVISION	COMPILED RESPONSE TO COMMENTS ON THE DRAFT INVESTIGATION AREA I REMEDIAL INVESTIGATION REPORT, DATED 14 MAY 2001 (COMMENTS BY RWQCB, US EPA, & TECHLAW)	ADMIN RECORD INFO REPOSITORY	IA I SITE 00005	FRC - PERRIS	181-03-0185 41031808	BX 0003
N00221 / 000557 NONE CORRESPONDENCE NONE 2	**09-25-2002** 08-18-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE FINAL SUMMARY REPORT, UNEXPLODED ORDNANCE INTRUSIVE INVESTIGATION, PRODUCTION MANUFACTURING AREA AND INSTALLATION RESTORATION SITE 04	ADMIN RECORD INFO REPOSITORY	SITE 00004	FRC - PERRIS	181-03-0185 41031808	BX 0010

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N00221 / 000227 NONE MINUTES NONE 10	**09-26-2002** 03-20-2003 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	DRAFT RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES FROM MEETING HELD ON 26 SEPTEMBER 2002	ADMIN RECORD INFO REPOSITORY	BLDG. 513 BLDG. 535 SITE 00023 UST 772	FRC - PERRIS	181-03-0185 41031808	BX 0006
N00221 / 000558 NONE CORRESPONDENCE NONE 2	**09-30-2002** 08-18-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	LETTER REGARDING T. HALL'S REVIEW OF THE HISTORY OF THE ORDNANCE AND EXPLOSIVES PROGRAM IN RESPONSE TO COMMUNITY CONCERN ABOUT THE PROGRAM GENERATED BY ALLEGATIONS MADE BY INDIVIDUALS	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000174 DS.0136.17789 & SWDIV SER 06CM.MH/1021 CORRESPONDENCE N62474-94-D-7609 250	**10-01-2002** 10-31-2002 5090.3.A. 00136	GORMAN, C. TETRA TECH EM INC. M. HILLSTROM NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN AND QUALITY ASSURANCE PROJECT PLAN) FOR ADDITIONAL SAMPLING INVESTIGATION AREA F1 [INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY WITH SOME SENSITIVE ADDRESSES]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. A159 BLDG. A17 BLDG. A187 BLDG. A215 BLDG. A216 BLDG. A220 BLDG. A221 BLDG. A222 BLDG. A223 BLDG. A248 BLDG. A265 BLDG. A267 BLDG. A271 BLDG. A71 BLDG. A75 BLDG. A76 BLDG. A80 IA F1	FRC - PERRIS	181-03-0185 41031808	BX 0005

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N00221 / 000175 0013 CORRESPONDENCE NONE 150	**10-01-2002** 10-31-2002 5090.3.A. NONE	SKILES, A. ROY F. WESTON, INC. NAVFAC - SOUTHWEST DIVISION	WETLAND HYDROLOGY EVALUATION WORK PLAN	ADMIN RECORD INFO REPOSITORY	IA H1 SITE 00001 SITE 00002 SITE 00005 SITE 00006 SITE 00014 SITE 00016	FRC - PERRIS	181-03-0185 41031808	BX 0005
N00221 / 000183 0011 REPORT N68711-01-MDC-1061 250	**10-01-2002** 11-07-2002 5090.3.A. NONE	ROY F. WESTON, INC. DTSC - BERKELEY	DRAFT STABILIZATION/SOLIDIFICATION TREATABILITY STUDY SUMMARY REPORT - WASTE OIL DISPOSAL SUMP/LEAD OXIDE STORAGE AND DISPOSAL AREAS [INCLUDES TRANSMITTAL WITH SOME CONFIDENTIAL ADDRESSES]	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA H1 SITE 00002 SITE 00016	FRC - PERRIS	181-03-0185 41031808	BX 0005
N00221 / 000184 WO NO. 12826.001.001.0002.20 CORRESPONDENCE N68711-01-MDC-1061 20	**10-01-2002** 11-07-2002 5090.3.A. NONE	K. DUDDY ROY F. WESTON, INC NAVFAC - SOUTHWEST DIVISION	ENGINEERING EVALUATION WORK PLAN FOR SLURRY WALL VERTICAL CONTAINMENT AREA H1 LANDFILL [INCLUDES TRANSMITTAL LETTER WHICH CONTAINS SOME CONFIDENTIAL ADDRESSES]	ADMIN RECORD INFO REPOSITORY	IA H1	FRC - PERRIS	181-03-0185 41031808	BX 0005

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N00221 / 000179 DS.0179.17792 CORRESPONDENCE N62474-94-D-7609 40	**10-03-2002** 10-31-2002 5090.3.A. 00179	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	ATTACHMENT C - DRAFT FINAL SITE MANAGEMENT PLAN FOR FISCAL YEAR 2003 [INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY]	ADMIN RECORD INFO REPOSITORY	BLDG. 503 BLDG. A159 BLDG. A17 BLDG. A187 BLDG. A215 BLDG. A216 BLDG. A222 BLDG. A248 BLDG. A258 BLDG. A265 BLDG. A266 BLDG. A267 BLDG. A271 BLDG. A278 BLDG. A280 BLDG. A288 BLDG. A71 BLDG. A75 BLDG. A76 BLDG. A80 IA A1 IA A2 IA C2 IA F1 IA F2 IA G IA H1 IA H2 IA I IA K MANHOLE D1-C85 SITE 00001 SITE 00002 SITE 00004	FRC - PERRIS	181-03-0185 41031808	BX 0005

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					SITE 00005 SITE 00014 SITE 00016 SITE 00017			
N00221 / 000530 NONE CORRESPONDENCE NONE 4	**10-04-2002** 08-12-2003 5090.3.A. NONE	RILEY, G. CRWQCB - SAN FRANCISCO DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE TENTATIVE ORDER, REVISED SITE CLEANUP REQUIREMENTS	ADMIN RECORD INFO REPOSITORY	PARCEL VII-A PARCEL X PARCEL XV-A PARCEL XXI-A	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000532 NONE CORRESPONDENCE NONE 3	**10-08-2002** 08-18-2003 5090.3.A. NONE	G. RILEY CRWQCB - SAN FRANCISCO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT CONCEPTUAL SITE MODEL FOR THE SOUTHERN OFFSHORE ORDNANCE SITES	ADMIN RECORD INFO REPOSITORY	SITE 00005	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000594 NONE CORRESPONDENCE NONE 5	**10-08-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT UNEXPLODED ORDNANCE INTRUSIVE INVESTIGATION SUMMARY REPORT, SOUTH SHORE AREA	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000595 NONE CORRESPONDENCE NONE 5	**10-09-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE FINAL SUMMARY REPORT, UNEXPLODED ORDNANCE (UXO) INTRUSIVE INVESTIGATION, PRODUCTION MANUFACTURING AREA AND INSTALLATION RESTORATION SITE 4	ADMIN RECORD INFO REPOSITORY	SITE 00004	FRC - PERRIS	181-03-0185 41031808	BX 0010

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N00221 / 000603 NONE CORRESPONDENCE NONE 1	**10-10-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL SITE MANAGEMENT PLAN	ADMIN RECORD INFO REPOSITORY	AREA H1	FRC - PERRIS	181-03-0185 BX 0010 41031808

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N00221 / 000180 DS.0179.17795 CORRESPONDENCE N62474-94-D-7609 40	**10-18-2002** 10-31-2002 5090.3.A. 00179	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	ATTACHMENT C - FINAL SITE MANAGEMENT PLAN FOR FISCAL YEAR 2003 [INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY]	ADMIN RECORD INFO REPOSITORY	BLDG. 900 BLDG. A159 BLDG. A17 BLDG. A187 BLDG. A215 BLDG. A216 BLDG. A222 BLDG. A248 BLDG. A258 BLDG. A265 BLDG. A266 BLDG. A267 BLDG. A271 BLDG. A278 BLDG. A280 BLDG. A288 BLDG. A71 BLDG. A75 BLDG. A76 BLDG. A80 IA A1 IA A2 IA C2 IA F1 IA F2 IA G IA H1 IA H2 IA I IA K MANHOLE D1-C85 SITE 00001 SITE 00002 SITE 00004	FRC - PERRIS	181-03-0185 BX 0005 41031808

UIC No. / Rec. No. Doc. Control No. Record Type Contract No. Approx. # Pages	Record Date Prc. Date SSIC No. CTO No.	Author Author Affil. Recipient Recipient Affil.	Subject	Distribution	Sites	Location SWDIV Box No(s) CD No.	FRC Accession No. FRC Warehouse FRC Box No(s)	
					SITE 00005 SITE 00006 SITE 00014 SITE 00016 SITE 00017			
N00221 / 000176 DS.0132.17626 & SWDIV SER 06CM.JD/0081 REPORT N62474-94-D-7609 300	**10-22-2002** 10-31-2002 5090.3.A. 00132	GORMAN, C. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT SITE INSPECTION REPORT MANHOLE D1-C85 AND OUTFALLS 22, 23, 25, AND 26 INVESTIGATION AREA C2 {INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY WHICH INCLUDES SOME SENSITIVE ADDRESSES}	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. 670 BLDG. 672 BLDG. 674 BLDG. 678 BLDG. 680 BLDG. 692 BLDG. 738 BLDG. 742 IA C2 MANHOLE D1-C85 OUTFALL 22 OUTFALL 23 OUTFALL 25 OUTFALL 26	FRC - PERRIS	181-03-0185 41031808	BX 0005
N00221 / 000228 NONE MINUTES NONE 20	**10-24-2002** 03-20-2003 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	DRAFT RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES FOR MEETING HELD ON 24 OCTOBER 2002	ADMIN RECORD INFO REPOSITORY	SITE 00004	FRC - PERRIS	181-03-0185 41031808	BX 0006
N00221 / 000604 NONE CORRESPONDENCE NONE 2	**10-26-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE FINAL SITE MANAGEMENT PLAN	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010

UIC No. / Rec. No. Doc. Control No. Record Type Contract No. Approx. # Pages	Record Date Prc. Date SSIC No. CTO No.	Author Author Affil. Recipient Recipient Affil.	Subject	Distribution	Sites	Location SWDIV Box No(s) CD No.	FRC Accession No. FRC Warehouse FRC Box No(s)	
N00221 / 000605 NONE CORRESPONDENCE NONE 4	**10-29-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE FINAL INVESTIGATION AREA, FORMER NORTH BUILDING WAYS REMEDIAL INVESTIGATION REPORT (SEE AR # 110 - FINAL RI REPORT)	ADMIN RECORD INFO REPOSITORY	IA A2	FRC - PERRIS	181-03-0185 41031808	BX 0010

UIC No. / Rec. No. Doc. Control No. Record Type Contract No. Approx. # Pages	Record Date Prc. Date SSIC No. CTO No.	Author Author Affil. Recipient Recipient Affil.	Subject	Distribution	Sites	Location SWDIV Box No(s) CD No.	FRC Accession No. FRC Warehouse FRC Box No(s)	
N00221 / 000188 DS.0179.17795-1 CORRESPONDENCE N62474-94-D-7609 60	**11-01-2002** 11-07-2002 5090.3.A. 00179	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	ATTACHMENT C - REVISED FINAL SITE MANAGEMENT PLAN FOR FISCAL YEAR 2003 [INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY]	ADMIN RECORD INFO REPOSITORY	BLDG. 503 BLDG. 900 BLDG. A159 BLDG. A17 BLDG. A187 BLDG. A215 BLDG. A216 BLDG. A222 BLDG. A248 BLDG. A258 BLDG. A265 BLDG. A266 BLDG. A267 BLDG. A271 BLDG. A278 BLDG. A280 BLDG. A288 BLDG. A71 BLDG. A75 BLDG. A76 BLDG. A80 IA A1 IA A2 IA C2 IA F1 IA F2 IA G IA H1 IA H2 IA I IA K MANHOLE D1-C85 SITE 00001 SITE 00002	FRC - PERRIS	181-03-0185 41031808	BX 0005

UIC No. / Rec. No. Doc. Control No. Record Type Contract No. Approx. # Pages	Record Date Prc. Date SSIC No. CTO No.	Author Author Affil. Recipient Recipient Affil.	Subject	Distribution	Sites	Location SWDIV Box No(s) CD No.	FRC Accession No. FRC Warehouse FRC Box No(s)	
					SITE 00004 SITE 00005 SITE 00006 SITE 00014 SITE 00016 SITE 00017			
N00221 / 000209 WESTON SER 115/DG REPORT NONE 7	**11-12-2002** 11-27-2002 5090.3.A. NONE	D. GEMAR ROY F. WESTON, INC. C. GRIBBLE DTSC - BERKELEY	RESOURCE CONSERVATION AND RECOVERY ACT/FACILITY LANDFILL QUARTERLY GROUNDWATER MONITORING, INVESTIGATION AREA H1 [DISTRIBUTION LIST CONTAINS CONFIDENTIAL ADDRESSES]	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA H1 SITE 00001 SITE 00002 SITE 00006 SITE 00014 SITE 00016	FRC - PERRIS	181-03-0185 41031808	BX 0005
N00221 / 000606 NONE CORRESPONDENCE NONE 2	**11-14-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO FURTHER COMMENTS ON THE FINAL CLOSURE REPORT - UNDERGROUND FUEL PIPING AND TPH CONTAMINATED SOIL REMOVAL AT THE MARE ISLAND ELEMENTARY SCHOOL	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000607 NONE CORRESPONDENCE NONE 1	**11-15-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO FURTHER COMMENTS ON THE REVISED FINAL SITE MANAGEMENT PLAN	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010

UIC No. / Rec. No. Doc. Control No. Record Type Contract No. Approx. # Pages	Record Date Prc. Date SSIC No. CTO No.	Author Author Affil. Recipient Recipient Affil.	Subject	Distribution	Sites	Location SWDIV Box No(s) CD No.	FRC Accession No. FRC Warehouse FRC Box No(s)	
N00221 / 000208 DS.0179.17800 & SWDIV SER 06CM.JD/01067 CORRESPONDENCE N62474-94-D-7609 275	**11-18-2002** 11-27-2002 5090.3.A. 00179	GORMAN, C. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT SAMPLING AND ANALYSIS PLAN - SOIL AND GROUNDWATER SAMPLING AT THE MARE ISLAND ELEMENTARY SCHOOL SITE [INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY WHICH INCLUDES SOME CONFIDENTIAL ADDRESSES]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. 20 BLDG. 2000 BLDG. 2001 BLDG. 21 BLDG. 22 BLDG. 23 BLDG. 24 BLDG. 25 BLDG. 26 BLDG. 27 BLDG. 28 BLDG. 28A BLDG. 29 BLDG. 29A BLDG. 864	FRC - PERRIS	181-03-0185 41031808	BX 0005
N00221 / 000238 NONE MINUTES NONE 35	**11-21-2002** 04-23-2003 5090.3.A. NONE	MAE'S LEGAL TRANSCRIBING SERV. NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) DRAFT MEETING MINUTES OF 21 NOVEMBER 2002	ADMIN RECORD INFO REPOSITORY	AST 000636	FRC - PERRIS	181-03-0185 41031808	BX 0007
N00221 / 000628 NONE CORRESPONDENCE NONE 2	**11-22-2002** 08-19-2003 5090.3.A. NONE	RILEY, G. CRWQCB - SAN FRANCISCO DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO FURTHER COMMENTS ON THE FINAL CLOSURE REPORT, UNDERGROUND FUEL OIL PIPING AND TPH CONTAMINATED SOIL REMOVAL AT THE MARE ISLAND ELEMENTARY SCHOOL	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000608 NONE CORRESPONDENCE NONE 3	**11-26-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE BASEWIDE POLYCHLORINATED BIPHENYLS (PCB) CONFIRMATION SAMPLING SUMMARY REPORT FOR TRANSFER PARCELS III AND XVII	ADMIN RECORD INFO REPOSITORY	AREA C2 AREA D PARCEL 17D PARCEL III PARCEL XVI PARCEL XVII	FRC - PERRIS	181-03-0185 41031808	BX 0010

UIC No. / Rec. No. Doc. Control No. Record Type Contract No. Approx. # Pages	Record Date Prc. Date SSIC No. CTO No.	Author Author Affil. Recipient Recipient Affil.	Subject	Distribution	Sites	Location SWDIV Box No(s) CD No.	FRC Accession No. FRC Warehouse FRC Box No(s)	
N00221 / 000211 SWDIV SER 06CM.JD/0195 CORRESPONDENCE N00024-99-8137 300	**11-27-2002** 12-04-2002 5090.3.A. DO 0086	L. MAGGINI ROY F. WESTON, INC. P. MCFADDEN NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL ENGINEERING EVALUATION/COST ANALYSIS/REMOVAL ACTION WORK PLAN - OPERATION OF MARE ISLAND ORDNANCE STORAGE AND TREATMENT FACILITIES [INCLUDES SWDIV TRANSMITTAL LETTER FROM J. DUNAWAY WHICH CONTAINS SOME CONFIDENTIAL ADDRESSES]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. A180 RANGE 2 SITE 00005	FRC - PERRIS	181-03-0185 41031808	BX 0006
N00221 / 000210 SWDIV SER 06CM.JD/0196 CORRESPONDENCE N62742-98-D-1809 350	**12-02-2002** 12-03-2002 5090.3.A. 00001	P. KHANNA ENVIRONMENTAL CHEMICAL CORP. NAVFAC - SOUTHWEST DIVISION	DRAFT WORK PLAN REMEDIAL INVESTIGATION GEOPHYSICAL SURVEY FOR THE SOUTHERN OFFSHORE SITES [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY WHICH CONTAINS SOME CONFIDENTIAL ADDRESSES]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. A-159 BLDG. A-246 SITE 00005	FRC - PERRIS	181-03-0185 41031808	BX 0006
N00221 / 000534 NONE CORRESPONDENCE NONE 2	**12-03-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL SAMPLING AND ANALYSIS PLAN FOR ADDITIONAL SAMPLING INVESTIGATION AREA F1	ADMIN RECORD INFO REPOSITORY	AREA F1	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000512 NONE CORRESPONDENCE NONE 2	**12-04-2002** 08-12-2003 5090.3.A. NONE	G. RILEY CRWQCB - SAN FRANCISCO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE ENGINEERING EVALUATION WORK PLAN FOR SLURRY WALL VERTICAL CONTAINMENT AREA H1 LANDFILL - AGENCY HAS NOT OBJECTION TO PROCEEDING WITH THE PROPOSED SAMPLING AND ANALYSIS	ADMIN RECORD INFO REPOSITORY	AREA H1	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000560 NONE CORRESPONDENCE NONE 2	**12-05-2002** 08-18-2003 5090.3.A. NONE	EIDELBERG, J. U.S. EPA - SAN FRANCISCO, CA D'ALMEIDA, C. NAVFAC - SOUTHWEST DIVISION	MEMORANDUM REGARDING THE DRAFT SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN AND QUALITY ASSURANCE PROJECT PLAN) FOR ADDITIONAL SAMPLING INVESTIGATION AREA F1	ADMIN RECORD INFO REPOSITORY	AREA F1	FRC - PERRIS	181-03-0185 41031808	BX 0010

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N00221 / 000536 NONE CORRESPONDENCE NONE 2	**12-06-2002** 08-18-2003 5090.3.A. NONE	RILEY, G. CRWQCB - SAN FRANCISCO DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO COMMENTS ON THE REVISED DRAFT FINAL SITE MANAGEMENT PLAN FOR FISCAL YEAR 2003	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000609 NONE CORRESPONDENCE NONE 4	**12-12-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE ENGINEERING EVALUATION WORK PLAN FOR SLURRY WALL VERTICAL CONTAINMENT AREA H1 LANDFILL	ADMIN RECORD INFO REPOSITORY	AREA H1	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000564 NONE CORRESPONDENCE NONE 6	**12-16-2002** 08-18-2003 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN AND QUALITY ASSURANCE PROJECT PLAN) FOR ADDITIONAL SAMPLING INVESTIGATION AREA F1	ADMIN RECORD INFO REPOSITORY	A215 AOC 000004 AOC 000006 AREA F1 BLDG. 215 BLDG. 248 BLDG. A159 BLDG. A-17 BLDG. A187 BLDG. A216 BLDG. A220 BLDG. A265 BLDG. A267 BLDG. A271 BLDG. A71 BLDG. A75 BLDG. A76 BLDG. A80	FRC - PERRIS	181-03-0185 41031808	BX 0010

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N00221 / 000610 NONE CORRESPONDENCE NONE 7	**12-20-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE WETLAND HYDROLOGY EVALUATION WORK PLAN	ADMIN RECORD INFO REPOSITORY	AREA H1 SITE 00005	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000611 NONE CORRESPONDENCE NONE 2	**12-20-2002** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO FURTHER COMMENTS ON THE DRAFT SITE INSPECTION REPORT MANHOLE D1-C85 AND OUTFALLS 22, 23, 25, AND 26	ADMIN RECORD INFO REPOSITORY	MANHOLE D1-C85 OUTFALL 22 OUTFALL 23 OUTFALL 25 OUTFALL 26	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000216 DS.0179.17801 & SWDIV SER 06CM.JD/0256 CORRESPONDENCE N62474-94-D-7609 600	**12-31-2002** 02-10-2003 5090.3.A. 00179	GORMAN, C. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL SAMPLING AND ANALYSIS PLAN FOR SOIL AND GROUNDWATER SAMPLING AT THE ELEMENTARY SCHOOL SITE - INCLUDES TRANSMITTAL LETTER BY J. DUNAWAY WITH CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY	BLDG. 20 BLDG. 2000 BLDG. 2001 BLDG. 21 BLDG. 22 BLDG. 23 BLDG. 24 BLDG. 25 BLDG. 26 BLDG. 27 BLDG. 28 BLDG. 28A BLDG. 29 BLDG. 29A BLDG. 864	FRC - PERRIS	181-03-0185 41031808	BX 0006
N00221 / 000214 DS.A034.10074 & SWDIV SER 06CM.JD/0328 REPORT N68711-00-D-0005 100	**01-01-2003** 02-06-2003 5090.3.A. DO 034	R. LAGO TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT FEASIBILITY STUDY FOR SITE 17 AND BUILDING 503 AREA, INVESTIGATION AREA A1 [INCLUDES TRANSMITTAL BY J. DUNAWAY] (PORTION OF MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA A1 BLDG. 503 SITE 00017	FRC - PERRIS	181-03-0185 41031808	BX 0006

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N00221 / 000218 SWDIV SER 06CM.KE/0397 CORRESPONDENCE NONE 30	**01-01-2003** 02-10-2003 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION NAVFAC - SOUTHWEST DIVISION	DRAFT SITE CONTROL PLAN FOR NAVY RETAINED PROPERTY - INCLUDES TRANSMITTAL LETTER BY J. DUNAWAY WITH CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA A1 IA A2 IA B IA C1 IA C2 IA D IA E IA F1 IA F2 IA G IA H1 IA H2 IA I IA J IA K IA L IA ROOSEVELT TERRACE SITE 00004 SITE 00005	FRC - PERRIS	181-03-0185 41031808	BX 0006
N00221 / 000569 NONE CORRESPONDENCE NONE 11	**01-08-2003** 08-18-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION REPORT FOR INVESTIGATION AREA H1 (SOIL AND SURFACE WATER), THE FORMER ORDNANCE AND BURNING AREA, AND THE WESTERN MAGAZINE AREA	ADMIN RECORD INFO REPOSITORY	IA H1	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000217 WORK ORDER NO. 12826.001.001.0012.30 CORRESPONDENCE NONE 100	**01-13-2003** 02-10-2003 5090.3.A. NONE	POPEK, E. WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT SAMPLING AND ANALYSIS PLAN FOR RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)/FACILITY LANDFILL GROUNDWATER MONITORING	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA H1 SITE 00006	FRC - PERRIS	181-03-0185 41031808	BX 0006

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N00221 / 000612 NONE CORRESPONDENCE NONE 2	**01-15-2003** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO FURTHER COMMENTS ON THE DRAFT FINAL SAMPLING AND ANALYSIS PLAN FOR SOIL AND GROUNDWATER SAMPLINGA THE THE MARE ISLAND ELEMENTARY SCHOOL	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000220 SWDIV SER 06CM.JD/0364 CORRESPONDENCE NONE 5	**01-17-2003** 03-19-2003 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE DTSC - BERKELEY	REQUEST FOR DTSC TO IDENTIFY POTENTIAL STATE CHEMICAL-SPECIFIC, LOCATION-SPECIFIC, AND ACTION-SPECIFIC "APPLICABLE" OR "RELEVANT AND APPROPRIATE" REQUIREMENTS FOR NON-TIME CRITICAL REMOVAL ACTION (NTCRA) AT FORMER OIL SUMPS & LEAD OXIDE SITE W/IN AREA H1	ADMIN RECORD INFO REPOSITORY	AREA H1 SITE 00002 SITE 00016	FRC - PERRIS	181-03-0185 41031808	BX 0006
N00221 / 000537 NONE CORRESPONDENCE NONE 2	**01-21-2003** 08-18-2003 5090.3.A. NONE	RILEY, G. CRWQCB - SAN FRANCISCO DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO COMMENTS ON THE DRAFT SITE INSPECTION REPORT MANHOLE D1-C85 AND OUTFALLS 22, 23, 25, AND 26 INVESTIGATION AREA C2	ADMIN RECORD INFO REPOSITORY	AREA C2 MANHOLE D1-C85 OUTFALL 22 OUTFALL 23 OUTFALL 25 OUTFALL 26	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000219 NONE REPORT NONE 300	**01-24-2003** 02-10-2003 5090.3.A. NONE	WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT NON-TIME CRITICAL REMOVAL ACTION (NTCRA) ENGINEERING EVALUATION/COST ANALYSIS - INCLUDES TRANSMITTAL LETTER BY R. WESTON WITH CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00002 SITE 00016	FRC - PERRIS	181-03-0185 41031808	BX 0006
N00221 / 000239 NONE MINUTES NONE 33	**01-30-2003** 04-23-2003 5090.3.A. NONE	MAE'S LEGAL TRANSCRIBING SERV. NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) DRAFT MEETING MINUTES OF 30 JANUARY 2003	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0007

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N00221 / 000223 0006 CORRESPONDENCE N68711-01-MDC-1061 40	**02-07-2003** 03-20-2003 5090.3.A. NONE	DOUGLASS, O. WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	FINAL CONSTRUCTION QUALITY CONTROL PLAN FOR REMEDIATION AGREEMENT SITES - INCLUDES WESTON TRANSMITTAL LETTER BY R. WESTON WHICH CONTAINS A CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY SENSITIVE		FRC - PERRIS	181-03-0185 41031808	BX 0006
N00221 / 000221 SWDIV SER 06CM.JD/0442 CORRESPONDENCE NONE 4	**02-10-2003** 03-20-2003 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE DTSC - BERKELEY	LETTER REQUESTING DTSC TO IDENTIFY POTENTIAL STATE CHEMICAL-SPECIFIC, LOCATION-SPECIFIC, AND ACTION-SPECIFIC "APPLICABLE" OR "RELEVANT AND APPROPRIATE" REQUIREMENTS FOR AN ENGINEERING EVALUATION/COST ANALYSIS AT THE FOMER MARINE CORPS FIRING RANGE	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0006
N00221 / 000538 NONE CORRESPONDENCE NONE 2	**02-10-2003** 08-18-2003 5090.3.A. NONE	SCOTT, C. CRWQCB - SAN FRANCISCO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	LETTER REQUESTING ALL FUTURE REPORTS BE SUBMITTED IN ELECTRONIC AND PAPER COPY	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000613 NONE CORRESPONDENCE NONE 6	**02-20-2003** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION GEOPHYSICAL SURVEY FOR THE SOUTHERN OFFSHORE SITES	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000226 DS.0179.17803 & SWDIV SER 06CM.DG/0467 REPORT N62474-94-D-7609 60	**02-21-2003** 03-20-2003 5090.3.A. 00179	MCCONATHY, B. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT SITE INSPECTION FOR THE MARE ISLAND ELEMENTARY SCHOOL - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY WHICH CONTAINS A CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY SENSITIVE	AST 000636 UST 772	FRC - PERRIS	181-03-0185 41031808	BX 0006

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N00221 / 000265 NONE MINUTES NONE 30	**02-27-2003** 07-14-2003 5090.3.A. NONE	MAE'S LEGAL TRANSCRIBING SERV. NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) DRAFT MEETING MINUTES OF 27 FEBRUARY 2003	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000229 0017 REPORT N68711-01-MDC-1061 100	**02-28-2003** 03-20-2003 5090.3.A. NONE	POPEK, E. WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	RCRA/FACILITY LANDFILL, ANNUAL GROUNDWATER MONITORING REPORT - INCLUDES WESTON TRANSMITTAL LETTER BY D. GEMAR	ADMIN RECORD INFO REPOSITORY	IA H1	FRC - PERRIS	181-03-0185 41031808	BX 0006
N00221 / 000614 NONE CORRESPONDENCE NONE 2	**02-28-2003** 08-19-2003 5090.3.A. NONE	LANDIS, A. DTSC - SACRAMENTO, CA W. MOORE MARE ISLAND	COMMENTS ON THE INVESTIGATION AREA A3 REMDIAL ACTION CERTIFICATION	ADMIN RECORD INFO REPOSITORY	AREA A3 SITE 00008	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000615 NONE CORRESPONDENCE NONE 7	**02-28-2003** 08-19-2003 5090.3.A. NONE	LANDIS, A. DTSC - SACRAMENTO, CA MOORE, W. MARE ISLAND	TRANSMITTAL OF RELEASE OF COVENANT TO RESTRICT USE OF PROPERTY DOCUMENT FOR INVESTIGATION AREA A3	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000274 SWDIV SER 06CM.JD/0519 CORRESPONDENCE NONE 30	**03-05-2003** 07-14-2003 5090.3.A. NONE	DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO AGENCY COMMENTS ON THE DRAFT FINAL SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN), ADDITIONAL SAMPLING AT INVESTIGATION AREA F1	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA F1	FRC - PERRIS	181-03-0185 41031808	BX 0008

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N00221 / 000619 NONE CORRESPONDENCE NONE 2	**03-20-2003** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	LETTER REGARDING THE TRANSFER OF PARCEL VII-A EXCLUSION PARCEL 2 - UNRESOLVED ISSUES STILL PRESENT THEREFORE, DTSC CANNOT CONCUR	ADMIN RECORD INFO REPOSITORY	PARCEL 2 PARCEL VII-A	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000620 NONE CORRESPONDENCE NONE 2	**03-24-2003** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO FURTHER COMMENTS ON THE BRIEFING PAPER SUMMARY OF ENVIRONMENTAL CONDITIONS PARCEL VII-A EXCLUSION PARCEL 2	ADMIN RECORD INFO REPOSITORY	PARCEL 2 PARCEL VII-A	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000266 NONE MINUTES NONE 30	**03-27-2003** 07-14-2003 5090.3.A. NONE	MAE'S LEGAL TRANSCRIBING SERV. NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) DRAFT MEETING MINUTES OF 27 MARCH 2003	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000570 NONE CORRESPONDENCE NONE 2	**03-28-2003** 08-18-2003 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT SITE CONTROL PLAN FOR NAVY RETAINED PROPERTY	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000248 WON. 12826.001.001.0012. 30 CORRESPONDENCE NONE 500	**04-01-2003** 05-22-2003 5090.3.A. DO 0016	E. POPEK ROY F. WESTON, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL SAMPLING AND ANALYSIS PLAN FOR THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)/FACILITY LANDFILL GROUNDWATER MONITORING (SEE AR #679 - REVISED DRAFT FINAL SAP)	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0007

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N00221 / 000262 DS.0136.13265 & SWDIV SER 06CM.JD/0621 REPORT N68711-00-D-0005 2500	**04-01-2003** 07-11-2003 5090.3.A. 00136	GORMAN, C. TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT INVESTIGATION AREA REMEDIAL INVESTIGATION, VOLUME I-II OF II [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY	SITE 00004	FRC - PERRIS	181-03-0185 41031808	BX 0007
N00221 / 000232 SWDIV SER 06CM.JD/0620 REPORT N62742-98-D-1809 100	**04-02-2003** 04-23-2003 5090.3.A. 00001	ENVIRONMENTAL CHEMICAL CORP. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL CONCEPTUAL SITE MODEL FOR THE SOUTHERN OFFSHORE MUNITIONS AND EXPLOSIVES OF CONCERN (MEC) SITES - INCLUDES RESPONSE TO COMMENTS ON THE DRAFT VERSION DATED 07/17/02 AND SWDIV TRANSMITTAL FROM J. DUNAWAY STATING CONCURRENCE DUE 05/05/03)	ADMIN RECORD INFO REPOSITORY SENSITIVE	DIKE 12 DIKE 14 PIER 34 PIER 35	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000509 NONE CORRESPONDENCE NONE 2	**04-02-2003** 08-08-2003 5090.3.A. NONE	RILEY, G. CRWQCB - SAN FRANCISCO DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO FURTHER COMMENTS ON THE FINAL POST-CONSTRUCTION REPORT, STORM DRAIN CLEANING	ADMIN RECORD INFO REPOSITORY	MANHOLE D1-C85 STS-21 STS-25 STS-26	FRC - PERRIS	181-03-0185 41031808	BX 0009
N00221 / 000252 SWDIV SER 06CM.DR/0888 CORRESPONDENCE NONE 6	**04-03-2003** 06-24-2003 5090.3.A. NONE	DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION ROTH, E. US EPA - SAN FRANCISCO	RESPONSE TO COMMENTS FOR THE DRAFT FINAL UNEXPLODED ORDNANCE INTRUSIVE INVESTIGATION SUMMARY REPORT, SOUTH SHORE AREA - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY WITH CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY SENSITIVE		FRC - PERRIS	181-03-0185 41031808	BX 0007

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N00221 / 000234 SWDIV SER 06CM.JD/0669 CORRESPONDENCE NONE 4	**04-11-2003** 04-23-2003 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION VARIOUS AGENCIES	NAVY LETTER REQUESTING CONCURRENCE AND COMMENTS OR PROPOSED SCHEDULE ON THE CONCLUSIONS OF THE FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT - WITH ENCLOSURE AND CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. 108 BLDG. 116 BLDG. 121 BLDG. 1310 BLDG. 213 BLDG. 386 BLDG. 388 BLDG. 390 BLDG. 569 BLDG. 678 BLDG. 680 BLDG. 866 SITE 00001 SITE 00002 SITE 00003 SITE 00006 SITE 00007 SITE 00009 SITE 00010 SITE 00011 SITE 00012 SITE 00013 SITE 00014 SITE 00015 SITE 00016-B3 SITE 00016-B5 SITE 00019 SITE 00020 SITE 00021 SITE 00023 SITE 00024	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000237 SWDIV SER 06CM.JD/0670 CORRESPONDENCE NONE 2	**04-11-2003** 04-23-2003 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION VARIOUS AGENCIES	NAVY LETTER REQUESTING CONCURRENCE AND COMMENTS OR PROPOSED SCHEDULE ON THE CONCLUSIONS OF THE REVISED FINAL OFFSHORE ECOLOGICAL RISK ASSESSMENT - WITH ENCLOSURE AND CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY SENSITIVE	BERTH 0001 BERTH 0002 DIKE 12 DIKE 14 PIER 21 PIER 23	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000621 NONE CORRESPONDENCE NONE 35	**04-14-2003** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION REPORT FOR INVESTIGATION AREA H1	ADMIN RECORD INFO REPOSITORY	IA H1	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000242 SWDIV SER 06CM.JD/0677 CORRESPONDENCE NONE 3	**04-15-2003** 04-24-2003 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE DTSC - BERKELEY	LETTER ADVISING DTSC OF PLANS TO FURTHER INVESTIGATE PETROLEUM CONTAMINATION DISCOVERED ON THE EASTERN EARLY TRANSFER PARCEL (EETP) AND RESOLVE NON-COMPLIANCE AS IDENTIFIED BY DTSC - INCLUDES CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000233 FWSD-RAC-03-1204 & SWDIV SER 06CM.DG/0696 REPORT N68711-98-D-5713 400	**04-23-2003** 04-23-2003 5090.3.A. 00064	K. WEINGARDT FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	DRAFT ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR THE MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S, REVISION 0 - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	FRC - PERRIS	181-03-0185 41031808	BX 0007
N00221 / 000243 FWSD-RAC-03-1204 & SWDIV SER 06CM.DG/0696 REPORT N68711-98-D-5713 300	**04-23-2003** 04-28-2003 5090.3.A. 00064	K. WEINGARDT FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	DRAFT ENGINEERING EVALUATION/COST ANALYSIS FOR THE MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S, REVISION 1 - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	FRC - PERRIS	181-03-0185 41031808	BX 0007

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N00221 / 000267 NONE MINUTES NONE 30	**04-24-2003** 07-14-2003 5090.3.A. NONE	MAE'S LEGAL TRANSCRIBING SERV. NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) DRAFT MEETING MINUTES OF 24 APRIL 2003	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000244 SWDIV SER 06CM.JD CORRESPONDENCE N62742-98-D-1809 200	**04-25-2003** 05-22-2003 5090.3.A. 00001	P. MCFADDEN ENVIRONMENTAL CHEMICAL CORP NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL WORK PLAN REMEDIAL INVESTIGATION GEOPHYSICAL SURVEY FOR THE SOUTHERN OFFSHORE SITES WITH RESPONSE TO COMMENTS ON THE INTERNAL DRAFT GEOPHYSICAL SURVEY WORK PLAN AND DRAFT REMEDIAL INVESTIGATION GEOPHYSICAL WORK PLAN	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0007
N00221 / 000247 NONE CORRESPONDENCE N61742-98-D-1809 150	**04-25-2003** 05-22-2003 5090.3.A. 00001	P. MCFADDEN ENVIRONMENTAL CHEMICAL CORP NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL HEALTH AND SAFETY PLAN REMEDIAL INVESTIGATION GEOPHYSICAL SURVEY FOR THE SOUTHERN OFFSHORE SITES	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0007
N00221 / 000571 NONE CORRESPONDENCE NONE 3	**04-30-2003** 08-18-2003 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN AND QUALITY ASSURANCE PROJECT PLAN) FOR ADDITIONAL SAMPLING INVESTIGATION AREA F1	ADMIN RECORD INFO REPOSITORY	AREA F1 BLDG. A159 BLDG. A17 BLDG. A271 BLDG. A71 BLDG. A75 BLDG. A76	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000622 NONE CORRESPONDENCE NONE 4	**04-30-2003** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE RCRA/FACILITY LANDFILL 2002 ANNUAL GROUNDWATER MONITORING REPORT	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010

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N00221 / 000539 NONE CORRESPONDENCE NONE 2	**05-01-2003** 08-18-2003 5090.3.A. NONE	G. RILEY CRWQCB - SAN FRANCISCO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT SITE INSPECTION FOR THE MARE ISLAND ELEMENTARY SCHOOL	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000623 NONE CORRESPONDENCE NONE 5	**05-07-2003** 08-19-2003 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) FOR THE MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S, REVISION 0	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000573 NONE CORRESPONDENCE NONE 3	**05-09-2003** 08-18-2003 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL CONCEPTUAL SITE MODEL FOR THE SOUTHERN OFFSHORE ORDNANCE SITES	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000574 NONE CORRESPONDENCE NONE 1	**05-12-2003** 08-18-2003 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO FURTHER COMMENTS ON THE DRAFT SITE INSPECTION FOR THE MARE ISLAND ELEMENTARY SCHOOL	ADMIN RECORD INFO REPOSITORY	AST 000636 AST 000772 SITE 00023	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000276 SWDIV SER 06CM.JD/0804 CORRESPONDENCE NONE 3	**05-16-2003** 07-14-2003 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE DTSC - BERKELEY	LETTER FORMALLY NOTIFYING SWDIV OF THE INTERNET TO CONDUCT A TIME CRITICAL REMOVAL ACTION (TCRA) FOR THE INSTALLATION OF A FOUR-SIDE GROUNDWATER CONTAINMENT WALL AND GROUNDWATER EXTRACTION TRENCH TO H1	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA H1	FRC - PERRIS	181-03-0185 41031808	BX 0008

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N00221 / 000575 NONE CORRESPONDENCE NONE 2	**05-19-2003** 08-18-2003 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL WORK PLAN REMEDIAL INVESTIGATION GEOPHYSICAL SURVEY FOR THE SOUTHERN OFFSHORE SITES	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000540 NONE CORRESPONDENCE NONE 2	**05-21-2003** 08-18-2003 5090.3.A. NONE	G. RILEY CRWQCB - SAN FRANCISCO J. MORRIS CH2M HILL, INC.	LETTER REGARDING THE APPROVAL OF THE FINAL ADDENDUM TO SAMPLING AND ANALYSIS PLAN FOR THE EVALUATION OF PETROLEUM HYDROCARBONS IN SOIL AND GROUNDWATER AT TISDALE ROAD AND 9TH STREET, INVESTIGATION AREA D2	ADMIN RECORD INFO REPOSITORY	AREA D2	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000576 NONE CORRESPONDENCE NONE 9	**05-28-2003** 08-18-2003 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FINAL REMEDIAL INVESTIGATION FOR INSTALLATION RESTORATION SITE 17 AND BUILDING 503 AREA INVESTIGATION AREA A1	ADMIN RECORD INFO REPOSITORY	AREA A1 BLDG. 503 SITE 00017	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000577 NONE CORRESPONDENCE NONE 4	**05-28-2003** 08-18-2003 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON THE DRAFT FEASIBILITY STUDY FOR SITE 17 AND BUILDING 503 AREA, INVESTIGATION AREA A1	ADMIN RECORD INFO REPOSITORY	AREA A1 BLDG. 503 SITE 00017	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000642 NONE MINUTES NONE 20	**05-29-2003** 09-25-2003 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) DRAFT MEETING MINUTES FOR MEETING HELD ON 29 MAY 2003	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000646 NONE MINUTES NONE 20	**05-29-2003** 10-16-2003 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) DRAFT MEETING MINUTES FOR MEETING HELD ON 29 MAY 2003	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000771 NONE CORRESPONDENCE NONE 2	**05-30-2003** 01-25-2006 5090.3.A. NONE	G. RILEY CRWQCB - OAKLAND J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON THE DRAFT FINAL CONCEPTUAL SITE MODEL FOR THE SOUTHERN OFFSHORE ORDNANCE SITES	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000263 DT.110-05.05 & SWDIV SER 06CM.DG/0991 CORRESPONDENCE N6811-03-C-5004 600	**06-01-2003** 07-11-2003 5090.3.A. NONE	FOSTER, M. TETRA TECH EM INC. GODSEY, D. NAVFAC - SOUTHWEST DIVISION	REVISED DRAFT FINAL SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN), ADDITIONAL SAMPLING (CD COPY AND NAVFAC SW TRANSMITTAL LETTER ENCLOSED) {***SEE COMMENTS}	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA F1	FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000249 DS.110-04.001 & SWDIV SER 06CM.DG/0835 REPORT N68711-03-C-5004 200	**06-02-2003** 06-10-2003 5090.3.A. NONE	M. FOSTER SULLIVAN CONSULTING GROUP NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL SITE INSPECTION REPORT MANHOLE D1-C85 AND OUTFALLS 22, 23, 25, AND 26 INVESTIGATION AREA C2 - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY WITH CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA C2 MANHOLE D1-C85 OUTFALL 22 OUTFALL 23 OUTFALL 25 OUTFALL 26	FRC - PERRIS	181-03-0185 41031808	BX 0007
N00221 / 000769 NONE CORRESPONDENCE NONE 7	**06-13-2003** 01-25-2006 5090.3.A. NONE	L. BARSAMIAN CRWQCB - OAKLAND J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REQUEST FOR A TECHNICAL REPORT ON EMERGENT CHEMICALS SOURCES AND SAMPLING (INCLUDES CAL/EPA LETTER DATED 6-6-2003 AND EMERGENT CHEMICAL INFORMATION)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000264 NONE REPORT NONE 2000	**06-17-2003** 07-11-2003 5090.3.A. DO 0017	E. POPEK ROY F. WESTON, INC. NAVFAC - SOUTHWEST DIVISION	RCRA/FACILITY LANDFILL REVISED 2002 ANNUAL GROUNDWATER MONITORING REPORT	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000253 FWSD-RAC-03-2890 & SWDIV SER 06CM.JD/0974 CORRESPONDENCE N68711-98-D-5713 40	**06-20-2003** 06-26-2003 5090.3.A. 00064	K. WEINGARDT FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	DRAFT PROJECT WORK PLAN FOR THE TIME-CRITICAL REMOVAL ACTION (TCRA) AT THE MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S, REVISION 0 - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY WITH CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY SENSITIVE	OUTFALL 4S	FRC - PERRIS	181-03-0185 41031808	BX 0007
N00221 / 000254 FWSD-RAC-03-2889 & SWDIV SER 06CM.JD/0974 REPORT N68711-98-D-5713 100	**06-20-2003** 06-26-2003 5090.3.A. 00064	FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	DRAFT ACTION MEMORANDUM FOR THE CERCLA TIME-CRITICAL REMOVAL ACTION (TCRA) FOR THE MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY WITH CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY SENSITIVE	OUTFALL 4S	FRC - PERRIS	181-03-0185 41031808	BX 0007
N00221 / 000268 SWDIV SER 06CM.JD/0966 CORRESPONDENCE NONE 4	**06-25-2003** 07-14-2003 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE DTSC - BERKELEY	REQUEST FOR DTSC TO IDENTIFY POTENTIAL STATE CHEMICAL-SPECIFIC, LOCATION-SPECIFIC, AND ACTION-SPECIFIC "APPLICABLE" OR "RELEVANT AND APPROPRIATE" REQUIREMENTS FOR TIME CRITICAL REMOVAL ACTION (TCRA) AT FORMER OIL SUMPS AND LEAD OXIDE SITE W/IN AREA H1	ADMIN RECORD INFO REPOSITORY	AREA H1 SITE 00002	FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 000643 NONE MINUTES NONE 20	**06-26-2003** 09-25-2003 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) DRAFT MEETING MINUTES FOR MEETING HELD ON 26 JUNE 2003	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000275 SWDIV SER 06CM.JD/1021 REPORT NONE 120	**07-01-2003** 07-14-2003 5090.3.A. DO 0019	WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT CONTAINMENT BARRIER AND EXTRACTION TRENCH TIME CRITICAL REMOVAL ACTION (TCRA) FOR INVESTIGATION AREA H, INCLUDES - (SWDIV TRANSMITTAL LETTER BY J. DUNAWAY)	ADMIN RECORD INFO REPOSITORY	IA H1	FRC - PERRIS	181-03-0185 41031808	BX 0008
N00221 / 003632 NONE CORRESPONDENCE NONE 3	**07-14-2003** 01-17-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON THE DRAFT PROJECT WORK PLAN AND ON THE DRAFT ACTION MEMORANDUM, TIME CRITICAL REMOVAL ACTION AT THE MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S	ADMIN RECORD	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000630 FWSD-RAC-03-3146 & SWDIV SER 06CM.JD/1086 CORRESPONDENCE N68711-98-D-5713 600	**07-18-2003** 08-21-2003 5090.3.A. 00064	K. WEINGARDT FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	DRAFT PROJECT WORK PLAN FOR THE TIME-CRITICAL REMOVAL ACTION (TCRA) AT THE MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S, REVISION 1 - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY WITH CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY SENSITIVE	OUTFALL 4S	FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 000676 FWSD-RAC-03-2889 & SWDIV SER 06CM.JD/1086 REPORT N68711-98-D-5713 120	**07-18-2003** 01-27-2004 5090.3.A. 00064	FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	DRAFT ACTION MEMORANDUM FOR THE CERCLA TIME-CRITICAL REMOVAL ACTION (TCRA) FOR THE MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY WITH CONFIDENTIAL DISTRIBUTION LIST - SEE COMMENTS FIELD BELOW	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000686 FWSD-RAC-03-3412 REPORT N68711-98-D-5713 120	**07-18-2003** 03-19-2004 5090.3.A. 00064	FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	APPENDIX G, DRAFT EXPLOSIVES SAFETY SUBMISSION FOR THE TIME-CRITICAL REMOVAL ACTION (TCRA) AT THE MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S, REVISION 1 - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000772 NONE CORRESPONDENCE NONE 2	**07-18-2003** 01-25-2006 5090.3.A. NONE	G. RILEY CRWQCB - OAKLAND J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON THE DRAFT PROJECT WORK PLAN AND ON THE DRAFT ACTION MEMORANDUM, TIME CRITICAL REMOVAL ACTION (TCRA) AT THE MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S	ADMIN RECORD	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003633 NONE CORRESPONDENCE NONE 4	**07-22-2003** 01-17-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON FINAL COMPILATION OF TECHNICAL MEMORANDA ON AMBIENT ANALYSES OF METALS IN SOILS AND GROUNDWATER (INCLUDES HERD COMMENTS DATED 04/09/2003)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000631 DS.A064.10904 & SWDIV SER 06CM.JD/1111 CORRESPONDENCE N68711-00-D-0005 10	**07-30-2003** 08-21-2003 5090.3.A. DO 0064	R. LAGO TETRA TECH EM INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	DRAFT ADDENDUM 1 TO THE DRAFT FINAL SAMPLING AND ANALYSIS PLAN FOR THE SOIL AND GROUNDWATER SAMPLING AT THE MARE ISLAND ELEMENTARY SCHOOL SITE - INCLUDES ELECTRONIC VERSION AND SWDIV TRANSMITTAL LETTER BY J. DUNAWAY WITH CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY SENSITIVE		FRC - PERRIS	181-03-0185 41031808	BX 0010
N00221 / 003509 SWDIV SER 06CM.JD/1110 CORRESPONDENCE NONE 3	**07-30-2003** 10-19-2004 5090.3.A. NONE	DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION HICKS, J. U.S. ARMY CORPS OF ENGINEERS	TRANSMITTAL OF DELINEATION OF CLEAN WATER ACT JURISDICTION FOR THE INVESTIGATION AREA REMEDIAL ACTION PROJECT (RAP) (W/OUT ENCLOSURE) {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA H1	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003510 SWDIV SER 06CM.JD/1111 CORRESPONDENCE NONE 4	**07-30-2003** 10-19-2004 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF DRAFT SAMPLE AND ANALYSIS PLAN SAP/QAPP ADDITIONAL SOIL AND GROUNDWATER SAMPLING AT THE ELEMENTARY SCHOOL SITE (W/OUT ENCLOSURE) {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000673 NONE MINUTES NONE 30	**07-31-2003** 01-19-2004 5090.3.A. NONE	MAE'S LEGAL TRANSCRIBING NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) DRAFT MEETING MINUTES OF 31 JULY 2003	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000679 WON. 12826.001.001.0012. 30, SWDIV SER 06CM.DG/1174 CORRESPONDENCE NONE 200	**08-04-2003** 02-12-2004 5090.3.A. DO 0016	E. POPEK ROY F. WESTON, INC. NAVFAC - SOUTHWEST DIVISION	REVISED DRAFT FINAL SAMPLING AND ANALYSIS PLAN FOR THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)/FACILITY LANDFILL GROUNDWATER MONITORING, REVISION 1 - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY WITH CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000637 DT 110-04.09 & SWDIV SER 06CM.JD/1152 CORRESPONDENCE N68711-03-C-5004 100	**08-06-2003** 09-04-2003 5090.3.A. 00003	WILSON, P. SULLIVAN CONSULTING GROUP GODSEY, D. NAVFAC - SOUTHWEST DIVISION	DRAFT SAMPLING AND ANALYSIS PLAN ADDENDUM (FIELD SAMPLING PLAN/QUALITY ASSURANCE PLAN) FOR ADDITIONAL SOIL SAMPLING AT FORMER NORTH BUILDING WAYS INVESTIGATION AREA - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY WITH CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA A2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000892 NONE CORRESPONDENCE NONE 12	**08-06-2003** 07-09-2007 5090.3.A. NONE	GRIBBLE, C. BRAC PMO WEST DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON THE DRAFT INVESTIGATION REMEDIAL INVESTIGATION	ADMIN RECORD INFO REPOSITORY	AREA F2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003635 NONE CORRESPONDENCE NONE 1	**08-06-2003** 01-17-2006 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON THE DRAFT ADDENDUM 1 TO THE DRAFT FINAL SAMPLING AND ANALYSIS PLAN (SAP), SOIL AND GROUNDWATER SAMPLING AT THE MARE ISLAND ELEMENTARY SCHOOL	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000638 DT 110-01.08 CORRESPONDENCE NONE 100	**08-11-2003** 09-04-2003 5090.3.C. NONE	SULLIVAN CONSULTING GROUP NAVFAC - SOUTHWEST DIVISION	ATTACHMENT C - INTERNAL DRAFT FOR THE AMENDED SITE MANAGEMENT PLAN (SEE AR #656 - FEDERAL FACILITY SITE REMEDIATION AGREEMENT (FFSRA)).	SITE FILE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003511 SWDIV SER 06CM.DG/1174 CORRESPONDENCE NONE 4	**08-12-2003** 10-19-2004 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION P. BARNI DTSC - BERKELEY	LIST OF VIOLATIONS ON THE REVISED DRAFT FINAL WATER QUALITY SAMPLING AND ANALYSIS PLAN (WQSAP) REVISION 1 RCRA/FACILITY LANDFILL GROUNDWATER MONITORING (W/OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003648 NONE CORRESPONDENCE NONE 2	**08-12-2003** 01-26-2006 5090.3.A. NONE	G. RILEY CRWQCB - OAKLAND J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON THE DRAFT ADDENDUM 1 TO THE DRAFT FINAL SAMPLING AND ANALYSIS PLAN, SOIL AND GROUNDWATER SAMPLING AT THE MARE ISLAND ELEMENTARY SCHOOL SITE	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000639 DT.110-01.09 & SWDIV SER 06CM.JD/1206 CORRESPONDENCE NONE 100	**08-14-2003** 09-04-2003 5090.3.A. NONE	SULLIVAN CONSULTING GROUP NAVFAC - SOUTHWEST DIVISION	ATTACHMENT C - DRAFT FOR THE AMENDED SITE MANAGEMENT PLAN - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY (SEE AR #638 - INTERNAL DRAFT AMENDED SMP AND #656 - FEDERAL FACILITY SITE REMEDIATION AGREEMENT (FFSRA))	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000640 NONE CORRESPONDENCE NONE 2	**08-14-2003** 09-25-2003 5090.3.A. NONE	ROTH, E. U.S. EPA - SAN FRANCISCO, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	NO FURTHER COMMENTS ON THE DRAFT FINAL UNEXPLODED ORDNANCE INTRUSIVE INVESTIGATION SUMMARY REPORT, SOUTH SHORE AREA	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000636 DS.A064.10905 CORRESPONDENCE N68711-00-D-0005 20	**08-18-2003** 09-04-2003 5090.3.A. DO 0064	R. LAGO TETRA TECH EM INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL ADDENDUM 1 TO THE DRAFT FINAL SAMPLING AND ANALYSIS PLAN FOR THE SOIL AND GROUNDWATER SAMPLING AT THE MARE ISLAND ELEMENTARY SCHOOL SITE - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY WITH CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD BASE-READY INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000753 NONE CORRESPONDENCE NONE 1	**08-18-2003** 01-25-2006 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND CONCURRENCE ON THE RESPONSE TO COMMENTS ON THE DRAFT ADDENDUM 1 TO THE DRAFT FINAL SAMPLING AND ANALYSIS PLAN (SAP), SOIL AND GROUNDWATER SAMPLING AT THE MARE ISLAND ELEMENTARY SCHOOL	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001215 NONE CORRESPONDENCE NONE 7	**08-21-2003** 07-18-2008 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA DUNAWAY, J. NAVFAC - SOUTHWEST	COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION FOR INVESTIGATION AREA	ADMIN RECORD	IA F2 SITE 00004	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003512 SWDIV SER 06CM.JD/1206 CORRESPONDENCE NONE 5	**08-21-2003** 10-19-2004 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE DTSC - BERKELEY	COMMENTS ON THE DRAFT AMENDED FY 2004 SITE MANAGEMENT PLAN W/OUT ENCLOSURE) {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000633 FWSD-RAC-03-3180 CORRESPONDENCE N68711-98-D-5713 150	**08-25-2003** 09-04-2003 5090.3.A. 00064	K. WEINGARDT FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	DRAFT SITE-SPECIFIC HEALTH AND SAFETY PLAN FOR THE TIME-CRITICAL REMOVAL ACTION (TCRA) AT THE MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S, REVISION 0	ADMIN RECORD	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001191 NONE CORRESPONDENCE NONE 2	**08-25-2003** 06-12-2008 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST	REQUEST FOR MARE ISLAND STRAIT INTERIM OFFSHORE USE RESTRICTIONS UNTIL A FINDING OF SUITABILITY TO LEASE IS COMPLETED	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000644 WON 12826.001.001.0012.10 REPORT NONE 1000	**08-27-2003** 09-25-2003 5090.3.A. DO 0021	E. POPEK ROY F. WESTON, INC. NAVFAC - SOUTHWEST DIVISION	RCRA/FACILITY LANDFILL, 2003 SEMIANNUAL GROUNDWATER MONITORING REPORT (CONSISTS OF 2 VOLUMES) - INCLUDES CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000672 NONE MINUTES NONE 20	**08-28-2003** 01-19-2004 5090.3.A. NONE	MAE'S LEGAL TRANSCRIBING NAVFAC - SOUTHWEST DIVISION	RESTORATION ADVISORY BOARD (RAB) DRAFT MEETING MINUTES OF 28 AUGUST 2003	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000689 NONE MINUTES NONE 20	**08-28-2003** 04-13-2004 5090.3.A. NONE	CDM FEDERAL PROGRAMS RAB MEMBERS	28 AUGUST 2003 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003628 NONE CORRESPONDENCE NONE 2	**08-28-2003** 01-13-2006 5090.3.A. NONE	E. ROTH U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON THE DRAFT ACTION MEMORANDUM FOR THE CERCLA TIME CRITICAL REMOVAL ACTION, MARINE CORPS FIRING RANGE	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000635 DT 110-04.03 & SWDIV SER 06CM.JD/1228 REPORT N68711-03-C-5004 120	**08-29-2003** 09-04-2003 5090.3.A. 00003	M. FOSTER SULLIVAN CONSULTING GROUP NAVFAC - SOUTHWEST DIVISION	DRAFT TECHNICAL MEMORANDUM FOR THE EVALUATION OF OFFSHORE DATA GAPS [INLCUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000674 FWSD-RAC-03-3540 REPORT N68711-98-D-5713 200	**09-16-2003** 01-19-2004 5090.3.A. 00064	FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	FINAL ACTION MEMORANDUM FOR THE CERCLA TIME-CRITICAL REMOVAL ACTION (TCRA), MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S [SEE RECORD # 1238 - NAVFAC SW TRANSMITTAL LETTER]	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000641 DT 110-03.06 & SEDIV SER 06CM.DR/1298 CORRESPONDENCE N68711-03-C-5004 200	**09-18-2003** 09-25-2003 5090.3.A. 00002	M. FOSTER SULLIVAN CONSULTING GROUP NAVFAC - SOUTHWEST DIVISION	DRAFT SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN), SOIL AND GROUNDWATER SAMPLING HORSE STABLE AREA AND BUILDING 505 UNDERGROUND STORAGE TANK SITES [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000645 WON 12826-001-001-0002 CORRESPONDENCE NONE 400	**09-25-2003** 10-16-2003 5090.3.A. NONE	WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT DATA GAPS SAMPLING PLAN FOR THE INVESTIGATION AREA {PORTION OF MAILING LIST IS SENSITIVE}	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000690 NONE MINUTES NONE 20	**09-25-2003** 04-13-2004 5090.3.A. NONE	CDM FEDERAL PROGRAMS RAB MEMBERS	25 SEPTEMBER 2003 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000559 FWSD-RAC-04-0068 CORRESPONDENCE N68711-98-D-5713 200	**10-09-2003** 10-16-2003 5090.3.A. 00064	R. MARGOTTO FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	FINAL SITE-SPECIFIC HEALTH AND SAFETY PLAN FOR THE TIME-CRITICAL REMOVAL ACTION (TCRA) AT THE MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S, REVISION 0 - INCLUDES RESPONSE TO COMMENTS ON THE DRAFT VERSION	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	181-03-0185 BX 0010 41031808
N00221 / 000770 NONE CORRESPONDENCE NONE 8	**10-14-2003** 01-25-2006 5090.3.A. NONE	G. RILEY CRWQCB - OAKLAND J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON DRAFT FEASIBILITY STUDY, INSTALLATION RESTORATION SITE 17, AND BUILDING 503 AREA, INVESTIGATION AREA A1	ADMIN RECORD	AREA A1 BLDG. 503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001238 SW SER 06CM.JD/1285 CORRESPONDENCE NONE 3	**10-15-2003** 10-01-2008 5090.3.A. NONE	DUNAWAY, J. NAVFAC - SOUTHWEST GRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF THE FINAL ACTION MEMORANDUM FOR THE CERCLA TIME-CRITICAL REMOVAL ACTION (TCRA), MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S (PORTION OF THE MAILING LIST IS SENSITIVE) [W/OUT ENCLOSURE] {***SEE COMMENTS}	ADMIN RECORD SENSITIVE	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001190 NONE CORRESPONDENCE NONE 2	**10-24-2003** 06-12-2008 5090.3.A. NONE	ROTH, E. U.S. EPA - SAN FRANCISCO, CA DUNAWAY, J. NAVFAC - SOUTHWEST	COMMENTS ON THE DRAFT DATA GAPS SAMPLING PLAN FOR THE INVESTIGATION AREA	ADMIN RECORD	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000671 DS.A034.10842 &SWDIV SER. 06CM.JD/1419 REPORT N68711-00-D-0005 150	**10-28-2003** 01-19-2004 5090.3.A. DO 034	P. WILSON TETRA TECH EM INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	DRAFT TECHNICAL MEMORANDUM EVALUATION AND APPROACH FOR TOTAL PETROLEUM HYDROCARBONS (TPH) SCREENING CRITERIA FOR SOIL AND GROUNDWATER [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003627 NONE CORRESPONDENCE NONE 2	**10-28-2003** 01-13-2006 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON THE DRAFT SAMPLING AND ANALYSIS PLAN, SOIL AND GROUNDWATER SAMPLING HORSE STABLE AREA AND BUILDING 505 UNDERGROUND STORAGE TANK SITES	ADMIN RECORD	BLDG. 505	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000687 FWSD-RAC-03-356 & SWDIV SER 06CM.JD/1442 REPORT N68711-98-D-5713 120	**10-30-2003** 03-19-2004 5090.3.A. 00064	FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	APPENDIX G, FINAL EXPLOSIVES SAFETY SUBMISSION FOR THE TIME-CRITICAL REMOVAL ACTION (TCRA) AT THE MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S, REVISION 2 - INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY	ADMIN RECORD	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000691 NONE MINUTES NONE 20	**10-30-2003** 04-13-2004 5090.3.A. NONE	CDM FEDERAL PROGRAMS RAB MEMBERS	30 OCTOBER 2003 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000647 DS.A064.10906 REPORT N68711-00-D-0005 20	**11-01-2003** 12-31-2003 5090.3.A. DO 064	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT ELEMENTARY SCHOOL DATA SUMMARY, AUGUST 2003	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000677 NONE CORRESPONDENCE NONE 2	**11-05-2003** 01-27-2004 5090.3.A. NONE	ROTH, E. U.S. EPA - SAN FRANCISCO, CA DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT FINAL SITE INSPECTION REPORT MANHOLE D1-C85 AND OUTFALLS 22, 23, 25, AND 26 INVESTIGATION AREA C2	ADMIN RECORD INFO REPOSITORY	AREA C2 MANHOLE D1-C85 OUTFALL 22 OUTFALL 23 OUTFALL 25 OUTFALL 26	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000768 NONE CORRESPONDENCE NONE 1	**11-18-2003** 01-25-2006 5090.3.A. NONE	S. SEYMOUR U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC	THANK YOU LETTER FOR THE EFFORTS, ASSISTANCE AND HOSPITALITY EXTENDED TO THE OFFICIALS FROM THE VIET NAM ENVIRONMENTAL PROTECTION AGENCY	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000773 NONE CORRESPONDENCE NONE 1	**11-20-2003** 01-25-2006 5090.3.A. NONE	G. RILEY CRWQCB - OAKLAND J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND NO FURTHER COMMENTS ON THE DRAFT SAMPLING AND ANALYSIS PLAN, SOIL AND GROUNDWATER SAMPLING, HORSE STABLE AREA AND BUILDING 505 UNDERGROUND STORAGE TANK SITES	ADMIN RECORD	BLDG. 505	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000670 DT.110-05.13 & SWDIV SER 06CM.JD/1490 CORRESPONDENCE N68711-03-C-5004 30	**11-24-2003** 01-19-2004 5090.3.A. 00004	M. FOSTER SULLIVAN CONSULTING GROUP D. GODSEY NAVFAC - SOUTHWEST DIVISION	DRAFT ADDENDUM 1 FOR THE REVISED DRAFT FINAL SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN), ADDITIONAL SAMPLING INVESTIGATION AREA F1	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000675 SWDIV SER 06CM.DR/1515 CORRESPONDENCE NONE 7	**11-25-2003** 01-19-2004 5090.3.A. NONE	DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. DTSC - BERKELEY	RESPONSE TO AGENCY COMMENTS ON THE DRAFT SAMPLING AND ANALYSIS PLAN FOR SOIL AND GROUNDWATER SAMPLING HORSE STABLE AREA AND BUILDING 505 UNDERGROUND STORAGE TANK SITES	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. 505	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003631 NONE CORRESPONDENCE NONE 3	**11-25-2003** 01-17-2006 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON DRAFT INVESTIGATION DATA GAPS SAMPLING PLAN, INVESTIGATION AREA H1	ADMIN RECORD	IA H1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000668 WON 12826.001.001.0012.10 CORRESPONDENCE NONE 300	**12-01-2003** 01-05-2004 5090.3.A. DO 0026	WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT WATER QUALITY SAMPLING AND ANALYSIS PLAN FOR THE RCRA/FACILITY LANDFILL POST-CLOSURE GROUNDWATER MONITORING - INCLUDES CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000669 2012 & SWDIV SER 06CM.JD/1523 CORRESPONDENCE N68711-01-D-6010 300	**12-01-2003** 01-19-2004 5090.3.A. 00003	L. MAGGINI WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT ENGINEERING EVALUATION/COST ANALYSIS REMOVAL ACTION WORK PLAN FOR THE OPERATION OF MARE ISLAND ORDNANCE STORAGE AND TREATMENT FACILITIES, INCLUDES - (SWDIV TRANSMITTAL LETTER BY J. DUNAWAY), [PORTION OF MAILING LIST IS CONFIDENTIAL]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000692 NONE MINUTES NONE 20	**12-11-2003** 04-13-2004 5090.3.A. NONE	CDM FEDERAL PROGRAMS RAB MEMBERS	11 DECEMBER 2003 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000651 DT 110-04.11 & 06CM.JD/1573 REPORT N68711-03-C-5004 50	**12-12-2003** 12-31-2003 5090.3.A. 00003	FOSTER, M. SULLIVAN CONSULTING GROUP GODSEY, D. NAVFAC - SOUTHWEST DIVISION	DRAFT FORMER NORTH BUILDING WAYS ADDITIONAL SAMPLING SUMMARY REPORT, INVESTIGATION AREA - INCLUDES ELECTRONIC VERSION AND SWDIV TRANSMITTAL LETTER BY J. DUNAWAY WITH CONFIDENTIAL DISTRIBUTION LIST	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA A2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000653 DT 110-06.06 & SWDIV SER 06CM.JD/1586 CORRESPONDENCE N68711-03-C-5012 150	**12-18-2003** 12-31-2003 5090.3.A. 00001	M. FOSTER SULLIVAN CONSULTING GROUP NAVFAC - SOUTHWEST DIVISION	DRAFT SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN) FOR THE SOIL AND GROUNDWATER SAMPLING AT THE PAINT WASTE INVESTIGATION AREA I REUSE PARCEL XVI	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA I PARCEL XVI	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003643 NONE CORRESPONDENCE NONE 1	**01-13-2004** 01-17-2006 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND NO FURTHER COMMENTS ON RESPONSE TO EPA COMMENTS ON DRAFT SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN) SOIL AND GROUNDWATER SAMPLING AT THE HORSE STABLE AREA AND BUILDING 505 UNDERGROUND STORAGE TANK (UST)SITES	ADMIN RECORD	BLDG. 505	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000681 DT 110-03.08 CORRESPONDENCE N68711-03-C-5004 200	**01-26-2004** 02-12-2004 5090.3.A. 00002	M. FOSTER SULLIVAN CONSULTING GROUP NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN), SOIL AND GROUNDWATER SAMPLING HORSE STABLE AREA AND BUILDING 505 UNDERGROUND STORAGE TANK SITES	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. 505	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003626 NONE CORRESPONDENCE NONE 8	**01-27-2004** 01-13-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON THE DRAFT TECHNICAL MEMORANDUM, EVALUATION OF OFFSHORE DATA GAPS (INCLUDES COMMENTS BY HERD DATED 10/21/2003)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000693 NONE MINUTES NONE 20	**01-29-2004** 04-13-2004 5090.3.A. NONE	CDM FEDERAL PROGRAMS RAB MEMBERS	29 JANUARY 2004 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000678 WON. 12826-001-001-0002-84 CORRESPONDENCE NONE 350	**02-01-2004** 02-12-2004 5090.3.A. NONE	W. KARLOVITZ WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	GROUNDWATER CONTAINMENT AND EXTRACTION REMEDIAL DESIGN PLAN AREA H1 LANDFILL	ADMIN RECORD INFO REPOSITORY	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003642 NONE CORRESPONDENCE NONE 2	**02-05-2004** 01-17-2006 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON DRAFT SAMPLING AND ANALYSIS PLAN FOR SOIL AND GROUNDWATER SAMPLING AT THE PAINT WASTE AREA INVESTIGATION AREA I, REUSE PARCEL XVI	ADMIN RECORD	AREA I REUSE PARCEL XVI	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003476 DS. A062.13115 CORRESPONDENCE N68711-00-D-0005 30	**02-19-2004** 02-25-2004 5090.3.A. 00062	M. WANTA TETRA TECH EM INC. R. FULLER NAVFAC - SOUTHWEST DIVISION	DRAFT SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN) SOIL GAS INVESTIGATION AT THE FORMER DEGREASING PLANT INVESTIGATION AREA C2 (SEE AR #3527 - DRAFT SAP ADDENDUM)	ADMIN RECORD INFO REPOSITORY	IA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003562 FWSD-RAC-04-1044 REPORT N68711-98-D-5713 20	**02-19-2004** 08-05-2005 5090.3.A. 00073	V. RICHARDS FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	ADDENDUM TO THE FINAL SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING AND QUALITY ASSURANCE PROJECT PLAN) REVISION 0 [CD COPY ENCLOSED] (SEE AR# 630 DRAFT PROJECT WORK PLAN, REVISION 1)	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003514 SWDIV SER 06CM.JD/0202 CORRESPONDENCE NONE 4	**02-20-2004** 10-22-2004 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF SOIL GAS SAMPLNG AND ANALYSIS PLAN (SAP) FOR THE FORMER DEGREASING PLANT [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL} (SEE AR #3476 - DRAFT SAP)	ADMIN RECORD INFO REPOSITORY	BLDG. 742	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000688 WON 12826.001.001.0012.35 REPORT NONE 200	**02-27-2004** 03-19-2004 5090.3.A. 00031	E. POPEK WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)/FACILITY LANDFILL 2003 ANNUAL GROUNDWATER MONITORING REPORT	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003625 NONE CORRESPONDENCE NONE 2	**03-02-2004** 01-13-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON THE SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN) SOIL GAS INVESTIGATION AT THE FORMER DEGREASING PLANT, INVESTIGATION AREA C2	ADMIN RECORD	IA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003636 NONE CORRESPONDENCE NONE 12	**03-04-2004** 01-17-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	PERCHLORATE LABORATORY ANALYSIS RESULTS OF DUPLICATE GROUNDWATER SAMPLE FROM MONITORING WELL 01W34AN (INCLUDES GSU COMMENTS DATED 3/03/04)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000749 NONE CORRESPONDENCE NONE 1	**03-08-2004** 01-25-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	LETTER DOCUMENTING AGREEMENT REGARDING FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003480 0019 & SWDIV SER. 06CM.JD/0542 CORRESPONDENCE NONE 300	**03-12-2004** 05-21-2004 5090.3.A. NONE	WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	FINAL ACTION MEMORANDUM/INTERIM REMEDIAL ACTION PLAN CONTAINMENT BARRIER AND EXTRACTION TRENCH TIME CRITICAL REMOVAL ACTION INVESTIGATION	ADMIN RECORD BASE INFO REPOSITORY SENSITIVE	0H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001192 NONE CORRESPONDENCE NONE 1	**03-16-2004** 06-12-2008 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. NAVFAC - SOUTHWEST	COMMENTS ON THE DRAFT FINAL UNEXPLODED ORDNANCE INTRUSIVE INVESTIGATION SUMMARY REPORT, SOUTH SHORE AREA (SEE COMMENTS.)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003641 NONE CORRESPONDENCE NONE 2	**03-16-2004** 01-17-2006 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON THE DRAFT SAMPLING AND ANALYSIS PLAN FOR SOIL GAS INVESTIGATION AT THE FORMER DEGREASING PLANT, INVESTIGATION AREA C2	ADMIN RECORD	AREA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001193 FILE NO. 2129.2011(AWN) CORRESPONDENCE NONE 3	**03-17-2004** 06-12-2008 5090.3.A. NONE	SCOTT, C. CRWQCB - OAKLAND, CA DUNAWAY, J. NAVFAC - SOUTHWEST	APPROVAL OF REQUEST FOR CONCURRENCE WITH GROUNDWATER BENEFICIAL USE EXCEPTION FOR MUNICIPAL AND DOMESTIC SUPPLY INVESTIGATION AREA	ADMIN RECORD	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001216 FILE NO. 2129.2011 (GJR) CORRESPONDENCE NONE 3	**03-17-2004** 07-18-2008 5090.3.A. NONE	RILEY, G. CRWQCB - OAKLAND, CA DUNAWAY, J. NAVFAC - SOUTHWEST	COMMENTS ON THE DRAFT INVESTIGATION AREA REMEDIAL INVESTIGATION	ADMIN RECORD	IA F2 SITE 00004	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003646 NONE CORRESPONDENCE NONE 12	**03-18-2004** 01-24-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON THE GROUNDWATER CONTAINMENT AND EXTRACTION REMEDIAL DESIGN PLAN, AREA H1 LANDFILL (INCLUDES GSU COMMENTS DATED 3/8/04, 3-16-04 & 3/18/04)	ADMIN RECORD	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003520 SWDIV SER 06CM.JD/0309 CORRESPONDENCE NONE 3	**03-23-2004** 10-27-2004 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE CAL-EPA - BERKELEY	TRANSMITTAL OF 04 MARCH 2004 MEETING SUMMARY TO DISCUSS THE DRAFT DATA GAPS TECHNICAL MEMORANDUM FOR THE OFFSHORE AREAS AND OTHER ONSHORE RISK ASSESSMENT ISSUES {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003491 NONE MINUTES NONE 49	**03-25-2004** 07-14-2004 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	25 MARCH 2004 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003477 04-1023 & SWDIV SER. 06CM.JD/0400 REPORT N68711-98-D-5713 40	**03-26-2004** 05-05-2004 5090.3.A. 00073	FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	APPENDIX G - FINAL EXPLOSIVES SAFETY SUBMISSION REVISION 3 TIME-CRITICAL REMOVAL ACTION AT THE FIRING RANGE AND HISTORICAL OUTFALLS 4S (SEE AR # 686 APPENDIX G DRAFT REV. 1), [AR # 687FINAL REV.2], (AR #3478 APPENDIX G FINAL REV. 4)	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003561 FWSD-RAC-04-1371 REPORT N68711-98-D-5713 50	**03-26-2004** 08-05-2005 5090.3.A. 00073	K. WEINGARDT TETRA TECH FW INC. NAVFAC - SOUTHWEST DIVISION	RADIOLOGICAL SURVEY PLAN FOR TIME CRITICAL REMOVAL ACTION	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003565 FWSD-RAC-04-1476 REPORT N68711-98-D-5713 75	**03-26-2004** 08-19-2005 5090.3.A. 00073	TETRA TECH FW INC.	APPENDIX H - FINAL STANDARD OPERATING PROCEDURE ONE (SOP-1) MUNITION AND EXPLOSIVES OF CONCERN, RECOVERY, STORAGE AND DISPOSITION REVISION 2 (SEE AR#687 REVISION 1AND AR# 3566 REVISION 3)	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003481 2013 & SER. 06CM.JD/0261 REPORT N68711-01-D-6010 30	**04-01-2004** 05-21-2004 5090.3.A. 00003	WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	NON-CRITICAL REMOVAL ACTION, ACTION MEMORANDUM, OPERATION OF MARE ISLAND ORDNANCE STORAGE AND TREATMENT FACILITIES [SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] (PORTION OF MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD BASE INFO REPOSITORY SENSITIVE	SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001194 NONE CORRESPONDENCE NONE 2	**04-14-2004** 06-12-2008 5090.3.A. NONE	ROTH, E. U.S. EPA - SAN FRANCISCO, CA DUNAWAY, J. NAVFAC - SOUTHWEST	COMMENTS ON THE ECOLOGICAL RISK ASSESSMENT (ERA) MEETING OF 04 MARCH 2004	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003482 2012 CORRESPONDENCE N68711-01-D-6010 75	**04-14-2004** 05-21-2004 5090.3.A. 00003	MAGGINI, L. WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	FINAL ENGINEERING EVALUATION/COST ANALYSIS REMOVAL ACTION WORKPLAN, OPERATION OF MARE ISLAN ORDNANCE STORAGE AND TREATMENT FACILITIES, SEE AR # 669 DRAFT ENGINEERING EVALUATION/COST ANALYSIS REMOVAL ACTION WORKPLAN	ADMIN RECORD BASE INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003492 DT 110-06.04 & SER 06CM.DR/0419 REPORT N68711-03-C-5012 200	**04-15-2004** 07-27-2004 5090.3.A. NONE	M. FOSTER SULLIVAN CONSULTING GROUP D. ROLLEFSON NAVFAC - SOUTHWEST DIVISION	FINAL POST-CONSTRUCTION REPORT FOR THE PAINT WASTE ARE INVESTIGATION AREA I REFUSE PARCEL XVI [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL XVI	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003483 04-1954 REPORT N68711-98-D-5713 33	**04-27-2004** 05-27-2004 5090.3.A. 00073	BRICE ENVIRONMENTAL SVS CORP. NAVFAC - SOUTHWEST DIVISION	IMPLEMENTATION STUDY FOR PARTICLE SEPARATION USMC SMALL ARMS FIRING RANGES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003484 04-1953 REPORT N68711-98-D-5713 13	**04-28-2004** 05-27-2004 5090.3.A. 00073	T. MOODY METALS TREATMENT TECHNOLOGIES NAVFAC - SOUTHWEST DIVISION	TREATABILITY REPORT PHASE II	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003489 NONE MINUTES NONE 33	**04-29-2004** 07-14-2004 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	29 APRIL 2004 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003478 04-1023 REPORT N68711-98-D-5713 20	**04-30-2004** 05-05-2004 5090.3.A. 00073	FOSTER WHEELER NAVFAC - SOUTHWEST DIVISION	APPENDIX G FINAL EXPLOSIVES SAFETY SUMISSION REVISION 4 TIME-CRITICAL REMOVAL ACTION AT THE FIRING RANGE AND HISTORIC OUTFALL 4S REVISION 4 (SEE AR #686 APPENDIX G DRAFT REV. 1),[AR #687APPENDIX G FINAL REV. 2], (AR #3477 APPENDIX G FINAL REV. 3)	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003479 04-1023 REV. 5 REPORT N68711-98-D-5713 (RAC III) 40	**05-05-2004** 05-11-2004 5090.3.A. 00073	TETRA TECH FW INC. NAVFAC - SOUTHWEST DIVISION	APPENDIX G FINAL EXPLOSIVES SAFETY SUBMISSION REV. 5 TIME CRITICAL REMOVAL ACTION AT THE FIRING RANGE AND HISTORIC OUTFALL 4S SEE AR#686 APPENDIX G DRAFT REV. 1, [SEE AR#687 APPENDIX G FINAL REV.2, AR#3477 APPENDIX G FINAL REV. 3, AR #3478 FINAL REV. 4]	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003566 FWSD-RAC-04-1476 REPORT N68711-98-D-5713 75	**05-05-2004** 08-19-2005 5090.3.A. 00073	TETRA TECH FW INC. NAVFAC - SOUTHWEST DIVISION	APPENDIX H - FINAL STANDARD OPERATING PROCEDURE ONE (SOP-1) MUNITION AND EXPLOSIVES OF CONCERN, RECOVERY, STORAGE AND DISPOSITION REVISION 3 (SEE AR# 687 REVISION 1 AND AR# 3565 REVISION 3)	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003521 SWDIV SER 06CM.BA/0513 CORRESPONDENCE NONE 2	**05-10-2004** 10-27-2004 5090.3.A. NONE	DUNAWAY, J. NAVFAC - SOUTHWEST DIVISION GRIBBLE, C. CAL-EPA - BERKELEY	TRANSMITTAL OF RESPONSE TO COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION FOR INVESTIGATION AREA (W/ OUT ENCLOSURE) [RESPONSE TO COMMENTS WAS NOT SUBMITTED TO THE ADMINISTRATIVE RECORD] {PORTION OF MAILING LIST IS SENSITIVE}	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA F2 SITE 00004	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003490 NONE MINUTES NONE 36	**05-20-2004** 07-14-2004 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	20 MAY 2004 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003624 NONE CORRESPONDENCE NONE 4	**05-20-2004** 01-13-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA D. GEMAR WESTON SOLUTIONS, INC	COMMENTS ON THE WELL DECOMMISSIONING SPECIFICATIONS, GROUNDWATER CONTAINMENT AND EXTRACTION REMEDIAL DESIGN PLAN, INVESTIGATION AREA H1 (INCLUDES COMMENTS BY GSU DATED 5-18-04)	ADMIN RECORD	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003486 DS.A062.14220 & SWDIV SER. 06CM.JD/0600 CORRESPONDENCE N68711-00-D-0005 30	**06-08-2004** 06-24-2004 5090.3.A. DO 0062	P. WILSON TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT ADDENDUM 2, FOR THE REVISED DRAFT FINAL SAMPLING AND ANALYSIS PLAN (SAP), (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN), SOIL GAS INVESTIGATION AT INVESTIGATION AREAS	ADMIN RECORD INFO REPOSITORY SENSITIVE	F1 F2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000762 NONE CORRESPONDENCE NONE 1	**06-17-2004** 01-25-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA D. GEMAR WESTON SOLUTIONS, INC.	REVIEW AND APPROVAL OF THE GROUNDWATER CONTAINMENT AND EXTRACTION REMEDIAL DESIGN PLAN, INVESTIGATION AREA H1 LANDFILL AS A FINAL DOCUMENT	ADMIN RECORD	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003485 NONE REPORT N68711-03-C-5004 13	**06-17-2004** 06-21-2004 5090.3.A. 00004	M. FOSTER SULLIVAN CONSULTING GROUP D. GODSEY NAVFAC - SOUTHWEST DIVISION	DRAFT LETTER REPORT GROUNDWATER SAMPLING FOR PERCHLORATE AT INVESTIGATION AREA, [PORTION OF MAILING LIST IS CONFIDENTIAL]	ADMIN RECORD INFO REPOSITORY SENSITIVE	F1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003487 SWDIV SER 06CA.SB/0652 CORRESPONDENCE NONE 14	**06-23-2004** 06-24-2004 5090.3.A. NONE	BRYANT, S. NAVFAC - SOUTHWEST DIVISION BUFORD, D. US FISH AND WILDLIFE SERVICES	RESPONSE OF ACTION AND APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR) REQUIREMENTS, SECTION 7, CONCURRENCE REQUEST ON PAINT WASTE AREA, REUSE PARCEL, INVESTIGATION AREA [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY	PARCEL XVI SITE 00001	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003621 NONE CORRESPONDENCE NONE 2	**06-23-2004** 01-13-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON THE DRAFT FINAL REMEDIAL INVESTIGATION AND ON THE DRAFT FEASIBILITY STUDY	ADMIN RECORD	AREA A1 BLDG. 503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003517 NONE MINUTES NONE 20	**06-24-2004** 10-27-2004 5090.3.A. NONE	CDM FEDERAL PROGRAMS RAB MEMBERS	24 JUNE 2004 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003494 DT 110-04.04&SWDIV SER. 06CM.JD/0780 REPORT N68711-03-C-5004 200	**07-01-2004** 08-03-2004 5090.3.A. 00003	SULLIVAN CONSULTING GROUP, INC NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL TECHNICAL MEMORANDUM EVALUATION OF OFFSHORE DATA GAPS [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL;CD COPY ENCLOSED}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003500 NONE CORRESPONDENCE NONE 60	**07-01-2004** 08-23-2004 5090.3.A. NONE	WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON THE DRAFT FINAL REMEDIAL INVESTIGATION (RI), IA HI MANY OF THE COMMENTS AND RESPONSES APPLY TO THIS DOCUMENT	ADMIN RECORD INFO REPOSITORY	SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003620 NONE CORRESPONDENCE NONE 3	**07-08-2004** 01-13-2006 5090.3.A. NONE	F. GRAY DEPT OF FISH AND GAME C. GRIBBLE DTSC - BERKELEY	REVIEW AND COMMENTS ON THE TECHNICAL MEMORANDUM EVALUATION OF OFFSHORE DATA GAPS	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003493 FWSD-RAC-04-2399 REPORT N68711-98-D-5713 20	**07-13-2004** 07-27-2004 5090.3.A. 00073	T. MOODY TETRA TECH FW INC. NAVFAC - SOUTHWEST DIVISION	TREATABILITY REPORT, PHASE III	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000720 NONE CORRESPONDENCE NONE 45	**07-21-2004** 11-30-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS BY GSU DATED 7/19/04 ON THE DRAFT WATER QUALITY SAMPLING AND ANALYSIS PLAN, RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) / FACILITY LANDFILL POST-CLOSURE GROUNDWATER MONITORING	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003495 WORK ORDER NO. 12827-001-001-0002 REPORT NONE 1000	**07-22-2004** 08-03-2004 5090.3.A. NONE	KARLOVITZ, W. WESTON SOLUTIONS, INC NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL REMEDIAL INVESTIGATION REPORT, INVESTIGATION AREA H1 (CD COPY OF DOCUMENT AND APPENDICES A THROUGH N ENCLOSED)	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003647 NONE CORRESPONDENCE NONE 1	**07-22-2004** 01-24-2006 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND CONCURRENCE ON DRAFT LETTER REPORT, GROUNDWATER SAMPLING FOR PERCHLORATE AT INVESTIGATION AREA F1	ADMIN RECORD	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003630 NONE CORRESPONDENCE NONE 20	**07-28-2004** 01-13-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON THE DRAFT WATER QUALITY SAMPLING AND ANALYSIS PLAN RCRA/FACILITY LANDFILL POST-CLOSURE GROUNDWATER MONITORING (INCLUDES COMMENTS BY GSUDATED 7-19-04)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003518 NONE MINUTES NONE 20	**07-29-2004** 10-27-2004 5090.3.A. NONE	CDM FEDERAL PROGRAMS RAB MEMBERS	29 JULY 2004 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003496 SWDIV SER 06CM.DR/0809 REPORT N68711-03-C-5004 40	**08-01-2004** 08-10-2004 5090.3.A. 00002	FOSTER, M. SULLIVAN CONSULTING GROUP NAVFAC - SOUTHWEST DIVISION	DRAFT SITE INSPECTION OF THE HORSE STABLE AREA {INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY} (PORTION OF MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003497 SWDIV SER. 06CM.DR/0819 REPORT N68711-03-C-5004 20	**08-01-2004** 08-13-2004 5090.3.A. 00002	M. FOSTER SULLIVAN CONSULTING GROUP, INC NAVFAC - SOUTHWEST DIVISION	DRAFT BUILDING 505 UNDERGROUND STORAGE TANKS (UST) CLOSURE REPORT, REQUEST FOR NO FURTHER ACTION {SWDIV TRANSMITTAL LETTER BY J. DUNAWAY} (PORTION OF MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. 505	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003502 DT. 110-06.08 & SWDIV SER. 06CM.DR/0875 CORRESPONDENCE N68711-03-C-5012 75	**08-01-2004** 08-31-2004 5090.3.A. NONE	M. SHAHBAZIAN SULLIVAN CONSULTING GROUP NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL SAMPLING AND ANALYSIS PLAN (SAP) (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN) SOIL AND GROUNDWATER SAMPLING PAINT WASTE AREA INVESTIGATION AREA [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA 00001 PARCEL XVI	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000747 NONE CORRESPONDENCE NONE 1	**08-03-2004** 01-25-2006 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	LETTER OF FORMAL NOTIFICATION THAT CAROLYN D'ALMEIDA WILL BE TAKING OVER AS PRIMARY EPA CONTACT, REPLACING EMILY ROTH	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003501 SWDIV SER 03EN.WS/025 REPORT NONE 40	**08-05-2004** 08-31-2004 5090.3.A. NONE	SANDZA, W. NAVFAC - SOUTHWEST DIVISION LANDIS, A. DTSC - SACRAMENTO	DRAFT SITE MANAGEMENT PLAN (SMP) FOR FISCAL YEAR 2005 [PORTION OF MAILING LIST IS CONFIDENTIAL]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003503 DS.B020.13960 & SWDIV SER. 06CM.JD/0827 REPORT N68711-03-D-5104 80	**08-11-2004** 09-02-2004 5090.3.A. 00020	KELLY, D. SULTECH NAVFAC - SOUTHWEST DIVISION	DRAFT SUPPLEMENTAL ENVIRONMENTAL BASELINE SURVEY REMAINING NAVY OWNED UPLAND PROPERTY [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL;CD COPY ENCLOSED}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003640 NONE CORRESPONDENCE NONE 2	**08-11-2004** 01-17-2006 5090.3.A. NONE	G. RILEY CRWQCB - SAN FRANCISCO J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	COMMENTS ON DRAFT LETTER REPORT, GROUNDWATER SAMPLING FOR PERCHLORATE AT INVESTIGATION AREA F1	ADMIN RECORD	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003499 00032 REPORT NONE 100	**08-13-2004** 08-18-2004 5090.3.A. NONE	E. POPEK WESTON SOLUTIONS, INC. THE CITY OF VALLEJO	RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)/FACILITY LANDFILL 2004 SEMI-ANNUAL GROUNDWATER MONITORING REPORT [PORTION OF MAILING LIST IS CONFIDENTIAL; CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003498 SWDIV SER 06CM.DR/0804 REPORT N62467-98-D-0995 600	**08-18-2004** 08-13-2004 5090.3.A. 00065	CH2MHILL NAVFAC - SOUTHWEST DIVISION	DRAFT ENGINEERING EVALUATION/COST ANALYSIS: NON-TIME-CRITICAL REMOVAL ACTION FOR THE FENCED SCRAPYARD AREA OF THE DEFENSE REUTILIZATION AND MARKETING OFFICE SITE, VOLUME I	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001217 NONE CORRESPONDENCE NONE 6	**08-19-2004** 07-18-2008 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA DUNAWAY, J. NAVFAC - SOUTHWEST	RESPONSE TO COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION FOR INVESTIGATION AREA	ADMIN RECORD	IA F2 SITE 00004	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003634 NONE REPORT NONE 2	**08-24-2004** 01-17-2006 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON THE DRAFT FINAL TECHNICAL MEMORANDUM EVALUATION OF OFFSHORE DATA GAPS	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003519 NONE MINUTES NONE 40	**08-26-2004** 10-27-2004 5090.3.A. NONE	CDM FEDERAL PROGRAMS RAB MEMBERS	26 AUGUST 2004 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003504 DT 110-03.21 & SWDIV 06CM.DR/0938 REPORT N68711-03-C-5004 30	**09-01-2004** 09-20-2004 5090.3.A. 00002	M. FOSTER SULLIVAN CONSULTING GROUP, INC NAVFAC - SOUTHWEST DIVISION	FINAL BUILDING UNDERGROUND STORAGE TANK (UST)S CLOSURE REPORT - REQUEST FOR NO FURTHER ACTION [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. 505	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003506 NONE CORRESPONDENCE NONE 1	**09-14-2004** 10-04-2004 5090.3.A. NONE	ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEWED AND HAVE NO COMMENTS ON DRAFT FINAL SAMPLING AND ANALYSIS PLAN (SAP) (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN) SOIL AND GROUNDWATER SAMPLING PAINT WASTE AREA INVESTIGATION AREA	ADMIN RECORD INFO REPOSITORY	PARCEL XVI SITE 00001	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003505 SWDIV SER 06CM.DR/0950 CORRESPONDENCE NONE 5	**09-15-2004** 09-22-2004 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE CALIFORNIA EPA	DEPARTMENT OF THE NAVY (DON) REQUESTS ACTION SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) ALONG WITH THE CHEMICAL-SPECIFIC AND LOCATION-SPECIFIC {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003522 SWDIV SER 06CM.JD/0952 CORRESPONDENCE NONE 3	**09-16-2004** 10-27-2004 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION VARIOUS AGENCIES	INTERAGENCY COORDINATION MEETING REQUEST (PLANNING DOCUMENTS WERE NOT SUBMITTED TO ADMINISTRATIVE RECORDS) {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003622 NONE CORRESPONDENCE NONE 6	**09-17-2004** 01-13-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON DRAFT SITE MANAGEMENT PLAN, FISCAL YEAR 2005	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003507 NONE CORRESPONDENCE NONE 1	**09-22-2004** 10-04-2004 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEWED AND HAS NO COMMENTS ON DRAFT FINAL SAMPLING AND ANALYSIS PLAN (SAP) (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN) SOIL AND GROUNDWATER SAMPLING PAINT WASTE AREA, INVESTIGATION AREA	ADMIN RECORD INFO REPOSITORY	PARCEL XVI SITE 00001	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003531 NONE MINUTES NONE 14	**09-30-2004** 01-27-2005 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION	30 SEPTEMBER 2004 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003508 SWDIV SER 06CM.JD/1011 CORRESPONDENCE NONE 400	**10-01-2004** 10-05-2004 5090.3.A. DO 0026	T. WALKER WESTON SOLUTIONS, INC. CITY OF VALLEJO	DRAFT FINAL WATER QUALITY SAMPLING AND ANALYSIS PLAN (SAP) INVESTIGATION AREA RCRA LANDFILL AND IWTP SURFACE IMPOUNDMENTS POST-CLOSURE GROUNDWATER MONITORING [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003513 DS.B047.14369 CORRESPONDENCE N68711-03-D-5104 30	**10-01-2004** 10-19-2004 5090.3.A. 00047	P. BAUR SULTEC NAVFAC - SOUTHWEST DIVISION	DRAFT WORK PLAN DRAIN LINE CLEANOUT	ADMIN RECORD INFO REPOSITORY	BLDG. A17	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003523 BRAC SER BPMOW.KRE/0046 REPORT N68711-03-C-5004 20	**10-01-2004** 10-27-2004 5090.3.A. NONE	M. FOSTER SULLIVAN CONSULTING GROUP NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL LETTER REPORT, GROUNDWATER SAMPLING FOR PERCHLORATE AT INVESTIGATION AREA {PORTION OF MAILING LIST IS CONFIDENTIAL, CD COPY ENCLOSED}	ADMIN RECORD INFO REPOSITORY SENSITIVE	F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003637 NONE CORRESPONDENCE NONE 1	**10-04-2004** 01-17-2006 5090.3.A. NONE	G. RILEY CRWQCB - OAKLAND J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND NO COMMENTS ON DRAFT FINAL SITE INSPECTION REPORT, MANHOLE D1-C85 AND OUTFALLS 22, 23, 25, AND 26, INVESTIGATION AREA C2	ADMIN RECORD	AREA C2 MANHOLE D1-C85 OUTFALL 22 OUTFALL 23 OUTFALL 25 OUTFALL 26	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003638 NONE CORRESPONDENCE NONE 1	**10-04-2004** 01-17-2006 5090.3.A. NONE	G. RILEY CRWQCB - OAKLAND J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND NO COMMENTS ON DRAFT POST CONSTRUCTION REPORT FOR THE PAINT WASTE AREA, INVESTIGATION AREA I REUSE PARCEL XVI	ADMIN RECORD	AREA I PARCEL XVI	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001195 FILE NO. 2129.2011 (GJR) CORRESPONDENCE NONE 3	**10-05-2004** 06-12-2008 5090.3.A. NONE	RILEY, G. CRWQCB - OAKLAND, CA DUNAWAY, J. NAVFAC - SOUTHWEST	COMMENTS ON THE DRAFT SITE MANAGEMENT PLAN	ADMIN RECORD	IA A2 IA K PARCEL XVI UST A71-W	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003515 BRAC SER BPMOW/0006 CORRESPONDENCE NONE 4	**10-15-2004** 10-22-2004 5090.3.A. NONE	LEE, A. NAVFAC - SOUTHWEST DIVISION A. LANDIS DTSC - SACRAMENTO	TRANSMITTAL OF REVISED DRAFT FY05 SITE MANAGEMENT PLAN (SMP) AND RESPONSE TO COMMENTS (W/OUT ENCLOSURE) {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003516 BRAC SER BPMOW/0003 CORRESPONDENCE NONE 3	**10-15-2004** 10-22-2004 5090.3.A. NONE	LEE, A. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	DEPARTMENT OF THE NAVY (DON) REQUESTING THAT DTSC, IDENTIFY POTENTIAL STATE CHEMICAL-SPECIFIC, LOCATION-SPECIFIC AND ACTION SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) FOR A PROPOSED REMEDIAL ACTION FOR INVESTIGATION	ADMIN RECORD INFO REPOSITORY	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003629 NONE CORRESPONDENCE NONE 1	**10-19-2004** 01-13-2006 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON THE DRAFT SITE INSPECTION OF THE HORSE STABLE AREA	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003524 BRAC SER BPMOW.KRE/0046 CORRESPONDENCE NONE 4	**10-26-2004** 11-01-2004 5090.3.A. NONE	LEE, A. BRAC - SAN DIEGO C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF DRAFT FINAL LETTER REPORT, GROUNDWATER SAMPLING FOR PERCHLORATE AT INVESTIGATION AREA F1 (W/ OUT ENCLOSURE) {PORTION OF MAILING LIST IS CONFIDENTIAL} (SEE AR #3523 - DRAFT FINAL LETTER REPORT)	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003532 NONE MINUTES NONE 19	**10-28-2004** 01-27-2005 5090.3.A. NONE	NAVFAC - SOUTHWEST DIVISION	28 OCTOBER 2004 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003525 0034 SWDIV SER BPMOW.JTD/0103 REPORT NONE 300	**11-01-2004** 12-02-2004 5090.3.A. NONE	WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT FEASIBILITY STUDY FOR INVESTIGATION AREA H-1 [INCLUDES SWDIV TRANSMITTAL LETTER BY A. LEE] {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003639 NONE CORRESPONDENCE NONE 1	**11-02-2004** 01-17-2006 5090.3.A. NONE	G. RILEY CRWQCB J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON THE DRAFT FINAL LETTER REPORT, GROUNDWATER SAMPLING FOR PERCHLORATE AT INVESTIGATION AREA F1	ADMIN RECORD	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003644 NONE CORRESPONDENCE NONE 23	**11-12-2004** 01-17-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA D. GEMAR NAVFAC - SOUTHWEST DIVISION	ADDITIONAL COMMENTS ON THE DRAFT FINAL REMEDIAL INVESTIGATION, INVESTIGATION AREA H1 (INCLUDES GSU COMMENTS DATED 11/05/04, AND HERD COMMENTS DATED 10/29/04)	ADMIN RECORD	IA H1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003526 BRAC SER BPMOW.JTD/0149 CORRESPONDENCE NONE 6	**11-24-2004** 12-09-2004 5090.3.A. NONE	LEE, A. BRAC - SAN DIEGO C. GRIBBLE DTSC - BERKELEY	NAVY'S PROPOSED STRATEGY TO DEVELOP THE REMEDIAL ACTION FOR INSTALLATION RESTORATION SITE {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. 503 BLDG. 517 BLDG. 519 BLDG. 519-A BLDG. 567 IA A1 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003548 FWSD-RAC-04-2638 REPORT N68711-98-D-5713 600	**11-30-2004** 05-03-2005 5090.3.A. 00073	K. WEINGARDT TETRA TECH FW, INC. NAVFAC - SOUTHWEST DIVISION	FINAL STATUS SUMMARY REPORT FOR THE TIME-CRITICAL REMOVAL ACTION AT THE FIRING RANGE AND HISTORIC OUTFALL 4S, REVISION 0	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003544 NONE MINUTES NONE 14	**12-02-2004** 03-30-2005 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	02 DECEMBER 2004 RESTORATION ADVISORY BOARD (RAB) DRAFT MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003623 NONE CORRESPONDENCE NONE 30	**12-09-2004** 01-13-2006 5090.3.A. NONE	GRIBBLE, C. DTSC J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	REVIEW AND COMMENTS ON THE REVISED DRAFT SITE MANAGEMENT PLAN, FISCAL YEAR 2005, AND COMMENTS ON THE NAVY RESPONSE TO COMMENTS ON THE DRAFT SITE MANAGEMENT PLAN, FISCAL YEAR 2005	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003528 BRAC SER BPMOW.DR/0229 REPORT N62474-98-D-0995 50	**12-10-2004** 01-18-2005 5090.3.A. 00065	CH2M HILL NAVFAC - SOUTHWEST DIVISION	DRAFT ACTION MEMORANDUM, NON-TIME CRITICAL REMOVAL ACTION FOR THE FENCED SCRAPYARD AREA OF THE DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SITE [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003529 BRAC SER BPMOW.DR/0229 REPORT N62474-98-D-0995 1500	**12-10-2004** 01-18-2005 5090.3.A. 00065	CH2MHILL NAVFAC - SOUTHWEST DIVISION	DRAFT REMOVAL ACTION WORK PLAN, NON-TIME-CRITICAL REMOVAL ACTION FOR THE FENCED SCRAPYARD AREA OF THE DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SITE, VOLUME I-II OF II [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000724 NONE CORRESPONDENCE NONE 2	**01-12-2005** 11-30-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC	ADDITIONAL COMMENTS ON THE OVERSIGHT REPORT FOR MEC (MUNITIONS AND EXPLOSIVES OF CONCERN) SOIL SCREENING OPERATION AT MINS CORAL SEA HOUSING AREA	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003527 DS.A062.19597 & SWDIV SER BPMOW.JD/0292 REPORT N68711-00-D-0005 150	**01-14-2005** 01-18-2005 5090.3.A. DO 0062	P. WILSON TETRA TECH EM INC. D. GODSEY NAVFAC - SOUTHWEST DIVISION	DRAFT SAMPLING AND ANALYSIS PLAN ADDENDUM (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN) ADDITIONAL CHARACTERIZATION AT THE FORMER DEGREASING PLAN, INVESTIGATION AREA C2 [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY]	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003608 NONE CORRESPONDENCE NONE 2	**01-20-2005** 12-15-2005 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON THE DRAFT ENGINEERING EVALUATION/COST ANALYSIS: NON-TIME CRITICAL REMOVAL ACTION FOR THE FENCED SCRAPYARD AREA OF THE DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000781 NONE CORRESPONDENCE NONE 1	**01-23-2005** 02-17-2006 5090.3.A. NONE	ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON THE DRAFT FINAL SITE INSPECTION OF THE HORSE STABLE AREA	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000726 NONE REPORT NONE 30	**01-27-2005** 12-08-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA D. GEMAR WEST SOLUTIONS, INC.	MEMORANDUM ON THE INVESTIGATION AREA H1 , RCRA (RESOURCE CONSERVATION AND RECOVERY ACT) LANDFILL POST-CLOSURE SECURITY FENCE EVALUATION	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003530 BRAC SER BPMOW.JD/0237 CORRESPONDENCE NONE 4	**01-27-2005** 01-27-2005 5090.3.A. NONE	J. DUNAWAY BRAC - SAN DIEGO C. GRIBBLE DTSC - BERKELEY	OVERSIGHT REPORT FOR MEC SOIL SCREENING OPERATION AT FORMER MINS CORAL SEA HOUSING AREA [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL} (DOCUMENT NOT DATED, USED TRANSMITTAL DATE AS RECORD DATE)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003545 NONE MINUTES NONE 28	**01-27-2005** 03-30-2005 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	27 JANUARY 2005 RESTORATION ADVISORY BOARD (RAB) DRAFT MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000705 NONE CORRESPONDENCE NONE 20	**01-31-2005** 11-30-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC	COMMENTS ON THE DRAFT REMOVAL ACTION WORK PLAN, NON-TIME CRITICAL REMOVAL ACTION (NTCRA) FOR FENCED SCRAP YARD AREA OF THE DEFENSE REUTILIZATION AND MARKETING OFFICE SITE	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003533 0030 REPORT NONE 150	**02-01-2005** 02-08-2005 5090.3.A. NONE	D. GEMAR WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT MUNITIONS RESPONSE ACTION WORK PLAN FOR THE DREDGE POND 7S {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY	SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003534 0029 REPORT NONE 200	**02-01-2005** 02-08-2005 5090.3.A. NONE	D. GEMAR WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT MUNITIONS RESPONSE ACTON WORK PLAN FOR THE WESTERN MAGAZINE AREA {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003535 DT 110-05.07 & SWDIV SER BPMOW.KE/0371 REPORT N68711-03-C-5004 800	**02-01-2005** 02-08-2005 5090.3.A. NONE	M. FOSTER SULLIVAN BRAC - SAN DIEGO	DRAFT REMEDIAL INVESTIGATION REPORT INSTALLATION RESTORATION PROGRAM SITES WITHIN INVESTIGATION AREA F1 - VOLUMES I - III OF III [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL, CD COPY ENCLOSED}	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003538 DS.B047.14371 REPORT N68711-03-D-5104 4	**02-01-2005** 02-18-2005 5090.3.A. 00047	P. BAUR SULTECH BRAC - SAN DIEGO	DRAFT SUMMARY OF DRAIN LINE SOIL AND DEBRIS REMOVAL ACTIVITIES	ADMIN RECORD INFO REPOSITORY	BLDG. A17	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003540 DS.B087.19558 & SWDIV SER BPMOW.JD/0405 REPORT N68711-03-D-5104 20	**02-01-2005** 02-18-2005 5090.3.A. 00087	G. ARONSON SULTECH BRAC - SAN DIEGO	DRAFT WATERSHED CONTAMINATED SOURCE DOCUMENT [INCLUDES SWDIV LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003541 DT110-06.10 & SWDIV SER BPMOW.KRE/0413 REPORT N68711-03-C-5012 100	**02-01-2005** 02-22-2005 5090.3.A. NONE	M. FOSTER SULLIVAN BRAC - SAN DIEGO	DRAFT PRELIMINARY ASSESSMENT/SITE INSPECTION OF THE PAINT WASTE AREA INVESTIGATION AREA I REUSE PARCEL XVI [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL, CD COPY ENCLOSED}	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA 1 PARCEL XVI	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003542 0038 CORRESPONDENCE NONE 400	**02-01-2005** 02-28-2005 5090.3.A. NONE	WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	APPENDIX I OPERATIONS AND MAINTENANCE PLAN FOR THE AREA H1 LANDILL GROUNDWATER COLLECTION SYSTEM, REVISION 1	ADMIN RECORD INFO REPOSITORY	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003554 BRAC SER BPMOW.JD/0369 CORRESPONDENCE NONE 6	**02-02-2005** 05-19-2005 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION G. RILEY RWQCB - OAKLAND	NOTIFICATION OF SITE CLOSURE COMPLETION WITH NO FURTHER ACTION REQUIRED (NFA) [INCLUDES UNDERGROUND STORAGE TANK (UST) WELL ABANDOMENT LETTER DATED 25 JANUARY 2005]{PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. 505	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000706 NONE CORRESPONDENCE NONE 15	**02-07-2005** 11-30-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA D. GEMAR WESTON SOLUTIONS, INC.	PARTIAL REVIEW AND COMMENTS ON THE DRAFT FEASIBILITY STUDY INVESTIGATION AREA H1	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003536 NONE REPORT N68711-01-D-6010 200	**02-07-2005** 02-16-2005 5090.3.A. 00008	LACSON, C. WESTON SOLUTIONS, INC. BRAC - SAN DIEGO	DRAFT SITE-SPECIFIC HEALTH AND SAFETY PLAN FOR THE TIME-CRITICAL REMOVAL ACTION AT THE MARINE CORPS FINING RANGE AND HISTORIC OUTFALL 4S	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003537 BRAC SER BPMOW.JD/0371 REPORT N68711-01-D-6010 550	**02-07-2005** 02-16-2005 5090.3.A. 00008	L. MAGGINI WESTON SOLUTIONS, INC. BRAC - SAN DIEGO	DRAFT WORK PLAN FOR THE TIME-CRITICAL REMOVAL ACTION AT THE MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003595 NONE CORRESPONDENCE NONE 3	**02-08-2005** 12-14-2005 5090.3.A. NONE	G. RILEY CRWQCB - OAKLAND J. DUNAWAY BRAC	REVIEW AND COMMENTS ON DRAFT REMOVAL ACTION WORK PLAN, NON TIME-CRITICAL REMOVAL ACTION FOR THE FENCED SCRAPYARD AREA OF THE DEFENSE REUTILIZATION AND MARKETING OFFICE SITE	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000707 NONE CORRESPONDENCE NONE 2	**02-10-2005** 11-30-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC	COMMENTS ON THE DRAFT ENGINEERING/COST ANALYSIS, NON-TIME CRITICAL REMOVAL ACTION (NTCRA) FOR THE DEFENSE REUTILIZATION AND MARKETING OFFICE SITE	ADMIN RECORD INFO REPOSITORY	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003596 NONE CORRESPONDENCE NONE 2	**02-15-2005** 12-14-2005 5090.3.A. NONE	G. RILEY CRWQCB - OAKLAND J. DUNAWAY BRAC	REVIEW AND COMMENTS ON DRAFT ENGINEERING EVALUATION/COST ANALYSIS: NON TIME-CRITICAL REMOVAL ACTION FOR THE FENCED SCRAPYARD AREA OF THE DEFENSE REUTILIZATION AND MARKETING OFFICE SITE	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003539 DS.B087.19555 & SWDIV SER BPMOW.JD/0405 REPORT N68711-03-D-5104 50	**02-16-2005** 02-18-2005 5090.3.A. 00087	G. ARONSON SULTECH BRAC - SAN DIEGO	DRAFT CONCEPTUAL SITE MODEL TECHNICAL MEMORANDUM FOR INVESTIGATION AREA K [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL, CD COPY ENCLOSED}	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000708 NONE CORRESPONDENCE NONE 2	**02-18-2005** 11-30-2005 5090.3.A. NONE	GIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC	COMMENTS ON THE DRAFT SAMPLING AND ANALYSIS PLAN ADDENDUM , ADDITIONAL CHARACTERIZATION AT THE FORMER DEGREASING PLANT INVESTIGATION AREA C2	ADMIN RECORD INFO REPOSITORY	AREA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000727 NONE CORRESPONDENCE NONE 35	**02-18-2005** 12-08-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC	COMMENTS BY GSU DATED 2/16/05 ON THE DRAFT FINAL WATER QUALITY SAMPLING AND ANALYSIS PLAN, INVESTIGATION AREA H1 RCRA LANDFILL AND IWTP SURFACE IMPOUNDMENTS POST - CLOSURE GROUNDWATER MONITORING	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001196 NONE CORRESPONDENCE NONE 3	**02-18-2005** 06-12-2008 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. BRAC PMO WEST	COMMENTS ON THE DRAFT FINAL SITE MANAGEMENT PLAN AND NAVY RESPONSE TO DTSC COMMENTS ON THE REVISED DRAFT FY05 SITE MANAGEMENT PLAN (SEE COMMENTS.)	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001218 NONE CORRESPONDENCE NONE 2	**03-01-2005** 07-18-2008 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA DUNAWAY, J. NAVFAC - SOUTHWEST	RESPONSE TO COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION FOR INVESTIGATION AREA	ADMIN RECORD	IA F2 SITE 00004	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003543 0037 & WESTON SOLUTIONS SER 089/DG REPORT NONE 650	**03-01-2005** 03-10-2005 5090.3.A. NONE	D. GEMAR WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) FACILITY LANDFILL FOR THE 2004 ANNUAL GROUNDWATER MONITORING REPORT {PORTION OF MAILING LIST IS CONFIDENTIAL, CD COPY OF APPENDIX E ENCLOSED}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003610 NONE CORRESPONDENCE NONE 8	**03-01-2005** 12-15-2005 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON DRAFT REMOVAL ACTION WORK PLAN, NON-TIME CRITICAL REMOVAL ACTION FOR THE FENCED SCRAPYARD AREA OF THE DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SITE	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000701 BRAC SER BPMOW.SKB/0486 CORRESPONDENCE NONE 10	**03-02-2005** 07-27-2005 5090.3.A. NONE	LEE, A. NAVFAC - SOUTHWEST DIVISION J. BROWNING U.S. FISH AND WILDLIFE SERVICE	RESPONSE ACTION AND REQUEST FOR THE INITIATION OF FORMAL CONSULTATION FOR THE LANDFILL LOCATED WITHIN THE INVESTIGATION AREA (IA)	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003612 NONE CORRESPONDENCE NONE 1	**03-29-2005** 12-15-2005 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON SAMPLING AND ANALYSIS PLAN ADDENDUM (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN) ADDITIONAL CHARACTERIZATION AT THE FORMER DEGREASING PLANT INVESTIGATION AREA C2	ADMIN RECORD INFO REPOSITORY	AREA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003567 NONE MINUTES NONE 20	**03-31-2005** 08-29-2005 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	31 MARCH 2005 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003546 BRAC SER BPMOW.JD/0611 CORRESPONDENCE NONE 5	**04-12-2005** 05-02-2005 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION C. GRIBBLE U.S. EPA - BERKELEY	LETTER REQUESTING CONCURRENCE TO RESUME FIELD ACTIVITIES TO COMPLETE THE TIME CRITICAL REMOVAL ACTION (TCRA) FOR THE MARINE CORPS FIRING RANGE (MCFR) {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003547 2021 REPORT N68711-01-D-6010 200	**04-12-2005** 05-03-2005 5090.3.A. 00008	D. GEMAR WESTON SOLUTIONS, INC. BRAC - SAN DIEGO	FINAL SITE-SPECIFIC HEALTH AND SAFETY PLAN TIME-CRITICAL REMOVAL ACTION AT FIRING RANGE AND HISTORIC OUTFALL 4S [INCLUDES HEALTH AND SAFETY PLAN COMMENTS RESPONSES]	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003549 2020 REPORT N68711-01-D-6010 600	**04-12-2005** 05-03-2005 5090.3.A. 00008	D. GEMAR WESTON SOLUTIONS, INC. BRAC - SAN DIEGO	FINAL TIME-CRITICAL REMOVAL ACTION AT THE FIRING RANGE AND HISTORIC OUTFALL 4S [INCLUDES RESPONSES TO COMMENTS]	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003604 NONE CORRESPONDENCE NONE 1	**04-14-2005** 12-14-2005 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON THE DRAFT PRELIMINARY ASSESSMENT/SITE INSPECTION OF THE PAINT WASTE AREA I, REUSE PARCEL XVI	ADMIN RECORD INFO REPOSITORY	AREA I PARCEL XVI	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003605 NONE CORRESPONDENCE NONE 3	**04-14-2005** 12-14-2005 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON DRAFT MUNITIONS RESPONSE ACTION WORK PLAN, INSTALLATION RESTORATION SITE AND DREDGE POND	ADMIN RECORD INFO REPOSITORY	DP7S SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003611 NONE CORRESPONDENCE NONE 3	**04-14-2005** 12-15-2005 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON THE DRAFT MUNITIONS RESPONSE ACTION WORK PLAN, WESTERN MAGAZINE AREA	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003597 NONE CORRESPONDENCE NONE 2	**04-15-2005** 12-14-2005 5090.3.A. NONE	G. RILEY CRWQCB - OAKLAND J. DUNAWAY BRAC	REVIEW AND COMMENTS ON SAMPLING AND ANALYSIS PLAN ADDENDUM (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN) ADDITIONAL CHARACTERIZATION AT THE FORMER DEGREASING PLANT INVESTIGATION AREA C2	ADMIN RECORD INFO REPOSITORY	AREA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000813 NONE CORRESPONDENCE NONE 2	**04-19-2005** 05-26-2006 5090.3.A. NONE	G. KATHURIA CRWQCB - OAKLAND D. GEMAR WESTON SOLUTIONS, INC.	DESIGNATION OF AGNES FARRES AS THE NEW PROJECT MANAGER FOR THE WESTERN EARLY TRANSFER PARCEL AND NOTING THAT BRIAN THOMPSON IS THE NEW PROJECT MANAGER FOR THE EASTERN EARLY TRANSFER PARCEL.	ADMIN RECORD INFO REPOSITORY	AREA H1 AREA I AREA J	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003556 NONE CORRESPONDENCE NONE 10	**04-19-2005** 06-03-2005 5090.3.A. NONE	LANDIS, A. DTSC - BERKELEY, CA J. DUNAWAY NAVFAC - SOUTHWEST DIVISION	APPROVAL OF PROPOSED CHANGE TO USE THE DEIONIZED WATER WASTE EXTRACTION TEST FOR CHARACTERIZATION OF SOIL FROM THE MARINE CORPS FIRING RANGE (MCFR)	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003550 BRAC SER BPMOW.JD/0651 REPORT N62467-98-D-0995 500	**04-22-2005** 05-03-2005 5090.3.A. 00065	CH2MHILL BRAC - SAN DIEGO	DRAFT FINAL ENGINEERING EVALUATION/COST ANALYSIS (EE/CA)/INTERM REMOVAL ACTION PLAN (IRAP): NON-TIME-CRITICAL REMOVAL ACTION FOR THE FENCED SCRAPYARD AREA OF THE DEFENSE REUTILIZATION AND MARKETING OFFICE SITE - VOLUME I AND II OF II	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001197 NONE CORRESPONDENCE NONE 3	**04-28-2005** 06-12-2008 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA DUNAWAY, J. NAVFAC - SOUTHWEST	RESPONSE TO COMMENTS ON 1) DRAFT ENGINEERING EVALUATION/COST ANALYSIS NON-TIME-CRITICAL REMOVAL ACTION (NTCRA) FOR THE FENCED SCRAP YARD AREA OF THE DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SITE, AND … [SEE COMMENTS.]	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003568 NONE MINUTES NONE 15	**04-28-2005** 08-30-2005 5090.3.A. NONE	CDM FEDERAL PROGRAMS RAB MEMBERS	28 APRIL 2005 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003551 BRAC SER BPMOW.JTD/0666 REPORT N62467-98-D-0995 40	**04-29-2005** 05-05-2005 5090.3.A. 00065	CH2M HILL NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL ACTION MEMORANDUM (AM) FOR THE NON-TIME CRITICAL REMOVAL ACTION (NTCRA) FOR THE FENCED SCRAPYARD AREA (FSA) OF THE DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SITE [INCLUDES SWDIV TRANSMITTAL LETTER BY J. DUNAWAY]	ADMIN RECORD INFO REPOSITORY SENSITIVE	715	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003552 BRAC SER BPMOW.JTD/0666 REPORT N62467-98-D-0995 750	**04-29-2005** 05-05-2005 5090.3.A. 00065	CH2M HILL NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL REMOVAL ACTION PLAN (RAP) FOR THE NON-TIME CRITICAL REMOVAL ACTION (NTCRA) FOR THE FENCED SCRAPYARD AREA (FSA) OF THE DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SITE, VOLUMES I AND II OF II	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000709 NONE CORRESPONDENCE NONE 20	**05-05-2005** 11-30-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC	COMMENTS BY GSU DATED 4/25/05 ON THE DRAFT FINAL WATER QUALITY SAMPLING AND ANALYSIS PLAN, INVESTIGATION AREA H1, RCRA (RESOURCE CONSERVATION AND RECOVERY ACT) LANDFILL AND IWTP SURFACE IMPOUNDMENTS, POST CLOSURE GROUNDWATER MONITORING	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003553 DS.A062.19604 & SWDIV SER BPMOW.JTD/0686 REPORT N68711-00-D-0005 200	**05-10-2005** 05-12-2005 5090.3.A. DO 0062	P. WILSON TETRA TECH EM INC. D. GODSEY BRAC - SAN DIEGO	DRAFT FINAL SAMPLING AND ANALYSIS PLAN ADDENDUM (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN) ADDITIONAL CHARACTERIZATION [INCLUDES SWDIV TRANSMITTAL LETTER] {PORTION OF MAILING LIST CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA C2	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003555 BRAC SER BPMOW.JTD/0704 CORRESPONDENCE NONE 2	**05-10-2005** 05-27-2005 5090.3.A. NONE	LEE, A. BRAC - SAN DIEGO A. LANDIS EPA - SACRAMENTO	TRANSMITTAL ON FORMER DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SCRAPYARD SITE AND THE SUBMITTAL OF DRAFT FINAL ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003559 BRAC SER BPMOW.PAM/0694 REPORT N62742-98-D-1809 300	**05-10-2005** 06-30-2005 5090.3.A. 00001	ECC NAVFAC - SOUTHWEST DIVISION	DRAFT WORK PLAN (WP) REMEDIAL INVESTIGATION (RI) PHASE II FOR THE SOUTHERN OFFSHORE SITES {PORTION OF MAILING LIST IS CONFIDENTIAL, CD COPY ENCLOSED}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003569 NONE MINUTES NONE 10	**05-19-2005** 08-30-2005 5090.3.A. NONE	CDM FEDERAL PROGRAMS RAB MEMEBERS	19 MAY 2005 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003557 BRAC SER BPMOW.JTD/0736 CORRESPONDENCE NONE 3	**05-20-2005** 06-13-2005 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION D. PLUMMER STATE LANDS COMISSION	LETTER REQUESTING COOPERATION ON A PORTION OF WORK INVOLVING THE RELOCATION OF THE FEDERALLY LISTED AS ENDANGERED SALT MARSH HARVEST MOUSE TO THE WESTERN EARLY TRANSER PARCEL (WETP){PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000703 TC.B0897.12201 MINUTES NONE 20	**05-24-2005** 08-26-2005 5090.3.A. NONE	TETRA TECH EM INC. NAVFAC - SOUTHWEST DIVISION	DRAFT MEETING MINUTES OF THE TECHNICAL WORKGROUP MEETING OF 24 MAY 2005 FOR DATA QUALITY OBJECTIVE (DQO) DEVELOPMENT FOR SEDIMENT INVESTIGATIONS {CD COPY ENCLOSED}	ADMIN RECORD INFO REPOSITORY	IA K	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000710 NONE CORRESPONDENCE NONE 4	**05-24-2005** 11-30-2005 5090.3.A. NONE	R. GHAZI DTSC - SACRAMENTO, CA J. DUNAWAY BRAC	COMMENTS ON THE DRAFT FINAL NON-TIME CRITICAL REMOVAL ACTION (NTCRA) FOR THE FENCED SCRAP YARD AREA , DEFENSE REUTILIZATION AND MARKETING (DRMO) SITE, ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) / INTERIM REMOVAL ACTION PLAN (IRAP)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003558 NONE CORRESPONDENCE NONE 3	**05-27-2005** 06-13-2005 5090.3.A. NONE	GEMAR, D. WESTON SOLUTIONS, INC. GRIBBLE, C. DTSC - BERKELEY	LETTER OF GENERAL AGREEMENT ON THE APPROPRIATE METHOD FOR AVOIDING IMPACTS TO THE SALT MARSH HARVEST MOUSE (SMHM) DURING TRAPPING AND TRANSLOCATION {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA H1 WETLAND X	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000695 NONE REPORT NONE 25	**06-15-2005** 07-14-2005 5090.3.A. NONE	WESTON SOLUTIONS, INC. C. GRIBBLE DTSC - BERKELEY	25 APRIL 2005 CALIFORNIA GEOLOGICAL SERVICES UNIT MEMORANDUM ON INVESTIGATION AREA PROPOSED MONITORING WELL LOCATIONS	ADMIN RECORD INFO REPOSITORY	H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000775 NONE REPORT NONE 12	**06-15-2005** 02-06-2006 5090.3.A. NONE	WESTON SOLUTIONS, INC. BRAC	DRAFT SITE MANAGEMENT PLAN (SMP), FISCAL YEAR 2006 (FY06)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003578 NONE MINUTES NONE 30	**06-23-2005** 10-27-2005 5090.3.A. NONE	CLIFFORD, R. CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	23 JUNE 2005 RESTORATION ADVISORY BOARD (RAB) FINAL MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003599 NONE CORRESPONDENCE NONE 2	**06-28-2005** 12-14-2005 5090.3.A. NONE	G. RILEY CRWQCB - OAKLAND J. DUNAWAY BRAC	REVIEW AND NO FURTHER COMMENTS ON DRAFT FINAL SAMPLING AND ANALYSIS PLAN ADDENDUM (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN) ADDITIONAL CHARACTERIZATION AT THE FORMER DEGREASING PLANT INVESTIGATION AREA C2	ADMIN RECORD INFO REPOSITORY	AREA C2	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000711 NONE CORRESPONDENCE NONE 3	**06-30-2005** 11-30-2005 5090.3.A. NONE	R. GHAZI DTSC - SACRAMENTO, CA J. DUNAWAY BRAC	RESPONSE TO LETTER BY A. LEE DATED 11/24/2004 TO C. GRIBBLE OF DTSC REGARDING PROPOSED STRATEGY TO DEVELOP REMEDIAL ACTION FOR INSTALLATION RESTORATION SITE	ADMIN RECORD INFO REPOSITORY	SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003603 NONE CORRESPONDENCE NONE 3	**07-07-2005** 12-14-2005 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON THE DRAFT WORK PLAN REMEDIAL INVESTIGATION PHASE II FOR SOUTHERN OFFSHORE SITES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000694 BRAC SER BPMOW.JTD/0942 CORRESPONDENCE NONE 2	**07-08-2005** 07-14-2005 5090.3.A. NONE	J. DUNAWAY NAVFAC - SOUTHWEST DIVISION VARIOUS EPA - SACRAMENTO	REQUEST FOR AND EXTENTION OF 30 DAYS FOR SUBMISSION OF CLOSURE AND POST-CLOSURE PLANS FOR INVESTIGATION AREA [PORTION OF MAILING LIST IS CONFIDENTIAL]	ADMIN RECORD INFO REPOSITORY SENSITIVE	H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000699 BRAC SER BPMOW.JD/0958 REPORT N62467-98-D-0995 800	**07-08-2005** 07-19-2005 5090.3.A. 00065	CH2M HILL NAVFAC - SOUTHWEST DIVISION	FINAL REMOVAL ACTION PLAN (RAP) FOR THE NON-TIME-CRITICAL REMOVAL ACTION (NTCRA) FOR THE FENCED SCRAP YARD AREA OF THE DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SITE, VOLUMES I - II OF II {PORTION OF MAILING LIST IS CONFIDENTIAL, CD COPY ENCLOSED}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001343 NONE REPORT N62467-98-D-0995 120	**07-08-2005** 07-30-2009 5090.3.A. CTO 0065	ANTIPAS, A. CH2M HILL NAVFAC - SOUTHWEST	FINAL SAMPLING AND ANALYSIS PLAN (SAP) NON-TIME CRITICAL REMOVAL ACTION (NTCRA) FOR THE FENCED SCRAP YARD AREA OF THE DEFENSE REUTILIZATION OFFICE SITE	ADMIN RECORD		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000712 NONE CORRESPONDENCE NONE 1	**07-11-2005** 11-30-2005 5090.3.A. NONE	R. GHAZI DTSC - SACRAMENTO, CA J. DUNAWAY BRAC	NO COMMENTS ON THE DRAFT FINAL ACTION MEMORANDUM FOR NON-TIME CRITICAL REMOVAL ACTION (NTCRA) FOR THE FENCED SCRAP YARD AREA OF THE DEFENSE REUTILIZATION AND MARKETING OFFICE	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000718 NONE CORRESPONDENCE NONE 1	**07-11-2005** 11-30-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC	NO COMMENTS ON APPENDIX A THAT ADVISES ENVIRONMENTAL CONTAMINATION CONDITIONS AT PARCEL XVB - B(2) FOR THE DRAFT SUPPLEMENTAL ENVIRONMENTAL BASELINE SURVEY	ADMIN RECORD INFO REPOSITORY	PARCEL XV B2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000719 NONE CORRESPONDENCE NONE 15	**07-13-2005** 11-30-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC	COMMENTS ON THE DRAFT FINAL OFFSHORE DATA GAPS TECHNICAL MEMORANDUM (INCLUDES COMMENTS BY HERD DATED 6/15/05)	ADMIN RECORD INFO REPOSITORY	AREA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001202 NONE CORRESPONDENCE NONE 4	**07-14-2005** 06-18-2008 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. BRAC PMO WEST	COMMENTS ON THE DRAFT FISCAL YEAR 2006 SITE MANAGEMENT PLAN WITH REVISED TABLES	ADMIN RECORD INFO REPOSITORY	BLDG A155 IA A2 IA F1 IA F2 IA K PARCEL III PARCEL XIII SITE 00005 SITE 00014 SITE 00017 UST A190 UST A225 UST A226 UST A246E UST A71W	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003598 NONE CORRESPONDENCE NONE 1	**07-19-2005** 12-14-2005 5090.3.A. NONE	G. RILEY CRWQCB - OAKLAND J. DUNAWAY BRAC	REVIEW AND NO FURTHER COMMENTS ON THE DRAFT FINAL ENGINEERING EVALUATION/COST ANALYSIS/INTERIM REMOVAL ACTION PLAN: NON TIME-CRITICAL REMOVAL ACTION FOR THE FENCED SCRAPYARD AREA OF THE DEFENSE REUTILIZATION AND MARKETING OFFICE SITE	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001210 NONE CORRESPONDENCE NONE 6	**07-25-2005** 07-02-2008 5090.3.A. NONE	GHAZI, R. DTSC - SACRAMENTO, CA DUNAWAY, J. BRAC PMO WEST	COMMENTS ON THE DRAFT FINAL INVESTIGATION AREA, FORMER NORTH BUILDING WAYS AREA REMEDIAL INVESTIGATION REPORT (INCLUDES HERD COMMENTS DATED 26 JULY 2005)	ADMIN RECORD INFO REPOSITORY	IA A2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003564 0043 REPORT 12826.001.001.0013.04 150	**07-27-2005** 08-08-2005 5090.3.A. NONE	POPEK, E. WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) FACILITY LANDFILL 2005 SEMIANNUAL GROUNDWATER MONITORING SUMMARY REPORT (CD COPY INCLUDED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003579 NONE MINUTES NONE 31	**07-28-2005** 10-27-2005 5090.3.A. NONE	CLIFFORD, R. CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	28 JULY 2005 RESTORATION ADVISORY BOARD (RAB) FINAL MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003560 NONE REPORT 12826.001.001.0001.90 500	**07-29-2005** 08-05-2005 5090.3.A. 00040	D. SANCHEZ WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT CONSTRUCTION COMPLETION REPORT FOR THE SOIL-BENTONITE SLURRY WALL AND GROUNDWATER EXTRACTION SYSTEM TIME-CRITICAL REMOVAL ACTION / INTERIM REMEDIAL ACTION INVESTIGATION AREA [PORTION OF MAILING LIST IS CONFIDENTIAL]	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA H1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000702 BRAC SER BPMOW.JTD/1035 REPORT NONE 30	**08-01-2005** 08-12-2005 5090.3.A. NONE	CH2M HILL BRAC PMO WEST - VALLEJO	DRAFT FINDING OF SUITABILITY TO LEASE (FOSL) FOR THE MARINE CORPS FIRING RANGE (MCFR){PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY	PARCEL I PARCEL XIX	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001201 NONE CORRESPONDENCE NONE 13	**08-01-2005** 06-18-2008 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA GEMAR, D. WESTON SOLUTIONS, INC.	COMMENTS ON THE FINAL REMEDIAL INVESTIGATION (INCLUDES HERD COMMENTS DATED 21 JULY 2005 AND DEPARTMENT OF FISH AND GAME COMMENTS DATED 26 JULY 2005)	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003563 26 REPORT 12826.001.001.00001 .94 400	**08-01-2005** 08-08-2005 5090.3.A. NONE	GEMAR, D. WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL FOR WATER QUALITY CONTROL SAMPLING AND ANALYSIS PLAN (WQSAP) AT RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) FACILITY LANDFILL AND INDUSTRIAL WASTE TREATMENT PLANT (IWPT) SURFACE IMPOUNDMENTS AND GROUNDWATER EVALUATION MONITORING PROGRAM	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003572 BRAC SER BPMOW.JD/1043 REPORT N62468-98-D-0995 300	**08-01-2005** 09-07-2005 5090.3.A. 00065	CH2M HILL NAVFAC - SOUTHWEST DIVISION	FINAL ENGINEERING EVALUATION/COST ANALYSIS (EE/CA)/INTERIM REMEDIAL ACTION PLAN (IRAP): NON-TIME-CRITICAL REMOVAL ACTION FOR THE FENCED SCRAPYARD AREA OF THE DEFENSE REUTILIZATION AND MAKETING OFFICE (DRMO) VOLUME I-II OF II [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003571 BRAC SER BPMOW.JD/1043 REPORT N62467-98-D-0995 50	**08-02-2005** 09-06-2005 5090.3.A. 00065	CH2M HILL NAVFAC - SOUTHWEST DIVISION	FINAL ACTION MEMORANDUM NON-TIME CRITICAL REMOVAL ACTION FOR THE FENCED SCRAPYARD AREA OF THE DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SITE [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY	715 AREA H2	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000721 NONE CORRESPONDENCE NONE 6	**08-04-2005** 11-30-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA D. GEMAR WESTON SOLUTIONS, INC.	COMMENTS ON THE DRAFT MUNITIONS RESPONSE ACTION WORK PLAN, WESTERN MAGAZINE AREA	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003602 NONE CORRESPONDENCE NONE 1	**08-15-2005** 12-14-2005 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC	REVIEW AND NO COMMENTS ON WATERSHED CONTAMINATED SOURCE DOCUMENT	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003615 BRAC SER BPMOW.JTD/1116 REPORT NONE 30	**08-15-2005** 01-12-2006 5090.3.A. NONE	J. DUNAWAY BRAC A. LANDIS DTSC - SACRAMENTO	TRANSMITTAL OF THE DRAFT FINAL FISCAL YEAR 2006 SITE MANAGEMENT PLAN (FY06 SMP) [W/ENCLOSURES] (PORTION OF THE MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000722 NONE CORRESPONDENCE NONE 2	**08-22-2005** 11-30-2005 5090.3.A. NONE	D. MURPHY DTSC - BERKELEY, CA J. DUNAWAY BRAC	NO COMMENTS ON THE DRAFT FINDING OF SUITABILITY TO LEASE FOR THE MARINE CORPS FIRING RANGE	ADMIN RECORD INFO REPOSITORY	PARCEL I PARCEL XIX	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003600 NONE CORRESPONDENCE NONE 1	**08-22-2005** 12-14-2005 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC	REVIEW AND NO COMMENTS ON DRAFT FINDING OF SUITABILITY TO LEASE (FOSL), MARINE CORPS FIRING RANGE	ADMIN RECORD INFO REPOSITORY	PARCEL I PARCEL XIX	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003601 NONE CORRESPONDENCE NONE 2	**08-22-2005** 12-14-2005 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON THE DRAFT CONCEPTUAL SITE MODEL TECHNICAL MEMORANDUM FOR INVESTIGATION AREA K	ADMIN RECORD INFO REPOSITORY	AREA K	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003570 BRAC SER BPMOW.DC\1157 REPORT N62467-98-D-0995 100	**08-26-2005** 09-06-2005 5090.3.A. 00065	CH2MHILL NAVFAC - SOUTHWEST DIVISION	DRAFT SUMMARY REPORT ON J-LINES CLEANING AND FLUSHING ACTIVITIES [CD COPY ENCLOSED, PORTION OF MAILING LIST IS CONFIDENTIAL]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000723 NONE CORRESPONDENCE NONE 1	**08-31-2005** 11-30-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC	NO FURTHER COMMENTS ON THE DRAFT WATERSHED CONTAMINATED SOURCE DOCUMENT	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003606 NONE CORRESPONDENCE NONE 1	**09-02-2005** 12-15-2005 5090.3.A. NONE	G. RILEY CRWQCB J. DUNAWAY BRAC	ELECTRONIC MAIL MEMO WITH NO COMMENTS ON: THE NAVY LETTER FOR IR 17 PATH FORWARD, WATERSHED CONTAMINATED SOURCE DOCUMENT AND GREENSAND HUMAN HEALTH RISK ASSESSMENT (HHRA)	ADMIN RECORD INFO REPOSITORY	SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003609 NONE CORRESPONDENCE NONE 4	**09-06-2005** 12-15-2005 5090.3.A. NONE	R. GHAZI DTSC - SACRAMENTO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON DRAFT FINAL REMEDIAL INVESTIGATION INSTALLATION RESTORATION SITE, BUILDING 503 AREA AND INVESTIGATION AREA A1	ADMIN RECORD INFO REPOSITORY	AREA A1 BLDG. 503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003573 BRAC SER BPMOW.JTD/1203 REPORT N68711-01-D-6010 350	**09-09-2005** 09-16-2005 5090.3.A. 00009	PASAPANE, B. WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT CONCEPTUAL SITE MODEL AND GEOPHYSICAL INVESTIGATION WORK PLAN AT SOUTH SHORE AREA AND PRODUCTION MANUFACTURING [PORTION OF MAILING LIST IS CONFIDENTIAL]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000725 NONE CORRESPONDENCE NONE 1	**09-26-2005** 11-30-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC	NO FURTHER COMMENTS ON THE DRAFT FINAL WATER QUALITY SAMPLING AND ANALYSIS PLAN, INVESTIGATION AREA H1 RCRA / FACILITY LANDFILL AND IWTP SURFACE IMPOUNDMENTS GROUNDWATER EVALUATION MONITORING PROGRAM, REVISION 2	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003584 NONE CORRESPONDENCE NONE 4	**09-26-2005** 12-05-2005 5090.3.A. NONE	GRIBBLE, G. DTSC - BERKELEY, CA DUNAWAY, J. BRAC	REVIEW OF AND COMMENTS ON DRAFT FINAL FISCAL YEAR 2006 SITE MANAGEMENT PLAN WITH REVISED TABLE 3 (SEE AR # 3615 - DRAFT FINAL SMP, WHICH INCLUDES REVISED TABLES)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003607 NONE CORRESPONDENCE NONE 2	**09-26-2005** 12-15-2005 5090.3.A. NONE	G. KATHURIA CRWQCB - OAKLAND J. DUNAWAY BRAC	LETTER DESIGNATING WATER BOARD PROJECT MANAGERS	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003575 0030 REPORT NONE 150	**10-01-2005** 10-18-2005 5090.3.A. NONE	D. GEMAR WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL MUNITIONS RESPONSE ACTION WORK PLAN (INCLUDES RESPONSES TO REGULATORY AGENCY COMMENTS) [PORTIONS OF THE MAILING LIST ARE CONFIDENTIAL] {SEE AR # 743 - REVISED DRAFT FINAL}	ADMIN RECORD INFO REPOSITORY	DP7S SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003576 0029 REPORT NONE 150	**10-01-2005** 10-18-2005 5090.3.A. NONE	D. GEMAR WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL MUNITIONS RESPONSE WORK PLAN, WESTERN MAGAZINE AREA (INCLUDES RESPONSES TO REGULATORY AGENCY COMMENTS) [PORTIONS OF THE MAILING LIST ARE CONFIDENTIAL]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003577 NONE REPORT N68711-01-MDC-1061 150	**10-01-2005** 10-24-2005 5090.3.A. NONE	WESTON SOLUTIONS, INC NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL GEOTECHNICAL DESIGN PARAMETERS REPORT FOR THE AREA #1 CONTAINMENT AREA (INCLUDES RESPONSE TO DTSC COMMENTS BY WESTON SOLUTIONS, INC.)[PORTIONS OF THE MAILING LIST ARE CONFIDENTIAL]	ADMIN RECORD INFO REPOSITORY	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003580 12826.001.001.0002.80 AND 0034 REPORT NONE 250	**10-01-2005** 11-08-2005 5090.3.A. NONE	D. GEMAR WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL FEASIBILITY STUDY, INVESTIGATION AREA H1 (CD COPY ENCLOSED) [PORTIONS OF THE MAILING LIST ARE CONFIDENTIAL]	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000704 BRAC SER BPMOW.JTD/1328 REPORT NONE 50	**10-25-2005** 11-30-2005 5090.3.A. NONE	J. DUNAWAY BRAC A. LANDIS DTSC - SACRAMENTO	TRANSMITTAL OF THE FINAL FISCAL YEAR 2006 SITE MANAGEMENT PLAN (W/ENCLOSURE) [PORTION OF MAILING LIST IS CONFIDENTIAL]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003585 NONE CORRESPONDENCE NONE 4	**10-25-2005** 12-05-2005 5090.3.A. NONE	R. GHAZI DTSC - SACRAMENTO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON DRAFT WORK PLAN REMEDIAL INVESTIGATION PHASE II FOR SOUTHERN OFFSHORE SITES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003586 NONE CORRESPONDENCE NONE 2	**10-26-2005** 12-05-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA D. GEMAR WESTON SOLUTIONS, INC.	REVIEW AND APPROVAL OF DRAFT FINAL GEOTECHNICAL DESIGN PARAMETERS REPORT FOR THE INVESTIGATION AREA H1 CONTAINMENT AREA	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000794 NONE MINUTES NONE 30	**10-27-2005** 03-14-2006 5090.3.A. NONE	MCCRAY, D. CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	FINAL MEETING MINUTES FROM THE RESTORATION ADVISORY BOARD (RAB) MEETING HELD ON 27 OCTOBER 2005	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003587 NONE CORRESPONDENCE NONE 2	**10-27-2005** 12-05-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON DRAFT SITE INSPECTION OF THE HORSE STABLE AREA	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003590 NONE CORRESPONDENCE NONE 5	**10-27-2005** 12-05-2005 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON THE DRAFT CONCEPTUAL SITE MODEL AND GEOPHYSICAL INVESTIGATION WORK PLANS, SOUTH SHORE AREA AND PRODUCTION MANUFACTURING AREA	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003594 NONE CORRESPONDENCE NONE 11	**10-27-2005** 12-14-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA D. GEMAR WESTON SOLUTIONS, INC.	IDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) FOR THE FEASIBILITY STUDY	ADMIN RECORD INFO REPOSITORY	1A-H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003588 NONE CORRESPONDENCE NONE 2	**10-28-2005** 12-05-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC	REVIEW OF DRAFT SITE CONTROL PLAN (INCLUDES REQUEST TO ADD AS AN AGENDA ITEM TO THE NEXT RPM MEETING FOR DISCUSSION TO FACILITATE THE DEVELOPMENT OF REDESIGNED SITE CONTROL FENCES AND GATES FOR THIS PART OF THE ISLAND)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003589 NONE CORRESPONDENCE NONE 3	**11-01-2005** 12-05-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON DRAFT PRELIMINARY ASSESSMENT/SITE INSPECTION OF THE PAINT WASTE AREA, INVESTIGATION AREA I REUSE PARCEL XVI	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003593 NONE CORRESPONDENCE NONE 2	**11-01-2005** 12-05-2005 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON DRAFT FINAL MUNITIONS RESPONSE ACTION WORK PLAN, WESTERN MAGAZINE AREA/DRAFT FINAL MUNITIONS RESPONSE WORK PLAN, IR SITE AND DREDGE POND 7S	ADMIN RECORD INFO REPOSITORY	DREDGE POND 7S SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003583 NONE CORRESPONDENCE NONE 5	**11-02-2005** 12-05-2005 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON DRAFT CONCEPTUAL SITE MODEL TECHNICAL MEMORANDUM FOR INVESTIGATION AREA K	ADMIN RECORD INFO REPOSITORY	AREA K	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003592 NONE CORRESPONDENCE NONE 2	**11-07-2005** 12-05-2005 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON THE DRAFT FINAL GEOTECHNICAL DESIGN PARAMETERS REPORT FOR THE AREA H1 CONTAINMENT AREA	ADMIN RECORD INFO REPOSITORY	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000830 BRAC SER BPMOW/1382 CORRESPONDENCE NONE 4	**11-10-2005** 07-18-2006 5090.3.A. NONE	J. DUNAWAY BRAC PMO WEST VARIOUS AGENCIES	REQUEST FOR CONCURRENCE IN AMENDING THE WORK PLAN FOR THE DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SITE FENCED SCRAP YARD AREA (FSA) NON-TIME CRITICAL REMOVAL ACTION (NTCRA) (PORTION OF THE MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003581 BRAC SER BPMOW/1382 CORRESPONDENCE NONE 4	**11-10-2005** 11-22-2005 5090.3.A. NONE	J. DUNAWAY BRAC VARIOUS AGENCIES	REQUEST AND CONCURRENCE IN AMENDING THE WORK PLAN FOR THE DEFENSE REUTILIZATION AND MARKETING OFFICE (DROM),SITE FENCED SCRAPYARD AREA (FSA) NON - TIME CRITICAL REMOVAL ACTION (NTCRA)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003582 NONE CORRESPONDENCE NONE 2	**11-10-2005** 12-05-2005 5090.3.A. NONE	R. GHAZI DTSC - SACRAMENTO, CA J. DUNAWAY BRAC	REQUEST TO EXTEND COMMENT PERIOD ON DRAFT CONCEPTUAL SITE MODEL AND GEOPHYSICAL INVESTIGATION WORK PLAN, SOUTH SHORE AREA AND PRODUCTION MANUFACTURING AREA UNTIL 23 NOVEMBER 2005	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000696 WORK ORDER NO. 12826-001-001-0002 AND 046 REPORT NONE 600	**11-11-2005** 07-18-2005 5090.3.A. NONE	D. GEMAR WESTON SOLUTIONS, INC. DTSC - BERKELEY	FINAL REMEDIAL INVESTIGATION, INVESTIGATION AREA H1 [CD COPY OF DOCUMENT AND APPENDICES A THROUGH P ENCLOSED] (INCLUDES REPLACEMENT PAGES CONVERTING FINAL DATED 7/1/05 TO 11/11/05)	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003591 NONE CORRESPONDENCE NONE 1	**11-18-2005** 12-05-2005 5090.3.A. NONE	G. LEYVA CRWQCB - OAKLAND J. DUNAWAY BRAC	REVIEW OF FINAL FISCAL YEAR 2006 SITE MANAGEMENT PLAN W/EXCEPTIONS NOTED. THE TIME SCHEDULE PROPOSED IS ACCEPTABLE.	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000798 BRAC SER BPMOW.JTD/ CORRESPONDENCE NONE 3	**11-23-2005** 03-29-2006 5090.3.A. NONE	J. DUNAWAY BRAC PMO WEST VARIOUS AGENCIES	REQUEST FOR EXTENSIONS OF SITE MANAGEMENT PLAN (SMP) SUBMITTAL DATES (PORTION OF THE MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000728 NONE CORRESPONDENCE NONE 9	**11-28-2005** 01-04-2006 5090.3.A. NONE	D. ALMEIDA U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION REPORT INSTALLATION RESTORATION PROGRAM SITES WITHIN INVESTIGATION AREA F1	ADMIN RECORD INFO REPOSITORY	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000795 NONE MINUTES NONE 26	**12-01-2005** 03-14-2006 5090.3.A. NONE	MCCRAY, D. CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	FINAL MEETING MINUTES FROM THE RESTORATION ADVISORY BOARD (RAB) MEETING HELD ON 01 DECEMBER 2005	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000735 NONE CORRESPONDENCE NONE 4	**12-06-2005** 01-04-2006 5090.3.A. NONE	ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON THE DRAFT FINAL FEASIBILITY STUDY INVESTIGATION AREA H1	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000738 NONE CORRESPONDENCE NONE 2	**12-07-2005** 01-04-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J.DUNAWAY BRAC	REVIEW AND APPROVAL OF THE FINAL SITE MANAGEMENT PLAN FISCAL YEAR 2006	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000743 29 REPORT N68711-01-MDC-1061 500	**12-14-2005** 01-04-2006 5090.3.A. NONE	D. GEMAR WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	REVISED DRAFT FINAL MUNITIONS RESPONSE WORK PLAN, WESTERN MAGAZINE AREA (PORTION OF MAILING LIST IS CONFIDENTIAL) [SEE AR # 3575 - DRAFT FINAL]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003613 DT 110-03.12 AND BRAC SER BPMOW.JD/1467 REPORT N68711-03-C-5004 250	**12-14-2005** 12-19-2005 5090.3.A. NONE	M. FOSTER SULLIVAN CONSULTING GROUP. NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL SITE INSPECTION OF THE HORSE STABLE AREA (CD COPY ENCLOSED) [INCLUDES BRAC TRANSMITTAL LETTER BY J. DUNAWAY] {PORTION OF MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003614 NONE REPORT N62467-98-D-0995 125	**12-15-2005** 12-19-2005 5090.3.A. 00065	S. FARLEY CH2MHILL BRAC	WORK PLAN SUMP INTRUSIVE INVESTIGATION, DEFENSE REUTILIZATION AND MARKETING OFFICE SITE (PORTION OF MAILING LIST IS CONFIDENTIAL) [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000729 NONE CORRESPONDENCE NONE 20	**12-16-2005** 01-04-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA D. GEMAR WESTON SOLUTIONS, INC.	REVIEW AND COMMENTS ON THE DRAFT FINAL FEASIBILITY STUDY, INVESTIGATION AREA H1(INCLUDES GSU COMMENTS DATED 12/2/05, DFG COMMENTS DATED 12/5/05 AND HERD COMMENTS DATED 12/7/05 AND 12/12/05)	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003616 NONE CORRESPONDENCE NONE 4	**12-20-2005** 01-12-2006 5090.3.A. NONE	R.GHAZI DTSC - SACRAMENTO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON DRAFT CONCEPTUAL SITE MODEL AND GEOPHYSICAL INVESTIGATION WORK PLAN SOUTH SHORE AREA AND PRODUCTION MANUFACTURING AREA	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000745 DT 110.06.11 AND BRAC SER BPMOW.JD/1486 REPORT N68711-03-C-5012 275	**12-21-2005** 01-04-2006 5090.3.A. NONE	D. CROTEAU TETRA TECH EM INC. BRAC	DRAFT FINAL PRELIMINARY ASSESSMENT / SITE, INSPECTION OF THE PAINT WASTE AREA, INVESTIGATION AREA 1, REUSE PARCEL XVI (CD COPY ENCLOSED) [PORTION OF MAILING LIST IS CONFIDENTIAL]	ADMIN RECORD INFO REPOSITORY	AREA I PARCEL XVI	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001224 NONE CORRESPONDENCE NONE 14	**12-28-2005** 08-25-2008 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA GEMAR, D. WESTON SOLUTIONS, INC.	REVIEW OF SANITARY SEWAGE TREATMENT PLANT (SSTP) OUTFALL OFFSHORE AREA DATA PACKAGE AND RECOMMENDATION FOR ADDITIONAL SITE CHARACTERIZATION (SEE COMMENTS.)	ADMIN RECORD	IA I IA J	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000774 0030 REPORT NONE 200	**01-01-2006** 02-06-2006 5090.3.A. NONE	WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	REVISED DRAFT FINAL MUNITIONS RESPONSE ACTION WORK PLAN, IR SITE AND DREDGE POND 7S [INCLUDES RESPONSES TO AGENCY COMMENTS ON DRAFT FINAL] (PORTION OF THE MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003619 2024 REPORT N68711-01-D-6010 100	**01-01-2006** 01-13-2006 5090.3.A. 00009	D. GEMAR WESTON SOLUTIONS, INC. BRAC	DRAFT FINAL SITE SPECIFIC HEALTH AND SAFETY PLAN (SSHSP) GEOPHYSICAL INVESTIGATION OF THE SOUTH SHORE AREA AND PRODUCTION MANUFACTURING AREA	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003645 0035 REPORT N68711-01-MDC-1061 75	**01-01-2006** 01-24-2006 5090.3.A. NONE	D. GEMAR WESTON SOLUTIONS, INC. C. GRIBBLE DTSC - BERKELEY	DRAFT REMEDIAL ACTION PLAN, RECORD OF DECISION, RCRA CLOSURE PLAN, INVESTIGATION AREA H1 (PORTION OF THE MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000799 BRAC SER BPMOW.JTD/0017 CORRESPONDENCE NONE 2	**01-11-2006** 03-29-2006 5090.3.A. NONE	J. DUNAWAY BRAC PMO WEST VARIOUS AGENCIES	REQUEST FOR EXTENSIONS OF SITE MANAGEMENT PLAN (SMP) SUBMITTAL DATES (PORTION OF THE MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003618 DT110-06.14 & BRAC SER BPMOW.JD/0013 REPORT N68711-03-R-5012 150	**01-11-2006** 01-13-2006 5090.3.A. 00001	M. FOSTER SULLIVAN CONSULTING GROUP BRAC	DRAFT FINAL SITE INSPECTION REPORT FOR THE MARE ISLAND ELEMENTARY SCHOOL (INCLUDES BRAC TRANSMITTAL LETTER BY J. DUNAWAY) [PORTION OF THE MAILING LIST IS CONFIDENTIAL]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000796 NONE MINUTES NONE 23	**01-12-2006** 03-14-2006 5090.3.A. NONE	MCCRAY, D. CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST DIVISION	FINAL MEETING MINUTES FROM THE RESTORATION ADVISORY BOARD (RAB) MEETING HELD ON 12 JANUARY 2006	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000783 NONE CORRESPONDENCE NONE 2	**01-19-2006** 02-17-2006 5090.3.A. NONE	G. LEYVA CRWQCB - OAKLAND J. DUNAWAY BRAC	REVIEW AND COMMENTS ON THE THE TECHNICAL REPORT, FEASIBILITY STUDY, INVESTIGATION AREA A1	ADMIN RECORD INFO REPOSITORY	AREA A1 BLDG. 503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000785 NONE CORRESPONDENCE NONE 2	**01-20-2006** 02-17-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON THE DRAFT FINAL PRELIMINARY ASSESSMENT / SITE INSPECTION OF THE PAINT WASTE AREA, INVESTIGATION AREA I, REUSE PARCEL XVI	ADMIN RECORD INFO REPOSITORY	AREA 00001 PARCEL XVI	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000778 NONE CORRESPONDENCE NONE 4	**01-25-2006** 02-17-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC	COMMENTS ON THE DRAFT FINAL SITE INSPECTION OF THE HORSE STABLE AREA	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000776 NONE CORRESPONDENCE NONE 4	**01-26-2006** 02-17-2006 5090.3.A. NONE	R. GHAZI DTSC - SACRAMENTO, CA J. DUNAWAY BRAC	COMMENTS ON THE DRAFT FINAL CONCEPTUAL SITE MODEL AND GEOPHYSICAL INVESTIGATION WORK PLAN SOUTH SHORE AREA AND PRODUCTIN MANUFACTURING AREA	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000777 NONE CORRESPONDENCE NONE 2	**01-26-2006** 02-17-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC	REVIEW OF THE DRAFT FINAL LETTER REPORT, GROUNDWATER SAMPLING FOR PERCHLORATE AT INVESTIGATION AREA F1 AND DTSC AGREES THAT FURTHER TESTING FOR PERCHLORATE AT THE SAMPLING LOCATION IN INVESTIGATION AREA F1 IS NOT WARRANTED AT THIS TIME	ADMIN RECORD INFO REPOSITORY	AREA F1	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 000212 DS.B090.20509 REPORT N68711-00-D-0005 550	**01-27-2006** 12-19-2002 5090.3.A. DO 0034	EARLY, V. SULTECH BRAC PMO WEST	FINAL REMEDIAL INVESTIGATION FOR SITE AND BUILDING AREA, INVESTIGATION AREA, VOLUMES I & II (INCLUDES REPLACEMENT PAGES CONVERTING REVISED DRAFT FINAL DATED 26 AUGUST 2003 TO FINAL; ALSO INCLUDES CD COPY AND SWDIV TRANSMITTAL LETTER) [SEE COMMENTS.]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 BLDG 0000519 BLDG 00567 IA A1 SITE 00017	FRC - PERRIS	181-03-0185 41031808	BX 0006
N00221 / 000809 BRAC SER BPMOW.ART/0057 CORRESPONDENCE NONE 3	**01-27-2006** 05-17-2006 5090.3.A. NONE	DUNAWAY, J. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF REPLACEMENT PAGES: 1) CONVERTING DRAFT FINAL DATED 10 JUNE 2004 TO FINAL FEASIBILITY STUDY, AND 2) CONVERTING REVISED DRAFT FINAL DATED 26 AUGUST 2003 TO FINAL REMEDIAL INVESTIGATION [W/OUT ENCLOSURES] {SEE COMMENTS.}	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 IA A1 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1		
N00221 / 003488 DS. A034.12984 & SW DIV SER.06CM.JD/0642 REPORT N68711-00-D-0005 200	**01-27-2006** 07-12-2004 5090.3.A. DO 0034	LAGO, R. TETRA TECH EM INC. GO, P. NAVFAC - SOUTHWEST DIVISION	FINAL FEASIBILITY STUDY (FS) [INCLUDES SWDIV TRANSMITTAL LETTER AND RESPONSE TO COMMENTS (DS.A034.10840) ON THE DRAFT FS] {PORTION OF MAILING LIST IS SENSITIVE; CD COPY ENCLOSED}	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 IA A1 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1		

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N00221 / 000784 NONE CORRESPONDENCE NONE 3	**01-30-2006** 02-17-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC	COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION REPORT, INSTALLATION RESTORATION PROGRAM SITES WITHIN INVESTIGATION AREA F1	ADMIN RECORD INFO REPOSITORY	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000786 0049 REPORT NONE 75	**01-31-2006** 02-23-2006 5090.3.A. NONE	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	CLOSURE CERTIFICATION REPORT, INVESTIGATION AREA H1 INDUSTRIAL WASTEWATER TREATMENT PLANT (IWTP) PIPELINE (PORTION OF THE MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA H1 SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003617 2025 & BRAC SER BPMOW.DC/0014 REPORT N68711-01-D-6010 200	**02-01-2006** 01-13-2006 5090.3.A. 00009	D. GEMAR WESTON SOLUTIONS, INC BRAC	REVISED DRAFT FINAL CONCEPTUAL SITE MODEL AND GEOPHYSICAL INVESTIGATION WORK PLAN, SOUTH SHORE AREA AND PRODUCTION MANUFACTURING AREA (INCLUDES BRAC TRANSMITTAL LETTER BY J. DUNAWAY) [PORTION OF THE MAILING LIST IS CONFIDENTIAL]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000782 NONE CORRESPONDENCE NONE 2	**02-02-2006** 02-17-2006 5090.3.A. NONE	ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON THE DRAFT FINAL WORK PLAN, REMEDIAL INVESTIGATION PHASE II FOR SOUTHERN OFFSHORE SITES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000817 NONE CORRESPONDENCE NONE 2	**02-02-2006** 05-26-2006 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC PMO WEST	REVIEW AND NO FURTHER COMMENTS ON THE REVISED DRAFT FINAL MUNITIONS RESPONSE ACTION WORK PLAN, WESTERN MAGAZINE AREA	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000791 NONE CORRESPONDENCE NONE 2	**02-09-2006** 03-07-2006 5090.3.A. NONE	R. GHAZI DTSC - SACRAMENTO, CA J. DUNAWAY BRAC	REVIEW AND COMMENTS ON THE DRAFT FINAL WORK PLAN, REMEDIAL INVESTIGATION (RI) PHASE II FOR SOUTHERN OFFSHORE SITES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000793 NONE CORRESPONDENCE NONE 2	**02-14-2006** 03-07-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA D. GEMAR WESTON SOLUTIONS, INC.	REVIEW AND NO FURTHER COMMENTS ON THE REVISED DRAFT FINAL MUNITIONS RESPONSE ACTION WORK PLAN	ADMIN RECORD INFO REPOSITORY	DREDGE POND 7S SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000792 NONE CORRESPONDENCE NONE 2	**02-16-2006** 03-07-2006 5090.3.A. NONE	G. LEYVA CRWQCB - OAKLAND J. DUNAWAY BRAC	REVIEW AND COMMENTS ON THE SITE INSPECTION (SI) REPORT FOR MARE ISLAND ELEMENTARY SCHOOL SITE	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000787 BRAC SER BPMOW.DC/0143 CORRESPONDENCE NONE 3	**02-17-2006** 02-27-2006 5090.3.A. NONE	J. DUNAWAY BRAC VARIOUS AGENCIES	TRANSMITTAL OF REPLACEMENT PAGES FOR THE REVISED DRAFT FINAL CONCEPTUAL SITE MODEL AND GEOPHYSICAL INVESTIGATION WORK PLAN, SOUTH SHORE AREA AND PRODUCTION MANUFACTURING AREA. (PORTION OF THE MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000824 NONE MINUTES NONE 30	**02-23-2006** 07-17-2006 5090.3.A. NONE	BRAC PMO WEST RAB MEMBERS	23 FEBRUARY 2006 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000788 2031 REPORT N68711-01-D-6010 300	**02-27-2006** 03-01-2006 5090.3.A. 00008	WESTON SOLUTIONS, INC. BRAC	DRAFT GENERAL SITE CLOSURE REPORT FOR THE TIME-CRITICAL REMOVAL ACTION (TCRA) MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S (SEE AR #789 - BRAC TRANSMITTAL LETTER BY J. DUNAWAY)	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000789 BRAC SER BPMOW.JCK/0161 CORRESPONDENCE NONE 3	**02-27-2006** 03-01-2006 5090.3.A. NONE	J. DUNAWAY BRAC VARIOUS AGENCIES	TRANSMITTAL OF THE DRAFT GENERAL SITE CLOSURE REPORT FOR THE TIME-CRITICAL REMOVAL ACTION (TCRA) MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S (PORTION OF THE MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000818 NONE CORRESPONDENCE NONE 14	**02-27-2006** 05-26-2006 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT REMEDIAL DESIGN AND REMEDIAL ACTION WORK PLAN	ADMIN RECORD INFO REPOSITORY	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000790 0047 REPORT NONE 150	**03-01-2006** 03-02-2006 5090.3.A. NONE	WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	RCRA/FACILITY LANDFILL 2005 ANNUAL GROUNDWATER MONITORING REPORT (PORTION OF THE MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000797 BRAC SER BPMOW.JD/0240 CORRESPONDENCE NONE 8	**03-14-2006** 03-28-2006 5090.3.A. NONE	J. DUNAWAY BRAC PMO WEST M. SANDHU DTSC	REQUEST FOR CORRECTIVE ACTION COMPLETION DETERMINATION (CACD) FOR TWO TRANSFERRING PARCELS.(INCLUDES MAP OR REMAINING TRANSFER PARCELS, FACILITY LAYOUT MAP OF FIGURE X, FACILITY LAYOUR MAP OF FIGURE 2, AND SITE LOCATION AND FACILITY BOUNDARY)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001108 BRAC SER BPMOW.JTD/0241 CORRESPONDENCE NONE 1	**03-14-2006** 08-03-2007 5090.3.A. NONE	DUNAWAY, J. BRAC PMO WEST DEPARTMENT OF DEFENSE EXPLOSIVES SAFETY BOARD	REQUEST FOR REVIEW AND APPROVAL FOR EXPLOSIVES SAFETY SUBMISSION (ESS) AMENDMENT 2, NON-TIME CRITICAL REMOVAL ACTION, DEFENSES REUTILIZATION AND MARKETING OFFICE (DRMO) SITE (W/ENCLOSURE)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000800 BRAC SER BPMOW.JTD/0242 CORRESPONDENCE NONE 3	**03-16-2006** 03-29-2006 5090.3.A. NONE	J. DUNAWAY BRAC PMO WEST VARIOUS AGENCIES	REQUEST FOR EXTENSIONS OF SITE MANAGEMENT PLAN (SMP) SUBMITTAL DATES (PORTION OF THE MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000804 NONE CORRESPONDENCE NONE 21	**03-20-2006** 04-11-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA D. GEMAR WESTON SOLUTIONS, INC.	REVIEW AND COMMENTS ON THE DRAFT REMEDIAL ACTION PLAN/RECORD OF DECISION/RCRA CLOSURE PLAN DATED JANUARY 2006 (INCLUDES GSU COMMENTS DATED 3/15/06, HERD COMMENTS DATED 3/17/06 AND 3/20/06 AND DEPARTMENT OF FISH AND GAME COMMENTS DATED 3/13/06)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000806 NONE CORRESPONDENCE NONE 3	**03-22-2006** 04-11-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA J. DUNAWAY BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT FINAL SITE INSPECTION (SI) REPORT FOR THE MARE ISLAND ELEMENTARY SCHOOL	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000805 NONE CORRESPONDENCE NONE 2	**03-23-2006** 04-11-2006 5090.3.A. NONE	G. LEYVA CRWQCB - OAKLAND J. DUNAWAY BRAC PMO WEST	REVIEW AND COMMENTS ON THE PAINT WASTE AREA, DRAFT FINAL PRELIMINARY ASSESSMENT/SITEINSPECTION, INVESTIGATION AREA 1, REUSE PARCEL XVI	ADMIN RECORD INFO REPOSITORY	AREA 00001 PARCEL XVI	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000814 NONE CORRESPONDENCE NONE 1	**03-28-2006** 05-26-2006 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA J. DUNAWAY BRAC PMO WEST	REVIEW AND NO FURTHER COMMENTS ON THE DRAFT FINAL SITE INSPECTION (SI) REPORT FOR THE MARE ISLAND ELEMENTARY SCHOOL	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000819 NONE CORRESPONDENCE NONE 1	**03-29-2006** 05-26-2006 5090.3.A. NONE	G. LEVYA CRWQCB - OAKLAND J. DUNAWAY BRAC PMO WEST	REVIEW AND CONCURRENCE WITH DTSC COMMENTS ON REMEDIAL INVESTIGATION REPORT	ADMIN RECORD INFO REPOSITORY	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000815 NONE CORRESPONDENCE NONE 2	**03-30-2006** 05-26-2006 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA DUNAWAY, J. BRAC PMO WEST	REVIEW OF THE DRAFT FINAL FORMER NORTH BUILDING WAYS AREA REMEDIAL INVESTIGATION (RI) REPORT (SEE AR # 110 - FINAL RI REPORT) [SEE COMMENTS.]	ADMIN RECORD INFO REPOSITORY	IA A2	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000825 NONE MINUTES NONE 34	**03-30-2006** 07-17-2006 5090.3.A. NONE	BRAC PMO WEST RAB MEMEBERS	30 MARCH 2006 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000823 NONE CORRESPONDENCE NONE 17	**04-06-2006** 06-08-2006 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA D. GEMAR WESTON SOLUTIONS, INC.	COMMENTS ON THE DRAFT INVESTIGATION AREA H1 REMEDIAL DESIGN PLAN AND REMEDIAL ACTION WORK PLAN DATED DECEMBER 2005 (INCLUDES HERD COMMENTS DATED 3/30/2006, GSU COMENTS DATED 3/30/2006, AND DEPT OF FISH AND GAME COMMENTS DATED D/22/2006) [***SEE COMMENTS]	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000816 NONE CORRESPONDENCE NONE 2	**04-11-2006** 05-26-2006 5090.3.A. NONE	J. KAISER CRWQCB - OAKLAND J. DUNAWAY BRAC PMO WEST	DESIGNATION OF BRIAN THOMPSON AS THE NEW PROJECT MANAGER FOR THE NAY RETAINED PORTIONS OF MARE ISLAND	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000807 NONE REPORT N68711-03-D-5104 50	**04-20-2006** 05-16-2006 5090.3.A. 00087	SULTECH BRAC PMO WEST	DRAFT DATA QUALITY OBJECTIVES TO SUPPORT THE BASELINE ECOLOGICAL RISK ASSESSMENT (BERA) AND OUTFALL SEDIMENT INVESTIGATION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	AREA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000808 BRAC SER BPMOW.MS/0371 CORRESPONDENCE NONE 3	**04-20-2006** 05-16-2006 5090.3.A. NONE	J. DUNAWAY BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF DRAFT DATA QUALITY OBJECTIVES TO SUPPORT THE BASELINE ECOLOGICAL RISK ASSESSMENT (BERA) AND OUTFALL SEDIMENT INVESTIGATION) {PORTION OF THE MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000820 NONE CORRESPONDENCE NONE 26	**04-26-2006** 05-26-2006 5090.3.A. NONE	R. GHAZI DTSC - SACRAMENTO, CA J. DUNAWAY BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION REPORT (RI) [INCLUDES HERD COMMENTS DATED 4/10/06 AND 4/14/06]	ADMIN RECORD INFO REPOSITORY	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000826 NONE MINUTES NONE 23	**04-27-2006** 07-17-2006 5090.3.A. NONE	BRAC PMO WEST RAB MEMBERS	27 APRIL 2006 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000810 DT 110-01.24 REPORT N68711-03-C-5004 30	**05-01-2006** 05-22-2006 5090.3.A. NONE	SULLIVAN BRAC PMO WEST	DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) ELEMENTARY SCHOOL [SEE AR #811 - BRAC TRANSMITTAL LETTER]	ADMIN RECORD INFO REPOSITORY	PARCEL XII	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000850 DS.B090.19704 REPORT N68711-03-D-5104 11	**05-01-2006** 10-13-2006 5090.3.A. 00090	S. BRADLEY SULTECH K. ROONEY NAVFAC - SOUTHWEST	DRAFT PROPOSED PLAN (PP) [SEE AR #3666 - REVISED DRAFT PROPOSED PLAN]	ADMIN RECORD INFO REPOSITORY	SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001203 NONE CORRESPONDENCE NONE 5	**05-04-2006** 06-18-2008 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA DUNAWAY, J. BRAC PMO WEST	COMMENTS ON THE DRAFT SUMMARY REPORT ON J-LINES CLEANING AND FLUSHING ACTIVITIES (INCLUDES NORTHERN CALIFORNIA PERMITTING AND CORRECTIVE ACTION BRANCH COMMENTS DATED 12 APRIL 2006)	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000811 BRAC SER BPMOW.ART/0424 CORRESPONDENCE NONE 3	**05-15-2006** 05-22-2006 5090.3.A. NONE	J. DUNAWAY BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) ELEMENTARY SCHOOL (PORTION OF THE MAILING LIST IS CONFIDENTIAL) [SEE AR #810 - DRAFT FINDING OF SUITABILITY TO TRANSFER]	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL XIII	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003669 NONE CORRESPONDENCE NONE 25	**05-15-2006** 05-30-2007 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA D. GEMAR WESTON SOLUTIONS, INC.	REVIEW AND COMMENTS ON DRAFT REMEDIAL ACTION PLAN (RAP)/RECORD OF DECISION (ROD)/RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) CLOSURE PLAN DATED APRIL 2005 (***SEE COMMENTS)	ADMIN RECORD INFO REPOSITORY	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000855 DS.B090.19709 REPORT N68711-03-D-5104 50	**05-16-2006** 10-31-2006 5090.3.A. 00090	SULTECH BRAC PMO WEST	DRAFT REMEDIAL ACTION PLAN/RECORD OF DECISION (RAP/ROD) {CD COPY ENCLOSED}	ADMIN RECORD INFO REPOSITORY	SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000822 BRAC SER BPMOW.JTD/0450 CORRESPONDENCE NONE 4	**05-18-2006** 06-08-2006 5090.3.A. NONE	J. DUNAWAY BRAC PMO WEST VARIOUS AGENCIES	REQUEST FOR EXTENSIONS OF FY06 SITE MANAGEMENT PLAN (SMP) SUBMITTAL DATES (PORTION OF THE MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000821 0035 REPORT N68711-01-MDC-1061 150	**05-30-2006** 06-01-2006 5090.3.A. NONE	WESTON SOLUTIONS, INC BRAC PMO WEST	FINAL DRAFT REMEDIAL ACTION PLAN/RECORD OF DECISION (RAP/ROD)/RCRA CLOSURE PLAN (PORTION OF THE MAILING LIST IS CONFIDENTIAL) [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000835 NONE MINUTES NONE 26	**06-01-2006** 07-21-2006 5090.3.A. NONE	BRAC PMO WEST RAB MEMBERS	01 JUNE 2006 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY	H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001297 DS.B122.20689 REPORT N68711-03-D-5104 160	**06-01-2006** 03-05-2009 5090.3.A. CTO 0122	MCCONATHY, B. SULTECH BRAC PMO WEST	DRAFT SUPPLEMENTAL SITE INSPECTION FOR NORTHERN OFFSHORE MUNITIONS AND EXPLOSIVES OF CONCERN SITES: FLEET RESERVE PIER AND BERTHS (CD COPY ENCLOSED)	ADMIN RECORD	BERTH 0001 BERTH 0002	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001296 BRAC SER BPMOW.MS/0370 CORRESPONDENCE NONE 3	**06-09-2006** 03-05-2009 5090.3.A. NONE	GOULD, D. BRAC PMO WEST GRIBBLE, S. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT SUPPLEMENTAL SITE INSPECTION FOR NORTHERN OFFSHORE MUNITIONS AND EXPLOSIVES OF CONCERN SITES: FLEET RESERVE PIER AND BERTHS (W/OUT ENCLOSURE) [PORTION OF THE MAILING LIST IS SENSITIVE]	ADMIN RECORD SENSITIVE	BERTH 0001 BERTH 0002	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000829 BRAC SER BPMOW.DC/0499 CORRESPONDENCE NONE 4	**06-13-2006** 07-18-2006 5090.3.A. NONE	D. GOULD BRAC PMO WEST VARIOUS AGENCIES	FOLLOW-UP LETTER REGARDING THE REQUEST TO AMEND THE WORK PLAN FOR THE DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SITE FENCED SCRAP YARD AREA (FSA) NON-TIME CRITICAL REMOVAL ACTION (NTCRA) (PORTION OF THE MAILING LIST IS CONFIDENTIAL)	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000827 BRAC SER BPMOW.MS/0518 CORRESPONDENCE NONE 2	**06-14-2006** 07-18-2006 5090.3.A. NONE	D. GOULD BRAC PMO WEST A. LANDIS DTSC - SACRAMENTO	TRANSMITTAL OF DRAFT SITE MANAGEMENT PLAN FOR FISCAL YEAR 2007 (W/OUT ENCLOSURE) [SEE AR # 828 - DRAFT SITE MANAGEMENT PLAN] {PORTION OF THE MAILING LIST IS CONFIDENTIAL}	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA F1 PARCEL I PARCEL XVI	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000828 DS.B131.20562 REPORT N68711-03-D-5104 25	**06-14-2006** 07-18-2006 5090.3.A. 00131	S. BRADLEY TETRA TECH EM INC. K. ROONEY NAVFAC - SOUTHWEST DIVISION	DRAFT SITE MANAGEMENT PLAN FOR FISCAL YEAR 2007, ATTACHMENT C (CD COPY ENCLOSED) [SEE AR #827 - TRANSMITTAL LETTER BY D. GOULD] ***SEE COMMENTS	ADMIN RECORD INFO REPOSITORY	IA A1 IA A2 IA C2 IA F1 IA F2 IA G IA H1 IA H2 IA I IA K PARCEL I PARCEL III PARCEL XIII PARCEL XV-B(2) PARCEL XVI	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000836 BRAC SER BPMOW.MS/0517 CORRESPONDENCE NONE 3	**06-22-2006** 07-21-2006 5090.3.A. NONE	MEGLIOLA, A. BRAC PMO WEST C. GRIBBLE EPA - CA	TRANSMITTAL LETTER OF FINAL SITE INSPECTION REPORT FOR MARE ISLAND ELEMENTARY SCHOOL (W/OUT ENCLOSURE) [PORTION OF MAILING LIST IS CONFIDENTIAL] {SEE AR #831 - FINAL SITE INSPECTION REPORT}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000831 DT 110-01.29 REPORT N68711-03-C-5004 200	**06-26-2006** 07-18-2006 5090.3.A. 00001	M. FOSTER SULLIVAN CONSULTING GROUP BRAC PMO WEST	FINAL SITE INSPECTION (SI) REPORT FOR THE MARE ISLAND ELEMENTARY SCHOOL (CD COPY ENCLOSED) [SEE AR #836 - BRAC PMO WEST TRANSMITTAL LETTER BY A. MEGLIOLA]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000832 BRAC SER BPMOW.MS/0544 CORRESPONDENCE NONE 4	**06-26-2006** 07-18-2006 5090.3.A. NONE	MEGLIOLA, A. BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	NOTIFICATION OF CHANGE OF PROJECT MANAGER TO MICHAEL S. BLOOM AS THE BRAC ENVIRONMENTAL COORDINATOR (BEC) [PORTION OF THE MAILING LIST IS CONFIDENTIAL]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000833 BRAC SER BPMOW.DG\0552 CORRESPONDENCE NONE 3	**06-30-2006** 07-18-2006 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF DRAFT EXPANDED SITE INSPECTION REPORT, FORMER DEGREASING PLANT, JUNE 2006 (W/OUT ENCLOSURE) [PORTION OF MAILING LIST IS SENSITIVE] {SEE AR # 834 - DRAFT EXPANDED SITE INSPECTION (SI) REPORT}	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 00742 IA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000834 DS.B139.20711 REPORT N68711-03-D-5104 175	**06-30-2006** 07-18-2006 5090.3.A. 00139	P. WILSON TETRA TECH EM INC. BRAC PMO WEST	DRAFT EXPANDED SITE INSPECTION (SI) REPORT, FORMER DEGREASING PLANT (SEE AR #833 - BRAC PMO WEST TRANSMITTAL LETTER BY M. BLOOM)	ADMIN RECORD INFO REPOSITORY	AREA C2 BLDG. 742	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000812 0034 REPORT N68711-01-MDC-1061 300	**07-01-2006** 05-22-2006 5090.3.A. NONE	WESTON SOLUTIONS, INC. BRAC PMO WEST	FINAL FEASIBILITY STUDY FOR INVESTIGATION AREA (INCLUDES TWO SETS OF REPLACEMENT PAGES REVISING DOCUMENT, ANALYTICAL DATA, AND CD COPY) [***SEE COMMENTS]	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000840 DT 110-01.21 REPORT N68711-03-C-5004 10	**07-01-2006** 08-18-2006 5090.3.A. NONE	ULMER, W. SULLIVAN BRAC PMO WEST	DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), NORTHERN SLIVER [SEE AR #840 - BRAC PMO WEST TRANSMITTAL LETTER]	ADMIN RECORD INFO REPOSITORY	PARCEL XV-B(2)	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000839 BRAC SER BPMOW.ART/0580 CORRESPONDENCE NONE 3	**07-05-2006** 08-18-2006 5090.3.A. NONE	MEGLIOLA, A. BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), NORTHERN SLIVER (W/OUT ENCLOSURE) [PORTION OF THE MAILING LIST IS CONFIDENTIAL] {SEE AR #840 - DRAFT FOST}	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL XV-B(2)	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000845 NONE CORRESPONDENCE NONE 6	**07-18-2006** 08-29-2006 5090.3.A. NONE	LANDIS, A. DTSC - SACRAMENTO, CA M. BLOOM BRAC PMO WEST	REVIEW AND CONCURRENCE WITH THE FINAL SITE INSPECTION REPORT FOR THE MARE ISLAND ELEMENTARY SCHOOL; NO FURTHER ACTION NECESSARY	ADMIN RECORD INFO REPOSITORY	PARCEL XIII	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000837 FILE NO. 2129.2011 CORRESPONDENCE NONE 2	**07-25-2006** 08-08-2006 5090.3.A. NONE	THOMPSON, B. CRWQCB - OAKLAND M. BLOOM BRAC PMO WEST	COMMENTS ON THE DRAFT GENERAL SITE CLOSURE REPORT, TIME CRITICAL REMOVAL ACTION (TCRA), MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000844 FILE NO. 2129.2011(BJT) CORRESPONDENCE NONE 2	**07-25-2006** 08-23-2006 5090.3.A. NONE	THOMPSON, B. CRWQCB - OAKLAND M. BLOOM BRAC PMO WEST	REVIEW AND REQUEST FOR REVISIONS ON SECTIONS 5.1.2 AND 5.2.9 OF THE DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), NORTHERN SLIVER	ADMIN RECORD INFO REPOSITORY	PARCEL XV-B(2)	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000847 FILE NO. 2129.2011(BJT) CORRESPONDENCE NONE 2	**07-25-2006** 09-07-2006 5090.3.A. NONE	THOMPSON, B. CRWQCB - OAKLAND M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON SITE INSPECTION (SI) OF THE HORSE STABLE AREA	ADMIN RECORD INFO REPOSITORY	BLDG. A155	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000842 NONE CORRESPONDENCE NONE 1	**07-27-2006** 08-22-2006 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), NORTHERN SLIVER	ADMIN RECORD INFO REPOSITORY	PARCEL XV-B(2)	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000848 NONE MINUTES NONE 18	**07-27-2006** 10-03-2006 5090.3.A. NONE	CDM FEDERAL PROGRAMS RAB MEMBERS	27 JULY 2006 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000843 FILE NO. 2129.2011(BJT) CORRESPONDENCE NONE 2	**07-28-2006** 08-23-2006 5090.3.A. NONE	THOMPSON, B. CRWQCB - OAKLAND M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON FINAL SITE INSPECTION (SI) REPORT FOR MARE ISLAND ELEMENTARY SCHOOL	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000849 NONE MINUTES NONE 21	**07-29-2006** 10-03-2006 5090.3.A. NONE	CDM FEDERAL PROGRAMS RAB MEMBERS	29 JUNE 2006 RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000841 FILE NO. 2129.2011(BJT) CORRESPONDENCE NONE 3	**07-31-2006** 08-22-2006 5090.3.A. NONE	THOMPSON, B. CRWQCB - OAKLAND M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), ELEMENTARY SCHOOL	ADMIN RECORD INFO REPOSITORY	PARCEL XIII	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000846 12826.001.001.0013.07 REPORT N68711--01-MDC-1061 600	**08-01-2006** 08-30-2006 5090.3.A. 00052	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) FACILITY LANDFILL, 2006 SEMIANNUAL GROUNDWATER MONITORING REPORT (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000885 DT110-05.12 REPORT N68711-03-C-5004 2500	**08-01-2006** 02-14-2007 5090.3.A. NONE	FOSTER, B. SULLIVAN INTL. GROUP, INC. BRAC PMO WEST	DRAFT FINAL INVESTIGATION AREA REMEDIAL INVESTIGATION (RI) [VOLUMES 1-2 OF 2] {CD COPY ENCLOSED} (SEE AR #884 - BRAC PMO WEST TRANSMITTAL LETTER BY A. MEGLIOLA) [DRAFT REMEDIAL INVESTIGATION REPORT WAS NOT SUBMITTED TO THE ADMINSTRATIVE RECORDS]	ADMIN RECORD INFO REPOSITORY	AREA F2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000838 0035 AND WORK ORDER NO.12826.001.001.00 02.85 REPORT N68711-01-MDC-1061 80	**08-11-2006** 08-15-2006 5090.3.A. NONE	D. GEMAR WESTON SOLUTIONS, INC. DTSC - BERKELEY	FINAL REMEDIAL ACTION PLAN (RAP), RECORD OF DECISION (ROD), RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) CLOSURE PLAN, INVESTIGATION AREA H1 (PORTION OF THE MAILING LIST IS CONFIDENTIAL) [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003670 NONE CORRESPONDENCE NONE 8	**08-25-2006** 05-30-2007 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON DRAFT GENERAL SITE CLOSURE REPORT FOR THE TIME-CRITICAL REMOVAL ACTION (TCRA), MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000884 BRAC SER BPMOW.DJC/0759 CORRESPONDENCE NONE 3	**09-01-2006** 02-14-2007 5090.3.A. NONE	MEGLIOLA, A. BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF DRAFT FINAL INVESTIGATION AREA REMEDIAL INVESTIGATION (RI) [W/OUT ENCLOSURE] {SEE AR #885 - DRAFT FINAL RI} (PORTION OF THE MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA F2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000887 DS.B095.20953 REPORT N68711-03-C-5004 20	**09-01-2006** 02-14-2007 5090.3.A. 00095	R. LAGO SULTECH BRAC PMO WEST	DRAFT SITE INVESTIGATION (SI) SAMPLING FIELD VARIANCE FORM, INVESTIGATION AREA (CD COPY ENCLOSED AND ELECTRONIC VERSION OF ATTACHMENT 1 ONLY) [SEE AR #886 - BRAC PMO WEST TRANSMITTAL LETTER BY M. BLOOM]	ADMIN RECORD INFO REPOSITORY	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000889 SD.B095.20981 REPORT N68711-03-D-5104 20	**09-01-2006** 02-28-2007 5090.3.A. 00095	R. LAGO SULTECH BRAC PMO WEST	FINAL POLYCHLORINATED BIPHENYLS (PCB) FIELD VARIANCE FORM, INVESTIGATION AREA (SEE AR #263 - ATTACHMENT 1, AND AR #888 - BRAC PMO WEST TRANSMITTAL LETTER BY M. BLOOM)	ADMIN RECORD INFO REPOSITORY	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000888 BRAC SER BPMOW.DJC\0777 CORRESPONDENCE NONE 3	**09-11-2006** 02-28-2007 5090.3.A. NONE	M. BLOOM BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF FINAL POLYCHLORINATED BIPHENYLS (PCB) FIELD VARIANCE FORM, INVESTIGATION AREA (W/OUT ENCLOSURE) [SEE AR #889 - FINAL PCB FIELD VARIANCE FORM] {PORTION OF THE MAILING LIST IS SENSITIVE}	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000886 BRAC SER BPMOW.DJC\0783 CORRESPONDENCE NONE 3	**09-19-2006** 02-14-2007 5090.3.A. NONE	M. BLOOM BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF DRAFT SITE INVESTIGATION (SI) SAMPLING FIELD VARIANCE FORM, INVESTIGATION AREA (W/OUT ENCLOSURE) [SEE AR #887 - DRAFT SI] {PORTION OF THE MAILING LIST IS SENSITIVE}	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003671 NONE CORRESPONDENCE NONE 25	**09-20-2006** 05-30-2007 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA D. GEMAR WESTON SOLUTIONS, INC.	REVIEW AND COMMENTS ON DRAFT FINAL REMEDIAL DESIGN WORK PLAN, DATED JUNE 2006 (INCLUDES GSU COMMENTS DATED 08/03/2006, AND ESU COMMENTS DATED 09/19/2006)	ADMIN RECORD INFO REPOSITORY	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000854 DS.B095-20955 REPORT N68711-03-D-5104 700	**10-01-2006** 10-31-2006 5090.3.A. 00095	S. BRADLEY SULTECH BRAC PMO WEST	FINAL SITE INVESTIGATION (SI) SAMPLING FIELD VARIANCE FORM (SEE AR #853 - BRAC PMO WEST TRANSMITTAL LETTER BY J. SULLIVAN) [CD COPY ENCLOSED] {SEE AR #263 - DRAFT SAMPLING AND ANALYSIS PLAN (SAP)}	ADMIN RECORD INFO REPOSITORY	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000856 12826.001.001.0002.94 REPORT N68711-01-MDC-1061 1000	**10-01-2006** 11-06-2006 5090.3.A. 00053	D. GEMAR WESTON SOLUTIONS INC. DTSC - BERKELEY	DRAFT POST-CLOSURE CARE PLAN: MONITORING MAINTENANCE, AND REPAIR, CONTAINMENT AREA GROUNDWATER/LEACHATE MONITORING PLAN, WATER QUALITY SAMPLING AND ANALYSIS PLAN CORRECTIVE ACTION MONITORING PROGRAM, VOLUMES I THROUGH III OF III (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA H1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000858 DS.B095.20958 REPORT N68711-03-D-5104 10	**10-01-2006** 11-14-2006 5090.3.A. 00095	R. LAGO SULTECH BRAC PMO WEST	DRAFT UNDERGROUND STORAGE TANK (UST) SAMPLING FIELD VARIANCE FORM, INVESTIGATION AREA F1 (CD COPY ENCLOSED) [SEE AR #857 BRAC PMO WEST TRANSMITTAL LETTER BY M. BLOOM AND AR #269 - DRAFT SAMPLING AND ANALYSIS (SAP) PLAN]	ADMIN RECORD INFO REPOSITORY	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000874 DS.B131.20564 REPORT N68711-03-D-5104 25	**10-01-2006** 01-10-2007 5090.3.A. 00131	SULTECH BRAC PMO WEST	DRAFT FINAL SITE MANAGEMENT PLAN (SMP), FISCAL YEAR 2007, ATTACHMENT C (CD COPY ENCLOSED) [SEE AR #873 - BRAC PMO WEST TRANSMITTAL LETTER BY M. BLOOM] ***SEE COMMENTS	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000852 2035 REPORT N68711-01-D-6010 55	**10-13-2006** 10-27-2006 5090.3.A. 00011	L. MAGGINI WESTON SOLUTIONS, INC. BRAC PMO WEST	REMOVAL ACTION WORK PLAN SUPPLEMENT, NON-TIME CRITICAL REMOVAL ACTION (NTCRA), DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SITE [SEE AR #851 - BRAC PMO WEST TRANSMITTAL LETTER BY M. BLOOM AND AR #655 - FINAL REMOVAL ACTION PLAN] {CD COPY ENCLOSED}	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000851 BRAC SER BPMOW.DJC\0044 CORRESPONDENCE NONE 3	**10-16-2006** 10-27-2006 5090.3.A. NONE	M. BLOOM BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF REMOVAL ACTION PLAN SUPPLEMENT FOR NON-TIME CRITICAL REMOVAL ACTION (NTCRA), DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SITE [W/OUT ENCLOSURE] [PORTION OF THE MAILING LIST IS SENSITIVE] {SEE AR #852 - REMOVAL ACTION PLAN}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000857 BRAC SER BPMOW.DJC\0045 CORRESPONDENCE NONE 1	**10-16-2006** 11-14-2006 5090.3.A. NONE	M. BLOOM BRAC PMO WEST B. THOMPSON CRWQCB - OAKLAND	TRANSMITTAL OF DRAFT UNDERGROUND STORAGE TANK (UST) SAMPLING FIELD VARIANCE FORM, INVESTIGATION AREA F1 (W/OUT ENCLOSURE) [SEE AR #858 - SAMPLING FIELD VARIANCE FORM] {PORTION OF THE MAILING LIST IS SENSITIVE}	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000859 NONE CORRESPONDENCE NONE 1	**10-16-2006** 11-14-2006 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA M. BLOOM BRAC PMO WEST	REVIEW AND NO COMMENTS ON DRAFT SITE INVESTIGATION SAMPLING FIELD VARIANCE FORM, INVESTIGATION AREA F1	ADMIN RECORD INFO REPOSITORY	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001204 NONE CORRESPONDENCE NONE 2	**10-17-2006** 06-18-2008 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	REVIEW OF AND NO COMMENTS ON DRAFT SITE INVESTIGATION SAMPLING FIELD VARIANCE FORM, INVESTIGATION AREA	ADMIN RECORD INFO REPOSITORY	IA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000853 BRAC SER BPMOW.DJC\0065 CORRESPONDENCE NONE 3	**10-24-2006** 10-31-2006 5090.3.A. NONE	M. BLOOM BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF FINAL SITE INVESTIGATION (SI) SAMPLING FIELD VARIANCE FORM (W/OUT ENCLOSURE) [PORTION OF THE MAILING LIST IS SENSITIVE] {SEE AR #854 - FINAL SI FORM}	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001205 FILE NO. 2129.2011(BJT) CORRESPONDENCE NONE 3	**10-24-2006** 06-18-2008 5090.3.A. NONE	THOMPSON, B. CRWQCB - OAKLAND, CA BLOOM, M. BRAC PMO WEST	COMMENTS ON 1) FINAL POLYCHLORINATED BIPHENYLS (PCB) FIELD VARIANCE FORM; 2) DRAFT SITE INVESTIGATION (SI) SAMPLING FIELD VARIANCE FORM; AND 3) DRAFT UNDERGROUND STORAGE TANK (UST) SAMPLING FIELD VARIANCE FORM (SEE COMMENTS.)	ADMIN RECORD INFO REPOSITORY	IA F1 UST A-225 UST A-267	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001206 NONE CORRESPONDENCE NONE 3	**10-26-2006** 06-18-2008 5090.3.A. NONE	MURPHY, D. DTSC - BERKELEY, CA MEGLIOLA, A. BRAC PMO WEST	COMMENTS ON THE DRAFT FINAL SITE MANAGEMENT PLAN	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000873 BRAC SER BPMOW.DG/0081 CORRESPONDENCE NONE 5	**10-30-2006** 01-10-2007 5090.3.A. NONE	M. BLOOM BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF DRAFT FINAL SITE MANAGEMENT PLAN (SMP), FISCAL YEAR 2007 AND RESPONSE TO AGENCY COMMENTS ON DRAFT SMP (W/OUT ENCLOSURE) [SEE AR #874 - DRAFT FINAL SMP] {PORTION OF THE MAILING LIST IS SENSITIVE}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000872 DS.B095.20962 REPORT N68711-03-D-5104 90	**10-31-2006** 01-10-2007 5090.3.A. 00095	K. RYAN SULTECH BRAC PMO WEST	DRAFT FINAL HEALTH AND SAFETY PLAN (HASP) FOR SAMPLING ACTIVITIES	ADMIN RECORD INFO REPOSITORY	AREA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001223 NONE CORRESPONDENCE NONE 4	**10-31-2006** 08-21-2008 5090.3.A. NONE	MURPHY, D. DTSC - BERKELEY, CA MEGLIOLA, A. BRAC PMO WEST	APPROVAL OF REQUEST TO AMEND THE WORK PLAN FOR THE DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SITE FENCED SCRAP YARD AREA NON-TIME CRITICAL REMOVAL ACTION (NTCRA)	ADMIN RECORD	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000867 WORK ORDER NO. 12954.002.008.1565 REPORT N68711-01-D-6010 5000	**11-01-2006** 12-15-2006 5090.3.A. 00008	D. SANCHEZ WESTON SOLUTIONS, INC. BRAC PMO WEST	DRAFT FINAL TIME-CRITICAL REMOVAL ACTION COMPLETION REPORT, MARINE CORPS FIRING RANGE AND HISTORICAL OUTFALL 4S, FOLDERS 1 - 4 OF 4 (INCLUDES RESPONSE TO COMMENTS ON THE DRAFT GENERAL SITE CLOSURE REPORT [SEE AR# 866 - BRAC TRANSMITTAL LETTER BY M. BLOOM]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001186 NONE CORRESPONDENCE NONE 12	**11-01-2006** 06-04-2008 5090.3.A. NONE	KILGORE, W. DTSC - SACRAMENTO, CA BLOOM, M. BRAC PMO WEST	LETTER TRANSMITTING DOCUMENTS ASSOCIATED WITH THE DTSC'S DETERMINATIONS REGARDING THE COMPLETION OF RCRA CORRECTIVE ACTION AND MODIFICATION	ADMIN RECORD INFO REPOSITORY	PARCEL XIII PARCEL XV-B(2)	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000865 W.O. NO. 12826-001-001-0002-88 REPORT NONE 300	**11-03-2006** 12-07-2006 5090.3.A. 00051	KARLOVITZ, W. WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST DIVISION	FINAL INVESTIGATION, REMEDIAL DESIGN PLAN (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001207 BRAC SER BPMOW.ART/0137 CORRESPONDENCE NONE 19	**11-16-2006** 06-18-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST VARIOUS AGENCIES	TRANSMITTAL OF RESPONSES TO COMMENTS ON DRAFT REMEDIAL ACTION PLAN/RECORD OF DECISION (W/ ENCLOSURE) [PORTION OF MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA A1 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000860 BRAC SER BPMOW.DJC\0140 CORRESPONDENCE NONE 2	**11-20-2006** 11-22-2006 5090.3.A. NONE	M. BLOOM BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SITE FENCED SCRAP YARD AREA INTERIM CLOSURE REPORT FOR THE NON-TIME-CRITICAL REMOVAL ACTION (NTCRA) (W/O ENCLOSURE) [SEE AR #861 - CLOSURE REPORT] {PORTION OF THE MAILING LIST IS SENSITIVE}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000861 NONE REPORT N62467-98-D-0995 25	**11-20-2006** 11-22-2006 5090.3.A. 00065	CH2MHILL BRAC PMO WEST	INTERIM CLOSURE REPORT, NON-TIME-CRITICAL REMOVAL ACTION (NTCRA) FOR THE FENCED SCRAP YARD AREA (FSA) OF THE DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SITE [SEE AR #860 - BRAC PMO WEST TRANSMITTAL LETTER BY M. BLOOM]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001101 NONE MINUTES NONE 20	**11-30-2006** 08-27-2007 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST	30 NOVEMBER 2006 RESTORATION ADVISORY BOARD MEETING (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000868 BRAC SER BPMOW.MSB/0168 CORRESPONDENCE NONE 1	**12-01-2006** 12-21-2006 5090.3.A. NONE	M. BLOOM BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF DRAFT FINAL FINDING OF SUITABILITY TO TRANSFER (FOST), NORTHERN SLIVER (W/OUT ENCLOSURE) {PORTION OF MAILING LIST IS SENSITIVE} [SEE AR# 869 - DRAFT FINAL FOST]	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL XV-B(2)	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000869 DS.B131.21208 REPORT N68711-03-D-5104 30	**12-01-2006** 12-21-2006 5090.3.A. 00131	SULTECH BRAC PMO WEST	DRAFT FINAL FINDING OF SUITABILITY TO TRANSFER (FOST), THE NORTHERN SLIVER (CD COPY ENCLOSED) [SEE AR# 868 - BRAC TRANSMITTAL LETTER BY M. BLOOM]	ADMIN RECORD INFO REPOSITORY	PARCEL XV-B(2)	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 000870 BRAC SER BPMOW.MSB/0167 CORRESPONDENCE NONE 2	**12-01-2006** 12-21-2006 5090.3.A. NONE	M. BLOOM BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF DRAFT FINAL FINDING OF SUITABILITY TO TRANSFER (FOST), ELEMENTARY SCHOOL (W/OUT ENCLOSURE) {PORTION OF MAILING LIST IS SENSITIVE} [SEE AR# 871 - DRAFT FINAL FOST, ELEMENTARY SCHOOL]	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL XIII	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000871 DS.B131.21210 REPORT N68711-03-D-5104 30	**12-01-2006** 12-21-2006 5090.3.A. 00131	SULTECH BRAC PMO WEST	DRAFT FINAL FINDING OF SUITABILITY TO TRANSFER (FOST), ELEMENTARY SCHOOL (CD COPY ENCLOSED) [SEE AR# 870 - BRAC TRANSMITTAL LETTER BY M. BLOOM]	ADMIN RECORD INFO REPOSITORY	PARCEL XIII	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000866 BRAC SER BPMOW.DG/0180 CORRESPONDENCE NONE 4	**12-04-2006** 12-15-2006 5090.3.A. NONE	M. BLOOM BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF DRAFT FINAL GENERAL SITE CLOSURE REPORT FOR THE TIME-CRITICAL REMOVAL ACTION (TCRA), MARINE CORPS FIRING RANGE AND HISTORIC OUTFALL 4S (W/OUT ENCLOSURE) [SEE AR# 867 - DRAFT FINAL TCRA COMPLETION REPORT]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000875 FILED NO. 2129.2011(BJT) CORRESPONDENCE NONE 2	**12-06-2006** 01-23-2007 5090.3.A. NONE	THOMPSON, B. CRWQCB - OAKLAND M. BLOOM BRAC PMO WEST	REVIEW AND NO FURTHER COMMENTS ON FINDING OF SUITABILITY TO TRANSFER (FOST), NORHTERN SLIVER	ADMIN RECORD INFO REPOSITORY	PARCEL XV-B(2)	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000877 FILE NO. 2129.2011(BJT) CORRESPONDENCE NONE 2	**12-06-2006** 01-23-2007 5090.3.A. NONE	THOMPSON, B. CRWQCB - OAKLAND M. BLOOM BRAC PMO WEST	REVIEW AND NO FURTHER COMMENTS ON DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST), ELEMENTARY SCHOOL	ADMIN RECORD INFO REPOSITORY	PARCEL XIII	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000882 NONE CORRESPONDENCE NONE 4	**12-22-2006** 01-31-2007 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON DRAFT FINAL TIME-CRITICAL REMOVAL ACTION (TCRA) COMPLETION REPORT, MARINE CORPS FIRING RANGE AND HISTORICAL OUTFALL 4S	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003672 NONE CORRESPONDENCE NONE 2	**12-22-2006** 05-30-2007 5090.3.A. NONE	THOMPSON, B. CRWQCB - OAKLAND M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON RESPONSES TO REGULATORY AGENCY COMMENTS ON DRAFT REMEDIAL ACTION PLAN (RAP) AND RECORD OF DECISION (ROD)	ADMIN RECORD INFO REPOSITORY	SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003649 2040 REPORT N68711-01-D-6010 2000	**01-01-2007** 02-22-2007 5090.3.A. 00009	WESTON SOLUTIONS, INC. BRAC PMO WEST	DRAFT GEOPHYSICAL INVESTIGATION PRODUCTION MANUFACTURING AREA AND SOUTH SHORE AREA	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000883 NONE CORRESPONDENCE NONE 2	**01-16-2007** 01-31-2007 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA M. BLOOM BRAC PMO WEST	REVIEW AND NO FURTHER COMMENTS ON DRAFT FINAL SITE MANAGEMENT PLAN (SMP), FISCAL YEAR 2007	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000891 NONE CORRESPONDENCE NONE 2	**01-25-2007** 03-16-2007 5090.3.A. NONE	H. CHUI DTSC - BERKELEY, CA M. BLOOM BRAC PMO WEST	REVIEW AND AGREEMENT ON RECOMMENDATION OF FURTHER INVESTIGATIONS AND REMOVAL ACTIONS (RA) OF DRAFT EXPANDED SITE INSPECTION (SI) REPORT, FORMER DEGREASING PLAN INVESTIGATION AREA	ADMIN RECORD INFO REPOSITORY	AREA C2 BLDG. 742	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001102 NONE MINUTES NONE 12	**01-25-2007** 08-27-2007 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST	25 JANUARY 2007 RESTORATION ADVISORY BOARD MEETING (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001208 BRAC SER BPMOW.MB/0297 CORRESPONDENCE NONE 3	**01-31-2007** 06-18-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	REQUEST FOR CONCURRENCE TO PERFORM ADDITIONAL FIELD ACTIVITIES TO COMPLETE REMEDIAL ACTIONS FOR THE MARINE CORPS FIRING RANGE	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003673 NONE CORRESPONDENCE NONE 8	**01-31-2007** 05-30-2007 5090.3.A. NONE	LANDIS, A. DTSC - SACRAMENTO, CA M. BLOOM BRAC PMO WEST	CERTIFICATION OF NO FURTHER ACTION (NFA), TERMINATION OF RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) CORRECTIVE ACTION, FACILITY BOUNDARY MODIFICATION AND CONCURRENCE TO FINDING OF SUITABILITY TO TRANSFER (FOST) [***SEE COMMENTS]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003674 NONE CORRESPONDENCE NONE 1	**02-01-2007** 05-30-2007 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON DRAFT EXPANDED SITE INSPECTION (SI) REPORT, FORMER DEGREASING PLANT	ADMIN RECORD INFO REPOSITORY	AREA C2 BLDG. 742	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003675 NONE CORRESPONDENCE NONE 25	**02-06-2007** 05-30-2007 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON DRAFT DATA QUALITY OBJECTIVES TO SUPPORT THE BASELINE ECOLOGICAL RISK ASSESSMENT (ERA) AND OUTFALL SEDIMENT AT INVESTIGATION AREA K (INCLUDES DEPARTMENT OF FISH AND GAME COMMENTS DATED 07/21/2006, AND HERD COMMENTS DATED 07/18/2006)	ADMIN RECORD INFO REPOSITORY	AREA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003676 NONE CORRESPONDENCE NONE 2	**02-07-2007** 05-30-2007 5090.3.A. NONE	WOLFE, B. CRWQCB - OAKLAND M. BLOOM BRAC PMO WEST	REVIEW AND CONCURRENCE TO FINDING OF SUITABILITY TO TRANSFER (FOST) FOR NORTHERN SLIVER	ADMIN RECORD INFO REPOSITORY	PARCEL XV-B(2)	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003677 NONE CORRESPONDENCE NONE 2	**02-07-2007** 05-30-2007 5090.3.A. NONE	WOLFE, B. CRWQCB - OAKLAND M. BLOOM BRAC PMO WEST	REVIEW AND CONCURRENCE TO FINDING OF SUITABILITY TO TRANSFER (FOST) FOR MARE ISLAND ELEMENTARY SCHOOL	ADMIN RECORD INFO REPOSITORY	PARCEL XIII	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003678 NONE CORRESPONDENCE NONE 3	**02-13-2007** 05-30-2007 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON DRAFT DATA QUALITY OBJECTIVES TO SUPPORT THE BASELINE ECOLOGICAL RISK ASSESSMENT (ERA) AND OUTFALL SEDIMENT AT INVESTIGATION AREA K	ADMIN RECORD INFO REPOSITORY	AREA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001103 NONE MINUTES NONE 24	**02-22-2007** 08-27-2007 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST	22 FEBRUARY 2007 RESTORATION ADVISORY BOARD MEETING (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001133 NONE CORRESPONDENCE NONE 2	**02-26-2007** 09-26-2007 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA M. BLOOM BRAC PMO WEST	REVIEW AND CONCURRENCE ON THE MARINE CORPS FIRING RANGE (MCFR)	ADMIN RECORD INFO REPOSITORY	IA-H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000890 55 & 12826.001.001.0013.10 REPORT N68711-01-MDC-1061 2000	**03-01-2007** 03-05-2007 5090.3.A. NONE	D. GEMAR WESTON SOLUTIONS, INC. CITY OF VALLEJO	RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)/ FACILITY LANDFILL 2006 ANNUAL GROUNDWATER MONITORING REPORT (CD COPY ENCLOSED) [FOLDERS 1-2 OF 2] {PORTION OF THE MAILING LIST IS SENSITIVE}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003650 NONE REPORT NONE 100	**03-01-2007** 03-21-2007 5090.3.A. NONE	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	DRAFT CONCEPTUAL SITE MODEL, WESTERN MAGAZINE AREA (WMA) [CD COPY ENCLOSED] {PORTION OF MAILING LIST IS SENSITIVE} [SEE AR # 1148 - REVISED DRAFT CONCEPTUAL SITE MODEL]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003652 DS.B131.21209 REPORT N68711-03-D-5104 40	**03-01-2007** 04-17-2007 5090.3.A. 00131	SULTECH BRAC PMO WEST	FINAL FINDING OF SUITABILITY TO TRANSFER (FOST), THE NORTHERN SLIVER (SEE AR #3651 - BRAC PMO WEST TRANSMITTAL LETTER BY M. BLOOM)	ADMIN RECORD INFO REPOSITORY	PARCEL XV-B(2)	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001125 2129.2001(LCR) CORRESPONDENCE NONE 2	**03-08-2007** 09-26-2007 5090.3.A. NONE	RAO, L. CRWQCB - OAKLAND BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT DATA QUALITY OBJECTIVES TO SUPPORT THE BASELINE ECOLOGICAL RISK ASSESSMENT AND OUTFALL SEDIMENT AT INVESTIGATION AREA	ADMIN RECORD INFO REPOSITORY	IA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003679 NONE CORRESPONDENCE NONE 2	**03-08-2007** 05-30-2007 5090.3.A. NONE	L. RAO CRWQCB - OAKLAND M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON DRAFT DATA QUALITY OBJECTIVES TO SUPPORT THE BASELINE ECOLOGICAL RISK ASSESSMENT (ERA) AND OUTFALL SEDIMENT AT INVESTIGATION AREA K	ADMIN RECORD INFO REPOSITORY	AREA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001104 NONE MINUTES NONE 15	**03-29-2007** 08-27-2007 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST	29 MARCH 2007 RESTORATION ADVISORY BOARD MEETING (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003657 2040 REPORT N68711-01-D-6010 3000	**04-01-2007** 05-14-2007 5090.3.A. 00009	WESTON SOLUTIONS, INC. BRAC PMO WEST	DRAFT GEOPHYSICAL INVESTIGATION PRODUCTION MANUFACTURING AREA AND SOUTH SHORE AREA (CD COPY IS ENCLOSED) [SEE AR #3656 - BRAC PMO WEST TRANSMITTAL LETTER BY M. BLOOM] {***SEE COMMENTS}	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003665 DS.B131.21211 REPORT N68711-03-D-5104 30	**04-01-2007** 05-24-2007 5090.3.A. 00131	SULTECH BRAC PMO WEST	FINAL FINDING OF SUITABLITY TO TRANSFER (FOST) ELEMENTARY SCHOOL (CD COPY ENCLOSED) {SEE AR # 3664 - BRAC PMO WEST TRANSMITTAL LETTER BY M. BLOOM}	INFO REPOSITORY	PARCEL XIII	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003651 BRAC SER BPMOW.MD/0459 CORRESPONDENCE NONE 3	**04-02-2007** 04-17-2007 5090.3.A. NONE	M. BLOOM BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF FINAL FINDING OF SUITABILITY TO TRANSFER (FOST), THE NORTHERN SLIVER (W/OUT ENCLOSURE) [PORTION OF MAILING LIST IS SENSITIVE] {SEE AR #3652 - FINAL FINDING OF SUITABILITY TO TRANSFER}	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL XV-B(2)	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003653 FILE NO. 2129.2011 (BJT) CORRESPONDENCE NONE 2	**04-03-2007** 04-25-2007 5090.3.A. NONE	THOMPSON, B. CRWQCB - SAN FRANCISCO M. BLOOM BRAC PMO WEST	COMMENTS ON DRAFT EXPANDED SITE INSPECTION (SI) REPORT, FORMER DEGREASING PLANT (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	AREA C2 BLDG. 742	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003656 BRAC SER BPMOW.DJC/0504 CORRESPONDENCE NONE 2	**04-25-2007** 05-14-2007 5090.3.A. NONE	M. BLOOM BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF DRAFT GEOPHYSICAL INVESTIGATION PRODUCTION MANUFACTURING AREA AND SOUTH SHORE AREA (W/OUT ENCLOSURE) [SEE AR #3657 - DRAFT GEOPHYSICAL INVESTIGATION] {PORTION OF MAILING LIST IS SENSITIVE}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001105 NONE MINUTES NONE 27	**04-26-2007** 08-27-2007 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST	26 APRIL 2007 RESTORATION ADVISORY BOARD MEETING (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003660 DS. B090.19706 PUBLIC NOTICE N68711-03-D-5104 10	**05-01-2007** 05-21-2007 5090.3.A. 00090	SULTECH NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL PROPOSED PLAN (PP)	ADMIN RECORD INFO REPOSITORY	BLDG. 503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003666 DS.B090.19706 REPORT N68711-03-D-5104 10	**05-01-2007** 05-24-2007 5090.3.A. NONE	SULTECH NAVFAC - SOUTHWEST	REVISED DRAFT PROPOSED PLAN AT INVESTIGATION AREA A1 {INCLUDES RESPONSE TO COMMENTS ON THE DRAFT PROPOSED PLAN DATED 01 MAY 2006} (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003667 TC.B090.12373 CORRESPONDENCE N68711-03-D-5104 16	**05-01-2007** 05-24-2007 5090.3.A. 00090	KELLY, D. SULTECH TAMAYO, A. BRAC PMO WEST	REVISED RESPONSES TO COMMENTS ON DRAFT REMEDIAL ACTION PLAN/RECORD OF DECISION AT INVESTIGATION AREA (SEE AR # 1207 - BRAC PMOW TRANSMITTAL LETTER)	ADMIN RECORD INFO REPOSITORY	IA A1 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003668 DS.B090.19712 REPORT N68711-03-D-5104 50	**05-01-2007** 05-29-2007 5090.3.A. 00090	SULTECH BRAC PMO WEST	DRAFT FINAL REMEDIAL ACTION PLAN/RECORD OF DECISION (RAP/ROD) [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003681 WEST-6010-0012-0001 REPORT N68711-01-MDC-1061 50	**05-02-2007** 06-05-2007 5090.3.A. 00012	WESTON SOLUTIONS, INC BRAC PMO WEST	DRAFT ACTION MEMORANDUM (AM) / INTERIM REMEDIAL ACTION PLAN (IRAP), CERCLA TIME CRITICAL REMOVAL ACTION (TCRA) FOR PAINT WASTE AREA, HORSE STABLES AREA, AND INSTALLATION RESTORATION (IR) SITES (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003654 BRAC SER BPMOW.PAM/0531 CORRESPONDENCE NONE 2	**05-07-2007** 05-09-2007 5090.3.A. NONE	M. BLOOM BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF DRAFT REMEDIAL INVESTIGATION (RI) REPORT, PHASES I AND II FOR THE SOUTHERN OFFSHORE SITES (PMA/SSA) [W/OUT ENCLOSURE] {SEE AR #3655 - DRAFT REMEDIAL INVESTIGATION REPORT} (PORTION OF MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003655 NONE REPORT N62742-98-D-1809 100	**05-07-2007** 05-09-2007 5090.3.A. 00001	ENVIRONMENTAL CHEMICAL CORPORATION BRAC PMO WEST	DRAFT REMEDIAL INVESTIGATION (RI) REPORT, PHASES I AND II FOR THE SOUTHERN OFFSHORE SITES (PRODUCTION MANUFACTURING AREA / SOUTH SHORE AREA (PMA/SSA)) [CD COPY IS ENCLOSED]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003659 NONE REPORT N68711-01-D-6010 500	**05-09-2007** 05-17-2007 5090.3.A. 00012	D. GEMAR WESTON SOLUTIONS, INC. BRAC PMO WEST	DRAFT WORK PLAN (WP), TIME-CRITICAL REMOVAL ACTION (TCRA), PARCEL XVI PAINT WASTE AREA, DEFENSE REUTILIZATION AND MARKETING OFFICE SHIPYARD, AND HORSE STABLES AREA (CD COPY IS ENCLOSED) [SEE AR #3658 - BRAC PMO WEST TRANSMITTAL LETTER BY M. BLOOM]	ADMIN RECORD INFO REPOSITORY	SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003664 DS.B131.21211 CORRESPONDENCE N68711-03-D-5104 3	**05-11-2007** 05-24-2007 5090.3.A. 00131	M. BLOOM BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF FINAL FINDING OF SUITABLITY TO TRANSFER (FOST) ELEMENTARY SCHOOL (W/O ENCLOSURE) [SEE AR # 3665 - FINAL FOST] {PORTION OF THE MAILING LIST IS SENSITIVE}	ADMIN RECORD INFO REPOSITORY	PARCEL XIII	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003658 BRAC SER BPMOW.DG/0553 CORRESPONDENCE NONE 4	**05-14-2007** 05-17-2007 5090.3.A. NONE	M. BLOOM BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF DRAFT WORK PLAN (WP), TIME-CRITICAL REMOVAL ACTION (TCRA), PARCEL XVI PAINT WASTE AREA, DEFENSE REUTILIZATION AND MARKETING OFFICE SCRAPYARD, AND HOUSE STABLES AREA (W/OUT ENCLOSURE) [PORTION OF MAILING LIST IS SENSITIVE] {***SEE COMMENTS}	ADMIN RECORD INFO REPOSITORY	SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003661 BRAC SER BPMOW.MD/0539 CORRESPONDENCE NONE 2	**05-14-2007** 05-21-2007 5090.3.A. NONE	M. BLOOM BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF DRAFT FINAL EXPANDED SITE INSPECTION (SI) REPORT FOR FORMER DEGREASING PLANT (W/OUT ENCLOSURE) [SEE AR #3662 - DRAFT FINAL EXPANDED SITE INSPECTION REPORT]	ADMIN RECORD INFO REPOSITORY	AREA C2 BLDG. 742	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003662 DS.B139.20712 REPORT N68711-03-D-5104 350	**05-14-2007** 05-21-2007 5090.3.A. 00139	K. RYAN TETRA TECH EM INC. BRAC PMO WEST	DRAFT FINAL EXPANDED SITE INSPECTION (SI) REPORT FOR FORMER DEGREASING PLANT (CD COPY IS ENCLOSED) [SEE AR #3661 - BRAC PMO WEST TRANSMITTAL LETTER BY M. BLOOM]	ADMIN RECORD INFO REPOSITORY	AREA C2 BLDG. 742	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003663 DS.B139.21820 CORRESPONDENCE N68711-03-D-5104 20	**05-14-2007** 05-21-2007 5090.3.A. 00139	SULTECH NAVFAC - SOUTHWEST DIVISION	RESPONSE TO COMMENTS ON DRAFT EXPANDED SITE INSPECTION (SI) REPORT FOR FORMER DEGREASING PLANT (***SEE COMMENTS)	ADMIN RECORD INFO REPOSITORY	AREA C2 BLDG. 742	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001152 NONE CORRESPONDENCE NONE 6	**05-23-2007** 01-23-2008 5090.3.A. NONE	POLISINI, J. DTSC - GLENDALE GRIBBLE, C. DTSC - BERKELEY	REVIEW AND COMMENTS ON THE DRAFT WORK PLAN, TIME-CRITICAL REMOVAL ACTION (TCRA), PAINT WASTE AREA, DEFENSE REUTILIZATION AND MARKETING OFFICE SHIPYARD AND HORSE STABLES AREA; DRAFT ACTION MEMORANDUM/ INTERIM REMEDIAL ACTION PLAN (***SEE COMMENTS***)	ADMIN RECORD BASE	PARCEL 00XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001110 BRAC SER BPMOW.MD/0575 CORRESPONDENCE NONE 4	**05-24-2007** 08-13-2007 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF DRAFT TECHNICAL MEMORANDUM PILOT STUDY FOR THE OFFSHORE SEDIMENT INVESTIGATION AT INVESTIGATION AREA (W/OUT ENCLOSURE) [SEE AR #1111 - DRAFT TECHNICAL MEMORANDUM] (PORTION OF THE MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001111 NUSC-0055-0311-0001 REPORT N62467-04-D-0055 70	**05-24-2007** 08-13-2007 5090.3.A. 00311	SALINAS, E. TETRA TECH EM INC. BRAC PMO WEST	DRAFT TECHNICAL MEMORANDUM PILOT STUDY FOR THE OFFSHORE SEDIMENT INVESTIGATION AT INVESTIGATION AREA (CD COPY IS ENCLOSED) {SEE AR #1110 - BRAC PMO WEST TRANSMITTAL LETTER} [***SEE COMMENTS.]	ADMIN RECORD INFO REPOSITORY	AREA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003687 NONE CORRESPONDENCE NONE 3	**05-24-2007** 01-23-2008 5090.3.A. NONE	KING, B. DTSC - BERKELEY, CA GRIBBLE, C. DTSC - BERKELEY	REVIEW AND COMMENTS ON THE DRAFT WORK PLAN TIME-CRITICAL REMOVAL ACTION, PAINT WASTE AREA, DEFENSE REUTILIZATION AND MARKETING OFFICE SHIPYARD, AND HORSE STABLES AREA [SEE AR # 3659 - DRAFT WORK PLAN]	ADMIN RECORD INFO REPOSITORY	PARCEL 00XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001121 NONE CORRESPONDENCE NONE 6	**05-25-2007** 09-20-2007 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA M. BLOOM NAVFAC - SOUTHWEST	REVIEW AND COMMENTS ON THE DRAFT WORK PLAN TIME-CRITICAL ACTION, PAINT WASTE AREA, DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SCRAPYARD, AND HORSE STABLES AREA	ADMIN RECORD INFO REPOSITORY	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001187 BRAC SER BPMOW.DG/0583 CORRESPONDENCE NONE 2	**05-25-2007** 06-04-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	LETTER INFORMING OF THE NAVY'S INTENT TO PURSUE ADDITIONAL EXCAVATIONS OF THE IMPACTED GRIDS ADJOINING DUMP ROAD [SEE AR # 1188 - RESPONSE TO INTENT TO EXCAVATE]	ADMIN RECORD INFO REPOSITORY	SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003680 BRAC SER BPMOW.DG/0582 CORRESPONDENCE NONE 3	**05-30-2007** 06-05-2007 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT ACTION MEMORANDUM (AM)/ INTERIM REMEDIAL ACTION PLAN (IRAP), CERCLA TIME CRITICAL REMOVAL ACTION (TCRA) FOR PAINT WASTE AREA, HORSE STABLES AREA, AND INSTALLATION RESTORATION (IR) SITES (W/OUT ENCLOSURE) [***SEE COMMENTS]	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001106 NONE MINUTES NONE 26	**05-31-2007** 08-27-2007 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST	31 MAY 2007 RESTORATION ADVISORY BOARD MEETING (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001120 2129.2001(LCR;BRT) CORRESPONDENCE NONE 2	**05-31-2007** 09-20-2007 5090.3.A. NONE	THOMPSON, B. CRWQCB - OAKLAND M. BLOOM NAVFAC - SOUTHWEST	REVIEW AND COMMENTS ON THE DRAFT WORK PLAN TIME-CRITICAL ACTION, PAINT WASTE AREA, DEFENSE REUTILIZATION AND MARKETING OFFICE SCRAPYARD, AND HORSE STABLES AREA	ADMIN RECORD INFO REPOSITORY	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001128 NONE CORRESPONDENCE NONE 6	**06-08-2007** 09-26-2007 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT ACTION MEMORANDUM/INTERIM REMEDIAL ACTION PLAN, TIME CRITICAL REMOVAL ACTION (TCRA) , PAINT WASTE AREA, HORSE STABLES AREA	ADMIN RECORD INFO REPOSITORY	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001188 NONE CORRESPONDENCE NONE 2	**06-11-2007** 06-04-2008 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	APPROVAL OF THE NAVY'S INTENT TO PURSUE ADDITIONAL EXCAVATIONS OF THE IMPACTED GRIDS ADJOINING DUMP ROAD [SEE AR # 1187 - LETTER INFORMING OF THE INTENT TO EXCAVATE]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001126 NONE CORRESPONDENCE NONE 2	**06-12-2007** 09-26-2007 5090.3.A. NONE	ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT WORK PLAN TIME-CRITICAL REMOVAL ACTION (TCRA) , PAINT WASTE AREA, DEFENSE REUTILIZATION AND MARKETING OFFICE AND HORSE STABLES AREA	ADMIN RECORD INFO REPOSITORY	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001127 2129.2001(BJT;LCR) CORRESPONDENCE NONE 2	**06-19-2007** 09-26-2007 5090.3.A. NONE	THOMPSON, B. CRWQCB - OAKLAND M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT WORK PLAN TIME-CRITICAL REMOVAL ACTION (TCRA) , PAINT WASTE AREA, DEFENSE REUTILIZATION AND MARKETING OFFICE AND HORSE STABLES AREA	ADMIN RECORD INFO REPOSITORY	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001100 SULT.5104.0095.000 4 CORRESPONDENCE N68744-03-D-5104 50	**06-20-2007** 07-24-2007 5090.3.A. 00095	SULTECH NAVFAC - SOUTHWEST	RESPONSES TO REGULATORY AGENCY COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION, INSTALLATION RESTORATION SITES WITHIN INVESTIGATION AREA (CD COPY IS ENCLOSED) [SEE AR # 909 - BRAC PMOW TRANSMITTAL LETTER]	ADMIN RECORD INFO REPOSITORY	IA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000909 BRAC SER BPMOW.MGD\0623 CORRESPONDENCE NONE 3	**06-21-2007** 07-24-2007 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF RESPONSES TO REGULATORY AGENCY COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION, INSTALLATION RESTORATION SITES WITHIN INVESTIGATION AREA [W/ OUT ENCLOSURE] (PORTION OF THE MAILING LIST IS SENSITIVE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001116 NONE CORRESPONDENCE NONE 1	**06-21-2007** 08-13-2007 5090.3.A. NONE	BISSON, P. U.S. EPA - SAN FRANCISCO, CA BLOOM, M. BRAC PMO WEST	TRANSMITTAL OF THE 40 CFR 761.61 APPROVAL APPLICATIONS	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001139 BRAC SER BPMOW.ART/0624 CORRESPONDENCE NONE 250	**06-21-2007** 11-07-2007 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST THOMPSON, B. CRWQCB - OAKLAND, CA	RESPONSE TO COMMENTS ON THE REQUEST FOR CLOSURE OF UNDERGROUND STORAGE TANK (UST) INVESTIGATION (W/ ENCLOSURE)	ADMIN RECORD INFO REPOSITORY	A 266-S AREA F1 AREA G UST A195	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001107 NONE MINUTES NONE 22	**06-28-2007** 08-27-2007 5090.3.A. NONE	CDM FEDERAL PROGRAMS NAVFAC - SOUTHWEST	28 JUNE 2007 RESTORATION ADVISORY BOARD MEETING (RAB) MEETING MINUTES	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 000895 SULT-5104-0095-0003 REPORT N68711-03-D-5104 50	**06-29-2007** 07-17-2007 5090.3.A. CTO 0095	RYAN, K. SULTECH - SAN DIEGO BRAC PMO WEST	DATA SUMMARY REPORT FOR UNDERGROUND STORAGE TANKS (UST) SOIL AND GROUNDWATER SAMPLING INVESTIGATION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	AREA F1 UST A-225 UST A-267	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001118 BRAC SER BPMOW.MD/0655 CORRESPONDENCE NONE 10	**07-02-2007** 08-16-2007 5090.3.A. NONE	MEGLIOLA, A. BRAC PMO WEST VARIOUS AGENCIES	BIOLOGICAL EVALUATION FOR THE PAINT WASTE AREA	ADMIN RECORD INFO REPOSITORY	SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001117 BRAC SER BPMOW.MGD/0685 CORRESPONDENCE NONE 4	**07-12-2007** 08-13-2007 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF THE RESPONSES TO REGULATORY AGENCY COMMENTS ON THE DRAFT SUPPLEMENTAL SITE INSPECTION FOR NORTHERN OFFSHORE MUNITIONS AND EXPLOSIVES OF CONCERN SITES: FLEET RESERVE PIER AND BERTHS 1 AND 2 (***SEE COMMENTS***)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001113 NONE CORRESPONDENCE NONE 4	**07-16-2007** 08-13-2007 5090.3.A. NONE	MURPHY, D DTSC - BERKELEY, CA KLEINER, M. WESTON SOLUTIONS, INC.	DTSC COMPILED LIST OF ENVIRONMENTAL ISSUE RELATION TO THE EDC EARLY TRANSFER (DTSC LIST REPRESENTING A SNAPSHOT OF CURRENT UNDERSTANDING AND PERSPECTIVES IS ENCLOSED)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001112 NONE CORRESPONDENCE NONE 2	**07-17-2007** 08-13-2007 5090.3.A. NONE	JOHNSON, K. U.S. EPA - SAN FRANCISCO, CA BLOOM, M. BRAC PMO WEST	PROPOSED FINAL EARLY TRANSFER PARCELS, APPLICABILITY OF TOXIC SUBSTANCES CONTROL ACT (TSCA)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001132 NONE CORRESPONDENCE NONE 1	**07-17-2007** 09-26-2007 5090.3.A. NONE	K. JOHNSON U.S. EPA - SAN FRANCISCO, CA M. BLOOM BRAC PMO WEST	PROPOSED FINAL EARLY TRANSFER PARCELS, APPLICABILITY OF TOXIC SUBSTANCES CONTROL ACT (TSCA)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001114 NONE CORRESPONDENCE NONE 2	**07-19-2007** 08-13-2007 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	REVIEW AND APPROVED AS FINAL INVESTIGATION REMEDIAL DESIGN PLAN	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001124 NONE CORRESPONDENCE NONE 2	**07-19-2007** 09-26-2007 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON THE NAVY FINAL INVESTIGATION, REMEDIAL DESIGN PLAN	ADMIN RECORD INFO REPOSITORY	H1 IA-H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001115 FILE NO. 2129.2011 (LCR) CORRESPONDENCE NONE 1	**07-24-2007** 08-13-2007 5090.3.A. NONE	RAO, L. CRWQCB - OAKLAND, CA BLOOM, M. BRAC PMO WEST	REVIEW AND APPROVAL OF THE FINAL INVESTIGATION REMEDIAL DESIGN PLAN	ADMIN RECORD INFO REPOSITORY	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001109 WEST-1061-0000-0001 REPORT N68711-01-MDC-1061 4500	**07-26-2007** 08-09-2007 5090.3.A. 00061	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) /FACILITY LANDFILL 2007 SEMIANNUAL GROUNDWATER MONITORING REPORT (CD COPY IS ENCLOSED) [FOLDER 1 - 5 OF 5]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001119 WEST-6010-0012-0003 REPORT N68711-01-D-6010 50	**08-01-2007** 08-22-2007 5090.3.A. 00012	WESTON SOLUTIONS, INC. BRAC PMO WEST	FINAL DRAFT ACTION MEMORANDUM/INTERIM REMEDIAL ACTION PLAN, CERCLA TIME CRITICAL REMOVAL ACTION (TCRA) , PAINT WASTE AREA, HORSE STABLES AREA, AND INSTALLATION RESTORATION SITES	ADMIN RECORD INFO REPOSITORY	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001123 NONE CORRESPONDENCE NONE 4	**08-07-2007** 09-26-2007 5090.3.A. NONE	ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT FINAL INVESTIGATION	ADMIN RECORD INFO REPOSITORY	AREA F2 SITE 00004	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003686 WEST-6010-0012-0002 REPORT N68711-01-D-6010 800	**08-13-2007** 12-10-2007 5090.3.A. 00012	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	DRAFT FINAL WORK PLAN, TIME-CRITICAL REMOVAL ACTION, PAINT WASTE AREA AND HORSE STABLES AREA (CD COPY ENCLOSED) {INCLUDES FINAL DRAFT ADDENDUM 1 TO FINAL SAMPLING AND ANALYSIS PLAN DATED JUNE 2007)	ADMIN RECORD INFO REPOSITORY	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003682 BRAC SER BPMOW.MGD/0785 CORRESPONDENCE NONE 5	**08-22-2007** 09-12-2007 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST OLAH, R. US FISH AND WILDLIFE SERVICE	REVISED PROJECT DESCRIPTION FOR BIOLOGICAL EVALUATION FOR THE PAINT WASTE AREA (PWA), INSTALLATION RESTORATION (IR) (W/ ENCLOSURES)	ADMIN RECORD INFO REPOSITORY	SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001138 NONE CORRESPONDENCE NONE 5	**08-27-2007** 11-07-2007 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT FINAL REMEDIAL ACTION PLAN/ RECORD OF DECISION	ADMIN RECORD INFO REPOSITORY	SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001131 NONE CORRESPONDENCE NONE 1	**08-30-2007** 09-26-2007 5090.3.A. NONE	ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT FINAL REMEDIAL ACTION PLAN (RAP)/RECORD OF DECISION (ROD)	ADMIN RECORD INFO REPOSITORY	SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001122 WEST-6010-0012-0004 REPORT N68711-01-D-6010 125	**09-01-2007** 09-21-2007 5090.3.A. 00012	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	DRAFT FINAL ACCIDENT PREVENTION PLAN (APP) TIME-CRITICAL REMOVAL ACTION (TCRA) , PAINT WASTE AREA AND HORSE STABLE AREA (CD COPY IS ENCLOSED) [INCLUDES RESPONSES TO COMMENTS ON THE INTERNAL DRAFT HEALTH AND SAFETY PLAN TIME-CRITICAL REMOVAL ACTION]	ADMIN RECORD INFO REPOSITORY	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001134 WEST-1061-0000-0002 REPORT N68711-01-MDC-1061 40	**09-01-2007** 09-27-2007 5090.3.A. 00060	D. GEMAR WESTON SOLUTIONS, INC BRAC PMO WEST	DRAFT RADIOLOGICAL SURVEY PLAN WESTERN MAGAZINE AREA (WMA) DREDGE OUTFALLS	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003685 WEST-6010-0012-0005 REPORT NONE 500	**09-01-2007** 10-11-2007 5090.3.A. NONE	WESTON SOLUTIONS INC. BRAC PMO WEST	FINAL ACTION MEMORANDUM / INTERIM REMEDIAL ACTION PLAN CERCLA TIME CRITICAL REMOVAL ACTION (TCRA) PARCEL XVI PAINT WASTE AREA, HORSE STABLES AREA [CD COPY ENCLOSED]	ADMIN RECORD BASE INFO REPOSITORY	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001130 NONE CORRESPONDENCE NONE 2	**09-06-2007** 09-26-2007 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT FINAL SITE INSPECTION REPORT, FORMER DEGREASING PLANT, INVESTIGATION	ADMIN RECORD INFO REPOSITORY	AREA C2 BLDG. 742	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001129 NONE CORRESPONDENCE NONE 6	**09-13-2007** 09-26-2007 5090.3.A. NONE	W. KILGORE DTSC - SACRAMENTO, CA M. BLOOM BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT GEOPHYSICAL INVESTIGATION, PRODUCTION MANUFACTURING AREA AND SOUTH SHORE AREA	ADMIN RECORD INFO REPOSITORY	AREA F2 AREA K SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001282 NONE CORRESPONDENCE NONE 2	**09-14-2007** 01-30-2009 5090.3.A. NONE	KILGORE, W. DTSC - SACRAMENTO, CA SILER, N. MARE ISLAND, CA	REQUEST TO REMOVE THE FINAL REMEDIAL INVESTIGATION AND INTERIM REMEDIAL ACTION SUMMARY REPORT FROM THE CH2M HILL DOCUMENT TRACKING LIST UNTIL SITE RELATED ISSUES ARE RESOLVED; AND COMMENTS ON THE DRAFT FINAL SITE INSPECTION REPORT	ADMIN RECORD INFO REPOSITORY	BLDG 00742 IA C2 MANHOLE D1-C85 SITE 00019	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 003684 WEST-6010-0012-0006 REPORT N68711-01-D-6010 600	**09-24-2007** 10-11-2007 5090.3.A. 00012	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	FINAL WORK PLAN TIME-CRITICAL REMOVAL ACTION (TCRA) PAINT WASTE AREA HORSE STABLES AREA (CD COPY ENCLOSED)	ADMIN RECORD BASE INFO REPOSITORY	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 003683 BRAC SER BPMOW.MPS/0861 CORRESPONDENCE NONE 3	**09-25-2007** 10-11-2007 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF THE 1) FINAL WORK PLAN AND FINAL ACTION MEMORANDUM/ INTERIM REMEDIAL ACTION PLAN FOR THE TIME CRITICAL REMOVAL ACTION (TCRA), PARCEL XVI PAINT WASTE AREA, HORSE STABLE AREA	ADMIN RECORD BASE INFO REPOSITORY	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001135 BRAC SER BPMOW.LB/0002 CORRESPONDENCE NONE 2	**09-28-2007** 10-11-2007 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF THE FINAL TIME CRITICAL REMOVAL ACTION (TCRA) COMPLETION REPORT, MARINE CORPS FIRING RANGE AND HISTORICAL OUTFALL 4S (PORTION OF THE MAILING LIST IS SENSITIVE) [W/ OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001143 SULT-5104-0131-.0005 REPORT N68711-03-D-5104 15	**10-01-2007** 11-29-2007 5090.3.A. 00131	SULTECH NAVFAC - SOUTHWEST DIVISION	DRAFT FINAL YEAR 2008 SITE MANAGEMENT PLAN SCHEDULE (SEE AR # 1142 - BRAC PMOW TRANSMITTAL LETTER)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001151 WEST.1061.0000.0003 REPORT N68711-01-MDC-1061 500	**10-01-2007** 01-10-2008 5090.3.A. NONE	WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST	DRAFT CONCEPTUAL SITE MODEL (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001160 HILL-0095-0065-0020 REPORT N62467-98-D-0995 80	**10-01-2007** 03-06-2008 5090.3.A. 00065	CH2M HILL BRAC PMO WEST	FINAL WORK PLAN: FOLLOW-ON TOTAL PETROLEUM HYDROCARBONS INVESTIGATION, FENCED SCRAPYARD AREA AND VICINITY, DEFENSE REUTILIZATION AND MARKETING OFFICE SITE (CD COPY ENCLOSED) {***SEE COMMENTS***}	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001161 HILL-0995-0065-0020.R1 REPORT N62467-98-D-0995 90	**10-01-2007** 03-06-2008 5090.3.A. 00065	CH2M HILL BRAC PMO WEST	REVISION NO. 1 TO THE FINAL WORK PLAN: FOLLOW-ON TOTAL PETROLEUM HYDROCARBONS INVESTIGATION, FENCED SCRAPYARD AREA AND VICINITY, DEFENSE REUTILIZATION AND MARKETING OFFICE SITE (CD COPY ENCLOSED) {***SEE COMMENTS***}	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001162 HILL-0995-0065-0004.R4 REPORT N62467-98-D-0995 100	**10-01-2007** 03-06-2008 5090.3.A. 00065	CH2M HILL BRAC PMO WEST	FINAL REVISION NO. 4 HEALTH AND SAFETY PLAN: FOLLOW-ON TOTAL PETROLEUM HYDROCARBONS INVESTIGATION, FENCED SCRAPYARD AREA AND VICINITY, DEFENSE REUTILIZATION AND MARKETING OFFICE SITE (CD COPY ENCLOSED) {***SEE COMMENTS***}	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001137 NONE CORRESPONDENCE NONE 1	**10-02-2007** 11-07-2007 5090.3.A. NONE	ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA BLOOM, M. BRAC PMO WEST	REVIEW AND CONCURRENCE WITH THE DRAFT GEOPHYSICAL INVESTIGATION FOR PRODUCTION MANUFACTURING AREA AND SOUTH SHORE AREAS	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001142 BRAC SER BPMOW.MB/0008 CORRESPONDENCE NONE 3	**10-05-2007** 11-29-2007 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT FINAL YEAR 2008 SITE MANAGEMENT PLAN SCHEDULE (PORTION OF MAILING LIST IS SENSITIVE) [SEE AR # 1143 - DRAFT FINAL YEAR 2008 SITE MANAGEMENT PLAN SCHEDULE]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001154 NONE CORRESPONDENCE NONE 5	**10-12-2007** 02-07-2008 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	COMMENTS ON RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) / FACILITY LANDFILL 2007 SEMIANNUAL GROUNDWATER MONITORING REPORT (INCLUDES COMMENTS FROM GSU DATED 27 SEPTEMBER 2007)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001144 BRAC SER BPMOW.MPS/0056 CORRESPONDENCE NONE 3	**10-30-2007** 12-04-2007 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF RESPONSES TO COMMENTS ON THE DRAFT FINAL REMEDIAL ACTION PLAN/RECORD OF DECISION [PORTION OF MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY	SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001145 SULT-5104-0131-0007 CORRESPONDENCE N68711-03-D-5104 12	**10-31-2007** 12-04-2007 5090.3.A. CTO 0131	KELLY, D. SULTECH SMITS, M. BRAC PMO WEST	RESPONSES TO COMMENTS ON THE DRAFT FINAL REMEDIAL ACTION PLAN/RECORD OF DECISION [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY	SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001148 WEST-1061-0000-0004.R1 REPORT N68711-01-MDC-1061 3	**11-01-2007** 12-18-2007 5090.3.A. NONE	WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST	REVISED DRAFT CONCEPTUAL SITE MODEL FOR WESTERN MAGAZINE AREA (CD COPY ENCLOSED) [SEE AR# 3650 - DRAFT CONCEPTUAL SITE MODEL]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001156 NONE CORRESPONDENCE NONE 5	**11-05-2007** 02-27-2008 5090.3.A. NONE	GRIBBLE, C. DTCS - BERKELEY GEMAR, D. MARE ISLAND	REVIEW AND COMMENTS ON THE DRAFT RADIOLOGICAL SURVEY PLAN, WESTERN MAGAZINE AREA (WMA) DREDGE OUTFALLS (INCLUDES COMMENTS FROM CA DEPT. OF PUBLIC HEALTH DATED 05 NOVEMBER 2007) [SEE AR # 1134 - DRAFT RADIOLOGICAL SURVEY PLAN]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001140 BRAC SER BPMOW.MD/0080 CORRESPONDENCE NONE 5	**11-08-2007** 11-27-2007 5090.3.A. NONE	M. BLOOM BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF THE DRAFT WORK PLAN FOR THE REMEDIAL INVESTIGATION AT INVESTIGATION AREA K (W/OUT ENCLOSURE) [SEE AR # 1141 - DRAFT WORK PLAN FOR REMEDIAL INVESTIGATION] {PORTION OF THE MAILING LIST IS SENSITIVE}	ADMIN RECORD INFO REPOSITORY SENSITIVE	AREA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001141 TTEM.0055.0311.0009 REPORT N62467-04-D-0055 150	**11-08-2007** 11-27-2007 5090.3.A. 00311	D. LEON TETRA TECH EM INC. BRAC PMO WEST	DRAFT WORK PLAN FOR THE REMEDIAL INVESTIGATION AT INVESTIGATION AREA K (CD COPY IS ENCLOSED) [SEE AR # 1140 - BRAC TRANSMITTAL LETTER]	ADMIN RECORD INFO REPOSITORY	AREA K	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001146 BRAC SER BPMOW.LB\0119 CORRESPONDENCE NONE 3	**11-30-2007** 12-18-2007 5090.3.A. NONE	M. BLOOM BRAC PMO WEST C. GRIBBLE DTSC - BERKELEY	TRANSMITTAL OF 1) DRAFT FINAL GEOPHYSICAL INVESTIGATION PRODUCTION MANUFACTURING AREA AND SOUTH SHORE AREA, VOLUMES 1 AND 2 OF 2, AND 2) RESPONSES TO AGENCY COMMENTS ON THE DRAFT GEOPHYSICAL INVESTIGATION (W/OUT ENCLOSURES) [SEE AR # 1147 - ENCLOSURE 1]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG. A-163 BLDG. A-223 BLDG. A-224	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001150 SULT.5104.0095.001 3 REPORT N68711-03-D-5104 80	**12-01-2007** 01-10-2008 5090.3.A. 00095	SWANSON, G. SULTECH BRAC PMO WEST	DRAFT SAMPLING AND ANALYSIS PLAN ADDENDUM 01, (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN), ADDITIONAL SAMPLING (CD COPY ENCLOSED) [SEE AR # 1153 - BRAC PMO WEST TRANSMITTAL LETTER, AND # 263 - REVISED DRAFT FINAL SAP]	ADMIN RECORD INFO REPOSITORY	IA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001153 BRAC SER BPMOW.MD/0175 CORRESPONDENCE NONE 3	**12-21-2007** 01-23-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF THE DRAFT SAMPLING AND ANALYSIS PLAN ADDENDUM 01, (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN), FOR ADDITIONAL SAMPLING INVESTIGATION AREA F1{PORTION OF MAILING LIST IS SENSITIVE} (W/OUT ENCLOSURE) [SEE AR # 1150 - DRAFT SAP]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001268 WEST-1061-0000-0010 REPORT N68711-01-MDC-1061 90	**01-01-2008** 12-04-2008 5090.3.A. NONE	WESTON SOLUTIONS, INC. VARIOUS AGENCIES	WESTERN EARLY TRANSFER PARCEL, 2007 ANNUAL REPORT (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	DREDGE POND 4M DREDGE POND 4N DREDGE POND 4S IA J	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001174 NONE CORRESPONDENCE NONE 7	**01-31-2008** 04-18-2008 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT FINAL, FORMER NORTH BUILDING WAYS REMEDIAL INVESTIGATION REPORT {INCLUDES ASSEMBLY BILL NO. 422, CHAPTER 597} [SEE AR # 110 - FINAL RI REPORT] (SEE COMMENTS.)	ADMIN RECORD INFO REPOSITORY	IA A2	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001155 FILE NO. 2129.2001 (LCR) CORRESPONDENCE NONE 2	**02-04-2008** 02-13-2008 5090.3.A. NONE	RAO, L. CRWQCB - OAKLAND BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT FINAL INVESTIGATION, FORMER NORTH BUILDING WAYS AREA REMEDIAL INVESTIGATION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	IA A2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001171 NONE CORRESPONDENCE NONE 1	**02-05-2008** 04-18-2008 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT SAMPLING AND ANALYSIS PLAN (SAP) ADDENDUM 01, (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN), FOR ADDITIONAL SAMPLING [SEE AR # 1150 - DRAFT SAP ADDENDUM 01]	ADMIN RECORD INFO REPOSITORY	IA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001172 NONE CORRESPONDENCE NONE 4	**02-07-2008** 04-18-2008 5090.3.A. NONE	KILGORE, W. DTSC - SACRAMENTO, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT SAMPLING AND ANALYSIS PLAN (SAP) ADDENDUM 01, (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN), FOR ADDITIONAL SAMPLING {INCLUDES GSU COMMENTS DATED 29 JANUARY 2008} [SEE AR # 1150 - DRAFT SAP ADDENDUM 01]	ADMIN RECORD INFO REPOSITORY	IA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001157 BRAC SER BPMOW.BH/0254 CORRESPONDENCE NONE 3	**02-15-2008** 03-03-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF THE DRAFT FINAL CLOSURE CERTIFICATION REPORT, J - LINES SEGMENT {PORTION OF MAILING LIST IS SENSITIVE} (W/OUT ENCLOSURE) [SEE AR # 1158 - DRAFT FINAL CLOSURE CERTIFICATION REPORT]	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001158 HILL-0995-0065-0021 REPORT N62467-98-D-0995 50	**02-15-2008** 03-03-2008 5090.3.A. 00065	LAMB, S. CH2M HILL BRAC PMO WEST	DRAFT FINAL CLOSURE CERTIFICATION REPORT, J - LINES SEGMENT (CD COPY ENCLOSED) [SEE AR # 1157 - BRAC PMO WEST TRANSMITTAL LETTER]	ADMIN RECORD INFO REPOSITORY	SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001167 NONE CORRESPONDENCE NONE 7	**02-19-2008** 04-02-2008 5090.3.A. NONE	KILGORE, W. DTSC - SACRAMENTO, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT FINAL GEOPHYSICAL INVESTIGATION, PRODUCTION MANUFACTURING AREA AND SOUTH SHORE AREA [SEE AR # 1147 - DRAFT FINAL GEOPHYSICAL INVESTIGATION]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001173 NONE CORRESPONDENCE NONE 4	**02-19-2008** 04-18-2008 5090.3.A. NONE	KILGORE, W. DTSC - SACRAMENTO, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT FINAL GEOPHYSICAL INVESTIGATION, PRODUCTION MANUFACTURING AREA AND SOUTH SHORE AREA {INCLUDES STATE UNEXPLODED ORDINANCE COORDINATOR COMMENTS DATED 11 FEBRUARY 2008} [SEE AR # 1147 - DRAFT FINAL GEOPHYSICAL INVESTIGATION]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001281 FILE NO. 2129.2011 (BJT) CORRESPONDENCE NONE 2	**02-20-2008** 01-27-2009 5090.3.A. NONE	THOMPSON, B. CRWQCB - OAKLAND, CA BLOOM, M. BRAC PMO WEST	COMMENTS ON DRAFT SAMPLING AND ANALYSIS PLAN ADDENDUM 01 (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN) ADDITIONAL SAMPLING INVESTIGATION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	AREA F	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001165 NONE CORRESPONDENCE NONE 21	**02-22-2008** 04-02-2008 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT WORK PLAN FOR THE REMEDIAL INVESTIGATION (INCLUDES GSU COMMENTS DATED 01 FEBRUARY 2008, HERD COMMENTS DATED 09 JANUARY 2008, AND DFG COMMENTS DATED 04 FEBRUARY 2008) {***SEE COMMENTS}	ADMIN RECORD INFO REPOSITORY	AREA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001166 FILE NO. 2129.2001 (LCR) CORRESPONDENCE NONE 3	**02-24-2008** 04-02-2008 5090.3.A. NONE	RAO, L. CRWQCB - SAN FRANCISCO BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT WORK PLAN FOR THE REMEDIAL INVESTIGATION [SEE AR # 1141 - DRAFT WORK PLAN FOR THE REMEDIAL INVESTIGATION]	ADMIN RECORD INFO REPOSITORY	AREA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001159 WEST-1061-0000-0005 REPORT N68711-01-D-1061 12000	**03-01-2008** 03-06-2008 5090.3.A. 00000	POPEK, E. WESTON SOLUTIONS, INC. BRAC PMO WEST	RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) FACILITY LANDFILL, 2007 ANNUAL GROUNDWATER MONITORING REPORT {INCLUDES ANALYTICAL DATA} (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	SITE 00006	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001164 WEST-6010-0011-0002 REPORT N68711-01-D-6010 4700	**03-01-2008** 03-27-2008 5090.3.A. 00011	BAUR, P. WESTON SOLUTIONS, INC. BRAC PMO WEST	DRAFT NON-TIME CRITICAL REMOVAL ACTION (NTCRA) COMPLETION REPORT, DEFENSE REUTILIZATION AND MARKETING OFFICE (INCLUDES ANALYTICAL DATA AND CD COPY)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001168 NONE CORRESPONDENCE NONE 1	**03-06-2008** 04-02-2008 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE 1) REVISED DRAFT CONCEPTUAL SITE MODEL FOR WESTERN MAGAZINE AREA AND THE 2) DRAFT CONCEPTUAL SITE MODEL [SEE AR # 1148 - REVISED DRAFT CONCEPTUAL SITE MODEL FOR WESTERN MAGAZINE AREA, AND # 1151 - DRAFT CONCEPTUAL SITE MODEL]	ADMIN RECORD INFO REPOSITORY	SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001226 BRAC SER BPMOW.ELB/0311 CORRESPONDENCE NONE 3	**03-06-2008** 08-27-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	REQUEST TO IDENTIFY STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) FOR THE NON-TIME CRITICAL REMOVAL ACTION AT FORMER DEGREASING PLANT, INVESTIGATION AREA	ADMIN RECORD INFO REPOSITORY	BLDG 00742 IA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001169 NONE CORRESPONDENCE NONE 21	**03-07-2008** 04-02-2008 5090.3.A. NONE	KILGORE, W. DTSC - SACRAMENTO, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE 1) REVISED DRAFT CONCEPTUAL SITE MODEL FOR WESTERN MAGAZINE AREA, AND THE 2) DRAFT CONCEPTUAL SITE MODEL (INCLUDES DFG COMMENTS DATED 04 MARCH 2008)	ADMIN RECORD INFO REPOSITORY	SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001163 BRAC SER BPMOW.ELB/0306 CORRESPONDENCE NONE 2	**03-08-2008** 03-27-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF THE DRAFT NON-TIME CRITICAL REMOVAL ACTION (NTCRA) COMPLETION REPORT, DEFENSE REUTILIZATION AND MARKETING OFFICE {PORTION OF THE MAILING LIST IS SENSITIVE} (W/OUT ENCLOSURE) [SEE RECORD # 1134 - DRAFT NON-TCRA COMPLETION REPORT]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001225 NONE CORRESPONDENCE NONE 10	**03-12-2008** 08-25-2008 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA GEMAR, D. WESTON SOLUTIONS, INC.	RESPONSE TO COMMENTS ON THE SANITARY SEWAGE TREATMENT PLANT (SSTP) OUTFALL OFFSHORE AREA DATA PACKAGE AND FURTHER RECOMMENDATION FOR ADDITIONAL SITE CHARACTERIZATION (SEE COMMENTS.)	ADMIN RECORD INFO REPOSITORY	IA I IA J	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001182 BRAC SER BPMOW.SP/0431 CORRESPONDENCE NONE 3	**04-01-2008** 05-27-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF THE FINAL SAMPLING AND ANALYSIS PLAN (SAP) ADDENDUM 01 (FILED SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN) ADDITIONAL SAMPLING , AND 2) RESPONSE TO COMMENTS ON THE DRAFT SAP ADDENDUM 01 (***SEE COMMENTS)	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001183 SULT.5104.0095.001 5 REPORT N68711-03-D-5104 60	**04-01-2008** 05-27-2008 5090.3.A. 00095	SWANSON, G. SULTECH BRAC PMO WEST	FINAL SAMPLING AND ANALYSIS PLAN (SAP) ADDENDUM 01, (FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN), ADDITIONAL SAMPLING (CD COPY ENCLOSED) [SEE AR # 1182 - BRAC PMO WEST TRANSMITTAL LETTER, AND # 263 - REVISED DRAFT FINAL SAP] {***SEE COMMENTS}	ADMIN RECORD INFO REPOSITORY	IA F1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001336 WEST-1061-0000-0016 REPORT N68711-01-MDC-1061 70	**04-07-2008** 07-21-2009 5090.3.B. NONE	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	QUARTERLY REPORT, LANDFILL LEACHATE AND GROUNDWATER EXTRACTION SYSTEM	POST DECISION FILE	IA H1 SUMP 12 SUMP 13	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001175 NONE CORRESPONDENCE NONE 2	**04-08-2008** 04-18-2008 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT FINAL, FORMER NORTH BUILDING WAYS REMEDIAL INVESTIGATION REPORT (SEE AR # 110 - FINAL RI REPORT) [SEE COMMENTS.]	ADMIN RECORD INFO REPOSITORY	IA A2	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001227 NONE CORRESPONDENCE NONE 15	**04-09-2008** 08-27-2008 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	RESPONSE TO REQUEST TO IDENTIFY STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) FOR THE NON-TIME CRITICAL REMOVAL ACTION AT FORMER DEGREASING PLANT, INVESTIGATION AREA	ADMIN RECORD INFO REPOSITORY	BLDG 00742 IA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001289 NONE CORRESPONDENCE NONE 1	**04-14-2008** 02-26-2009 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE RESPONSES TO COMMENTS ON THE DRAFT FINAL FORMER NORTH BUILDING WAYS REMEDIAL INVESTIGATION	ADMIN RECORD INFO REPOSITORY	IA A2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001170 ECSD-3211-0004-0002 REPORT N62473-07-D-3211 200	**04-16-2008** 04-18-2008 5090.3.A. 00004	HAMPARSUMIAN, H. TETRA TECH EC, INC. BRAC PMO WEST	WORK PLAN, STORM DRAIN MANHOLE PLUGGING (CD COPY)	ADMIN RECORD INFO REPOSITORY	IA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001176 NONE CORRESPONDENCE NONE 8	**04-16-2008** 05-06-2008 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	REVIEW AND NO FURTHER COMMENTS ON THE DRAFT FINAL CLOSURE CERTIFICATION REPORT, J - LINES SEGMENT (INCLUDES NCPCAB COMMENTS DATED 10 APRIL 2008) [SEE AR # 1159 - DRAFT FINAL CLOSURE CERTIFICATION REPORT, J - LINES SEGMENT]	ADMIN RECORD INFO REPOSITORY	SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001228 FILE NO. 2129.2011 (BJT) CORRESPONDENCE NONE 30	**04-16-2008** 08-27-2008 5090.3.A. NONE	THOMPSON, B. CRWQCB - OAKLAND, CA BLOOM, M. BRAC PMO WEST	RESPONSE TO REQUEST TO IDENTIFY STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) FOR THE NON-TIME CRITICAL REMOVAL ACTION AT FORMER DEGREASING PLANT, INVESTIGATION AREA	ADMIN RECORD INFO REPOSITORY	BLDG 00742 IA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001181 NONE CORRESPONDENCE NONE 1	**04-22-2008** 05-27-2008 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA BLOOM, M. BRAC PMO WEST	REVIEW AND CONCURRENCE WITH THE DRAFT FINAL CLOSURE CERTIFICATION REPORT, J - LINES SEGMENT [SEE AR # 1158 - DRAFT FINAL CLOSURE CERTIFICATION REPORT]	ADMIN RECORD INFO REPOSITORY	SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001177 NONE CORRESPONDENCE NONE 2	**04-28-2008** 05-06-2008 5090.3.A. NONE	THOMPSON, B. CRWQCB - OAKLAND BLOOM, M. BRA PMO WEST	REVIEW AND COMMENTS ON THE DRAFT FINAL CLOSURE CERTIFICATION REPORT, J - LINES SEGMENT [SEE AR # 1158 - DRAFT FINAL CLOSURE CERTIFICATION REPORT, J - LINES SEGMENT]	ADMIN RECORD INFO REPOSITORY	SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001136 WEST-6010-0008-0001.R1 REPORT N68711-01-D-6010 14000	**05-01-2008** 10-11-2007 5090.3.A. 00008	SANCHEZ, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	FINAL TIME-CRITICAL REMOVAL ACTION (TCRA) COMPLETION REPORT MARINE CORPS FIRING RANGE, REVISION 1(INCLUDES REPLACEMENT PAGES CONVERTING THE FINAL DATED 01SEPTMEBER 2007 TO FINAL REVISION 1, CD COPY, AND ANALYTICAL DATA) [***SEE COMMENTS]	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001147 WEST-6010-0009-0006 REPORT N68711-01-D-6010 2000	**05-01-2008** 12-18-2007 5090.3.A. 00009	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	FINAL GEOPHYSICAL INVESTIGATION PRODUCTION MANUFACTURING AREA AND SOUTH SHORE AREA, VOLUMES 1 AND 2 OF 2 (INCLUDES RESPONSE TO COMMENTS AND REPLACEMENT PAGES CONVERTING THE DRAFT FINAL DATED 30 NOVEMBER 2007 TO FINAL, AND CD COPY) [***SEE COMMENTS]	ADMIN RECORD INFO REPOSITORY	BLDG A-163 BLDG A-223 BLDG A-224	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001178 BRAC SER BPMOW.EB\0429 CORRESPONDENCE NONE 3	**05-01-2008** 05-13-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF REPLACEMENT PAGES CONVERTING THE FINAL DATED 01 SEPTEMBER 2007 TO THE FINAL TIME-CRITICAL REMOVAL ACTION (TCRA) COMPLETION REPORT MARINE CORPS FIRING RANGE AND HISTORICAL OUTFALL 4S, REVISION 1[***SEE COMMENTS]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001213 BRAC SER BPMOW.LB\0430 CORRESPONDENCE NONE 3	**05-02-2008** 07-17-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. CRWQCB - BERKELEY	TRANSMITTAL OF 1) REPLACEMENT PAGES CONVERTING THE DRAFT FINAL GEOPHYSICAL INVESTIGATION, PRODUCTION MANUFACTURING AREA AND SOUTH SHORE AREA, TO THE FINAL GEOPHYSICAL INVESTIGATION, PRODUCTION MANUFACTURING AREA AND SOUTH SHORE AREA (***SEE COMMENTS)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001184 BRAC SER BPMOW.MD/0441 CORRESPONDENCE NONE 4	**05-08-2008** 05-27-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF RESPONSE TO ADDITIONAL REGULATORY AGENCY COMMENTS ON THE FINAL, FORMER NORTH BUILDING WAYS REMEDIAL INVESTIGATION REPORT (CD COPY ENCLOSED) {PORTION OF THE MAILING LIST IS SENSITIVE} (W/OUT ENCLOSURE) [SEE AR #1185 - RESPONSE TO COMMENTS]	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA A2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001290 NONE CORRESPONDENCE NONE 2	**05-08-2008** 02-26-2009 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	REVIEW AND NO FURTHER COMMENTS ON THE FINAL TIME-CRITICAL REMOVAL ACTION (TCRA) COMPLETION REPORT MARINE CORPS FIRING RANGE, REVISION 1	ADMIN RECORD INFO REPOSITORY	OUTFALL 4S	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001185 SULT.5104.0131.000 9 CORRESPONDENCE N68711-03-D-5104 35	**05-09-2008** 05-27-2008 5090.3.A. 00131	SULTECH BRAC PMO WEST	RESPONSE TO ADDITIONAL REGULATORY AGENCY COMMENTS ON THE FINAL, FORMER NORTH BUILDING WAYS REMEDIAL INVESTIGATION REPORT (CD COPY ENCLOSED) [SEE AR # 1184 - BRAC PMO WEST TRANSMITTAL LETTER, AND # 110 - FINAL RI REPORT]	ADMIN RECORD INFO REPOSITORY	IA A2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001179 BRAC SER BPMOW.BH/0440 CORRESPONDENCE NONE 2	**05-15-2008** 05-19-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF THE FINAL CLOSURE CERTIFICATION REPORT, J - LINES SEGMENT {PORTION OF THE MAILING LIST IS SENSITIVE} (W/OUT ENCLOSURE) [SEE AR # 1180 - FINAL CLOSURE CERTIFICATION REPORT]	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001180 HILL-0995-0065-0022 REPORT N62467-98-D-0995 170	**05-15-2008** 05-19-2008 5090.3.A. 00065	LAMB, S. CH2M HILL BRAC PMO WEST	FINAL CLOSURE CERTIFICATION REPORT, J - LINES SEGMENT {INCLUDES DVD VIDEO} (CD COPY ENCLOSED) [SEE AR # 1179 - BRAC PMO WEST TRANSMITTAL LETTER]	ADMIN RECORD INFO REPOSITORY	BLDG 0000900 SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001291 NONE CORRESPONDENCE NONE 4	**05-15-2008** 02-26-2009 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT NON-TIME CRITICAL REMOVAL ACTION (NTCRA) COMPLETION REPORT, DEFENSE REUTILIZATION AND MARKETING OFFICE	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001209 FILE NO. 2129.2011 (BJT) CORRESPONDENCE NONE 3	**05-20-2008** 06-26-2008 5090.3.A. NONE	THOMPSON, B. CRWQCB - OAKLAND BLOOM, M. BRAC PMO WEST	INVESTIGATION FOR CHARACTERIZING THE NATURE AND EXTENT OF PETROLEUM HYDROCARBON DISCHARGES - DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO), CRANE TEST AREA, AND INVESTIGATION AREA B (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	IA B IA B.2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001214 BRAC SER BPMOW.SP/470 CORRESPONDENCE NONE 3	**05-22-2008** 07-17-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	REQUEST TO IDENTIFY POTENTIAL STATE CHEMICAL-SPECIFIC & LOCATION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) FOR PRODUCTION MANUFACTURING AREA (PMA) AND SOUTH SHORE AREA (SSA)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001337 NONE CORRESPONDENCE NONE 4	**05-23-2008** 07-21-2009 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA GEMAR, D. WESTON SOLUTIONS, INC,	REVIEW AND COMMENTS ON THE QUARTERLY REPORT, LANDFILL LEACHATE AND GROUNDWATER EXTRACTION SYSTEM (INCLUDES GSU COMMENTS, DATED 12 MAY 2008)	ADMIN RECORD INFO REPOSITORY	IA H1 SUMP 12 SUMP 13	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001292 NONE CORRESPONDENCE NONE 1	**05-29-2008** 02-26-2009 5090.3.A. NONE	D'ALMEIDA, C U.S. EPA - SAN FRANCISCO, CA BLOOM, M. BRAC PMO WEST	REVIEW AND NO COMMENTS ON THE DRAFT NON-TIME CRITICAL REMOVAL ACTION (NTCRA) COMPLETION REPORT, DEFENSE REUTILIZATION AND MARKETING OFFICE	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001200 CHAD-3213-0031-0002 REPORT N62473-07-D-3213 35	**06-01-2008** 06-17-2008 5090.3.A. CTO 0031	CHADUXTT JV NAVFAC - SOUTHWEST	DRAFT SITE MANAGEMENT PLAN ATTACHMENT C TO THE FEDERAL FACILITY SITE REMEDIATION AGREEMENT (FFSRA) FISCAL YEAR 2009 (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 BLDG 00643 BLDG 00742 IA A2 IA F1 IA H1 IA K SITE 00004 SITE 00005 SITE 00017 UST 000655 UST 000993-4 UST A195 UST A225 UST A266 UST A267	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001199 BRAC SER BPMOW.MD/0489 CORRESPONDENCE NONE 4	**06-04-2008** 06-17-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF DRAFT SITE MANAGEMENT PLAN ATTACHMENT C TO THE FEDERAL FACILITY SITE REMEDIATION AGREEMENT (FFSRA) FISCAL YEAR 2009 (W/ OUT ENCLOSURE) [PORTION OF MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001189 FILE NO. 2129.2011 (BJT) CORRESPONDENCE NONE 2	**06-05-2008** 06-09-2008 5090.3.A. NONE	THOMPSON, B. CRWQCB - OAKLAND BLOOM, M. BRAC PMO WEST	COMMENTS ON THE DRAFT NON-TIME-CRITICAL REMOVAL ACTION (NTCRA) COMPLETION REPORT, DEFENSE REUTILIZATION AND MARKETING OFFICE (CD COPY ENCLOSED) [SEE AR # 1164 - DRAFT NON-TIME-CRITICAL REMOVAL ACTION COMPLETION REPORT]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001240 TN&A-3217-0002-0002 REPORT N62473-07-D-3217 600	**07-01-2008** 10-07-2008 5090.3.A. CTO 0002	SHARMA, S. T N & ASSOCIATES, INC. BRAC PMO WEST	DRAFT PETROLEUM CORRECTIVE ACTION PLAN FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	IA A2	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001211 CHAD.3213.0028.0005 REPORT N62473-07-D-3213 170	**07-02-2008** 07-11-2008 5090.3.A. DO 0028	CHADUXTT BRAC PMO WEST	DRAFT ACCIDENT PREVENTION PLAN, ADDITIONAL SOIL, GROUNDWATER, AND SOIL GAS SAMPLING INVESTIGATION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001212 CHAD.3213.0028.0016 REPORT N62473-07-D-3213 170	**07-02-2008** 07-29-2008 5090.3.A. DO 0028	CHADUXTT BRAC PMO WEST	DRAFT HEALTH AND SAFETY PLAN, ADDITIONAL SOIL, GROUNDWATER, AND SOIL GAS SAMPLING INVESTIGATION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001251 CHAD.3213.0028.0006 CORRESPONDENCE N62473-07-D-3213 2	**07-14-2008** 11-13-2008 5090.3.A. 00028	CHADUXTT BRAC PMO WEST	RESPONSE TO COMMENTS ON THE DRAFT ACCIDENT PREVENTION PLAN (APP), ADDITIONAL SOIL, GROUNDWATER, AND SOIL GAS SAMPLING INVESTIGATION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001256 CHAD.3213.0028.0017 CORRESPONDENCE N62473-07-D-3213 2	**07-14-2008** 11-13-2008 5090.3.A. 00028	CHADUXTT BRAC PMO WEST	RESPONSE TO COMMENTS ON THE DRAFT HEALTH AND SAFETY PLAN (HSP), ADDITIONAL SOIL, GROUNDWATER, AND SOIL SAMPLING INVESTIGATION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001271 CHAD.3213.0028.0007 REPORT N62473-07-D-3213 287	**07-14-2008** 12-12-2008 5090.3.A. DO 0028	BECK, J. CHADUXTT JV BRAC PMO WEST	FINAL ACCIDENT PREVENTION PLAN (APP) ADDITIONAL SOIL, GROUNDWATER, SOIL GAS SAMPLING INVESTIGATION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001272 CHAD.3213.0028.0018 REPORT N62473-07-D-3213 223	**07-14-2008** 12-12-2008 5090.3.A. DO 0028	CHADUXTT BRAC PMO WEST	FINAL HEALTH AND SAFETY PLAN (HSP) ADDITIONAL SOIL, GROUNDWATER, SOIL GAS SAMPLING INVESTIGATION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001366 NEHC SER EP1914/000816 CORRESPONDENCE NONE 3	**07-24-2008** 10-08-2009 5090.3.A. NONE	WALKER, Y. NAVY ENVIRONMENTAL HEALTH CENTER - PORTSMOUTH, VA DREYER, M. NAVFAC - SOUTHWEST	TRANSMITTAL OF REVIEW AND COMMENTS ON THE DRAFT HEALTH AND SAFETY PLAN FOR ADDITIONAL SOIL, GROUNDWATER, AND SOIL GAS SAMPLING INVESTIGATION	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001239 BRAC SER BPMOW.MPS/0619 CORRESPONDENCE NONE 2	**07-30-2008** 10-07-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST THOMPSON, B. CRWQCB - OAKLAND, CA	TRANSMITTAL OF DRAFT PETROLEUM CORRECTIVE ACTION PLAN FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA (W/ OUT ENCLOSURE) [PORTION OF MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA A2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001149 WEST-1061-0000-0006 REPORT N68711-01-MDC-1061 80	**08-01-2008** 08-20-2008 5090.3.A. NONE	CHRISTENSEN, B. WESTON SOLUTIONS, INC. BRAC PMO WEST	DRAFT SUMMARY REPORT, RADIATION SURVEYS OF WESTERN MAGAZINE AREA, EAST AND WEST DREDGE OUTFALLS (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001230 WEST-6010-0012-0007 REPORT N68711-01-D-6010 350	**08-01-2008** 08-27-2008 5090.3.A. CTO 0012	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	DRAFT ADDENDUM 1 TIME-CRITICAL REMOVAL ACTION (TCRA) PAINT WASTE AREA MUNITIONS RESPONSE TO FINAL WORK PLAN (WP) TIME-CRITICAL REMOVAL ACTION (TCRA) PAINT WASTE AREA AND HORSE STABLES AREA (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001231 WEST-1061-0000-0007 REPORT N68711-01-MDC-1061 1400	**08-01-2008** 08-29-2008 5090.3.A. NONE	WALKER, T. WESTON SOLUTIONS, INC. BRAC PMO WEST	RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) / FACILITY LANDFILL 2008 SEMIANNUAL GROUNDWATER MONITORING REPORT (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	AREA J PARCEL 0002M PARCEL 0002N PARCEL 0002S PARCEL 0003W PARCEL 0004M PARCEL 0004N PARCEL 0004S SITE 00002 SITE 00006 SITE 00016 WELL 00007A WELL 00075B WELL 00076C WELL 00081A	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001233 WEST-6010-0011-0003 REPORT N68711-01-D-6010 25577	**08-01-2008** 09-16-2008 5090.3.A. CTO 0011	BAUR, P. WESTON SOLUTIONS, INC. BRAC PMO WEST	FINAL NON-TIME CRITICAL REMOVAL ACTION (NTCRA) COMPLETION REPORT, DEFENSE REUTILIZATION AND MARKETING OFFICE (INCLUDES ANALYTICAL DATA - PAPER ONLY, RESPONSES TO COMMENTS ON THE DRAFT DATED MARCH 2008, AND CD COPY)	ADMIN RECORD INFO REPOSITORY		FRC - PERRIS IMAGED MARE_001	181-09-4129 BX 0001 BX 0002 BX 0003 BX 0004 BX 0005 BX 0006 BX 0007 BX 0008 BX 0009
N00221 / 001219 BRAC SER BPMOW.MD/0629 CORRESPONDENCE NONE 3	**08-04-2008** 08-21-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF THE DRAFT FINAL WORK PLAN FOR THE REMEDIAL INVESTIGATION (PORTION OF THE MAILING LIST IS SENSITIVE) [W/OUT ENCLOSURE] [SEE RECORD # 1220 - DRAFT FINAL WORK PLAN FOR THE REMEDIAL INVESTIGATION}	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA K	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001293 NONE CORRESPONDENCE NONE 4	**08-07-2008** 02-26-2009 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA GEMAR, D. WESTON SOLUTIONS, INC.	REVIEW AND COMMENTS ON THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) / FACILITY LANDFILL 2008 SEMIANNUAL GROUNDWATER MONITORING REPORT (INCLUDES GSU COMMENTS DATED 07 AUGUST 2008)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001294 NONE CORRESPONDENCE NONE 20	**08-08-2008** 02-26-2009 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION (RI) REPORT, PHASES I AND II FOR THE SOUTHERN OFFSHORE SITES (PRODUCTION MANUFACTURING AREA / SOUTH SHORE AREA (PMA/SSA)) [***SEE COMMENTS]	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001221 TTEM.0055.0311.001 8 REPORT N62467-04-D-0055 200	**08-12-2008** 08-21-2008 5090.3.A. 00311	TETRA TECH EM INC. BRAC PMO WEST	DRAFT ACCIDENT PREVENTION PLAN OFFSHORE SEDIMENT INVESTIGATION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	IA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001222 TTEM.0055.0311.003 3 REPORT N62467-04-D-0055 170	**08-12-2008** 08-21-2008 5090.3.A. 00311	TETRA TECH EM INC. BRAC PMO WEST	DRAFT HEALTH AND SAFETY PLAN OFFSHORE SEDIMENT INVESTIGATION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	IA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001232 BRAC SER BPMOW.MD/0647 CORRESPONDENCE NONE 5	**08-18-2008** 09-16-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF THE FINAL NON-TIME CRITICAL REMOVAL ACTION (NTCRA) COMPLETION REPORT, DEFENSE REUTILIZATION AND MARKETING OFFICE (W/OUT ENCLOSURE) [PORTION OF THE MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY SENSITIVE		FRC - PERRIS IMAGED MARE_001	181-09-4129 BX 0001
N00221 / 001338 NONE CORRESPONDENCE NONE 2	**08-18-2008** 07-21-2009 5090.3.A. NONE	GEMAR, D. WESTON SOLUTIONS, INC. GRIBBLE, C. DTSC - BERKELEY, CA	RESPONSE TO COMMENTS ON THE QUARTERLY REPORT, LANDFILL LEACHATE AND GROUNDWATER EXTRACTION SYSTEM	ADMIN RECORD INFO REPOSITORY	IA H1 SUMP 12 SUMP 13	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001229 BRAC SER BPMOW.JL/0665 CORRESPONDENCE NONE 3	**08-22-2008** 08-27-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF DRAFT ADDENDUM 1 TIME-CRITICAL REMOVAL ACTION PARCEL XVI PAINT WASTE AREA MUNITIONS RESPONSE TO FINAL WORK PLAN TIME-CRITICAL REMOVAL ACTION PARCEL XVI PAINT WASTE AREA, HORSE STABLES AREA (W/ OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001269 TTEM.0055.0311.0019 REPORT N62467-04-D-0055 203	**09-09-2008** 12-12-2008 5090.3.A. 00311	GLICKFIELD, G. TETRA TECH EM, INC. BRAC PMO WEST	FINAL ACCIDENT PREVENTION PLAN (APP) OFFSHORE SEDIMENT INVESTIGATION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	IA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001270 TTEM.0055.0311.0034 REPORT N62467-04-D-0055 173	**09-09-2008** 12-12-2008 5090.3.A. 00311	TETRA TECH EM, INC. BRAC PMO WEST	FINAL HEALTH AND SAFETY PLAN (HSP) OFFSHORE SEDIMENT INVESTIGATION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	IA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001220 TTEM.0055.0311.0027.R1 REPORT N62467-04-D-0055 250	**09-11-2008** 08-21-2008 5090.3.A. 00311	BECK, J. TETRA TECH EM INC. BRAC PMO WEST	FINAL WORK PLAN FOR THE REMEDIAL INVESTIGATION (RI) (INCLUDES REPLACEMENT PAGES CONVERTING THE DRAFT FINAL DATED 04 AUGUST 2008 TO FINAL AND CD COPY)	ADMIN RECORD INFO REPOSITORY	IA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001242 BRAC SER BPMOW.MD/0832 CORRESPONDENCE NONE 3	**09-12-2008** 10-20-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF THE FINAL REVISION 1, FORMER NORTH BUILDING WAYS AREA, REMEDIAL INVESTIGATION (PORTION OF THE MAILING LIST IS SENSITIVE) [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA A2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001252 CHAD.3213.0028.0013 REPORT N62473-07-D-3213 10	**09-12-2008** 11-13-2008 5090.3.C. 00028	CHADUXTT BRAC PMO WEST	DRAFT SUBSURFACE VAPOR INTRUSION METHODOLOGY LETTER REPORT FOR PROPOSED ACTIVE SOIL GAS SAMPLING (CD COPY ENCLOSED)	SITE FILE	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001265 BRAC SER BPMOW.MD/0836 CORRESPONDENCE NONE 3	**09-12-2008** 12-04-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF REPLACEMENT PAGES CONVERTING THE DRAFT FINAL WORK PLAN FOR THE REMEDIAL INVESTIGATION (RI) TO FINAL (PORTION OF THE MAILING LIST IS SENSITIVE) [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA A2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001235 BRAC SER BPMOW.JL\0845 CORRESPONDENCE NONE 3	**09-18-2008** 11-03-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF THE DRAFT SAMPLING AND ANALYSIS PLAN (SAP) (FIELD SAMPLING PLAN (FSP)/QUALITY ASSURANCE PROJECT PLAN (QAPP)) FOR ADDITIONAL SOIL, GROUNDWATER, AND SOIL GAS SAMPLING INVESTIGATION (PORTION OF THE MAILING LIST IS SENSITIVE) [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001245 CHAD.3213.0028.0002 REPORT N62473-07-D-3213 139	**09-18-2008** 11-03-2008 5090.3.C. DO 0028	SWANSON, G. CHADUXTT BRAC PMO WEST	DRAFT SAMPLING AND ANALYSIS PLAN (SAP) (FIELD SAMPLING PLAN (FSP)/QUALITY ASSURANCE PROJECT PLAN (QAPP)) FOR ADDITIONAL SOIL, GROUNDWATER, AND SOIL GAS SAMPLING INVESTIGATION (CD COPY ENCLOSED)	SITE FILE	BLDG 0000503 SITE 00017 WELL 02817W02 WELL 02817W03 WELL 02817W04 WELL 02817W05 WELL 02817W06 WELL 02817W07 WELL 02817W10 WELL 02817W11 WELL 02817W12 WELL 02817W14 WELL 02817W15 WELL 02817W16 WELL 02817W18 WELL 02817W19 WELL 02817W20 WELL 02817W23 WELL 02817W24 WELL 028IR17GT001 WELL 028IR17GT002 WELL 028IR17GT003 WELL 028IR17SB001 WELL 028IR17SB002 WELL 028IR17SB003 WELL 028IR17SB004 WELL 028IR17SB005 WELL 028IR17SB006	NAVFAC SOUTHWEST - BLDG. 1	

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					WELL 028IR17SB007		
					WELL 028IR17SB008		
					WELL 028IR17SB009		
					WELL 028IR17SB010		
					WELL 028IR17SB011		
					WELL 028IR17SB012		
					WELL 028IR17SB013		
					WELL 028IR17SB014		
					WELL 028IR17SB015		
					WELL 028IR17SB016		
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					WELL 028IR17SB026		

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					WELL 028IR17SB027 WELL 028IR17SB028 WELL 028IR17SB029 WELL 028IR17SB030 WELL 028IR17SB031 WELL 028IR17SB032 WELL 028IR17SB033 WELL 028IR17W01 WELL 028IR17W02 WELL 028IR17W03 WELL 028IR17W04		

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N00221 / 001243 TTEM.0055.FZN4.0005 REPORT N62467-04-D-0055 4700	**09-22-2008** 10-20-2008 5090.3.A. FZN4	BECK, J. TETRA TECH EM INC. BRAC PMO WEST	FINAL REVISION 1, FORMER NORTH BUILDING WAYS AREA, REMEDIAL INVESTIGATION (INCLUDES ANALYTICAL DATA AND CD COPY)	ADMIN RECORD INFO REPOSITORY	BLDG 0000485 BLDG 0000487 BLDG 0000491 BLDG 00565 BLDG 00571 BLDG 00573 BLDG 00575 BLDG 00577 BLDG 00579 BLDG 00581 BLDG 00583 BLDG 00585 BLDG 00587 BLDG 00589 BLDG 00591 BLDG 00593 BLDG 00597 BLDG 00641 BLDG 00643 BLDG 00659 BLDG 007171 BLDG 00723 BLDG 00817 BLDG 00857 BLDG 00925 BLDG 595-A BLDG 595-B BLDG A BLDG AA BLDG AB BLDG AD BLDG AE BLDG AF BLDG AG BLDG AH	NAVFAC SOUTHWEST - BLDG. 1	

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					BLDG AI		
					BLDG AL		
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					BLDG C		
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					BLDG E		
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					BLDG H		
					BLDG I		
					BLDG J		
					BLDG K		
					BLDG L		
					BLDG M		
					BLDG N		
					BLDG N-1		
					BLDG N-2		
					BLDG O		
					BLDG Q		
					BLDG R		
					BLDG S		
					BLDG T		
					BLDG U		
					BLDG V		
					BLDG W		
					BLDG W-5		
					BLDG W-6		
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					BLDG X		
					BLDG Y		
					BLDG Z		
					IA A2		
					IA K		

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N00221 / 001278 NONE CORRESPONDENCE NONE 11	**09-22-2008** 01-22-2009 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE 1) DRAFT SAMPLING AND ANALYSIS PLAN (SAP) (FIELD SAMPLING PLAN (FSP)/QUALITY ASSURANCE PROJECT PLAN (QAPP)) FOR ADDITIONAL SOIL, GROUNDWATER, AND SOIL GAS SAMPLING INVESTIGATION, AND (***SEE COMMENTS)	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001248 BRAC SER BPMOW.JL\0861 CORRESPONDENCE NONE 3	**09-23-2008** 11-04-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	REQUEST FOR THE IDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) FOR THE TIME-CRITICAL REMOVAL ACTION (TCRA) AT PAINT WASTE AREA	ADMIN RECORD INFO REPOSITORY	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001247 BRAC SER BPMOW.JL\0873 CORRESPONDENCE NONE 2	**09-25-2008** 11-04-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF THE FINAL SAMPLING AND ANALYSIS PLAN (SAP) (FIELD SAMPLING PLAN (FSP)/QUALITY ASSURANCE PROJECT PLAN (QAPP)) FOR ADDITION SOIL, GROUNDWATER, AND SOIL GAS SAMPLING INVESTIGATION [PORTION OF THE MAILING LIST IS SENSITIVE] {W/OUT ENCLOSURE}	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001246 CHAD.3213.0028.0004 REPORT N62473-07-D-3213 145	**09-26-2008** 11-03-2008 5090.3.A. DO 0028	SWANSON, G. CHADUXTT BRAC PMO WEST	FINAL SAMPLING AND ANALYSIS PLAN (SAP) (FIELD SAMPLING PLAN (FSP)/QUALITY ASSURANCE PROJECT PLAN (QAPP)) FOR ADDITION SOIL, GROUNDWATER, AND SOIL GAS SAMPLING INVESTIGATION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017 WELL 02817W002 WELL 02817W003 WELL 02817W004 WELL 02817W005 WELL 02817W007 WELL 02817W010 WELL 02817W011 WELL 02817W012 WELL 02817W014 WELL 02817W015 WELL 02817W016 WELL 02817W018 WELL 02817W019 WELL 02817W020 WELL 02817W023 WELL 02817W024 WELL 028IRGT0001 WELL 028IRGT0002 WELL 028IRGT0003	NAVFAC SOUTHWEST - BLDG. 1	

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					WELL 02IR17SB006		
					WELL 02IR17SB007		
					WELL 02IR17SB008		
					WELL 02IR17SB009		
					WELL 02IR17SB010		
					WELL 02IR17SB011		
					WELL 02IR17SB012		
					WELL 02IR17SB013		
					WELL 02IR17SB014		
					WELL 02IR17SB015		
					WELL 02IR17SB016		
					WELL 02IR17SB017		
					WELL 02IR17SB018		
					WELL 02IR17SB019		
					WELL 02IR17SB020		
					WELL 02IR17SB021		
					WELL 02IR17SB022		
					WELL 02IR17SB023		
					WELL 02IR17SB024		
					WELL 02IR17SB025		

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					WELL 02IR17SB026		
					WELL 02IR17SB027		
					WELL 02IR17SB028		
					WELL 02IR17SB029		
					WELL 02IR17SB030		
					WELL 02IR17SB031		
					WELL 02IR17SB032		
					WELL 02IR17SB033		
					WELL 02IR17SB034		
					WELL 02IR17SB035		
					WELL 02IR17SB036		
					WELL 02IR17SB037		
					WELL 02IR17SB038		
					WELL 02IR17SG001		
					WELL 02IR17SG002		
					WELL 02IR17SG003		
					WELL 02IR17SG004		
					WELL 02IR17SG005		
					WELL 02IR17SG006		
					WELL 02IR17SG007		

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					WELL 02IR17SG008		
					WELL 02IR17SG009		
					WELL 02IR17SG010		
					WELL 02IR17SG011		
					WELL 02IR17SG012		
					WELL 02IR17SG013		
					WELL 02IR17SG014		
					WELL 02IR17SG015		
					WELL 02IR17SG016		
					WELL 02IR17SG017		
					WELL 02IR17SG018		
					WELL 02IR17SG019		
					WELL 02IR17SG020		
					WELL 02IR17SG021		
					WELL 02IR17SG022		
					WELL 02IR17SG023		
					WELL 02IR17SG024		
					WELL 02IR17SG025		
					WELL 02IR17SG026		
					WELL 02IR17SG027		

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					WELL 02IR17SG029		
					WELL 02IR17SG030		
					WELL 02IR17SG031		
					WELL 02IR17SG032		
					WELL 02IR17SG033		
					WELL 02IR17SG034		
					WELL 02IR17SG035		
					WELL 02IR17SG036		
					WELL 02IR17SG037		
					WELL 02IR17SG038		
					WELL 02IR17SG039		
					WELL 02IR17SG040		
					WELL 02IR17SG041		
					WELL 02IR17SG08		
					WELL 08IR17TW01		
					WELL 08IR17TW02		
					WELL 08IR17TW03		
					WELL 08IR17TW04		

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N00221 / 001234 HILL-0995-0065-0020.R2 REPORT N62467-98-D-0995 148	**10-01-2008** 11-03-2008 5090.3.A. 00065	CH2M HILL BRAC PMO WEST	REVISION NO. 2, FINAL WORK PLAN: FOLLOW-ON PETROLEUM HYDROCARBONS INVESTIGATION, FENCED SCRAPYARD AREA AND VICINITY, DEFENSE REUTILIZATION AND MARKETING OFFICE SITE (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001250 CHAD.3213.0031.0004 REPORT N62473-07-D-3213 47	**10-01-2008** 11-13-2008 5090.3.C. 00031	CHADUXTT BRAC PMO WEST	DRAFT FINAL SITE MANAGEMENT PLAN (SMP), ATTACHMENT C TO THE FEDERAL FACILITY SITE REMEDIATION AGREEMENT (FFSRA), FISCAL YEAR 2009 (CD COPY ENCLOSED)	SITE FILE	BLDG 0000503 BLDG 00742 IA A2 IA F1 IA F2 IA H1 IA K PARCEL XVI SITE 00004 SITE 00005 SITE 00017 UST 000655 UST 0993-4 UST A195 UST A225 UST A25 UST A266 UST A267 UST A296 UST A58	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001257 FILE NO. 2129.2011 (PJ) CORRESPONDENCE NONE 2	**10-06-2008** 11-17-2008 5090.3.A. NONE	JORGENSEN, P. CRWQCB - OAKLAND, CA BLOOM, M. BRAC PMO WEST	CONCURRENCE WITH THE FINAL REVISION 1, FORMER NORTH BUILDING WAYS AREA, REMEDIAL INVESTIGATION REPORT	ADMIN RECORD INFO REPOSITORY	IA A2	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001244 NONE CORRESPONDENCE NONE 20	**10-08-2008** 10-23-2008 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT ADDENDUM 1 TIME-CRITICAL REMOVAL ACTION (TCRA) PAINT WASTE AREA MUNITIONS RESPONSE TO FINAL WORK PLAN (WP) TIME-CRITICAL REMOVAL ACTION (TCRA) PAINT WASTE AREA, HORSE STABLES AREA	ADMIN RECORD INFO REPOSITORY	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001295 NONE CORRESPONDENCE NONE 2	**10-09-2008** 02-26-2009 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	REVIEW AND NO FURTHER COMMENTS ON THE FINAL NON-TIME CRITICAL REMOVAL ACTION (NTCRA) COMPLETION REPORT, DEFENSE REUTILIZATION AND MARKETING OFFICE	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001360 WEST-1061-0000-0019 REPORT N68711-01-MDC-1061 70	**10-09-2008** 09-17-2009 5090.3.A. NONE	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	QUARTERLY REPORT LANDFILL LEACHATE AND GROUNDWATER EXTRACTION SYSTEM (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001253 CHAD.3213.0028.0014 CORRESPONDENCE N62473-07-D-3213 4	**10-10-2008** 11-13-2008 5090.3.A. 00028	CHADUXTT BRAC PMO WEST	RESPONSES TO COMMENTS ON THE DRAFT SUBSURFACE VAPOR INTRUSION METHODOLOGY LETTER REPORT FOR PROPOSED ACTIVE SOIL GAS SAMPLING (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001254 BRAC SER BPMOW.JL\1006 CORRESPONDENCE NONE 1	**10-10-2008** 11-13-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST CRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF THE FINAL SUBSURFACE VAPOR INTRUSION METHODOLOGY LETTER REPORT FOR PROPOSED ACTIVE SOIL GAS SAMPLING (PORTION OF THE MAILING LIST IS SENSITIVE) [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001255 CHAD.3213.0028.0015 REPORT N62473-07-D-3213 10	**10-10-2008** 11-13-2008 5090.3.A. 00028	CHADUXTT BRAC PMO WEST	FINAL SUBSURFACE VAPOR INTRUSION METHODOLOGY LETTER REPORT FOR PROPOSED ACTIVE SOIL GAS SAMPLING (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001266 BRAC SER BPMOW.MD/1031 CORRESPONDENCE NONE 3	**10-21-2008** 12-04-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT FINAL SAMPLING AND ANALYSIS PLAN (SAP) (FIELD SAMPLING PLAN (FSP)/QUALITY ASSURANCE PROJECT PLAN (QAPP)) FOR THE OUTFALL AND SUPPLEMENTAL SAMPLING INVESTIGATIONS (PORTION OF THE MAILING LIST IS SENSITIVE) [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001249 BRAC SER BPMOW.LB\1037 CORRESPONDENCE NONE 3	**10-27-2008** 11-13-2008 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY	TRANSMITTAL OF THE 1) DRAFT FINAL SITE MANAGEMENT PLAN (SMP), ATTACHMENT C TO THE FEDERAL FACILITY SITE REMEDIATION AGREEMENT (FFSRA), FISCAL YEAR 2009, AND 2) RESPONSE TO COMMENTS (PORTION OF THE MAILING LIST IS SENSITIVE) [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001267 TTEM.0055.0311.003 1 REPORT N62467-04-D-0055 151	**10-30-2008** 12-04-2008 5090.3.A. 00311	SWANSON, G. TETRA TECH EM, INC. BRAC PMO WEST	DRAFT FINAL SAMPLING AND ANALYSIS PLAN (SAP) (FIELD SAMPLING PLAN (FSP) / QUALITY ASSURANCE PROJECT PLAN (QAPP)) FOR THE OUTFALL AND SUPPLEMENTAL SAMPLING INVESTIGATIONS (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	IA K	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001302 CHAD-3213-0031-0005 REPORT N62473-07-D-3213 50	**11-01-2008** 04-10-2009 5090.3.A. CTO 0031	KELLY, D. CHADUXTT BRAC PMO WEST	FINAL SITE MANAGEMENT PLAN (SMP), ATTACHMENT C TO THE FEDERAL FACILITY SITE REMEDIATION AGREEMENT (FFSRA), FISCAL YEAR 2009 [INCLUDES RESPONSE TO COMMENTS ON THE DRAFT FINAL SMP] {CD COPY ENCLOSED}	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 BLDG 00742 IA A2 IA F1 IA F2 IA H1 IA K PARCEL XVI SITE 00004 SITE 00005 SITE 00017 UST 000505-2 UST 000655 UST 000993-4 UST A16 UST A194 UST A195 UST A225 UST A25 UST A266S UST A267 UST A296 UST A58	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001329 BRAC SER BPMOW.JL/1074 CORRESPONDENCE NONE 2	**11-07-2008** 07-16-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT ENGINEERING EVALUATION / COST ANALYSIS (EE/CA) / INTERIM REMEDIAL ACTION PLAN (RAP) [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001330 CHAD-3213-0028-0021 REPORT N62473-07-D-3213 216	**11-07-2008** 07-16-2009 5090.3.A. DO 0028	BECK, J. CHADUXTT JV BRAC PMO WEST	DRAFT ENGINEERING EVALUATION / COST ANALYSIS (EE/CA) / INTERIM REMEDIAL ACTION PLAN (RAP) [CD COPY ENCLOSED]	ADMIN RECORD SENSITIVE	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001264 TTEM.0055.FZN4.0007 REPORT N62467-04-D-0055 8	**11-24-2008** 12-04-2008 5090.3.A. FZN4	TETRA TECH EM, INC. PUBLIC INTEREST	DRAFT PROPOSED PLAN (PP) / DRAFT REMEDIAL ACTION PLAN (RAP), FORMER NORTH BUILDING WAYS AREA (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	IA A2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001301 BRAC SER BPMOW.MSB/1107 CORRESPONDENCE NONE 3	**11-28-2008** 04-10-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF THE 1) FINAL SITE MANAGEMENT PLAN (SMP), ATTACHMENT C TO THE FEDERAL FACILITY SITE REMEDIATION AGREEMENT (FFSRA), FISCAL YEAR 2009, AND 2) RESPONSE TO COMMENTS [W/OUT ENCLOSURES] {PORTION OF MAILING LIST IS SENSITIVE}	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001273 BRAC SER BPMOW.JLG/1120 CORRESPONDENCE NONE 2	**12-01-2008** 01-08-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT ENGINEERING EVALUATION/COST ANALYSIS (EECA)/INTERIM REMEDIAL ACTION PLAN (IRAP) [PORTION OF THE MAILING LIST IS SENSITIVE] {W/OUT ENCLOSURE}	ADMIN RECORD BASE INFO REPOSITORY SENSITIVE	BLDG 00742 IA C2	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001274 ECSD-3211-0004-0003 REPORT N62473-07-D-3211 496	**12-01-2008** 01-08-2009 5090.3.A. CTO 0004	KYLLO, M. TETRA TECH EC, INC. BRAC PMO WEST	DRAFT ENGINEERING EVALUATION/COST ANALYSIS (EECA)/INTERIM REMEDIAL ACTION PLAN (IRAP) [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY	BLDG 0000134 BLDG 0000290 BLDG 00654A BLDG 00670 BLDG 00674 BLDG 00674A BLDG 00676 BLDG 00678 BLDG 00680 BLDG 00692 BLDG 00738 BLDG 00742 BLDG 00742A BLDG 00796 BLDG 00814 BLDG 00826 BLDG 00874 BLDG 00916 BLDG 00931 BLDG 01332 IA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001284 WEST-1061-0000-0008 REPORT N68711-01-MDC-1061 160	**12-01-2008** 02-03-2009 5090.3.A. NONE	POPEK, E. WESTON SOLUTIONS, INC. BRAC PMO WEST	DRAFT CONCEPTUAL SITE MODEL, WESTERN MAGAZINE AREA (CD COPY ENCLOSED) [PORTION OF THE MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001315 NONE CORRESPONDENCE NONE 20	**12-05-2008** 06-29-2009 5090.3.C. NONE	BECK, J. TETRA TECH EM, INC. GRIBBLE, C. DTSC - BERKELEY, CA	EMAIL REGARDING THE OFFSHORE DATA FOR CELLS 29 TO 35 (INCLUDES DRY DOCK DATA)	SITE FILE	DRY DOCK 2 IA K	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001316 NONE CORRESPONDENCE NONE 200	**12-05-2008** 06-29-2009 5090.3.C. NONE	MCCONATHY, B. TETRA TECH EM, INC. VARIOUS AGENCIES	EMAIL REGARDING THE OFFSHORE DATA FOR CELLS 29 TO 35 (INCLUDES DRY DOCK DATA NATIVE FILES)	SITE FILE	DRY DOCK 2 IA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001332 NONE CORRESPONDENCE NONE 7	**12-08-2008** 07-16-2009 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT ENGINEERING EVALUATION / COST ANALYSIS (EE/CA) / INTERIM REMEDIAL ACTION PLAN (RAP)	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001333 NONE CORRESPONDENCE NONE 30	**12-08-2008** 07-16-2009 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT ENGINEERING EVALUATION / COST ANALYSIS (EE/CA) / INTERIM REMEDIAL ACTION PLAN (RAP) [INCLUDES HERD COMMENTS, DATED 05 DECEMBER 2008, GSU COMMENTS, DATED 08 DECEMBER 2008 AND FISH AND GAME COMMENTS, DATED 05 DECEMBER 2008)	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001339 BEO TRACKER NO. T0609560708 CORRESPONDENCE NONE 3	**12-08-2008** 07-23-2009 5090.3.A. NONE	JORGENSEN, P. CRWQCB - OAKLAND, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT ENGINEERING EVALUATION / COST ANALYSIS (EE/CA) / INTERIM REMEDIAL ACTION PLAN (RAP)	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001323 BRAC SER BPMOW.MC/1148 CORRESPONDENCE NONE 3	**12-19-2008** 07-10-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	REQUEST FOR IDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) FOR THE REMEDIAL INVESTIGATION AND FEASIBILITY STUDY AT THE DEFENSE REUTILIZATION AND MARKETING OFFICE SITE	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001317 NONE CORRESPONDENCE NONE 3	**12-29-2008** 06-29-2009 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE 1) DRAFT FINAL SAMPLING AND ANALYSIS PLAN (SAP) (FIELD SAMPLING PLAN (FSP) / QUALITY ASSURANCE PROJECT PLAN (QAPP)) FOR THE OUTFALL AND SUPPLEMENTAL SAMPLING INVESTIGATIONS, (***SEE COMMENTS)	ADMIN RECORD INFO REPOSITORY	DRY DOCK 2 IA K	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001275 NONE CORRESPONDENCE NONE 1	**01-06-2009** 01-08-2009 5090.3.A. NONE	JORGENSEN, P. CRWQCB - OAKLAND, CA GRANIRER, J. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT PROPOSED PLAN (PP) / DRAFT REMEDIAL ACTION PLAN (RAP), FORMER NORTH BUILDING WAYS AREA	ADMIN RECORD INFO REPOSITORY	IA A2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001276 BRAC SER BPMOW.JL\1170 CORRESPONDENCE NONE 2	**01-06-2009** 01-20-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT FIELD INVESTIGATION SUMMARY REPORT AND VAPOR INTRUSION RISK EVALUATION (PORTION OF THE MAILING LIST IS SENSITIVE) [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001277 CHAD.3213.0028.0009 REPORT N62473-07-D-3213 323	**01-06-2009** 01-20-2009 5090.3.A. DO 0028	BECK, J. CHADUXTT JV BRAC PMO WEST	DRAFT FIELD INVESTIGATION SUMMARY REPORT AND VAPOR INTRUSION RISK EVALUATION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001283 WEST-1061-0000-0011 REPORT N68711-01-MDC-1061 72	**01-06-2009** 02-03-2009 5090.3.B. NONE	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	QUARTERLY REPORT LANDFILL LEACHATE AND GROUNDWATER EXTRACTION SYSTEM (CD COPY ENCLOSED)	POST DECISION FILE	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001318 BRAC SER BPMOW.MB/0025 CORRESPONDENCE NONE 4	**01-21-2009** 06-29-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	RESPONSE TO THE REVIEW AND COMMENTS ON THE 1) DRAFT FINAL SAMPLING AND ANALYSIS PLAN (SAP) (FIELD SAMPLING PLAN (FSP) / QUALITY ASSURANCE PROJECT PLAN (QAPP)) FOR THE OUTFALL AND SUPPLEMENTAL SAMPLING INVESTIGATIONS, (***SEE COMMENTS)	ADMIN RECORD INFO REPOSITORY	IA K OUTFALL 22	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001324 NONE CORRESPONDENCE NONE 12	**01-26-2009** 07-10-2009 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	RESPONSE TO THE REQUEST FOR IDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) FOR THE REMEDIAL INVESTIGATION AND FEASIBILITY STUDY AT THE DEFENSE REUTILIZATION AND MARKETING OFFICE SITE (INCLUDES TABLE OF STATE ARARS)	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001287 BRAC SER BPMOW.MD/0034 CORRESPONDENCE NONE 3	**01-27-2009** 02-25-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF THE FINAL SAMPLING AND ANALYSIS PLAN (SAP) (FIELD SAMPLING PLAN (FSP) / QUALITY ASSURANCE PROJECT PLAN (QAPP)) FOR THE OUTFALL AND SUPPLEMENTAL SAMPLING INVESTIGATIONS (W/OUT ENCLOSURE) [PORTION OF THE MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001288 TTEM-0055-0311-0035 REPORT N62467-04-D-0055 191	**01-27-2009** 02-25-2009 5090.3.A. CTO 0311	SWANSON, G. TETRA TECH EM, INC. BRAC PMO WEST	FINAL SAMPLING AND ANALYSIS PLAN (SAP) (FIELD SAMPLING PLAN (FSP) / QUALITY ASSURANCE PROJECT PLAN (QAPP)) FOR THE OUTFALL AND SUPPLEMENTAL SAMPLING INVESTIGATIONS (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	IA C2 IA F1 IA F2 IA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001313 NONE CORRESPONDENCE NONE 4	**01-29-2009** 06-08-2009 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT FIELD INVESTIGATION SUMMARY REPORT AND VAPOR INTRUSION RISK EVALUATION	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001314 FILE NO. 2129.2011 (PJ) CORRESPONDENCE NONE 4	**01-30-2009** 06-08-2009 5090.3.A. NONE	JORGENSEN, P. CRWQCB - OAKLAND, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT FIELD INVESTIGATION SUMMARY REPORT AND VAPOR INTRUSION RISK EVALUATION	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001286 WEST-6010-0012-0011 REPORT N68711-01-D-6010 299	**02-01-2009** 02-24-2009 5090.3.A. CTO 0012	BAUR, P. WESTON SOLUTIONS, INC. BRAC PMO WEST	DRAFT TIME-CRITICAL REMOVAL ACTION (TCRA) COMPLETION REPORT (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	BLDG 01300 IA H1 SITE 00004 SITE 00004 SUBAREA 1 SITE 00004 SUBAREA 2 SITE 00004 SUBAREA 3A SITE 00004 SUBAREA 3B SITE 00004 SUBAREA 3C SITE 00004 SUBAREA 4	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001298 WEST-1061-0000-0013 REPORT N68711-01-MDC-1061 21	**02-01-2009** 03-09-2009 5090.3.B. NONE	WESTON SOLUTIONS, INC. BRAC PMO WEST	2008 (YEAR 1) ANNUAL MONITORING REPORT FOR THE WETLAND MITIGATION PROJECT (PORTION OF THE MAILING LIST IS SENSITIVE) [CD COPY ENCLOSED]	POST DECISION FILE	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001312 NONE CORRESPONDENCE NONE 7	**02-10-2009** 06-08-2009 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT FIELD INVESTIGATION SUMMARY REPORT AND VAPOR INTRUSION RISK EVALUATION (INCLUDES GSU COMMENTS DATED 29 JANUARY 2009 AND HERD COMMENTS DATED 09 FEBRUARY 2009)	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001361 NONE CORRESPONDENCE NONE 5	**02-11-2009** 09-17-2009 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA GEMAR, D. WESTON SOLUTIONS, INC.	REVIEW AND COMMENTS ON 1) 09 OCTOBER 2008 QUARTERLY REPORT LANDFILL LEACHATE AND GROUNDWATER EXTRACTION SYSTEM, AND 2) 06 JANUARY 2009 QUARTERLY REPORT LANDFILL LEACHATE AND GROUNDWATER EXTRACTION SYSTEM (INCLUDES GSU COMMENTS DATED 10 FEBRUARY 2009]	ADMIN RECORD INFO REPOSITORY	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001285 BRAC SER BPMOW.JL/0069 CORRESPONDENCE NONE 2	**02-12-2009** 02-24-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT TIME-CRITICAL REMOVAL ACTION (TCRA) COMPLETION REPORT (W/OUT ENCLOSURE) [PORTION OF THE MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00004	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001357 NONE CORRESPONDENCE NONE 12	**02-12-2009** 09-17-2009 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	RESPONSE TO THE REQUEST FOR THE IDENTIFICATION OF STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS)	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001311 NONE CORRESPONDENCE NONE 3	**02-23-2009** 06-08-2009 5090.3.A. NONE	BOX, C. BCDC BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT CONCEPTUAL SITE MODEL, WESTERN MAGAZINE AREA	ADMIN RECORD INFO REPOSITORY	SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001299 WEST-1061-0000-0009 REPORT N68711-01-MDC-1061 2600	**03-01-2009** 03-13-2009 5090.3.B. NONE	GEMAR, D. WESTON SOLUTIONS, INC. GRIBBLE, C. DTSC - BERKELEY, CA	RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) FACILITY LANDFILL 2008 ANNUAL GROUNDWATER MONITORING REPORT (CD COPY ENCLOSED) [PORTION OF MAILING LIST IS SENSITIVE]	POST DECISION FILE SENSITIVE	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001307 TN&A-3217-0003-0001 REPORT N62473-07-D-3217 75	**03-01-2009** 05-07-2009 5090.3.A. CTO 0003	WOLFGANG, C. OTIE-TN&A AND ECC BRAC PMO WEST	DRAFT TECHNICAL MEMORANDUM ASSESSING MUNITIONS AND EXPLOSIVES OF CONCERN (MEC) AS A CONTAMINANT OF CONCERN FOR CAUSEWAY TO BERTH 24 (CD COPY ENCLOSED) [CONTAINS SENSITIVE MAPS]	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA K	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001322 WEST-1061-0000-0014 REPORT N68711-01-MDC-1061 2000	**03-01-2009** 07-01-2009 5090.3.B. NONE	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	DRAFT MUNITIONS RESPONSE ACTION COMPLETION REPORT, WESTERN MAGAZINE AREA (CD COPY ENCLOSED) [PORTION OF MAILING LIST IS SENSITIVE]	POST DECISION FILE SENSITIVE	SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001358 NONE CORRESPONDENCE NONE 19	**03-03-2009** 09-17-2009 5090.3.A. NONE	BRAC PMO WEST VARIOUS AGENCIES	RESPONSE TO COMMENTS ON THE DRAFT FIELD INVESTIGATION SUMMARY REPORT AND VAPOR INTRUSION RISK EVALUATION	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001303 FILE NO. 2129.2011 (PJ) CORRESPONDENCE NONE 3	**03-05-2009** 04-13-2009 5090.3.A. NONE	JORGENSEN, P. CRWQCB - OAKLAND, CA BLOOM, M. BRAC PMO WEST	COMMENTS ON THE DRAFT ENGINEERING EVALUATION / COST ANALYSIS (EECA) / INTERIM REMEDIAL ACTION PLAN (IRAP)	ADMIN RECORD INFO REPOSITORY	BLDG 00742 IA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001359 NONE CORRESPONDENCE NONE 2	**03-06-2009** 09-17-2009 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE RESPONSE TO COMMENTS ON THE DRAFT FIELD INVESTIGATION SUMMARY REPORT AND VAPOR INTRUSION RISK EVALUATION	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001300 NONE CORRESPONDENCE NONE 8	**03-09-2009** 03-24-2009 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT ENGINEERING EVALUATION/COST ANALYSIS (EECA) / INTERIM REMEDIAL ACTION PLAN (IRAP)	ADMIN RECORD INFO REPOSITORY	BLDG 00742	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001304 NONE CORRESPONDENCE NONE 8	**03-09-2009** 04-13-2009 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA BLOOM, M. BRAC PMO WEST	COMMENTS ON THE DRAFT ENGINEERING EVALUATION / COST ANALYSIS (EECA) / INTERIM REMEDIAL ACTION PLAN (IRAP)	ADMIN RECORD INFO REPOSITORY	BLDG 00742 IA C2	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001319 NONE CORRESPONDENCE NONE 3	**03-11-2009** 06-29-2009 5090.3.C. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	REVIEW OF INFORMATION REGARDING OFFSHORE SEDIMENTS, AND SUPPORT OF THE EFFORTS TO MAKE THE DRY DOCS AVAILABLE FOR COMMERCIAL USES	SITE FILE	DRY DOCK 2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001306 BRAC SER BPMOW.PAM/0147 CORRESPONDENCE NONE 3	**03-16-2009** 05-07-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT TECHNICAL MEMORANDUM ASSESSING MEC AS A CONTAMINANT OF CONCERN FOR CAUSEWAY TO BERTH 24 (W/OUT ENCLOSURE) [PORTION OF MAILING LIST IS SENSITIVE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001305 NONE CORRESPONDENCE NONE 8	**03-23-2009** 04-13-2009 5090.3.A. NONE	GRIBBLE, C. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	COMMENTS ON THE DRAFT ENGINEERING EVALUATION / COST ANALYSIS (EECA) / INTERIM REMEDIAL ACTION PLAN (IRAP) [INCLUDES GSU COMMENTS DATED 18 MARCH 2009]	ADMIN RECORD INFO REPOSITORY	BLDG 00742 IA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001309 BRAC SER BPMOW.JL/0192 CORRESPONDENCE NONE 3	**04-06-2009** 05-13-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT FINAL ENGINEERING EVALUATION AND COST ANALYSIS (EECA) / INTERIM REMEDIAL ACTION PLAN (RAP) [W/OUT ENCLOSURE] {PORTION OF THE MAILING LIST IS SENSITIVE}	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001310 CHAD-3213-0028-0023 REPORT N62473-07-D-3213 418	**04-06-2009** 05-13-2009 5090.3.A. DO 0028	HUNTER, C. CHADUXTT BRAC PMO WEST	DRAFT FINAL ENGINEERING EVALUATION AND COST ANALYSIS (EECA) / INTERIM REMEDIAL ACTION PLAN (RAP) [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 BLDG 0000519 BLDG 0000519A IA A1 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001334 BRAC SER BPMOW.JL/0191 CORRESPONDENCE NONE 3	**04-06-2009** 07-16-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST GRIBBLE, C. DTSC - BERKELEY, CA	TRANSMITTAL OF THE RESPONSE TO COMMENTS ON THE DRAFT ENGINEERING EVALUATION / COST ANALYSIS (EE/CA) / INTERIM REMEDIAL ACTION PLAN (RAP) [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001335 CHAD-3213-0028-0022 CORRESPONDENCE N62473-07-D-3213 15	**04-06-2009** 07-16-2009 5090.3.A. CTO 0028	CHADUXTT JV BRAC PMO WEST	RESPONSE TO COMMENTS ON THE DRAFT ENGINEERING EVALUATION / COST ANALYSIS (EE/CA) / INTERIM REMEDIAL ACTION PLAN (RAP) [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001308 WEST-1061-0000-0015 REPORT N68711-01-MDC-1061 75	**04-08-2009** 05-07-2009 5090.3.B. NONE	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	QUARTERLY REPORT, LANDFILL LEACHATE AND GROUNDWATER EXTRACTION SYSTEM (JANUARY THROUGH MARCH 2009) [CD COPY ENCLOSED]	POST DECISION FILE	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001321 WEST-6010-0009-0002 REPORT N68711-01-D-6010 75	**05-01-2009** 06-30-2009 5090.3.A. CTO 0009	BAUR, P. WESTON SOLUTIONS, INC. BRAC PMO WEST	DRAFT ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) MUNITIONS NON-TIME-CRITICAL REMOVAL ACTION, PRODUCTION MANUFACTURING AREA AND SOUTH SHORE AREA (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00004	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001328 TN&A-3217-0003-0002 REPORT N62473-07-D-3217 49	**05-01-2009** 07-10-2009 5090.3.A. DO 0003	T N & ASSOCIATES, INC. BRAC PMO WEST	DRAFT TECHNICAL MEMORANDUM ASSESSING MUNITIONS AND EXPLOSIVES OF CONCERN (MEC) AS A CONTAMINANT OF CONCERN FOR THE PRODUCTION MANUFACTURING AREA (PMA) HOUSING AREA (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000040 BLDG A191 BLDG A25 BLDG A42 BLDG A43 BLDG A44 BLDG A45 BLDG A5 BLDG A58 BLDG A6 IA G PARCEL VII-B	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001350 NONE REPORT NONE 491	**05-01-2009** 08-10-2009 5090.3.A. NONE	MORRIS, J. LENNAR MARE ISLAND, LLC BRAC PMO WEST	DRAFT REMEDIAL INVESTIGATION / FEASIBILITY STUDY (RI/FS), MARINE CORPS FIRING RANGE [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001320 BRAC SER BPMOW.JL/0248 CORRESPONDENCE NONE 3	**05-15-2009** 06-30-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) MUNITIONS NON-TIME-CRITICAL REMOVAL ACTION, PRODUCTION MANUFACTURING AREA AND SOUTH SHORE AREA [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001351 BRAC SER BPMOW.JL/0295 CORRESPONDENCE NONE 2	**05-15-2009** 09-08-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT ACTION MEMORANDUM (AM) FOR A NON-TIME CRITICAL REMOVAL ACTION (NTCRA) [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001352 CHAD-3213-0028-0027 REPORT N62473-07-D-3213 129	**05-18-2009** 09-08-2009 5090.3.A. CTO 0028	CHADUXTT JV BRAC PMO WEST	DRAFT ACTION MEMORANDUM (AM) FOR A NON-TIME CRITICAL REMOVAL ACTION (NTCRA) [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 BLDG 0000519 BLDG 0000519A BLDG 0000567 SITE 00017 WELL 17TW02 WELL 17TW04 WELL 17WM02 WELL 17WM04 WELL 17WM05 WELL 17WM10 WELL 17WM12 WELL 17WM13 WELL 17WM15	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001327 BRAC SER BPMOW.JD/0299 CORRESPONDENCE NONE 3	**05-19-2009** 07-10-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT TECHNICAL MEMORANDUM ASSESSING MUNITIONS AND EXPLOSIVES OF CONCERN (MEC) AS A CONTAMINANT OF CONCERN FOR THE PRODUCTION MANUFACTURING AREA (PMA) HOUSING AREA (W/OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA G PARCEL VII-B	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001384 BRAC SER BPMOW.MD/0300 CORRESPONDENCE NONE 3	**05-26-2009** 12-01-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE FINAL DATA VALIDATION REPORT FOR BASELINE ECOLOGICAL RISK ASSESSMENT AND OUTFALL AND SUPPLEMENTAL SAMPLING INVESTIGATIONS (W/OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001385 TTEM-0055-0311-0038 REPORT N62467-04-D-0055 465	**05-26-2009** 12-01-2009 5090.3.A. CTO 0311	BECK, J. TETRA TECH EM, INC. BRAC PMO WEST	FINAL DATA VALIDATION REPORT FOR BASELINE ECOLOGICAL RISK ASSESSMENT AND OUTFALL AND SUPPLEMENTAL SAMPLING INVESTIGATIONS (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001349 BRAC SER BPMOW.JD/0323 CORRESPONDENCE NONE 3	**05-27-2009** 08-10-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT REMEDIAL INVESTIGATION / FEASIBILITY STUDY (RI/FS), MARINE CORPS FIRING RANGE [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001393 WEST-6010-0012-0006.A2/F REPORT NONE 56	**06-01-2009** 12-14-2009 5090.3.A. CTO 0012	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	FINAL ADDENDUM 2 TO FINAL SAMPLING AND ANALYSIS PLAN (SAP) (FIELD SAMPLING PLAN (FSP) AND QUALITY ASSURANCE PROJECT PLAN (QAPP)) FOR TIME-CRITICAL REMOVAL ACTION (TCRA) PAINT WASTE AREA AND HORSE STABLES AREA (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001341 BRAC SER BPMOW.JL/0338 CORRESPONDENCE NONE 3	**06-03-2009** 07-28-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. BRAC PMO WEST	TRANSMITTAL OF THE FINAL ENGINEERING EVALUATION AND COST ANALYSIS (EECA) / INTERIM REMEDIAL ACTION PLAN (IRAP) [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001342 CHAD-3213-0028-0025 REPORT N62473-07-D-3213 435	**06-03-2009** 07-28-2009 5090.3.A. DO 0028	HUNTER, C. CHADUXTT BRAC PMO WEST	FINAL ENGINEERING EVALUATION AND COST ANALYSIS (EECA) / INTERIM REMEDIAL ACTION PLAN (IRAP) [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001326 WEST-6010-0012-0009 REPORT N68711-01-D-6010 98	**06-04-2009** 07-10-2009 5090.3.A. CTO 0012	WESTON SOLUTIONS, INC. BRAC PMO WEST	DRAFT ACTION MEMORANDUM (AM) / INTERIM REMEDIAL ACTION PLAN (RAP) AMENDMENT TO THE TIME-CRITICAL REMOVAL ACTION (TCRA), PAINT WASTE AREA (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001325 BRAC SER BPMOW.JL/0347 CORRESPONDENCE NONE 2	**06-05-2009** 07-10-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT ACTION MEMORANDUM (AM) / INTERIM REMEDIAL ACTION PLAN (RAP) AMENDMENT TO THE TIME-CRITICAL REMOVAL ACTION (TCRA), PAINT WASTE AREA (W/OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL XVI	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001331 NONE CORRESPONDENCE NONE 1	**06-05-2009** 07-16-2009 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT PROPOSED PLAN (PP) FOR FORMER NORTH BUILDING WAYS AREA	ADMIN RECORD INFO REPOSITORY	IA A2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001411 BATL-3212-0005-0002 REPORT N62473-07-D-3212 5267	**06-05-2009** 01-26-2010 5090.3.C. CTO 0005	BATTELLE BRAC PMO WEST	DRAFT REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT FOR DEFENSE REUTILIZATION AND MARKETING OFFICE (CD COPY ENCLOSED)	SENSITIVE SITE FILE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001344 BRAC SER BPMOW.HMW/0340 CORRESPONDENCE NONE 3	**06-09-2009** 08-03-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT SITE MANAGEMENT PLAN ATTACHMENT C TO THE FEDERAL FACILITY SITE REMEDIATION AGREEMENT (FFSRA) FISCAL YEAR 2010 (W/OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL XVI SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001345 CHAD-3213-0031-0007 REPORT N62473-07-D-3213 47	**06-09-2009** 08-03-2009 5090.3.A. CTO 0031	KELLY, D. CHADUXTT BRAC PMO WEST	DRAFT SITE MANAGEMENT PLAN ATTACHMENT C TO THE FEDERAL FACILITY SITE REMEDIATION AGREEMENT (FFSRA) FISCAL YEAR 2010 (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 BLDG 00742 IA A2 IA H1 IA K PARCEL XVI SITE 00004 SITE 00005 SITE 00017 UST 000993-4 UST A16 UST A194 UST A195 UST A225 UST A25 UST A266S UST A267 UST A296 UST A58	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001346 BRAC SER BPMOW.JLG/0350 CORRESPONDENCE NONE 2	**06-11-2009** 08-04-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT CLOSURE APPROACH TECHNICAL MEMORANDUM FOR THE J-LINE SECTION (W/OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001347 CHAD-3213-0063-0002 REPORT N62473-07-D-3213 131	**06-11-2009** 08-04-2009 5090.3.A. CTO 0063	RYAN, K. CHADUXTT BRAC PMO WEST	DRAFT CLOSURE APPROACH TECHNICAL MEMORANDUM FOR THE J-LINE SECTION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 00900 OU 0000007 PARCEL V SITE 00004 SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001392 BRAC SER BPMOW.JL/0398 CORRESPONDENCE NONE 3	**06-25-2009** 12-14-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE FINAL ADDENDUM 2 TO FINAL SAMPLING AND ANALYSIS PLAN (SAP) (FIELD SAMPLING PLAN (FSP) AND QUALITY ASSURANCE PROJECT PLAN (QAPP)) FOR TIME-CRITICAL REMOVAL ACTION (TCRA) PAINT WASTE AREA AND HORSE STABLES AREA, AND (***SEE COMMENTS)	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001367 NONE CORRESPONDENCE NONE 1	**07-09-2009** 10-08-2009 5090.3.A. NONE	D'ALMEIDA, C. U.S. EPA - SAN FRANCISCO, CA BLOOM, M. BRAC PMO WEST	REVIEW AND NO COMMENTS ON THE ACTION MEMORANDUM / INTERIM REMEDIAL ACTION PLAN AMENDMENT TO THE CERCLA TIME-CRITICAL REMOVAL ACTION FOR THE PAINT WASTE AREA	ADMIN RECORD INFO REPOSITORY	PARCEL XVI	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001369 NONE CORRESPONDENCE NONE 3	**07-31-2009** 10-21-2009 5090.3.A. NONE	GEMAR, D. WESTON SOLUTIONS, INC. NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) / FACILITY LANDFILL 2009 SEMIANNUAL GROUNDWATER MONITORING REPORT (W/OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001370 WEST-1061-0000-0018 REPORT N68711-01-MDC-1061 1299	**08-01-2009** 10-21-2009 5090.3.B. NONE	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) / FACILITY LANDFILL 2009 SEMIANNUAL GROUNDWATER MONITORING REPORT (CD COPY ENCLOSED)	POST DECISION FILE SENSITIVE	SITE 00006 WELL 01W07A WELL 01W09A WELL 01W12A WELL 01W13A WELL 01W19A WELL 01W28B WELL 01W29AR WELL 01W33AR WELL 01W33CR WELL 01W34AN WELL 01W34BN WELL 01W34CN WELL 01W35A WELL 01W35B WELL 01W35C WELL 01W38AR WELL 01W38BR WELL 01W38CR WELL 01W39BR WELL 01W39CR WELL 01W40A WELL 01W40B WELL 01W40C WELL 01W41C WELL 01W47A WELL 01W47B WELL 01W47C WELL 01W48A WELL 01W48B WELL 01W48C WELL 01W49A WELL 01W49B WELL 01W49C WELL 01W50A	NAVFAC SOUTHWEST - BLDG. 1	

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					WELL 01W53A		
					WELL 01W59C		
					WELL 01W60C		
					WELL 01W61C		
					WELL 01W62C		
					WELL 01W63C		
					WELL 16W05A		
					WELL 24W01A		
					WELL 24W04		
					WELL DPW70C		
					WELL DPW71C		
					WELL DPW72C		
					WELL DPW74B		
					WELL DPW75B		
					WELL DPW-76A		
					WELL DPW76B		
					WELL DPW76C		
					WELL IR01PZ004A		
					WELL IR01PZ008A		
					WELL IR01PZ026A		
					WELL IR01PZ027B		
					WELL MW80A		
					WELL MW80B		
					WELL MW80C		
					WELL MW81A		
					WELL MW82A		
					WELL MW83A		
					WELL MW84A		
					WELL MW84C		
					WELL MW85A		
					WELL MW86A		
					WELL MW87A		

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					WELL PZ30A WELL PZ31A WELL PZ32B WELL PZ32C WELL PZ33B WELL PZ33C		
N00221 / 001372 WEST-8825-0005-0002 REPORT N62473-08-D-8825 480	**08-01-2009** 10-21-2009 5090.3.A. CTO 0005	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	FINAL PETROLEUM CORRECTIVE ACTION PLAN (PCAP) DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SITE AND VICINITY (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000455 BLDG 00661 IA B.1 IA B.2 IA H1 IA H2 PARCEL XVI SITE 00001 SITE 00002 SITE 00016	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001404 WEST-6010-0012-0006.A1/F.R1 REPORT NONE 480	**08-01-2009** 01-05-2010 5090.3.A. CTO 0012	POPEK, E. WESTON SOLUTIONS, INC. BRAC PMO WEST	FINAL WORK PLAN ADDENDUM 1 TIME-CRITICAL REMOVAL ACTION (TCRA) PAINT WASTE AREA MUNITIONS AND RADIOLOGICAL RESPONSE TO FINAL WORK PLAN TIME-CRITICAL REMOVAL ACTION (TCRA) (***SEE COMMENTS)	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001371 BRAC SER BPMOW.MGD/0503 CORRESPONDENCE NONE 3	**08-03-2009** 10-21-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST JORGENSEN, P. CRWQCB - OAKLAND, CA	TRANSMITTAL OF THE FINAL PETROLEUM CORRECTIVE ACTION PLAN (PCAP) DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SITE AND VICINITY (W/OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001368 NONE CORRESPONDENCE NONE 4	**08-06-2009** 10-08-2009 5090.3.A. NONE	NAITO, J. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT PROPOSED PLAN / DRAFT REMEDIAL ACTION PLAN, FORMER NORTH BUILDING WAYS AREA	ADMIN RECORD INFO REPOSITORY	BLDG 00575 BLDG 00593 BLDG 00641 BLDG 00643 IA A2	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001355 BRAC SER BPMOW.JML/0535 CORRESPONDENCE NONE 3	**08-07-2009** 09-11-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE FINAL ACTION MEMORANDUM (AM) AMENDMENT TO THE CERCLA TIME-CRITICAL REMOVAL ACTION (TCRA), PAINT WASTE AREA [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL XVI	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001356 WEST-6010-0012-0015 REPORT N68711-01-D-6010 100	**08-07-2009** 09-11-2009 5090.3.A. CTO 0012	WESTON SOLUTIONS, INC. BRAC PMO WEST	FINAL ACTION MEMORANDUM (AM) AMENDMENT TO THE CERCLA TIME-CRITICAL REMOVAL ACTION (TCRA), PAINT WASTE AREA [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL XVI	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001405 BRAC SER BPMOW.JML/0534 CORRESPONDENCE NONE 3	**08-10-2009** 01-05-2010 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF REPLACEMENT PAGES REVISING THE DATE OF THE FINAL WORK PLAN ADDENDUM 1 TIME-CRITICAL REMOVAL ACTION (TCRA) PAINT WASTE AREA MUNITIONS AND RADIOLOGICAL RESPONSE TO FINAL WORK PLAN TIME-CRITICAL REMOVAL ACTION (TCRA) [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	PARCEL XVI SITE 00004 SITE 00005	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001364 BRAC SER BPMOW.HMW/0563 CORRESPONDENCE NONE 3	**08-14-2009** 09-30-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT FINAL ENGINEERING EVALUATION / COST ANALYSIS (EE/CA) / INTERIM REMOVAL ACTION WORK PLAN (RAWP) [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 00742 IA C2	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001365 ECSD-3211-0004-0005 REPORT N62473-07-D-3211 539	**08-14-2009** 09-30-2009 5090.3.A. CTO 0004	HAMPARSUMIAN, H. TETRA TECH EC, INC. BRAC PMO WEST	DRAFT FINAL ENGINEERING EVALUATION / COST ANALYSIS (EE/CA) / INTERIM REMOVAL ACTION WORK PLAN (RAWP) [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000134 BLDG 0000290 BLDG 00654A BLDG 00670 BLDG 00672 BLDG 00674 BLDG 00674A BLDG 00676 BLDG 00678 BLDG 00680 BLDG 00692 BLDG 00738 BLDG 00742 BLDG 00742A BLDG 00796 BLDG 00814 BLDG 00826 BLDG 00874 BLDG 00916 BLDG 00931 BLDG 01332 IA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001353 BRAC SER BPMOW.MB/0543 CORRESPONDENCE NONE 2	**08-17-2009** 09-11-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT FINAL SITE MANAGEMENT PLAN ATTACHMENT C TO THE FEDERAL FACILITY SITE REMEDIATION AGREEMENT (FFSRA) FISCAL YEAR 2010 [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001354 CHAD-3213-0067-0001 REPORT N62473-07-D-3213 65	**08-17-2009** 09-11-2009 5090.3.A. CTO 0067	KELLY, D. CHADUXTT BRAC PMO WEST	DRAFT FINAL SITE MANAGEMENT PLAN ATTACHMENT C TO THE FEDERAL FACILITY SITE REMEDIATION AGREEMENT (FFSRA) FISCAL YEAR 2010 [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 BLDG 00742 IA A2 IA F1 IA F2 IA H1 IA K PARCEL XVI SITE 00004 SITE 00017 UST 000993-4 UST A16 UST A194 UST A225 UST A226 UST A25 UST A267 UST A296 UST A58	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001378 TTEM-0055-FZN4-0010 CORRESPONDENCE N62467-04-D-0055 9	**08-19-2009** 10-28-2009 5090.3.A. CTO FZN4	TETRA TECH EM, INC. NAVFAC - SOUTHWEST	RESPONSES TO COMMENTS ON THE DRAFT PROPOSED PLAN / DRAFT REMEDIAL ACTION PLAN, FORMER NORTH BUILDING WAYS AREA (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	IA A2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001389 GEOTRACKER NO. T0609560708, FILE NO. 2129.2011(PJ) CORRESPONDENCE NONE 2	**08-20-2009** 12-09-2009 5090.3.A. NONE	JORGENSEN, P. CRWQCB - OAKLAND, CA BLOOM, M. BRAC PMO WEST	REVIEW AND CONCURRENCE WITH THE FINAL PETROLEUM CORRECTIVE ACTION PLAN (PCAP) DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO) SITE AND VICINITY	ADMIN RECORD INFO REPOSITORY		NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001362 CHAD-3213-0028-0028 CORRESPONDENCE N62473-07-D-3213 6	**08-31-2009** 09-24-2009 5090.3.A. CTO 0028	CHADUXTT JV BRAC PMO WEST	RESPONSE TO COMMENTS ON THE DRAFT ACTION MEMORANDUM (AM) FOR A NON-TIME CRITICAL REMOVAL ACTION (NTCRA) [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001375 CHAD-3213-0028-0029 REPORT N62473-07-D-3213 143	**08-31-2009** 10-27-2009 5090.3.A. CTO 0028	CHADUXTT JV BRAC PMO WEST	FINAL ACTION MEMORANDUM FOR A NON-TIME CRITICAL REMOVAL ACTION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001373 WEST-1061-0000-0021 REPORT N68711-01-MDC-1061 21	**09-01-2009** 10-22-2009 5090.3.B. NONE	GEMAR,D. WESTON SOLUTIONS, INC. NAITO, J. DTSC - BERKELEY, CA	2009 (YEAR 2) ANNUAL MONITORING REPORT FOR THE WETLAND MITIGATION PROJECT [PORTION OF THE MAILING LIST IS SENSITIVE] {CD COPY ENCLOSED}	POST DECISION FILE SENSITIVE	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001374 BRAC SER BPMOW.JL/0611 CORRESPONDENCE NONE 2	**09-01-2009** 10-27-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE FINAL ACTION MEMORANDUM FOR A NON-TIME CRITICAL REMOVAL ACTION (W/OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000503 SITE 00017	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001363 CHAD-3213-0063-0003 CORRESPONDENCE N62473-07-D-3213 15	**09-14-2009** 09-24-2009 5090.3.A. CTO 0063	CHADUXTT JV BRAC PMO WEST	RESPONSE TO COMMENTS ON THE DRAFT CLOSURE APPROACH TECHNICAL MEMORANDUM FOR THE J-LINE SECTION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	BLDG 00900 BLDG 01300 SITE 00004 SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001376 BRAC SER BPMOW.DW/0638 CORRESPONDENCE NONE 2	**09-14-2009** 10-27-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE FINAL CLOSURE APPROACH TECHNICAL MEMORANDUM FOR THE J-LINE SECTION (W/OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001377 CHAD-3213-0063-0004 REPORT N62473-07-D-3213 135	**09-14-2009** 10-27-2009 5090.3.A. CTO 0063	RYAN, K. CHADUXTT BRAC PMO WEST	FINAL CLOSURE APPROACH TECHNICAL MEMORANDUM FOR THE J-LINE SECTION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001381 ECSD-3211-0004-0009 MINUTES N62473-07-D-3211 26	**09-24-2009** 11-12-2009 5090.3.A. CTO 0004	TETRA TECH EC, INC. PUBLIC INTEREST	24 SEPTEMBER 2009 TRANSCRIPT OF PROCEEDINGS, FORMER DEGREASING PLANT ENGINEERING EVALUATION COST ANALYSIS (EECA) / INTERIM REMOVAL ACTION WORK PLAN (RAWP) [CD COPY ENCLOSED]	ADMIN RECORD	BLDG 00742 IA C-2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001396 BRAC SER BPMOW.MB/0677 CORRESPONDENCE NONE 2	**09-24-2009** 12-18-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE FINAL SITE MANAGEMENT PLAN (SMP) [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	

UIC No. / Rec. No. Doc. Control No. Record Type Contract No. Approx. # Pages	Record Date Prc. Date SSIC No. CTO No.	Author Author Affil. Recipient Recipient Affil.	Subject	Distribution	Sites	Location SWDIV Box No(s) CD No.	FRC Accession No. FRC Warehouse FRC Box No(s)
N00221 / 001397 CHAD-3213-0067-0002 REPORT N62473-07-D-3213 58	**09-24-2009** 12-18-2009 5090.3.A. CTO 0067	KELLY, D. CHADUXTT BRAC PMO WEST	FINAL SITE MANAGEMENT PLAN (SMP) [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY	BLDG 0000503 BLDG 00742 IA A2 IA F1 IA F2 IA H1 IA K PARCEL XVI SITE 00004 SITE 00017 UST 000993-4 UST A16 UST A194 UST A225 UST A226S UST A25 UST A267 UST A296 UST A58	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001383 WEST-6010-0012-0016 REPORT N68711-01-D-6010 468	**10-01-2009** 12-01-2009 5090.3.A. CTO 0012	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	DRAFT FINAL TIME-CRITICAL REMOVAL ACTION COMPLETION REPORT (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00004 SUBAREA 01 SUBAREA 02 SUBAREA 03 SUBAREA 03A SUBAREA 03B SUBAREA 04	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001382 BRAC SER BPMOW.JD/0553 CORRESPONDENCE NONE 3	**10-02-2009** 12-01-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT FINAL TIME-CRITICAL REMOVAL ACTION COMPLETION REPORT (W/OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00004	NAVFAC SOUTHWEST - BLDG. 1	

UIC No. / Rec. No. Doc. Control No. Record Type Contract No. Approx. # Pages	Record Date Prc. Date SSIC No. CTO No.	Author Author Affil. Recipient Recipient Affil.	Subject	Distribution	Sites	Location SWDIV Box No(s) CD No.	FRC Accession No. FRC Warehouse FRC Box No(s)
N00221 / 001379 WEST-1061-0000-0022 REPORT N68711-01-MDC-1061 67	**10-05-2009** 11-05-2009 5090.3.A. NONE	GEMAR, D. WESTON SOLUTIONS, INC. NAVFAC - SOUTHWEST	QUARTERLY REPORT LANDFILL LEACHATE AND GROUNDWATER EXTRACTION SYSTEM (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY	IA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001387 WEST-1061-0000-0024 REPORT N68711-01-MDC-0024 119	**11-01-2009** 12-08-2009 5090.3.A. NONE	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	DRAFT SANITARY SEWAGE TREATMENT PLANT OUTFALL SEDIMENT REMOVAL WORK PLAN	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA I IA J	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001380 NONE CORRESPONDENCE NONE 109	**11-05-2009** 11-10-2009 5090.3.A. NONE	OUSEY, F. ENVIROTECH SERVICES COMPANY NAVFAC - SOUTHWEST	REVIEW AND COMMENTS ON THE PROPOSED, NO FURTHER ACTION PLAN AT INVESTIGATIVE AREA	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA A2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001390 CHAD-3213-0063-0011 REPORT N62473-07-D-3213 175	**11-06-2009** 12-09-2009 5090.3.A. DO 0063	CHADUXTT BRAC PMO WEST	DRAFT SITE SAFETY AND HEALTH PLAN FOR J-LINE SECTION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001391 CHAD-3213-0063-0010 REPORT N62473-07-D-3213 219	**11-06-2009** 12-09-2009 5090.3.A. DO 0063	CHADUXTT BRAC PMO WEST	DRAFT ACCIDENT PREVENTION PLAN FOR J-LINE SECTION (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	

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N00221 / 001406 BRAC SER BPMOW.DW/0068 CORRESPONDENCE NONE 2	**11-09-2009** 01-08-2010 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE FINAL ENGINEERING EVALUATION (EE) / COST ANALYSIS (CA) / INTERIM REMOVAL ACTION WORK PLAN (RAWP) FORMER DEGREASING PLANT (W/OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 00742 IA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001407 ECSD-3211-0004-0008 REPORT N62473-07-D-3211 571	**11-09-2009** 01-08-2010 5090.3.A. CTO 0004	ADEBI, H. TETRA TECH EC, INC. BRAC PMO WEST	FINAL ENGINEERING EVALUATION (EE) / COST ANALYSIS (CA) / INTERIM REMOVAL ACTION WORK PLAN (RAWP) FORMER DEGREASING PLANT (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 00742 IA C2 OUTFALL 22 OUTFALL 23 OUTFALL 25 OUTFALL 26	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001386 WESTON SERIAL LETTER 015/DG CORRESPONDENCE NONE 3	**11-11-2009** 12-08-2009 5090.3.A. NONE	GEMAR, D. WESTON SOLUTIONS, INC. VARIOUS AGENCIES	TRANSMITTAL OF THE DRAFT SANITARY SEWAGE TREATMENT PLANT OUTFALL SEDIMENT REMOVAL WORK PLAN (W/OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001388 NONE CORRESPONDENCE NONE 5	**11-24-2009** 12-08-2009 5090.3.A. NONE	NAITO, J. DTSC - BERKELEY, CA BLOOM, M. BRAC PMO WEST	REVIEW AND COMMENTS ON THE DRAFT TECHNICAL MEMORANDUM ASSESSING MUNITIONS AND EXPLOSIVES OF CONCERN (MEC) AS A CONTAMINANT OF CONCERN FOR CAUSEWAY TO BERTH 24	ADMIN RECORD INFO REPOSITORY	IA K	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001395 TN&A-3217-0003-0002 REPORT N62473-07-D-3217 67	**12-01-2009** 12-14-2009 5090.3.A. DO 0003	T N & ASSOCIATES, INC. BRAC PMO WEST	DRAFT FINAL TECHNICAL MEMORANDUM (TM) ASSESSING MUNITIONS AND EXPLOSIVES OF CONCERN (MEC) AS A CONTAMINANT OF CONCERN FOR THE PRODUCTION MANUFACTURING AREA (PMA) HOUSING AREA (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000040 BLDG A5 BLDG A6 IA F1 IA G PARCEL VII-B	NAVFAC SOUTHWEST - BLDG. 1	

UIC No. / Rec. No. Doc. Control No. Record Type Contract No. Approx. # Pages	Record Date Prc. Date SSIC No. CTO No.	Author Author Affil. Recipient Recipient Affil.	Subject	Distribution	Sites	Location SWDIV Box No(s) CD No.	FRC Accession No. FRC Warehouse FRC Box No(s)
N00221 / 001399 WEST-1061-0000-0027 REPORT N68711-01-MDC-1061 124	**12-01-2009** 12-22-2009 5090.3.B. NONE	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	FINAL SANITARY SEWAGE TREATMENT PLANT OUTFALL SEDIMENT REMOVAL WORK PLAN (CD COPY ENCLOSED)	POST DECISION FILE SENSITIVE	IA I IA J	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001394 BRAC SER BPMOW.JD/0121 CORRESPONDENCE NONE 3	**12-04-2009** 12-14-2009 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT FINAL TECHNICAL MEMORANDUM (TM) ASSESSING MUNITIONS AND EXPLOSIVES OF CONCERN (MEC) AS A CONTAMINANT OF CONCERN FOR THE PRODUCTION MANUFACTURING AREA (PMA) HOUSING AREA (W/OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	IA F1 IA G PARCEL VII-B	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001398 WESTON SERIAL LETTER 016/DG CORRESPONDENCE NONE 3	**12-15-2009** 12-22-2009 5090.3.A. NONE	GEMAR, D. WESTON SOLUTIONS, INC. NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE FINAL SANITARY SEWAGE TREATMENT PLANT OUTFALL SEDIMENT REMOVAL WORK PLAN (W/OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY SENSITIVE		NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001400 BRAC SER BPMOW.JD/0156 CORRESPONDENCE NONE 2	**12-15-2009** 01-05-2010 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT SAMPLING AND ANALYSIS PLAN (SAP) (FIELD SAMPLING PLAN (FSP) / QUALITY ASSURANCE PROJECT PLAN (QAPP)) FOR THE J-LINE SECTION EXTERIOR (W/OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001401 CHAD-3213-0063-0007 REPORT N62473-07-D-3213 135	**12-15-2009** 01-05-2010 5090.3.A. DO 0063	HOCH, K. CHADUXTT JV BRAC PMO WEST	DRAFT SAMPLING AND ANALYSIS PLAN (SAP) (FIELD SAMPLING PLAN (FSP) / QUALITY ASSURANCE PROJECT PLAN (QAPP)) FOR THE J-LINE SECTION EXTERIOR (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	SITE 00004 SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001402 BRAC SER BPMOW.BWP/0161 CORRESPONDENCE NONE 3	**12-18-2009** 01-05-2010 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT ACTION MEMORANDUM (AM) FORMER DEGREASING PLANT [W/OUT ENCLOSURE]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 00742 IA C2	NAVFAC SOUTHWEST - BLDG. 1	

UIC No. / Rec. No. Doc. Control No. Record Type Contract No. Approx. # Pages	Record Date Prc. Date SSIC No. CTO No.	Author Author Affil. Recipient Recipient Affil.	Subject	Distribution	Sites	Location SWDIV Box No(s) CD No.	FRC Accession No. FRC Warehouse FRC Box No(s)
N00221 / 001403 ECSD-3211-0004-0010 REPORT N62473-07-D-3211 700	**12-18-2009** 01-05-2010 5090.3.A. CTO 0004	TETRA TECH EC, INC. BRAC PMO WEST	DRAFT ACTION MEMORANDUM (AM) FORMER DEGREASING PLANT [CD COPY ENCLOSED]	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 00742 IA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001408 CHAD-3213-0063-0014 REPORT N62473-07-D-3213 249	**12-18-2009** 01-08-2010 5090.3.C. DO 0063	CHADUXTT JV BRAC PMO WEST	FINAL ACCIDENT PREVENTION PLAN (APP) FOR J-LINE SECTION (CD COPY ENCLOSED)	SITE FILE	SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001409 CHAD-3213-0063-0015 REPORT N62473-07-D-3213 180	**12-18-2009** 01-08-2010 5090.3.C. DO 0063	CHADUXTT JV BRAC PMO WEST	FINAL SITE SAFETY AND HEALTH PLAN (SSHP) FOR J-LINE SECTION (CD COPY ENCLOSED)	SITE FILE	SITE 00014	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001410 WEST-1061-0000-0028 REPORT N68711-01-MDC-1061 10	**01-06-2010** 01-14-2010 5090.3.B. NONE	GEMAR, D. WESTON SOLUTIONS, INC. BRAC PMO WEST	QUARTERLY REPORT, LANDFILL LEACHATE AND GROUNDWATER EXTRACTION SYSTEM (CD COPY ENCLOSED)	POST DECISION FILE	AREA H1	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001412 BRAC SER BPMOW.BWP/0160 CORRESPONDENCE NONE 3	**01-15-2010** 01-26-2010 5090.3.A. NONE	BLOOM, M. BRAC PMO WEST NAITO, J. DTSC - BERKELEY, CA	TRANSMITTAL OF THE DRAFT WORK PLAN SOIL EXCAVATION AND GROUNDWATER TREATMENT FORMER DEGREASING PLANT (W/OUT ENCLOSURE)	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000742 IA C2	NAVFAC SOUTHWEST - BLDG. 1	
N00221 / 001413 ECSD-3211-0004-0011 REPORT N62473-07-D-3211 409	**01-15-2010** 01-26-2010 5090.3.A. CTO 0004	HAMPARSUMIAN, H. TETRA TECH EC, INC. BRAC PMO WEST	DRAFT WORK PLAN SOIL EXCAVATION AND GROUNDWATER TREATMENT FORMER DEGREASING PLANT (CD COPY ENCLOSED)	ADMIN RECORD INFO REPOSITORY SENSITIVE	BLDG 0000742 IA C2	NAVFAC SOUTHWEST - BLDG. 1	

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Doc. Control No.	Prc. Date	Author							
Record Type	SSIC No.	Author Affil.						Location	FRC Accession No.
Contract No.	CTO No.	Recipient						SWDIV Box No(s)	FRC Warehouse
Approx. # Pages		Recipient Affil.		Subject		Distribution	Sites	CD No.	FRC Box No(s)

Total Estimated Record Page Count: 257,167

Total - Administrative Records: 2,202

ATTACHMENT B
TABLE OF REFERENCES

(Reference documents provided on CD only)

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
1	**Proposed Plan (PP)/Draft RAP**	Section 1.2	Proposed Plan/Draft Remedial Action Plan, Former North Building Ways, Investigation Area A2, Former Mare Island Naval Shipyard, Vallejo, California. Navy. September 2009.
2	**EPA**	Section 1.4	http://www.epa.gov/superfund/policy/remedy/rods/index.htm
3	**FNBW**	Section 2.1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Sections 2.1 and 2.2. Tetra Tech EM Inc. September 22, 2008.
4	**Historical aerial photographs**	Section 2.1	Aerial Photographs of Naval Activities at Investigation Area A2 and the Former North Building Ways Area Circa 1954 to 1957, Mare Island Naval Shipyard.
5	**Buildings and structures**	Section 2.1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Table 2-1. Tetra Tech EM Inc. September 22, 2008.
6	**Current aerial photographs**	Section 2.1	Aerial Photographs of Investigation Area A2 and the Former North Building Ways Area Circa 2009, Google Earth.
7	**Cross-sections**	Section 2.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Figure 3-1. Tetra Tech EM Inc. September 22, 2008.
8	**Hydrogeology**	Section 2.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Sections 3.2.1 and 3.2.2. Tetra Tech EM Inc. September 22, 2008.
9	**Ecology**	Section 2.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Section 3.2.4. Tetra Tech EM Inc. September 22, 2008.
10	**PAHs**	Section 2.3	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Figures 3-6 and 3-7. Tetra Tech EM Inc. September 22, 2008.
11	**Lead**	Section 2.3	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Figures 3-9 and 3-10. Tetra Tech EM Inc. September 22, 2008.
12	**TPH**	Section 2.3	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Figures 3-2 through 3-5. Tetra Tech EM Inc. September 22, 2008.
13	**TPH**	Section 2.3	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Figure 3-11. Tetra Tech EM Inc. September 22, 2008.
14	**RCRA Facility Assessment**	Table 1	Resource Conservation and Recovery Act (RCRA) Facility Assessment, Preliminary Review, Mare Island Naval Shipyard (Mare Island), Vallejo, California. Sections 4.1, 4.77, 4.80.11, and 4.81.2. A.T. Kearney, Inc. September 1987.
15	**1995 field survey**	Table 1	Preliminary Assessment Final Summary Report Ordnance Sites, Mare Island Naval Shipyard, Vallejo, California. Section 6.3. PRC Environmental Management, Inc. September 1995.
16	**Follow up sampling investigation**	Table 1	Technical Memorandum. Results of the Preliminary Assessment and Site Inspection at the Former Skeet Range and Recommendation for Closure. Pages 1 through 5 and Figures 1 through 3. Jerry Dunaway, NAVFAC SWDIV. August 24, 2001.
17	**Closure of the former skeet range**	Table 1	Letter Regarding "Mare Island Naval Shipyard, Technical Memorandum Preliminary Assessment at the Former Skeet Range." From Chip Gribble, DTSC to Jerry Dunaway, NAVFAC SWDIV. February 5, 2002.
18	**Building 589**	Table 1	General Radioactive Material Program (G-RAM), Final Radiological Site Inspection Report for the Decommissioning of Mare Island Naval Shipyard, Individual Site Characterization Summaries, Volume II, Book 9 of 34, Building 589. Radiological Engineering Division, Mare Island Naval Shipyard, Vallejo, California. April 1, 1996
			Naval Nuclear Propulsion Program (NNPP), Radiological Final Report for the Decommissioning of Mare Island Naval Shipyard, Other Permanent Facilities (Building 273 – Building A-228), Volume II, Book 6, Building 589. Radiological Engineering Division, Mare Island Naval Shipyard, Vallejo, California. April 1, 1996.

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
19	**Closure letter**	Table 1	Letter Regarding the "Naval Nuclear Propulsion Program (NNPP) Radiological Survey Plan for Decommissioning Mare Island Naval Shipyard, Volume I, dated 2/28/96, and Naval Nuclear Propulsion Program Radiological Final Report for Decommissioning Mare Island Naval Shipyard, dated 4/1/96." From Tom Huetteman, USEPA, to Robert O'Brien, Radiological Control Office, Mare Island Naval Shipyard. March 19, 1996.
			Letter Regarding the "Naval Nuclear Propulsion Program (NNPP) Radiological Survey Plan (Volume I, Books 1 and 2, and Dated 2/28/96 for Revision 2 Change 3) and Radiological Final Report (Volume II, Books 1-8, and Dated 4/1/96) for the Decommissioning of Mare Island." From Chip Gribble, DTSC, to Robert. D. O'Brien, Radiological Control Office, Mare Island Naval Shipyard. March 18, 1996.
			Letter Regarding "Mare Island Naval Shipyard – Radioactive Equipment Material Associated with Naval Nuclear Propulsion Plants; Termination of Authorization to Handle." From Commander, Naval Sea Systems Command, to Commander, Mare Island Naval Shipyard. March 12, 1996.
20	**Closure letter**	Table 1	Letter Regarding the "Completion of All Mare Island Naval Shipyard General Radioactive Material (G-RAM) Surveys." From Chip Gribble, DTSC, to Juris Sinats, Engineering Field Activity West (EFA West). October 23, 1997.
21	**Building 593**	Table 1	General Radioactive Material Program (G-RAM), Final Radiological Site Inspection Report for the Decommissioning of Mare Island Naval Shipyard, Individual Site Characterization Summaries, Volume II, Book 12 of 34, Building 593. Radiological Engineering Division, Mare Island Naval Shipyard, Vallejo, California. April 1, 1996.
22	**Building 643**	Table 1	Naval Nuclear Propulsion Program, Radiological Final Report for the Decommissioning of Mare Island Naval Shipyard, Other Permanent Facilities (Building 273 – Building A-228), Volume II, Book 6, Building 643. Radiological Engineering Division, Mare Island Naval Shipyard, Vallejo, California. April 1, 1996.
23	**DOM1 and DOM2**	Table 1	Letter Concurring with No Further Action for Sanitary Sewer Pump Stations (DOM)-1, -2, and -17. From Chip Gribble, DTSC Remedial Project Manager, to Jerry Dunaway, Navy. May 4, 2000.
			Letter Concurring with No Further Action for Sanitary Sewer Pump Stations (DOM)-1, -2, and -17. From Bonnie Arthur, EPA Remedial Project Manager, to Jerry Dunaway, Navy. May 4, 2000.
24	**Samples**	Table 1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Tables 3-1, 3-2, 3-3, 3-4; and Appendix G, Tables G-1 and G-2. Tetra Tech EM Inc. September 22, 2008.
25	**FNBW Area**	Table 1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Figure 2-3. Tetra Tech EM Inc. September 22, 2008.
26	**Concurred with Navy findings**	Table 1	Letter Regarding the "Concurrence with the Final Revision 1 of the Investigation Area A2 Former North Building Ways Area Remedial Investigation Report, dated September 22, 2008 Former Mare Island Naval Shipyard, Vallejo, CA." From Paisha Jorgensen, Water Board, to Michael Bloom, Base Realignment and Closure Program Management Office. October 6, 2008.
27	**Data gap assessment**	Table 1	Draft PCB Summary Report, Mare Island, Vallejo, California. Section 1.0. Sullivan Consulting Group and Tetra Tech EM Inc. October 2004.
28	**Summary**	Table 1	Draft PCB Summary Report, Mare Island, Vallejo, California. Appendix A, Buildings 589, 591, 593, 641, 643, 797/GRA51, 799, 825/GRA61, GRA53, GRA55, GRA63, GRA65, and Pier 55. Sullivan Consulting Group and Tetra Tech EM Inc. October 2004.
29	**Summary tables**	Table 1	Draft PCB Summary Report, Mare Island, Vallejo, California. Section 5.0 and Table 3. Sullivan Consulting Group and Tetra Tech EM Inc. October 2004.
30	**Closure plan**	Table 1	Final Abatement Work Plan for PCB Sites Sampling, Abatement, and Closure Documentation, Former Mare Island Naval Shipyard, Vallejo, California. Sections 1.2, 1.3, and 1.6. ERS-Joint Venture. May 2009.
31	**Abatement**	Table 1	Final Abatement Work Plan for PCB Sites Sampling, Abatement, and Closure Documentation, Former Mare Island Naval Shipyard, Vallejo, California. Table 3. ERS-Joint Venture. May 2009.
32	**PCB sites**	Table 1	Final Abatement Work Plan for PCB Sites Sampling, Abatement, and Closure Documentation, Former Mare Island Naval Shipyard, Vallejo, California. Table 1. ERS-Joint Venture. May 2009.

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
33	**NFA closure reports**	Table 1	Revised Final Building 589, IA A2, PCB Site Request for Closure, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 4.0. ERS JV. April 2010.
			Final Building 591, IA A2, PCB Site Request for Closure, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 4.0. SulTech. September 2010.
			Revised Final Building 641, IA A2, PCB Site Request for Closure, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 4.0. ERS JV. April 2010.
34	**PCB closure letters**	Table 1	Concurrence Letter Regarding Revised Final Closure Report for Building 589 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facility and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 18, 2010.
			Concurrence Letter Regarding Navy's Request for No Further Action for PCB Site Building 591, IA A2, Mare Island, Vallejo, California. From Mr. Mike Montgomery, Assistant Director, Federal Facility and Site Branch Cleanup, to Mr. Michael Bloom, Department of the Navy. February 8, 2010.
			Concurrence Letter Regarding Revised Final Closure Report for Building 641 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facility and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 18, 2010.
35	**Closure reports**	Table 1	Final Building 593, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. March 2010.
			Final Building 643, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. May 2010.
			Final Building 797/GRA 51, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. April 2010.
			Final Building 799, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. June 2010.
			Final Building 825/GRA 61, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. March 2010.
			Final Grounded Rocker Arm 53, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. March 2010.
			Final Grounded Rocker Arm 55, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. June 2010.
			Final Grounded Rocker Arm 63, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. March 2010.
			Final Grounded Rocker Arm 65, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. May 2010.
			Final Pier 55 – Manholes 9 and 13, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. March 2010.

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
36	**PCB closure letters**	Table 1	Concurrence Letter Regarding Final Closure Report for Building 593 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 7, 2010.
			Letter Regarding TSCA Closure of PCB Transformer 1204, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. August 17, 2010.
			Concurrence Letter Regarding Final Closure Report for Building 643 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 18, 2010.
			Concurrence Letter Regarding Final Closure Report for Building 797 and Grounded Rocker Arm 51 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 7, 2010.
			Concurrence Letter Regarding Final Closure Report for Building 799 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. August 17, 2010.
			Concurrence Letter Regarding Final Closure Report for Building 825 and Grounded Rocker Arm 61 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Mike Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 7, 2010.
			Concurrence Letter Regarding Final Closure Report for Grounded Rocker Arm 53 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 7, 2010.
			Concurrence Letter Regarding Final Closure Report for Grounded Rocker Arm 55 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. August 17, 2010.
			Concurrence Letter Regarding Final Closure Report for Grounded Rocker Arm 63 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Mike Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 7, 2010.
			Concurrence Letter Regarding Final Closure Report for Grounded Rocker Arm 65/Load Control Center PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 18, 2010.
			Concurrence Letter Regarding Final Closure Report for Pier 55 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 7, 2010.
37	**Implementation of the PCAP**	Table 1	Final Petroleum Corrective Action Plan Completion Report, Former North Building Ways within Investigation Area A2, Former Mare Island Naval Shipyard, Vallejo, California. Sections 1.0 and 1.4. TN & Associates, Inc. October 13, 2009.
38	**Confirmation sampling was performed**	Table 1	Final Petroleum Corrective Action Plan Completion Report, Former North Building Ways within Investigation Area A2, Former Mare Island Naval Shipyard, Vallejo, California. Section 3.2.2 and Figures 4 through 20. TN & Associates, Inc. October 13, 2009.
39	**Closure letter**	Table 1	Letter Regarding the "No Further Action for Total Petroleum Hydrocarbons at the Former North Building Ways Area within Investigation Area A2, Former Mare Island Naval Shipyard, Vallejo, California." From Bruce Wolfe, RWQCB, to Michael Bloom, BRAC PMO. October 29, 2009.
40	**Reuses**	Section 2.4	Mare Island Specific Plan. Sections 3.3.1, 3.4, 3.4.4, 3.5.1, 3.5.18, and 4.10.1. City of Vallejo, California. Amended June 2008.
41	**Reuse Plan map**	Section 2.4	Mare Island Final Reuse Plan. City of Vallejo, California. Figure 2-2. July 1994.
42	**Drinking water**	Section 2.4	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Section 3.2.3. Tetra Tech EM Inc. September 22, 2008.
43	**Human health CSM**	Section 2.5.1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix J, Figure J-1. Tetra Tech EM Inc. September 22, 2008.

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
44	**HHRA**	Section 2.5.1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix J, Sections 3.0 through 3.4. Tetra Tech EM Inc. September 22, 2008.
45	**Site, total, ambient, and incremental risks**	Section 2.5.1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Sections 3.5.1 to 3.5.8. Tetra Tech EM Inc. September 22, 2008.
46	**Cancer risks and noncancer hazards**	Section 2.5.1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix J, Sections 5.1 through 5.4. Tetra Tech EM Inc. September 22, 2008.
47	**COPCs**	Section 2.5.1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix J, Table J-7. Tetra Tech EM Inc. September 22, 2008.
48	**HHRA results**	Section 2.5.1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix J, Tables J-1 through J-120. Tetra Tech EM Inc. September 22, 2008.
49	**Assumptions and uncertainties**	Section 2.5.1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix J, Sections 6.0 through 6.4. Tetra Tech EM Inc. September 22, 2008.
50	**Residential screening levels**	Section 2.5.1	Tier 2 Risk Assessment Approach for Water Board Sites in the Eastern Early Transfer Parcel, Lennar Mare Island, Vallejo, California. Pages 1 and 2. CH2M Hill. April 9 2009.
51	**Onshore ERA**	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix L, Section 9.0. Tetra Tech EM Inc. September 22, 2008.
52	**Supplemental ERA**	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix M, Section M1.0. Tetra Tech EM Inc. September 22, 2008.
53	**Supplemental ERA approach**	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix M, Sections M2.0 through M2.3, and Appendix M, Tables M-1 through M-24. Tetra Tech EM Inc. September 22, 2008.
54	**Results of Steps 1 and 2**	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix M, Section M3.3. Tetra Tech EM Inc. September 22, 2008.
55	**Risk refinement step**	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix M, Section M4.0. Tetra Tech EM Inc. September 22, 2008.
56	**Dose calculations**	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix M, Attachment M1, Tables M1-1 through M1-14. Tetra Tech EM Inc. September 22, 2008.
57	**Risk to birds**	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix M, Section M4.3.4. Tetra Tech EM Inc. September 22, 2008.
58	**Risk to mammals**	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix M, Section M4.4.4. Tetra Tech EM Inc. September 22, 2008.
59	**No further BERA evaluation or action**	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix M, Section M4.5. Tetra Tech EM Inc. September 22, 2008.
60	**Fate and transport of chemicals**	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Section 3.6.3. Tetra Tech EM Inc. September 22, 2008.
61	**Offshore ERA**	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Section 3.6.2 through 3.6.2.2. Tetra Tech EM Inc. September 22, 2008.
62	**Community Relations Plan**	Section 2.6	Final Community Relations Plan, Mare Island, Vallejo, California. ES-1 and ES-2. Tetra Tech EM Inc. August 23, 2001.

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
63	**IR Program website**	Section 2.6	http://www.bracpmo.navy.mil/basepage.aspx?baseid=47&state=California&name=mare_island

Note:

[1] **Bold blue** text indicates hyperlinks available on reference CD to detailed site information contained in the publicly available Administrative Record.

For access to information contained in the Administrative Record for Mare Island, please contact:

Commanding Officer
Naval Facilities Engineering Command, Southwest
Attn: Ms. Diane Silva, Command Records Manager, Code EV33
1220 Pacific Highway (NBSD Building 3519)
San Diego, California 92132
Phone: (619) 556-1280
E-mail: diane.silva@navy.mil

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
1	Proposed Plan (PP)/Draft RAP	Section 1.2	Proposed Plan/Draft Remedial Action Plan, Former North Building Ways, Investigation Area A2, Former Mare Island Naval Shipyard, Vallejo, California. Navy. September 2009.

PROPOSED PLAN / DRAFT REMEDIAL ACTION PLAN

Former North Building Ways, Investigation Area A2

Former Mare Island Naval Shipyard, Vallejo, California

September 2009

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Your Comments Make a Difference!

Public participation is an important part of the cleanup process and may influence the final decision of the selected alternative for IA A2. There are many opportunities for public involvement. Dates to remember are shown below and on Page 7.

Dates to Remember

Public Comment Period:

September 22, 2009 until October 21, 2009

Public Meeting:

September 23, 2009 at 7:00 p.m.

Mare Island Conference Center, Vallejo, California

*A glossary of terms and definitions is provided on Page 6.

INVITATION TO COMMENT

The Department of the Navy invites you to comment on this No Further Action (NFA) Proposed Plan/Draft Remedial Action Plan (PP/Draft RAP) for the area known as Investigation Area (IA) A2 at former Mare Island Naval Shipyard in Vallejo, California (Figure 1).

Figure 1. Vicinity Map

The Navy proposes no environmental cleanup action is necessary for IA A2 under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Total petroleum hydrocarbons (TPH) and polychlorinated biphenyls (PCB) will be addressed under programs that are separate from the CERCLA program. The Navy proposes NFA for this PP/Draft RAP based on a risk management decision that concluded that no unacceptable risks to human health or the environment are remaining at the site from residual hazardous substances.

The Navy encourages you to participate by submitting written or oral comments on the PP/Draft RAP for NFA under CERCLA for IA A2. The Navy is issuing this PP/Draft RAP pursuant to Section 117(a) of CERCLA and Sections 300.430(f) (2) and (3) of the National Oil and Hazardous Substance Pollution Contingency Plan (NCP) to ensure that the public has the opportunity to comment. The Navy invites you to attend a public meeting to discuss this PP/Draft RAP scheduled on September 23, 2009, at 7:00 p.m. at the Mare Island Conference Center, in Vallejo, California. The public comment period begins on September 22, 2009, and ends on October 21, 2009.

MARE ISLAND HISTORY

Mare Island was the first naval shipyard established on the Pacific coast. It is located in the western part of the City of Vallejo and borders the eastern portion of San Pablo Bay (Figure 1). The Navy purchased Mare Island in 1853 and commenced shipbuilding operations in September 1854. The primary ship construction and maintenance area of Mare Island was established along the northeastern shore of the original island, adjacent to Mare Island Strait. During World War II, Mare Island reached peak capacity for shipbuilding, repair, overhaul, and maintenance. After the war, Mare Island was considered one of the primary installations for construction and maintenance of the Navy's Pacific fleet of submarines. However, shipyard activity decreased because of

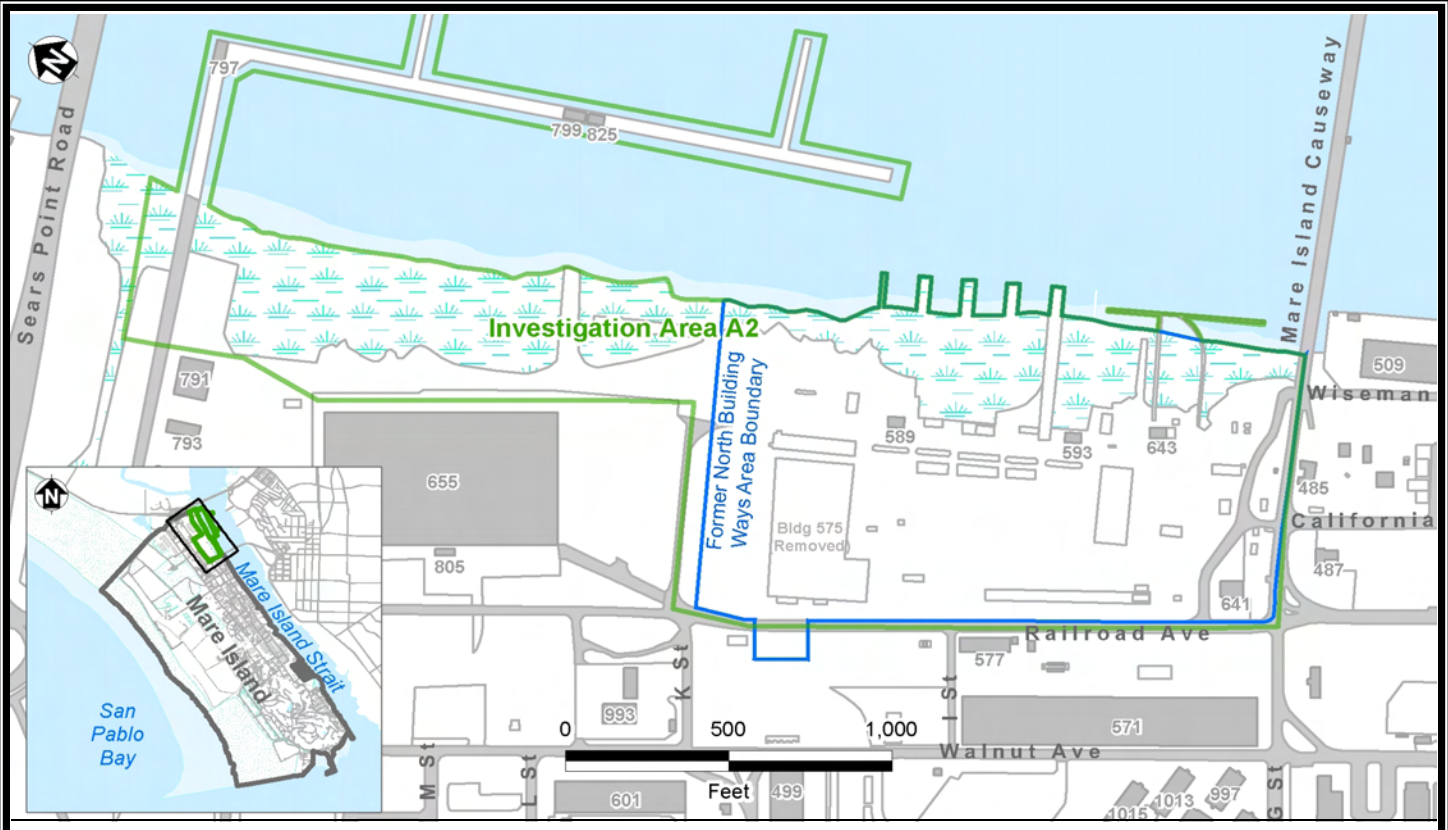


Figure 2. Former North Building Ways and Investigation Area A2 Site Features

decreasing Navy needs in a postwar environment. The Mare Island Naval Shipyard was closed on April 1, 1996, after 142 years of operation.

SITE INFORMATION

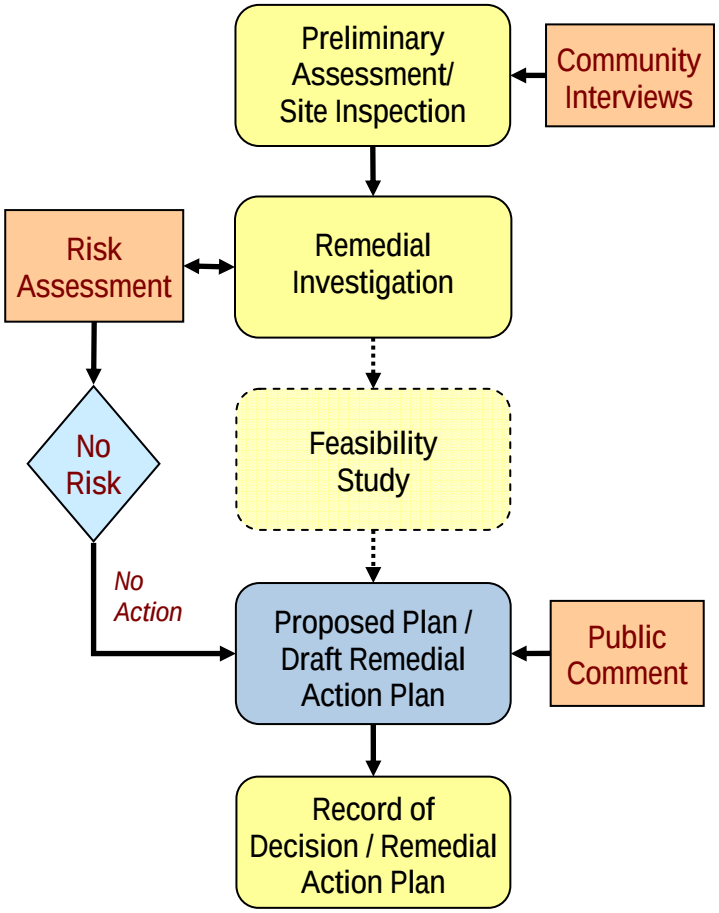
IA A2 occupies approximately 60 acres at the northeastern end of the former facility (Figure 2). The topography is relatively flat, with ground surface elevations that slope towards Mare Island Strait, which is located along the eastern edge of the IA. IA A2 contains both upland habitat and tidal wetlands that are adjacent to Mare Island Strait (Figure 2).

IA A2 includes the Former North Building Ways (FNBW) Area, which is the only CERCLA site within IA A2. The FNBW Area occupies approximately 40 acres of IA A2. The Navy used the FNBW Area to assemble destroyers and landing craft during World War II. After World War II, activities related to shipping at the site were phased out, including building use and most of the wharf. Building 575 (removed) was subsequently used during the 1950s for repair of landing crafts, and Building 593 was used to decontaminate radium dials and markers, decommission equipment containing mercury, and to store drums for low-level radioactive material. Building 589 was previously an electrical substation and used for storage. Building 641 was a fire station, and Building 643 was an electrical substation.

THE CERCLA PROCESS

This PP/Draft RAP details the Navy's recommendation for NFA and provides an overview of the environmental investigations and results for the site. Under federal cleanup regulations, it is not necessary to develop and analyze multiple cleanup options when the levels of contamination at the site are low and do not pose a significant risk to human health or the environment for its current or proposed future use. Therefore, this document provides only the proposed NFA recommendation and a summary of the data from the investigations that support the preferred action. This recommendation is based on extensive field investigations, laboratory analysis, evaluation of current and future reuses, and a thorough assessment of potential impacts to human health and ecological receptors.

CERCLA PROCESS OVERVIEW



The community has an opportunity to comment on the PP/Draft RAP, as required by CERCLA. The PP/Draft RAP describes the site history, environmental studies, past environmental cleanup, and how the recommended action will protect human health and the environment. After the public comment period has ended, the Navy will consider the public comments during preparation of a record of decision/remedial action plan (ROD/RAP), which will document the selected alternative. Additional information on IA A2 and the FNBW Area may be found in numerous documents, which are summarized in the Final Revision 1 Remedial Investigation (RI) report for the IA A2, FNBW Area, dated September 22, 2008. The RI report and other site documents are available at the information repository, located at the John F. Kennedy Library in Vallejo, California (see Page 8 for information).

Regulatory agency representatives of the Department of Toxic Substances Control (DTSC), the California Regional Water Quality Control Board, San Francisco Bay Region (Water Board), and the U.S. Environmental Protection Agency (EPA) have been coordinating and overseeing environmental cleanup at Mare Island. These agencies and the Navy make up the Base Realignment and Closure (BRAC) Cleanup Team (BCT).

PREVIOUS INVESTIGATIONS AND SUMMARY OF SITE RISK

Multiple investigations were conducted at IA A2 to investigate former on-site activities.

Remedial Investigation

During the RI, initial sampling was conducted between 1997 and 1998 to collect 165 soil, 18 groundwater, and 40 sediment samples across the FNBW Area to fully assess potential contamination and evaluate potential receptors that might be affected at the site. The initial samples indicated that TPH-diesel, TPH-motor oil, polycyclic aromatic hydrocarbons (PAH), iron, and lead were detected at concentrations above screening criteria in soil.

During subsequent step-out sampling in 2003, TPH-diesel, iron, and lead were detected at concentrations below their screening criteria. Elevated concentrations of PAHs detected at the site were determined to be representative of ambient conditions at Mare Island. TPH-motor oil that remained at the site at concentrations above the screening criterion was addressed under the Navy's separate petroleum program (see Page 4).

Risk Assessments

The Navy performed a baseline risk assessment, which evaluated the potential for chemicals of concern to cause adverse effects to human health or ecological receptors. The results of the human health risk assessment indicated carcinogenic risk was greater than the minimum threshold that may indicate a risk, but was within the risk management range EPA considers acceptable. The risk assessment identified PAHs as the main concern; however, the cancer risks associated with PAHs were determined in the RI report to represent ambient conditions at Mare Island.

View of Former North Building Ways Area IA A2

The potential risks to ecological receptors at IA A2 were evaluated for onshore and offshore areas. The onshore risk assessment presented in the IA A2 RI concluded ecological risk at IA A2 is not unacceptable because it is similar to the risk posed by concentrations of chemicals found in the natural environment. The offshore risk assessment likewise concluded that sediment posed minimal risk to benthic invertebrate and vertebrate communities. The offshore areas are being further characterized in the upcoming RI report for IA K, which includes all offshore areas along Mare Island Strait.

Radiological Investigation

The only area within IA A2 identified as having a historical radiological use was Building 593. A site investigation conducted in 1992 assessed the potential radiation contamination associated with Building 593 under the basewide radiological program. Sampling efforts included collection of air, surface wipe, waste liquid, and soil samples from in and around the building. After this effort, additional soil from outside the building and a portion of concrete from inside the building were removed. Based on the results of the investigation, DTSC, the state Department of Health, and EPA concurred with the finding of NFA for Building 593 in 1996.

Petroleum Program

The Navy finished implementing a Petroleum Corrective Action Plan (PCAP) in May 2009 to address petroleum hot spots (small contaminated areas) identified during previous site investigations conducted at IA A2 between 1997 and 2003. Field activities involved removing surface and subsurface soil that exceeded the screening criterion of 500 milligrams per kilogram for TPH-motor oil. A total of 17 areas of concern were excavated (3,378 cubic yards of petroleum-contaminated soil) to depths of approximately 5 feet below ground surface. The excavated areas were backfilled with clean fill material. TPH-motor oil was reported below the screening criterion in all confirmation soil samples. A final completion and closure report is being prepared for the site under the Navy's separate petroleum program.

PCB Program

IA A2 was also included as part of a basewide assessment of PCB contamination. The PCB assessment evaluated 13 sites, including Buildings 163, 589, 591 (demolished), 593, 641, 643, 799, and 825, the railroad tracks, and the former pier areas. Of the 13 sites, three are currently recommended for closure, and the other 10 are undergoing further verification sampling and abatement. Soil will be excavated if confirmation soil samples exceed the Toxic Substances Control Act screening criterion of 1 part per million. The results of the sampling will be documented in forthcoming site closure reports under the Navy's separate PCB corrective action program.

Although there are no records of PCB releases into Mare Island Strait from any of the eight PCB sites located on the pier, sediment adjacent to the pier is being evaluated and further characterized in the upcoming RI report for IA K.

DESCRIPTION OF THE NO ACTION ALTERNATIVE

No action will be taken to alter or change the conditions at the site. No action is appropriate for sites when no current or potential threat to human health or the environment exists. Based on the investigations and environmental considerations, IA A2 does not pose a risk to human health or the environment. As a result, the Navy proposes that NFA under CERCLA is appropriate for IA A2.

REGULATORY SUMMARY

California Health and Safety Code

This PP/Draft RAP has been prepared to meet the requirements of the California Health and Safety Code (HSC) Section 25356.1 for hazardous substance release sites. The HSC requires preparation of a RAP for sites that are not listed on the National Priorities List (NPL), such as Mare Island. Therefore, this document also serves as a Draft RAP to fulfill the public notice and comment requirements of the HSC. The final RAP will be incorporated in the ROD for this site.

California Environmental Quality Act

As required by California state law (the California Environmental Quality Act, or CEQA), DTSC has studied the risks associated with the residual chemical concentrations at the site and possible effects of the proposed cleanup on human health and the environment. The findings of the study can be reviewed in a document called a Notice of Exemption (commonly referred to as an NOE). The NOE is prepared by DTSC based on the findings of the risk assessment. The NOE documents that the proposed cleanup will have no negative impact on human health or the environment.

Nonbinding Allocation of Responsibility

HSC Section 25356.1(e) requires DTSC to prepare a preliminary nonbinding allocation of responsibility among all identifiable potentially responsible parties. HSC Section 25356.3(a) allows potentially responsible parties with an aggregate allocation in excess of 50 percent to convene an arbitration proceeding by submitting to binding arbitration before an arbitration panel. Based on available information regarding the former Mare Island Naval Shipyard, DTSC determines that the Navy is a responsible party with aggregate alleged liability in excess of 50 percent of the costs of removal and remedial action pursuant to HSC Section 25356.3. The Navy may convene arbitration if it so chooses.

View of Former North Building Ways Area IA A2 and Causeway Tower Bridge

NEXT STEPS FOR IA A2

The Navy will present the PP/Draft RAP for IA A2 at a public meeting on September 23, 2009. After the public comment period ends on October 21, 2009, the Navy and BCT will review and consider public comments concerning the recommended remedial alternative. The Navy's decision will be documented as a ROD/RAP, which will include all of the comments received, as well as the Navy's responses. A Public Notice will be published in the *Vallejo Times-Herald* announcing when the ROD/RAP is available to the public in the information repositories.

Multi-Agency Environmental Team Concurs with No Action Proposal

The multi-agency environmental team is composed of the Navy, DTSC, Water Board, and EPA and was established with the primary goals of protecting human health and the environment, to expedite the environmental cleanup, and to coordinate the environmental investigations and cleanup at the installation.

The team also serves as the primary forum for assessing cleanup priorities and progress. The team obtains a consensus on issues regarding the installation's environmental activities and makes a concerted effort to integrate current and potential future uses into the cleanup decisions.

Based on previous CERCLA investigations at IA A2, the Navy, DTSC, Water Board, and EPA concluded that further remedial investigation or cleanup is not needed. The multi-agency team further agreed that the potential risk to human health and the environment at IA A2 is within acceptable ranges and that no further evaluation or cleanup actions under CERCLA are necessary.

GLOSSARY OF TECHNICAL TERMS

BCT — Base Realignment and Closure Cleanup Team consists of representatives from the Navy, DTSC, Water Board, and EPA.

BRAC — Base Realignment and Closure is a program established by Congress under which Department of Defense installations undergo closure, environmental cleanup, and property transfer to other federal agencies or communities for reuse.

CERCLA — Comprehensive Environmental Response, Compensation, and Liability Act — A law that establishes a program to identify hazardous waste sites and procedures for cleaning up sites to protect human health and the environment. It is often known as Superfund.

DTSC — California EPA's Department of Toxic Substances Control — A State of California environmental regulatory agency that supports and provides oversight of environmental activities at Mare Island.

EPA — U.S. Environmental Protection Agency — A national environmental regulatory agency that supports and provides oversight of environmental activities at Mare Island.

Hazard Index — A calculated value used to represent a potential noncancer health effect. A hazard index value of 1 or less is considered protective of ecological or human health.

NPL — National Priorities List — The federal list of Superfund sites nationwide. NPL sites are considered high priority for cleanup under the Federal Superfund program. Mare Island is not listed on the NPL.

PAH — Polycyclic Aromatic Hydrocarbons — A group more than 100 different chemicals made up of one or more fused carbon rings; they are present in coal and petroleum products, and are formed when organic substances are burned.

PCAP — Petroleum Corrective Action Plan — A document that evaluates and implements the cleanup of petroleum-related compounds at a site.

PCB — Polychlorinated biphenyl — A family of mixtures of synthetic industrial compounds produced by chlorination of biphenyl carbon rings that were often used as coolants in electrical transformers. PCBs were banned from further production in 1977, because they can accumulate in animal tissue, and can result in adverse health effects.

PP — Proposed Plan — A document that presents the recommended cleanup action (if any), explains the recommendation, and solicits comments from the community.

RAP — Remedial Action Plan — A plan prepared for public review and comment that outlines a specific program leading to remediation of a contaminated site. The RAP is required under California Health and Safety Code Section 25356.1 for sites not listed on the NPL.

Mailing List Coupon

If you would like to be included on the mailing list to receive information about environmental restoration at Mare Island, please complete this coupon and mail to: Base Realignment and Closure PMO West, Attn: Michael Bloom, BRAC Environmental Coordinator, 1455 Frazee Road, Suite 900, San Diego, CA 92108-4310

☐ Add me to the Mare Island Installation Restoration Program mailing list.
☐ Send me information on Restoration Advisory Board membership.

Name_____ Affiliation (optional) _____

Street _____

City _____ State_____ Zip Code _____

Phone _____ E-Mail _____

RI — Remedial Investigation — A major study that must be completed before a decision can be made about how to clean up a site. The RI is designed to assess the nature and extent of contamination at a site and to estimate the risks posed by the contamination.

Risk — Likelihood or probability that a hazardous substance released to the environment will cause adverse effects on exposed human or other biological receptors. Risk calculations are designed to overestimate risk to assure that the cleanup will protect human health and the environment. Adverse health effects can be classified as carcinogenic (cancer-causing) or non-carcinogenic. Risk from cancer is expressed as a probability such as 1 in 1,000,000 (also expressed $1x10^{-6}$). This term means that one additional person in a population of 1,000,000 is more likely to get cancer over a lifetime. Noncancer risk is expressed as a Hazard Index relative to a threshold value of 1; see left.

Risk Management Range — The risk management range is considered to represent a cancer risk between 1 in 10,000 and 1 in 1,000,000 ($1x10^{-4}$ and $1x10^{-6}$).

ROD — Record of Decision — A decision document that identifies the cleanup alternative chosen for implementation at a CERCLA site. The ROD is based on information from the RI and other reports, and on public comments and community concerns.

Screening Criteria — Usually chemical concentration limits, which provide a quantitative means of identifying areas for potential remedial action.

TPH — Total Petroleum Hydrocarbons — A variety of complex mixtures of compounds, including the following three ranges: gasoline, diesel, and motor oil.

OPPORTUNITIES FOR PUBLIC INVOLVEMENT

The Navy is issuing this PP/Draft RAP as part of its public participation responsibilities under Section 117(a) of CERCLA and Sections 300.430(f) (2) and (3) of the NCP. The flowchart at the top of Page 3 illustrates the status of IA A2 in the CERCLA process. The Navy provides information on the CERCLA process at IA A2 and the FNBW Area to the public through monthly public meetings of the Restoration Advisory Board, information repositories for the site, and announcements published in the *Vallejo Times-Herald* and other local newspapers. The public is encouraged to gain a more thorough understanding of IA A2 and CERCLA activities conducted at Mare Island by visiting the information repository, reviewing the administrative record file, and attending public meetings. The administrative record is a collection of reports the BCT uses in selecting cleanup alternatives. See Page 8 for contact information on the information repository and administrative record.

Unacceptable Risk — Unacceptable risk is identified based on the results of the baseline risk assessment. The definition of unacceptable risk means a potential threat to human health or the environment.

Water Board — Regional Water Quality Control Board — A State of California environmental regulatory agency that supports and provides oversight of environmental activities at Mare Island.

YOU CAN GET INVOLVED !

There are two ways the public can participate and provide comments on this PP/Draft RAP:

1. Public Comment Period – During the public comment period from September 22, 2009, to October 21, 2009, you may use the enclosed comment form to send written comments to the Navy.
2. Public Meeting – You may also provide written or oral comments during the public meeting on September 23, 2009, that will be held at the Mare Island Conference Center in Vallejo, California. A stenographer will be at the meeting to record all public comments.

FOR MORE INFORMATION

Name/Title	Organization	Phone	Address	E-Mail
Michael Bloom BRAC Environmental Coordinator	Navy	(619) 532-0967	1455 Frazee Road Suite 900 San Diego, CA 92108	michael.s.bloom@navy.mil
Janet Naito Project Manager	DTSC	(510) 540-3833	700 Heinz Avenue Suite 200 Berkeley, CA 94710	jnaito@dtsc.ca.gov
Paisha Jorgensen Project Manager	Water Board	(510) 622-2756	1515 Clay Street Suite 1400 Oakland, CA 94612	pjorgensen@waterboards.ca.gov
Carolyn D'Almeida Project Manager	EPA	(415) 972-3150	75 Hawthorne Street 9th Floor San Francisco, CA 94105	dalmeida.carolyn@epa.gov

INFORMATION REPOSITORY

John F. Kennedy Library
505 Santa Clara Avenue
Vallejo, CA 94590
(866) 572-7587

Hours:	Mon & Wed	10 a.m. — 9 p.m.
	Tues & Thurs	10 a.m. — 6 p.m.
	Fri & Sat	10 a.m. — 5 p.m.
	Sun	1 p.m. — 5 p.m.

ADMINISTRATIVE RECORD

Naval Facilities Engineering Command, Southwest
1220 Pacific Highway, Building 128 Mailroom
Attn: Ms. Diane Silva,
Administrative Records Coordinator
Building 1, 3rd Floor
San Diego, CA 92132-5190
(619) 532-3676

Project Website: http://www.bracpmo.navy.mil/basepage.aspx?baseid=47&state=California&name=mare_island

Attn: Mr. Michael Bloom
BRAC Program Management Office West
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310

INSIDE

Your invitation to comment on the Navy's environmental cleanup at Mare Island Naval Shipyard

PROPOSED PLAN/
DRAFT REMEDIAL ACTION PLAN
Former North Building Ways Area, Investigation Area A2
Former Mare Island Naval Shipyard, Vallejo, California

The public comment period for the Proposed Plan/Draft Remedial Action Plan (PP/Draft RAP) for the Former North Buildings Ways Area at Investigation Area A2 at Mare Island, Vallejo, California is from September 22, 2009, to October 21, 2009. A public meeting to present the PP/Draft RAP will be held at the Mare Island Conference Center in Vallejo, California on September 23, 2009. You may provide your comments verbally at the public meeting where your comments will be recorded by a court reporter. Alternatively, you may provide written comments in the space provided below or on your own stationary. After completing your comments and your contact information, please fold and mail this form to the address provided on the reverse side. All written comments must be postmarked no later than October 21, 2009. You may also submit this form to a Navy representative at the public meeting. Comments are also being accepted by e-mail; please address e-mail messages to **michael.s.bloom@navy.mil**.

Name: _____

Representing: _____

Phone Number: _____

Address: _____

_____

Comments: _____

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Don't forget to attend the Public Meeting for the FNBW Area IA A2 Proposed Plan/Draft Remedial Action Plan!

Michael Bloom
BRAC Environmental Coordinator
Program Management Office West
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310

Don't forget to attend the Public Meeting for the FNBW Area IA A2 Proposed Plan/Draft Remedial Action Plan!

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
3	FNBW	Section 2.1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Sections 2.1 and 2.2. Tetra Tech EM Inc. September 22, 2008.

The following section describes the site background and the approach for the RI, including the conceptual site model, DQOs, and the sampling design.

2.1 SITE DESCRIPTION

The FNBW Area is located north of Causeway Street and south of K Street, between Railroad Avenue and Mare Island Strait in the northeastern portion of Mare Island (Figures 1-2 and 2-1). The area consists of an approximately 32-acre upland area, including existing Buildings 491, 589, 593, 641, and 643, and the tidal wetland area along Mare Island Strait (Figure 2-1 and Table 2-1). The border between IA A2 and IA K, the adjacent offshore area composed of intertidal mudflats and open water [Mare Island Strait], is the mean high water line. This adjacent offshore area will be addressed within the RI Report for IA K. Most of IA A2, including existing buildings, is currently not in use, with the exception of the occasional storage of construction material on the southern portion of the site. As specified in the Mare Island final reuse plan, the future reuse of the uplands area of the site is light industry, while the wetlands portion is designated as open space (City of Vallejo 1994).

The upland area of the site is largely unpaved, except for some asphalt-paved access roads and asphalt-paved areas of varying condition (Figure 2-2). Some areas of the site appear to be unpaved but either are covered with asphalt rubble (representing a former paved surface) or have a thin veneer of soil covering an asphalt-paved surface.

Buildings 589, 593, and 643 consist of concrete-block walls on a concrete slab foundation (Figure 2-1). Building 589 contains floor drains, and Building 593 contains concrete-plugged wall drains. A concrete vault containing soil residue is present on the southeastern side of Building 589. Also, two catch basins are located in the existing foundation of former Building 585. Building 491, a sentry house, is located at the former main entrance of Mare Island. Building 641, a former fire station, is located near the intersection of Causeway Street and Railroad Avenue, at the southernmost site boundary. Several concrete foundation slabs are present in various portions of the site (such as former Buildings 585 and 587 and structures R and Z). Numerous partially buried train and crane tracks are present across the site. A portion of the site near the northwestern site boundary is fenced.

The primary subsurface utility system at the site is the storm water system (Figure 2-1). Sanitary sewer, freshwater, and natural gas pipelines are also present along the western and southern boundaries of the site.

2.2 SITE HISTORY

Originally, the land occupied by the FNBW Area was a tidal wetland and intertidal mudflat area along Mare Island Strait or was part of the Mare Island Strait (Navy 1883). By 1938, a levee and

slough system had been constructed in the FNBW Area, and areas between levees were used to contain dredge spoils until the early 1940s (Navy 1938, 1941, 1944). Prior to construction of the FNBW Area between 1941 and 1944, additional unconsolidated material was imported to the site, and the area was paved (Navy 1941, 1944).

The site was used by the Navy during World War II to assemble destroyers and landing crafts. The parts for the ships were prefabricated and prepainted in Denver (Tetra Tech 1999b; Lemmon and Wichels 1977) and transferred to the site by rail car for assembly at the site. Some of the structures constructed to support ship assembly are as follows:

- Five building ways (timbered structures upon which ships were built and from which they slide when launched) and associated wharf
- An electrical distribution center and associated substations
- Buildings for rigger storage and service
- Several platforms
- Crane and train tracks used for transporting building materials (including preconstructed ship building materials) and a mobile power plant used to generate electricity for the site
- Other associated facilities (Figure 2-1 and Table 2-1)

At the end of World War II, shipbuilding activities at this site were phased out, and most of the major features have since been removed, including buildings and much of the wharf. Two of the remaining buildings were used for brief periods after World War II. According to a former shipyard worker, Building 575 was used in the early 1950s for repair of landing crafts (Tetra Tech 1999b). Building 593 was used for an unknown period of time beginning in 1969 to decontaminate radium dials and markers, repairing and decommissioning equipment containing mercury, and as a drum storage area for low-level radioactive material (PRC 1992). Much of the asphalt pavement has been removed, partially buried, or allowed to weather severely or deteriorate in the years since shipbuilding activities ceased.

2.3 PREVIOUS AND ONGOING INVESTIGATIONS

Seven separate studies have been or are currently being conducted at the FNBW Area:

- SI at Building 593 (PRC 1992)
- General radioactive material (GRAM) study at Building 593 (Navy 1996)

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
4	Historical aerial photographs	Section 2.1	Aerial Photographs of Naval Activities at Investigation Area A2 and the Former North Building Ways Area Circa 1954 to 1957, Mare Island Naval Shipyard.

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
5	Buildings and structures	Section 2.1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Table 2-1. Tetra Tech EM Inc. September 22, 2008.

TABLE 2-1

BUILDING STRUCTURE DESCRIPTIONS
FORMER NORTH BUILDING WAYS AREA
MARE ISLAND, CALIFORNIA

Building No./ Structure Designation	Current and Historical Use(s)	Date Constructed[1]	Date Removed[1]	Comments
Existing Buildings and Structures				
491	Sentry house	1911-1938	NA	
589	Electrical substation and storage space; currently vacant	1941-1944	NA	
593	Electrical substation and radium decontamination facility; currently vacant	1941-1944	NA	Radium decontamination began in 1969.
641	North Fire Station	1941-1944	NA	
643	Electrical distribution center; currently vacant	1941-1944	NA	
R	Concrete foundation	Unknown	NA	
Z	Concrete boat building slab	1941-1944	NA	
Former Buildings and Structures				
Building Ways 4 through 8	Ship building area	1941-1944	1951-1953	Piers are accessible by crane tracks; currently only a few wooden pilings remain.
Mobile Power Plant	Power plant	1941-1944	1960-1963	
North Timber Wharf	Unknown	1941-1944	1951-1953	
Timber Construction wharf	Unknown	1949-1951	1953-1960	
573	Electronics storage	1941-1944	1947-1948	
575	Ship fitters, electronic activities, and repair of land crafts	1941-1944	1951-1953	
581	Office and cafeteria	1941-1944	1951-1953	

TABLE 2-1 (Continued)

BUILDING STRUCTURE DESCRIPTIONS
FORMER NORTH BUILDING WAYS AREA
MARE ISLAND, CALIFORNIA

Building No./ Structure Designation	Current and Historical Use(s)	Date Constructed[1]	Date Removed[1]	Comments
Former Buildings and Structures (Continued)				
583	Tool Room No. 12	1941-1944	1951-1953	
585	Latrine	1941-1944	1951-1953	Currently this is a concrete slab.
587	Latrine	1941-1944	1953-1960	Currently this is a concrete slab.
591	Electronic substation; currently vacant	1941-1944	by 1993	Currently this is a concrete slab.
595-A	Checking station	1941-1944	1947-1951	Two small buildings; one removed 1947-1948; listed as Building 595 as of 1949.
595-B	Unknown	1941-1944	1946-1948	Two small buildings.
597	Office	1941-1944	1948-1949	Relocated off site in 1951.
659	Rigger storage and service building	1941-1944	1951-1953	
717	Paint shop and locker room	1941-1944	1946-1947	
723	Warehouse	1941-1944	1951-1953	
817	Unknown	1946-1947	1960-1963	Labeled “loctwall”
925	Shed	1951-1953	1978-1989	
A	Acetylene tank enclosure	1943-1947	1951-1953	
B	Bus shelter	1941-1944	1951-1953	
C	Acetylene platform	1941-1944	1951-1953	
D	Unknown	1947-1948	1951-1953	Unnamed 1949 Navy map indicates a slightly different location than the 1948 Navy map.

TABLE 2-1 (Continued)

BUILDING STRUCTURE DESCRIPTIONS
FORMER NORTH BUILDING WAYS AREA
MARE ISLAND, CALIFORNIA

Building No./ Structure Designation	Current and Historical Use(s)	Date Constructed[1]	Date Removed[1]	Comments
Former Buildings and Structures (Continued)				
E	Plate racks	1941-1944	1944-1946	
G	Unknown	1951-1953	1953-1960	
H	Bending roll	1941-1944	1951-1953	
I	Plate racks	1941-1944	1953-1960	
J	Platform	1941-1944	1944-1946	
K	Platform	1941-1944	1944-1946	
N	Plate racks	1941-1944	1953-1960	
n-1	Crane tracks	1941-1944	1960-1963	
n-2	Crane tracks	1941-1944	1960-1963	
O	Platform	1941-1944	1944-1946	
P	Plate racks	1941-1944	1944-1946	
Q	Contractor's shed	1941-1944	1951-1953	
S	Unknown	1941-1944	1944-1946	
T	Bus shelter	1941-1944	Unknown	
U	Saltwater pumping station	1948-1949	1944-1946	
V	Unknown	1941-1944	1944-1946	Unnamed; two small buildings.
W	Unknown	1941-1944	1947-1948	

TABLE 2-1 (Continued)

BUILDING STRUCTURE DESCRIPTIONS
FORMER NORTH BUILDING WAYS AREA
MARE ISLAND, CALIFORNIA

Building No./ Structure Designation	Current and Historical Use(s)	Date Constructed[1]	Date Removed[1]	Comments
Existing Buildings and Structures Off Site and Within Map View				
w-5	Crane tracks	1941-1944	1960-1963	
w-6	Crane tracks	1941-1944	1960-1963	
w-7	Crane tracks	1941-1944	1953-1960	
w-8	Crane tracks	1941-1944	1953-1960	
X	Unknown	1941-1944	1947-1948	
Y	Unknown	1941-1944	1947-1948	
485	Gate house	1911-1938	NA	
487	Motion picture exchange	1911-1938	NA	
571	Materials storehouse	1941-1944	NA	
577	Electrical substation and air compressor	1941-1944	NA	
857	Domestic Pump Station No. 2 (DOM-2)	1953-1960	NA	
AA	Shed	1941-1944	NA	
AB	Shed	by 1993	NA	
AE	Tanks	1941-1944	NA	
AF	Tanks	1941-1944	NA	
AI	Bleachers	Unknown	NA	Located on Morton Field
AO	Unknown	by 1993	NA	

TABLE 2-1 (Continued)

BUILDING STRUCTURE DESCRIPTIONS
FORMER NORTH BUILDING WAYS AREA
MARE ISLAND, CALIFORNIA

Building No./ Structure Designation	Current and Historical Use(s)	Date Constructed[1]	Date Removed[1]	Comments
Former Buildings and Structures Off Site and Within Map View (Continued)				
579	Electrical distribution center	1941-1944	1978-1989	Currently a concrete slab
AD	Unknown	1941-1944	1949-1951	
AG	Unknown	1953-1960	Unknown	Currently a concrete slab
AH	Bus shelter	by 1993	by 1999	Currently a concrete slab
AL	Bus shelter	1941-1944	1960-1963	

Notes:

1 Past and current building structures at the Former North Buildings Ways Area were identified using Navy historical maps and a 1993 aerial photograph (Navy 1993b). The current status of these structures was confirmed in site walks during 1998. Navy historical maps used to prepare this table included Navy 1862, 1883, 1911, 1938, 1940, 1941, 1944, 1946, 1947, 1948, 1949, 1951, 1953, 1960, 1963, 1970, 1978, 1989, and 1993a.

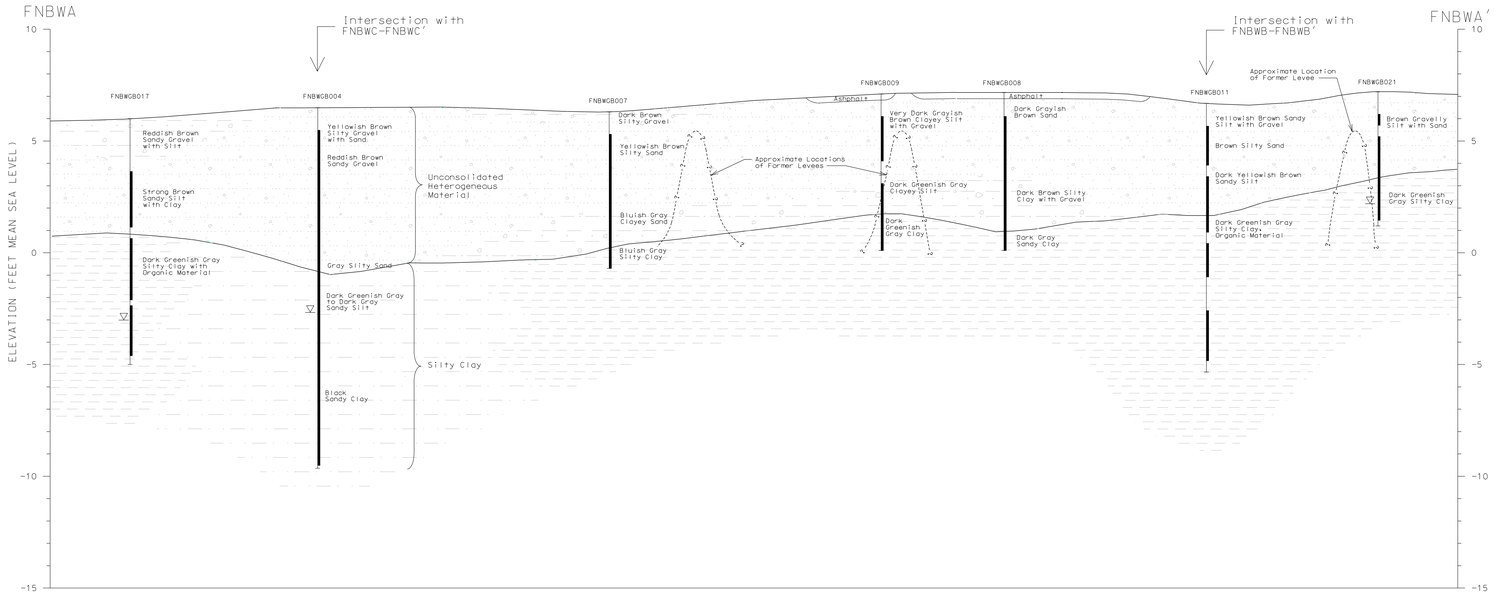
NA Not applicable

Navy U.S. Department of the Navy

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
6	Current aerial photographs	Section 2.1	Aerial Photographs of Investigation Area A2 and the Former North Building Ways Area Circa 2009, Google Earth.

H St
Railroad Ave
Walnut Ave
G St
562 ft
© USFWS
© 2009 Google
©2007 Google™
Pointer 38°06'40.60" N 122°16'46.68" W elev 6 ft
Streaming 100%
Eye alt 1958 ft

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
7	Cross-sections	Section 2.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Figure 3-1. Tetra Tech EM Inc. September 22, 2008.



LEGEND

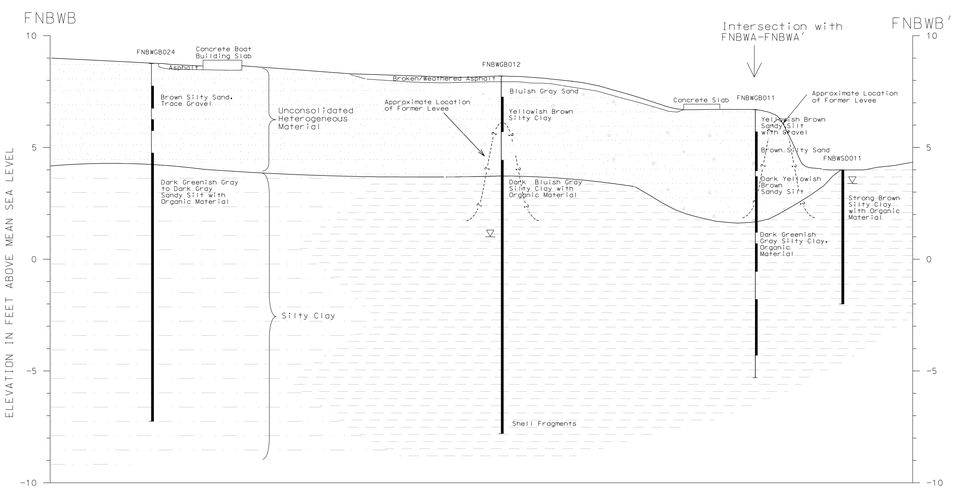
First Encountered Water or Saturated Zone

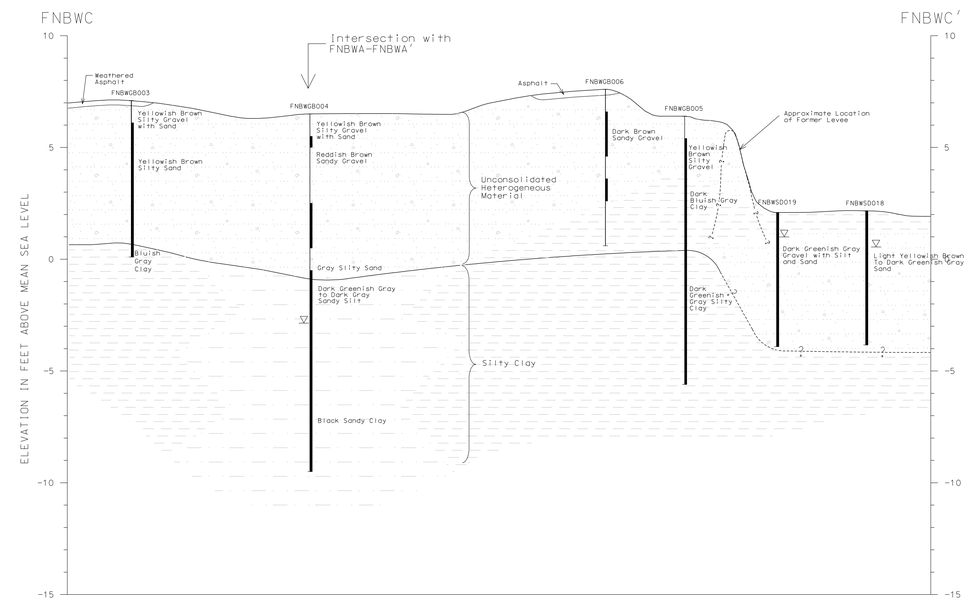
Lithologic Contact, Dashed Where Approximate and Queried Where Uncertain

Boring

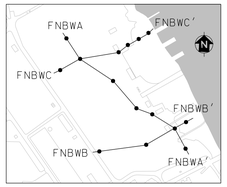
Recovered Interval

DESCRIPTION	USCS[4] SYMBOL	GRAPHIC PRESENTATION
Well-Graded Gravel, Gravel-Sand Mixtures	GW	
Poorly-Graded Gravel, Gravel-Sand Mixtures	GP	
Silty Gravel, Gravel-Sand-Silt Mixtures	GM	
Clayey Gravel, Gravel, Sand, Clay Mixtures	GC	
Silt-Sand-Gravel-Clay Mixtures	SM-GM	
Well-Graded Sand, Gravelly Sand	SW	
Poorly-Graded Sand, Gravelly Sand	SP	
Silty Sand	SM	
Clayey Sand	SC	
Silts and Very Fine Sand	ML	
Clay	CL	
Organic Silts and Organic Silty Clay	OL	
Peat	PT	
Landfill Debris	– –	
Siltstone, Bedrock, and Weathered Bedrock	– –	





LINE OF SECTION



NOTES

1. This is one interpretation based on available data. Other interpretations are possible.
2. Lithologic descriptors are abbreviated for presentation purposes.
3. Former levee locations are based on historic Navy maps (Navy 1938, 1941, and 1942).
4. USCS - Unified Soil Clasification System

40 0 40 80
SCALE IN FEET
VERTICAL EXAGGERATION = 25X

Tetra Tech EM Inc.

INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

FIGURE 3–1

GEOLOGIC CROSS SECTIONS FNBWA–FNBWA', FNBWB–FNBWB', AND FNBWC–FNBWC'

FORMER NORTH BUILDING WAYS AREA

J:\mi2\dgn\sec\geo\dpth\fnbw_abc_3.dgn

03/13/2002

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
8	Hydrogeology	Section 2.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Sections 3.2.1 and 3.2.2. Tetra Tech EM Inc. September 22, 2008.

the site, 122 grid nodes fell within the initial site boundary and the site boundary was subsequently expanded to accommodate step-out sampling requirements. Surface samples were not collected at 25 nodes within the upland area because of the presence of (1) asphalt pavement or (2) debris piles.

Comparison criteria for step-out grab groundwater samples evolved from those originally proposed in the SAP. Method detection limits were initially used as groundwater comparison criteria because no Mare Island basewide criteria were in existence at the time the SAP was developed. However, comparison criteria were subsequently revised to reflect the criteria developed for the former basewide groundwater monitoring, primarily ecological water quality criteria.

The large size of the FNBW Area and the widespread distribution of low-level contaminants and the absence of identified point sources at the site necessitated a site-specific step-out sampling approach. Therefore, sampling Rounds 2, 3, and 4 incorporated 100-foot step-outs to delineate contaminants at the site, rather than the 20-foot step-outs specified in the SAP and used at other Group II/III sites.

For similar reasons, the vertical distribution of TPH was not necessarily assessed at every location where comparison criteria were exceeded during Round 1 surface soil sampling. Rather, vertical distribution was assessed at locations exhibiting the highest concentrations, and spatial relationships were applied sitewide for characterization purposes.

Lastly, grab groundwater samples were not collected at every contingency location where contaminants other than metals were detected in soil at concentrations above comparison criteria as specified in the SAP. Rather, grab groundwater samples were collected during Rounds 3 and 4 at locations where the comparison criteria was exceeded in deeper soil. In addition, as requested by regulators, grab groundwater samples were collected across the entire site to evaluate groundwater conditions.

3.2 PHYSICAL CHARACTERIZATION

The following sections describe the geology, hydrogeology, and ecology at the FNBW Area.

3.2.1 Geology

Three cross-sections depicting the generalized geology of the FNBW Area are presented on Figure 3-1. Geologic units have been identified based on a review of these cross-sections, which were developed from lithologic data collected from direct-push borings advanced during the RI (Appendix E).

Geologic units that have been identified at the FNBW Area are (from top to bottom stratigraphically): (1) unconsolidated heterogeneous materials and (2) fine-grained, homogeneous unconsolidated materials (known as the silty clay unit). The heterogeneous unconsolidated material and the upper portion of the silty clay appear to represent the Mare Island artificial fill unit (Appendix F). The lower portion of the silty clay unit appears to represent the unconsolidated natural deposits unit known as Younger Bay Mud, as described in Appendix F.

The heterogeneous unconsolidated material consists of clay, silt, sand, gravel, and debris in varying proportions. Based on available lithologic data, the unit throughout the site consists of silty sand; localized zones of silty clay and gravel are also present on the eastern portion of the site. Debris includes wood pieces and refuse and buried wooden pilings and platforms in the tidal wetland and intertidal mudflat area. This unit generally varies in thickness from 0 to 7.5 feet, with an average thickness of approximately 5 feet, and is not present in the southeastern tidal wetland area.

Most of the heterogeneous unconsolidated materials appear to represent imported artificial fill that was placed on dredge spoils and native silty clay. Gravelly material is frequently present in the upper few feet and likely represents base materials placed prior to development for shipbuilding activities. Silty clay encountered at a few locations (such as borings FNBWGB009 and FNBWGB012) correlates well with the location of former levees at the site (Navy 1938) (Figure 3-1). Numerous partially buried wooden pilings and platforms are present throughout much of the tidal wetland and mudflat area where the former wharf area had been located.

The underlying silty clay unit consists of dark greenish gray, olive-gray, and brown silty clay, with occasional organic material (primarily rootlets). The top of this unit was generally encountered from 3.5 to 7.5 feet bgs; however, it is present at the ground surface in intertidal mudflat areas and in some areas of the tidal wetland. The bottom of the silty clay unit was not encountered in any boring; therefore, the maximum thickness observed was approximately 12 feet in boring FNBWGB024. Based on the site history, the upper few feet of this unit appear to represent artificial fill. The lower portion of the unit and portions along Mare Island Strait, which may represent a marshy depositional environment, appear to correlate to the Younger Bay Mud found in other areas of San Francisco Bay.

3.2.2 Hydrogeology

Groundwater monitoring wells were not installed within the FNBW Area; therefore, data on site hydrogeology is limited. During sampling, groundwater was generally observed in open boreholes at depths ranging from approximately 3 to 7 feet bgs. The top of the water table was generally near or just above the top of the silty clay unit. The shallow water-bearing zone, which primarily consists of silty sand (overlying silty clay unit), appears to range in saturated thickness from approximately 1 to 6 feet. As a result, this zone does not appear to represent a significant water-bearing zone. Based on the location of the Mare Island Strait to the northeast and on the site and vicinity topography, groundwater at the site should flow to the northeast. The presence

of former buried levees, however, may significantly restrict flow toward the strait. Groundwater beneath the tidal wetland and adjacent uplands is expected to be tidally influenced.

3.2.3 Beneficial Use of Groundwater

The potability of the shallow groundwater at the FNBW Area was assessed using EPA's groundwater classification guidelines. Under EPA guidelines, groundwater with a total dissolved solids (TDS) content of up to 10,000 milligrams per liter (mg/L) and a groundwater production rate (or well yield) of 150 gallons per day (gpd) may be considered as a potential source of drinking water. State criteria for a potential drinking water sources are: TDS content of up to 3,000 mg/L and well yield of 200 gpd.

Using EPA's classification guidelines, the groundwater at the FNBW Area is not considered potable for the following reasons:

- The calculated yield for a theoretical groundwater production well screened in the shallow water-bearing zone at the site is 108 gpd, which is below the EPA criterion of 150 gpd. This expected well yield was calculated based on hydraulic conductivity estimates from measurements made at the nearby IR17 and Building 503 Area, the saturated thickness of the shallow water-bearing zone, and other site-specific stratigraphic data.

- Groundwater at the site is expected to have site-specific TDS values exceeding 10,000 mg/L because the site is adjacent to Mare Island Strait, and was originally reclaimed from the strait. Although no wells were installed at FNBW Area, TDS values in groundwater samples collected from shallow water-bearing zone wells at a nearby site located further inland, IR17 and Building 503 Area, are greater than 10,000 mg/L in half of the wells in that area. In addition, TDS values in groundwater samples collected from background wells (BGW01 and BGW02) adjacent to and inland from the site are also near or greater than 10,000 mg/L; these wells are screened at 20 feet bgs.

3.2.4 Ecology

Three habitats exist at the FNBW Area include upland, tidal wetland, and offshore (intertidal mudflat) areas; this section briefly summarizes these habitats. Appendix F provides a more detailed discussion of ecology at Mare Island.

The upland habitat consists of a broad, relatively flat area that is largely asphalt paved, highly compacted from past, sustained heavy traffic, or covered by buildings. Much of the site is littered with construction debris such as concrete. As a result, this habitat mostly supports ruderal (opportunistic) vegetation, including some grass and shrub species, with only a few stands of trees. Populations of resident small mammals are present, including rodents and

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
9	Ecology	Section 2.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Section 3.2.4. Tetra Tech EM Inc. September 22, 2008.

3.2.3 Beneficial Use of Groundwater

The potability of the shallow groundwater at the FNBW Area was assessed using EPA's groundwater classification guidelines. Under EPA guidelines, groundwater with a total dissolved solids (TDS) content of up to 10,000 milligrams per liter (mg/L) and a groundwater production rate (or well yield) of 150 gallons per day (gpd) may be considered as a potential source of drinking water. State criteria for a potential drinking water sources are: TDS content of up to 3,000 mg/L and well yield of 200 gpd.

Using EPA's classification guidelines, the groundwater at the FNBW Area is not considered potable for the following reasons:

- The calculated yield for a theoretical groundwater production well screened in the shallow water-bearing zone at the site is 108 gpd, which is below the EPA criterion of 150 gpd. This expected well yield was calculated based on hydraulic conductivity estimates from measurements made at the nearby IR17 and Building 503 Area, the saturated thickness of the shallow water-bearing zone, and other site-specific stratigraphic data.

- Groundwater at the site is expected to have site-specific TDS values exceeding 10,000 mg/L because the site is adjacent to Mare Island Strait, and was originally reclaimed from the strait. Although no wells were installed at FNBW Area, TDS values in groundwater samples collected from shallow water-bearing zone wells at a nearby site located further inland, IR17 and Building 503 Area, are greater than 10,000 mg/L in half of the wells in that area. In addition, TDS values in groundwater samples collected from background wells (BGW01 and BGW02) adjacent to and inland from the site are also near or greater than 10,000 mg/L; these wells are screened at 20 feet bgs.

3.2.4 Ecology

Three habitats exist at the FNBW Area include upland, tidal wetland, and offshore (intertidal mudflat) areas; this section briefly summarizes these habitats. Appendix F provides a more detailed discussion of ecology at Mare Island.

The upland habitat consists of a broad, relatively flat area that is largely asphalt paved, highly compacted from past, sustained heavy traffic, or covered by buildings. Much of the site is littered with construction debris such as concrete. As a result, this habitat mostly supports ruderal (opportunistic) vegetation, including some grass and shrub species, with only a few stands of trees. Populations of resident small mammals are present, including rodents and

jackrabbits. The habitat is only occasionally used by prey species for foraging. Populations of invertebrates, amphibians, reptiles, and birds are also likely to be present.

The tidal wetland habitat consists of a low-lying, relatively flat area between the uplands and Mare Island Strait that is influenced by tidal action. This habitat is also called a coastal brackish marsh because it represents a relatively narrow band where fresh water from the Napa River mixes with tidal saltwater from Carquinez Strait. This habitat, which is generally between 150 and 400 feet wide, is dominated with vegetation like sedge and pickleweed. As a result, this viable habitat contains various species of invertebrates (including snails, mussels, and insects), birds, small mammals, amphibians, reptiles, and, at high tide, fish.

Offshore areas include the intertidal mudflat and open water areas. The intertidal mudflat is a narrow band located between the tidal wetland and Mare Island Strait; it is exposed only during low tide and supports very little vegetation. However, it is a viable habitat for various species of invertebrates. The open-water habitat at Mare Island consists primarily of pelagic (ocean surface) and benthic (ocean bottom) environments. Vegetation is largely composed of algae. Invertebrates present in the offshore habitat include shrimp, snails, sea anemones, clams, and worms. Numerous species of fish and birds traverse the offshore habitat along the FNBW Area. Occasional aquatic mammals in the vicinity include the harbor seal, California sea lion, and river otter.

3.3 CHEMICAL CHARACTERIZATION

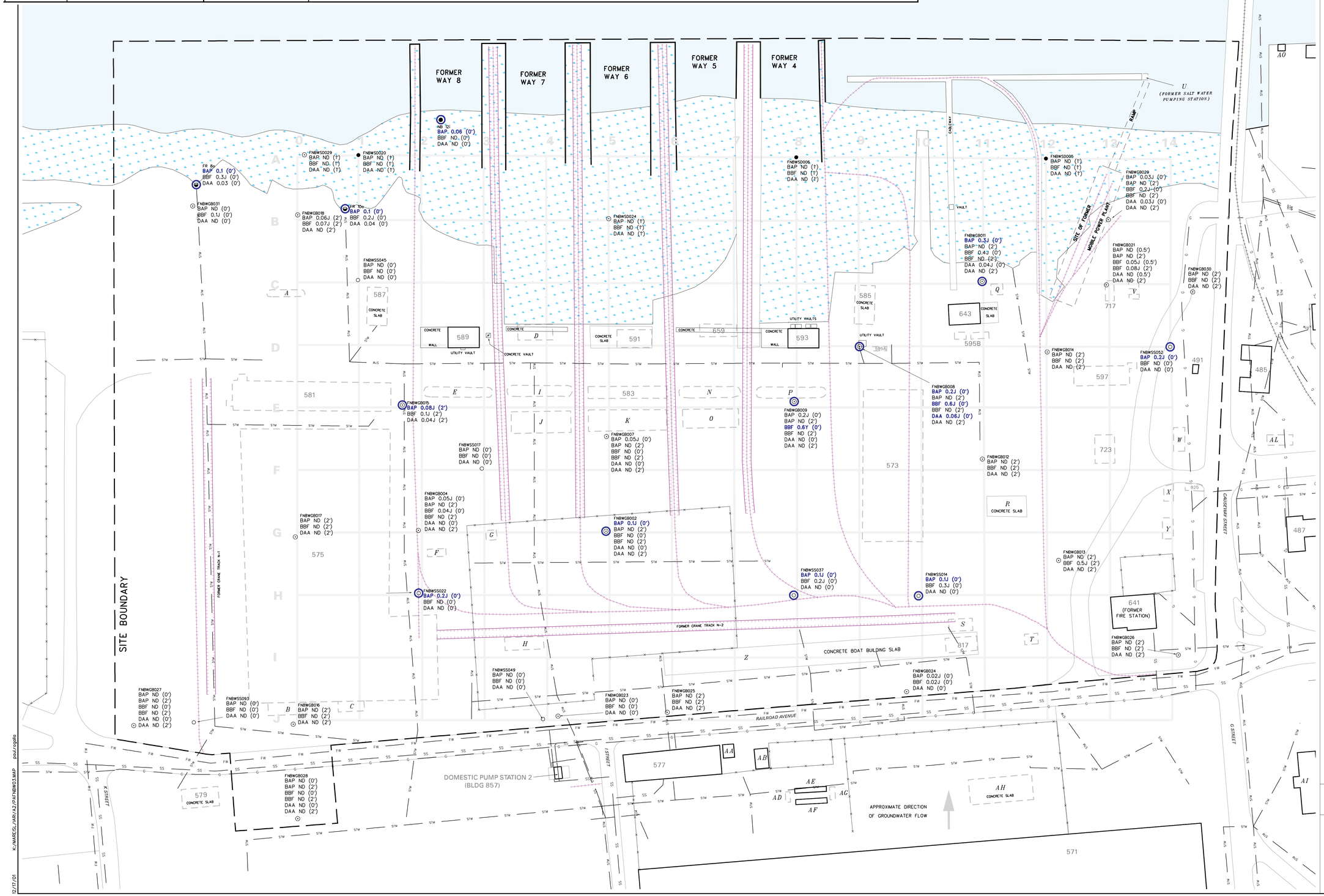
This section integrates results of soil, residue, concrete, sediment, and groundwater analyses from sampling conducted during the RI and past sampling conducted as part of the PCB basewide study and the offshore ERA at the FNBW Area. Data collection activities were conducted in accordance with the DQO process presented in Table 2-2 and Section 2.4.2.

3.3.1 Results of Soil Sample Analyses

Complete analytical results for soil samples collected from the upland area within the boundary of the site during the RI and the PCB basewide study are presented in Appendix G. A statistical summary of the analytical data set is provided in Table 3-2.

For preliminary assessment, soil concentration data at the FNBW Area were evaluated against the comparison criteria discussed in Appendix A. As detailed in Appendix A, several comparison criteria were used for RI characterization, including the 1998 soil preliminary remediation goals (PRG) for residential sites. These PRGs were in effect when the draft version of this RI was prepared; although updated PRGs exist, the comparison criteria have not been updated in the revised version of this RI in order to avoid repeatedly re-evaluating the same data. In addition, the potential for human health effects from exposure to lead was evaluated using the DTSC model that was available when the draft version of this report was prepared. The calculated comparison criterion for lead was 242 mg/kg. Although an updated version of the model (LeadSpread7) (DTSC 1999) is available, the previous lead value of 242 mg/kg was used

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
10	PAHs	Section 2.3	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Figures 3-6 and 3-7. Tetra Tech EM Inc. September 22, 2008.



LEGEND

○	SURFACE SOIL SAMPLE LOCATION
●	SEDIMENT SAMPLE LOCATION
⊙	BORING LOCATION
FNBWGB009	SAMPLE POINT IDENTIFICATION
BAP 0.2J (0')	PAH ABBREVIATION AND CONCENTRATION IN MG/KG (DEPTH IN FEET BGS)
○	PAH CONCENTRATION IN ONE OR MORE SOIL OR SEDIMENT SAMPLES EXCEED COMPARISON CRITERIA PRESENTED BELOW:

PAH ABBREVIATION USED ON FIGURE – PAH FULL NAME – COMPARISON CRITERION 1 (1998 PRG) – COMPARISON CRITERION 2 (95TH AMBIENT VALUE)

BAP – BENZO(A)PYRENE – 0.056 MG/KG – 0.87 MG/KG
BBF – BENZO(B)FLUORANTHENE – 0.56 MG/KG – 0.62 MG/KG
DAA – DIBENZ(A,H)ANTHRACENE – 0.056 MG/KG – 0.59 MG/KG
NOTE: NO RESULTS EXCEED THE 95TH AMBIENT VALUES.

PAH	POLYNUCLEAR AROMATIC HYDROCARBON
BGS	BELOW GROUND SURFACE
J	ESTIMATED VALUE
MG/KG	MILLIGRAM PER KILOGRAM
ND	NOT DETECTED
STW	STORM WATER PIPELINE
SS	SANITARY SEWER
FW	FRESH WATER PIPELINE
G	GAS LINE
	RAILROAD TRACKS
	FORMER RAILROAD TRACKS
	FORMER CRANE TRACKS
	FENCE
	CORRUGATED METAL OR CONCRETE RETAINING WALL
	TIDAL WETLAND
643	EXISTING BUILDING AND BUILDING NUMBER
Q	FORMER BUILDING OR STRUCTURE AND BUILDING NUMBER OR LETTER

NOTE: THE GRID SYSTEM IS SHOWN IN GRAY TO FACILITATE THE LOCATION OF SAMPLE POINTS. GRID LOCATIONS FOR ALL SAMPLE POINTS WITHIN THE SITE BOUNDARY ARE LISTED ON TABLE 2-4. MANY STEP-OUT SAMPLE POINTS WERE NOT COLLECTED AT GRID NODES, SO THE SAMPLE POINT COORDINATE FOR MANY STEP-OUT SAMPLE POINTS REPRESENTS THE CLOSEST NODE ON THE GRID SYSTEM.

35 0 35 70
SCALE IN FEET

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INVESTIGATION AREA A2 REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

FIGURE 3-6
PAH CONCENTRATIONS EXCEEDING COMPARISON CRITERIA IN SOIL AND SEDIMENT
0 TO 3 FEET BGS
FORMER NORTH BUILDING WAYS AREA

K:/MARE ISL/ARR/A2/PAT/NBW33.MAP paul.cogello 12/17/01

LEGEND

⊙	BORING LOCATION
FNBWGB021	SAMPLE POINT IDENTIFICATION
BAP 0.2J (4')	PAH ABBREVIATION AND CONCENTRATION IN MG/KG (DEPTH IN FEET BGS)
◎	PAH CONCENTRATION IN ONE OR MORE SOIL OR SEDIMENT SAMPLES EXCEED COMPARISON CRITERIA PRESENTED BELOW:

PAH ABBREVIATION USED ON FIGURE – PAH FULL NAME – COMPARISON CRITERION 1 (1998 PRG) – COMPARISON CRITERION 2 (95TH AMBIENT VALUE)

BAP – BENZO(A)PYRENE – 0.056 MG/KG – 0.87 MG/KG
BBF – BENZO(B)FLUORANTHENE – 0.56 MG/KG – 0.62 MG/KG
DAA – DIBENZ(A,H)ANTHRACENE – 0.056 MG/KG – 0.59 MG/KG

NOTE: NO RESULTS EXCEED THE 95TH AMBIENT VALUES.

PAH	POLYNUCLEAR AROMATIC HYDROCARBON
BGS	BELOW GROUND SURFACE
J	ESTIMATED VALUE
MG/KG	MILLIGRAM PER KILOGRAM
ND	NOT DETECTED
STW	STORM WATER PIPELINE
SS	SANITARY SEWER
FW	FRESH WATER PIPELINE
G	GAS LINE
	RAILROAD TRACKS
	FORMER RAILROAD TRACKS
	FORMER CRANE TRACKS
	FENCE
	CORRUGATED METAL OR CONCRETE RETAINING WALL
	TIDAL WETLAND
643	EXISTING BUILDING AND BUILDING NUMBER
Q	FORMER BUILDING OR STRUCTURE AND BUILDING NUMBER OR LETTER

NOTE: THE GRID SYSTEM IS SHOWN IN GRAY TO FACILITATE THE LOCATION OF SAMPLE POINTS. GRID LOCATIONS FOR ALL SAMPLE POINTS WITHIN THE SITE BOUNDARY ARE LISTED ON TABLE 2-4. MANY STEP-OUT SAMPLE POINTS WERE NOT COLLECTED AT GRID NODES, SO THE SAMPLE POINT COORDINATE FOR MANY STEP-OUT SAMPLE POINTS REPRESENTS THE CLOSEST NODE ON THE GRID SYSTEM.

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SCALE IN FEET

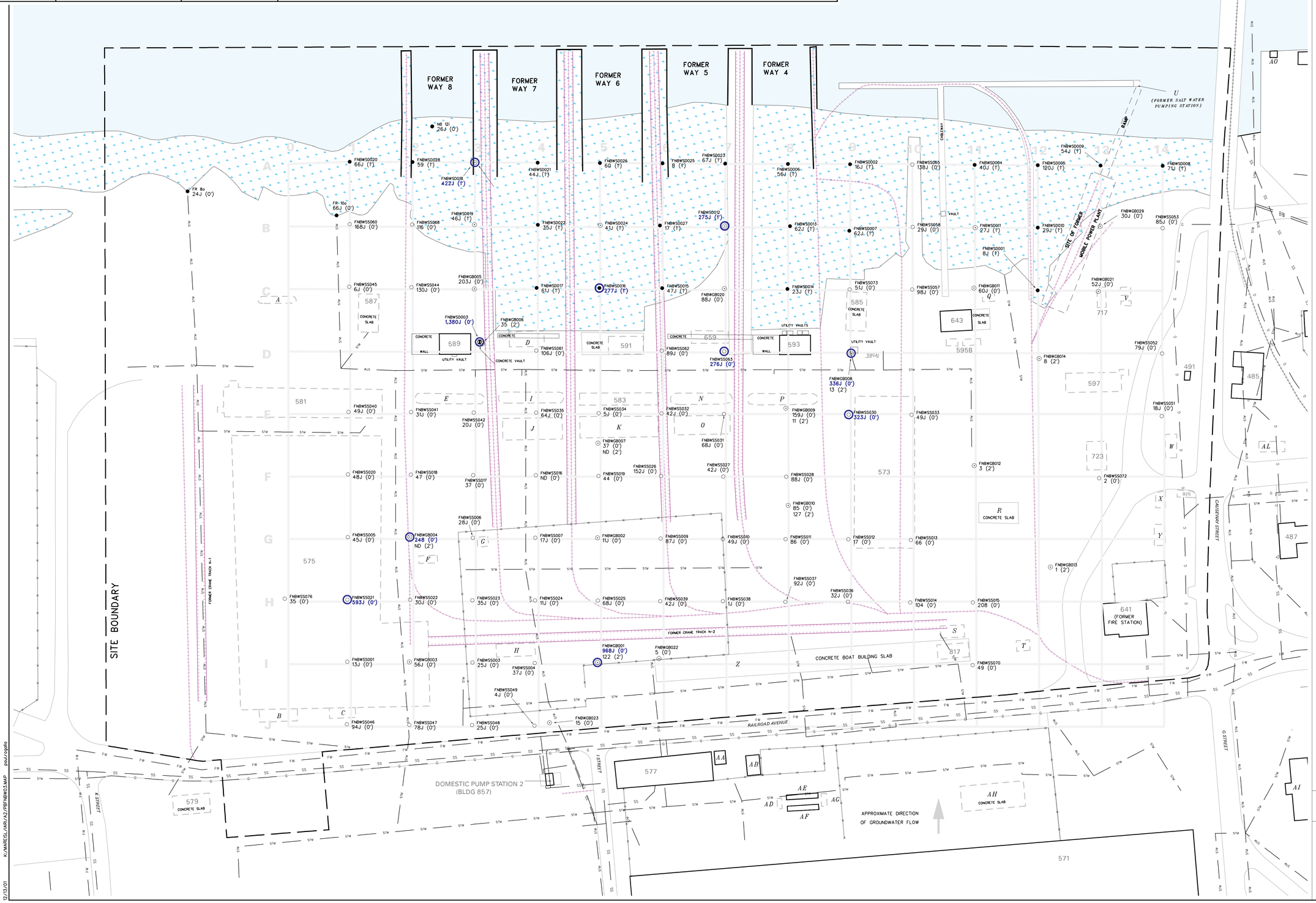
Tetra Tech EM Inc.

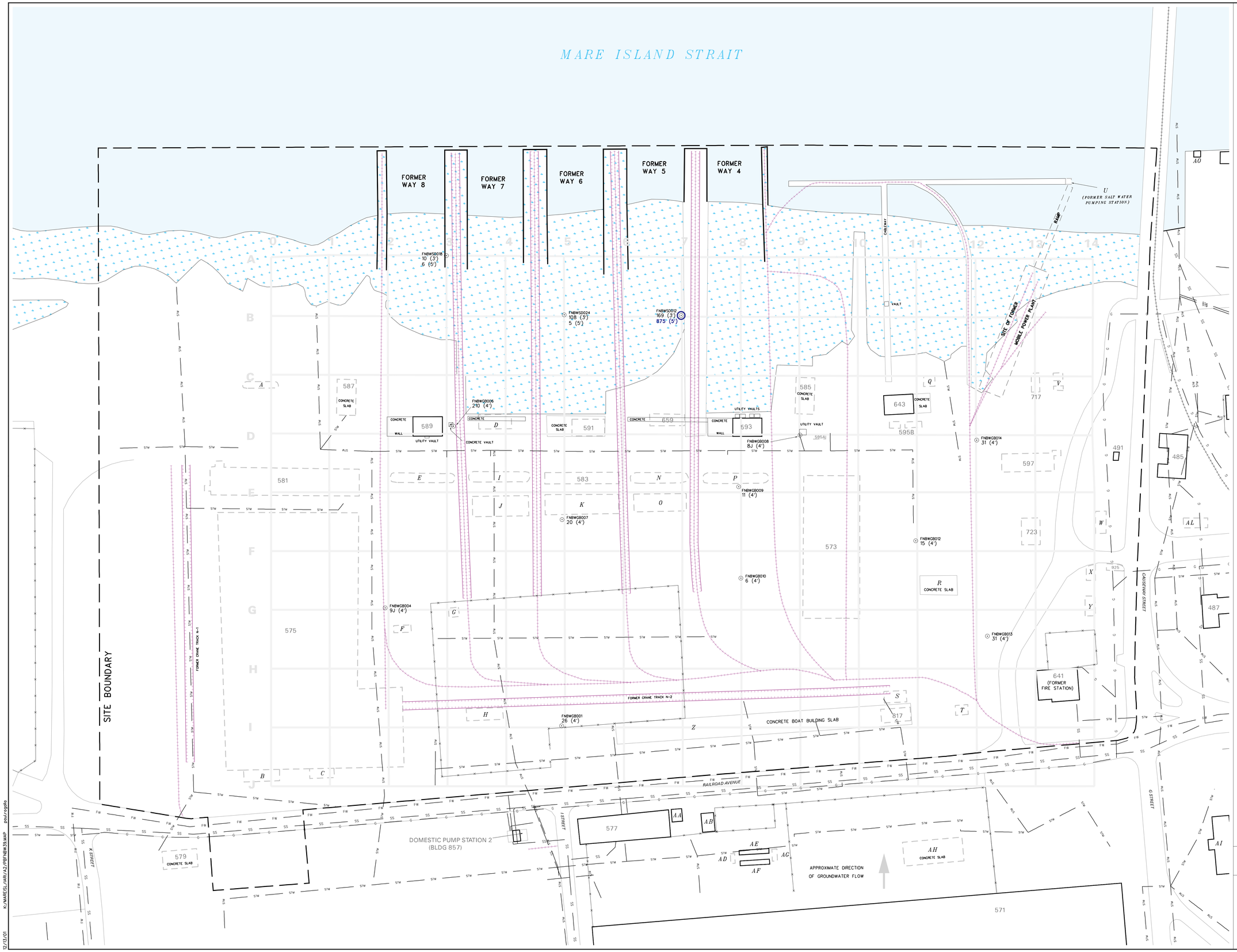
INVESTIGATION AREA A2 REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

FIGURE 3-7
PAH CONCENTRATIONS EXCEEDING COMPARISON CRITERIA IN SOIL AND SEDIMENT 3 FEET BGS OR DEEPER
FORMER NORTH BUILDING WAYS AREA

K:/MARE ISL/MRI/A2/PAH/NBW3.MAP psu/cogollo 12/17/01

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
11	Lead	Section 2.3	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Figures 3-9 and 3-10. Tetra Tech EM Inc. September 22, 2008.





LEGEND

⊙	BORING LOCATION
FNBWGB012	SAMPLE POINT IDENTIFICATION
15 (4')	CONCENTRATION OF LEAD IN MG/KG (DEPTH IN FEET BGS)
○	LEAD CONCENTRATION IN ONE OR MORE SOIL SAMPLES EXCEEDS COMPARISON CRITERION OF 242 MG/KG
BGS	BELOW GROUND SURFACE
J	ESTIMATED VALUE
MG/KG	MILLIGRAM PER KILOGRAM
ND	NOT DETECTED
	STORM WATER PIPELINE
	SANITARY SEWER
	FRESH WATER PIPELINE
	GAS LINE
	RAILROAD TRACKS
	FORMER RAILROAD TRACKS
	FORMER CRANE TRACKS
	FENCE
	CORRUGATED METAL OR CONCRETE RETAINING WALL
	TIDAL WETLAND
643	EXISTING BUILDING AND BUILDING NUMBER
Q	FORMER BUILDING OR STRUCTURE AND BUILDING NUMBER OR LETTER

NOTE: THE GRID SYSTEM IS SHOWN IN GRAY TO FACILITATE THE LOCATION OF SAMPLE POINTS. GRID LOCATIONS FOR ALL SAMPLE POINTS WITHIN THE SITE BOUNDARY ARE LISTED ON TABLE 2-4. MANY STEP-OUT SAMPLE POINTS WERE NOT COLLECTED AT GRID NODES, SO THE SAMPLE POINT COORDINATE FOR MANY STEP-OUT SAMPLE POINTS REPRESENTS THE CLOSEST NODE ON THE GRID SYSTEM.

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SCALE IN FEET

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INVESTIGATION AREA A2 REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

FIGURE 3-10

LEAD CONCENTRATIONS IN SOIL AND SEDIMENT, 3 FEET BGS OR DEEPER FORMER NORTH BUILDING WAYS AREA

K:/MARE/SL/ARI/A2/PBF/NBW3B.MAP paul.rogalko
12/13/01

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
12	TPH	Section 2.3	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Figures 3-2 through 3-5. Tetra Tech EM Inc. September 22, 2008.

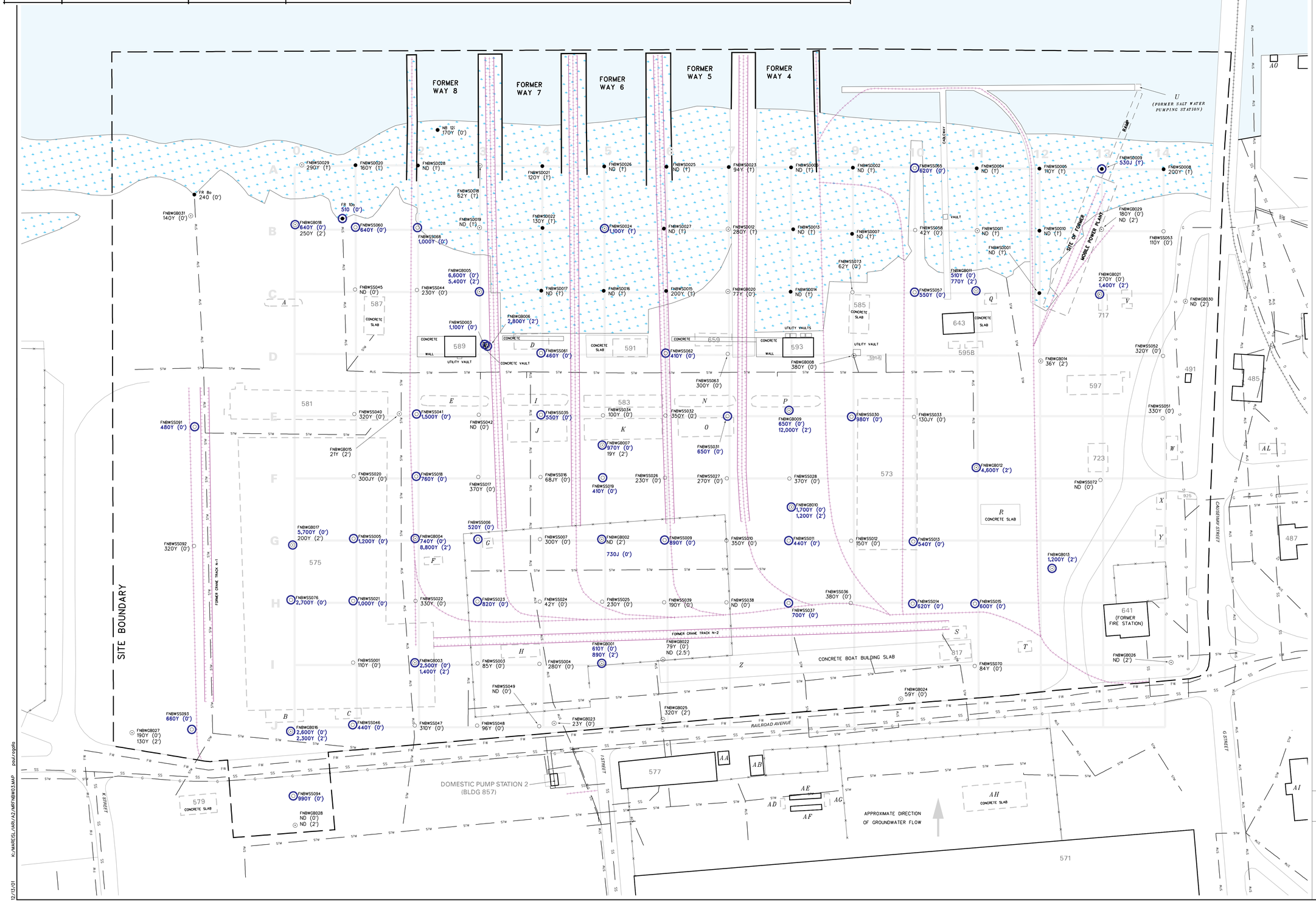
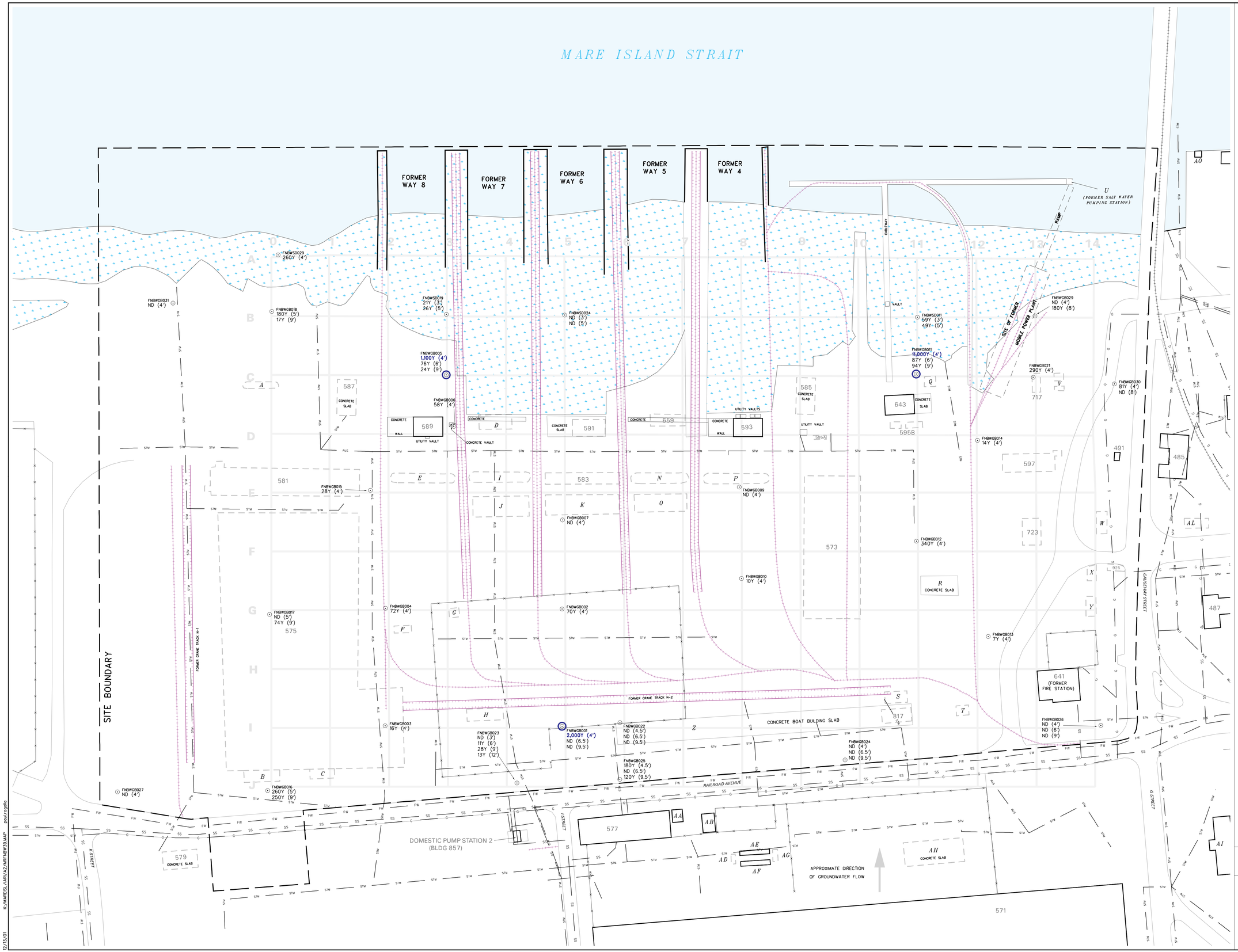


FIGURE 3-2

TPH-mr CONCENTRATIONS IN SOIL, RESIDUE, AND SEDIMENT, 0 TO 3 FEET BGS
FORMER NORTH BUILDING WAYS AREA

K:/NAVFESL/MARI/A2/MRT/NBW3.MAP paul.rogello 12/13/01



LEGEND

⊙	BORING LOCATION
FNBWG8011	SAMPLE POINT IDENTIFICATION
87Y (6')	CONCENTRATION OF TPH-mr IN MG/KG (DEPTH IN FEET BGS)
○	TPH-mr CONCENTRATION IN ONE OR MORE SOIL SAMPLES EXCEEDS COMPARISON CRITERION OF 400 MG/KG
BGS	BELOW GROUND SURFACE
J	ESTIMATED VALUE
MG/KG	MILLIGRAM PER KILOGRAM
ND	NOT DETECTED
TPH-mr	TOTAL PETROLEUM HYDROCARBONS – MOTOR-OIL RANGE
Y	OTHER FUEL RANGE
STW	STORM WATER PIPELINE
SS	SANITARY SEWER
FW	FRESH WATER PIPELINE
G	GAS LINE
	RAILROAD TRACKS
	FORMER RAILROAD TRACKS
	FORMER CRANE TRACKS
	FENCE
	CORRUGATED METAL OR CONCRETE RETAINING WALL
	TIDAL WETLAND
643	EXISTING BUILDING AND BUILDING NUMBER
Q	FORMER BUILDING OR STRUCTURE AND BUILDING NUMBER OR LETTER

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SCALE IN FEET

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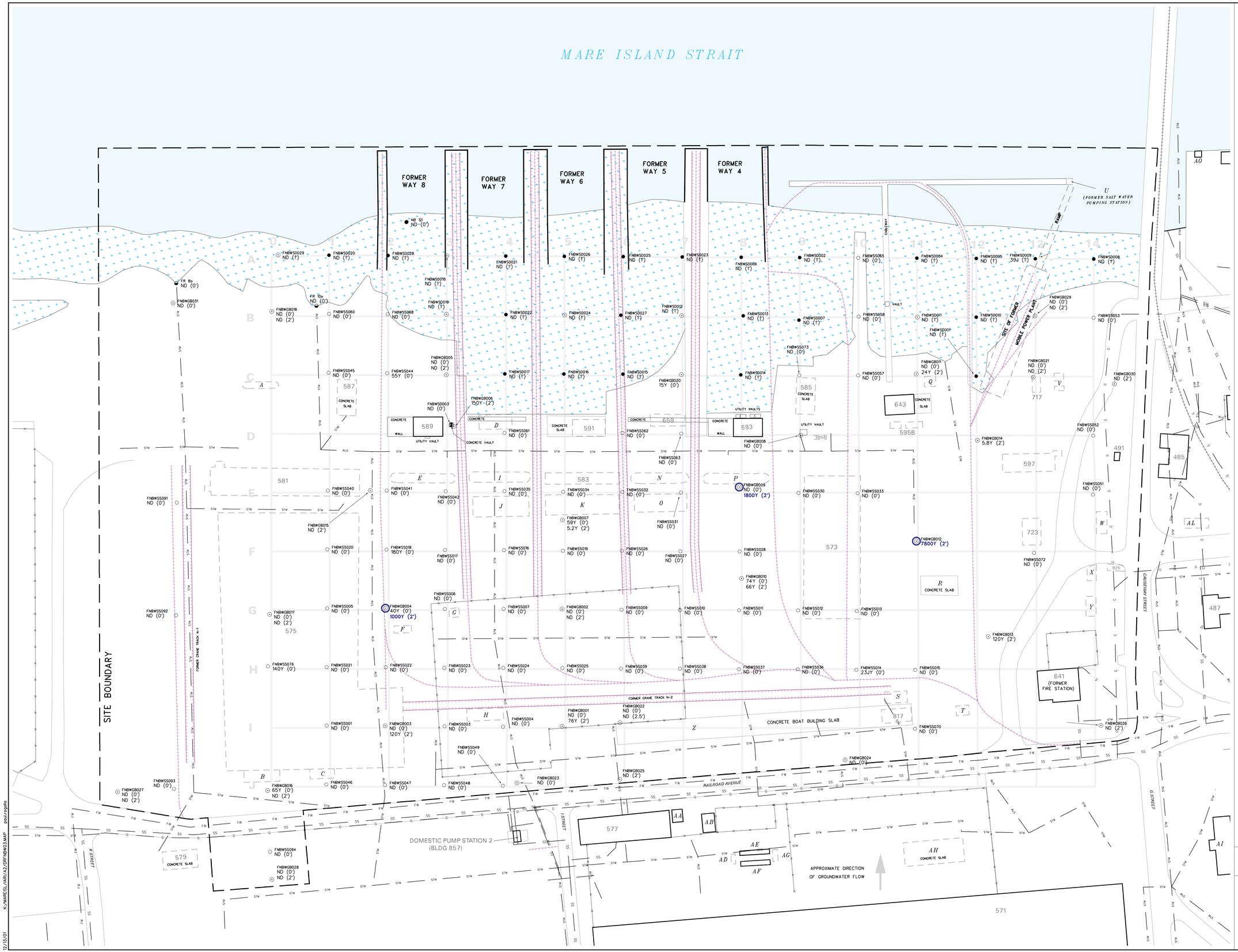
INVESTIGATION AREA A2 REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

FIGURE 3-3

TPH-mr CONCENTRATIONS IN SOIL AND SEDIMENT, 3 FEET BGS OR DEEPER FORMER NORTH BUILDING WAYS AREA

12/13/01 K:/MARE/ISL/ABI/A2/NBFT/BW39.MAP psuzuoka



LEGEND

○	SURFACE SOIL SAMPLE LOCATION
●	NEAR-SURFACE SEDIMENT SAMPLE LOCATION
	RESIDUE SAMPLE LOCATION
⊙	BORING LOCATION
FNBWGB014	SAMPLE POINT IDENTIFICATION
5.8Y (2')	CONCENTRATION OF TPH-dr IN MG/KG (DEPTH IN FEET BGS)
○	TPH-dr CONCENTRATION IN ONE OR MORE SOIL, RESIDUE, OR SEDIMENT SAMPLES EXCEEDS COMPARISON CRITERION OF 400 MG/KG
BGS	BELOW GROUND SURFACE
J	ESTIMATED VALUE
MG/KG	MILLIGRAM PER KILOGRAM
ND	NOT DETECTED
TPH-dr	TOTAL PETROLEUM HYDROCARBON - DIESEL RANGE
Y	OTHER FUEL RANGE
	STORM WATER PIPELINE
	SANITARY SEWER
	FRESH WATER PIPELINE
	GAS LINE
	RAILROAD TRACKS
	FORMER RAILROAD TRACKS
	FORMER CRANE TRACKS
	FENCE
	CORRUGATED METAL OR CONCRETE RETAINING WALL
	TIDAL WETLAND
643	EXISTING BUILDING AND BUILDING NUMBER
Q	FORMER BUILDING OR STRUCTURE AND BUILDING NUMBER OR LETTER

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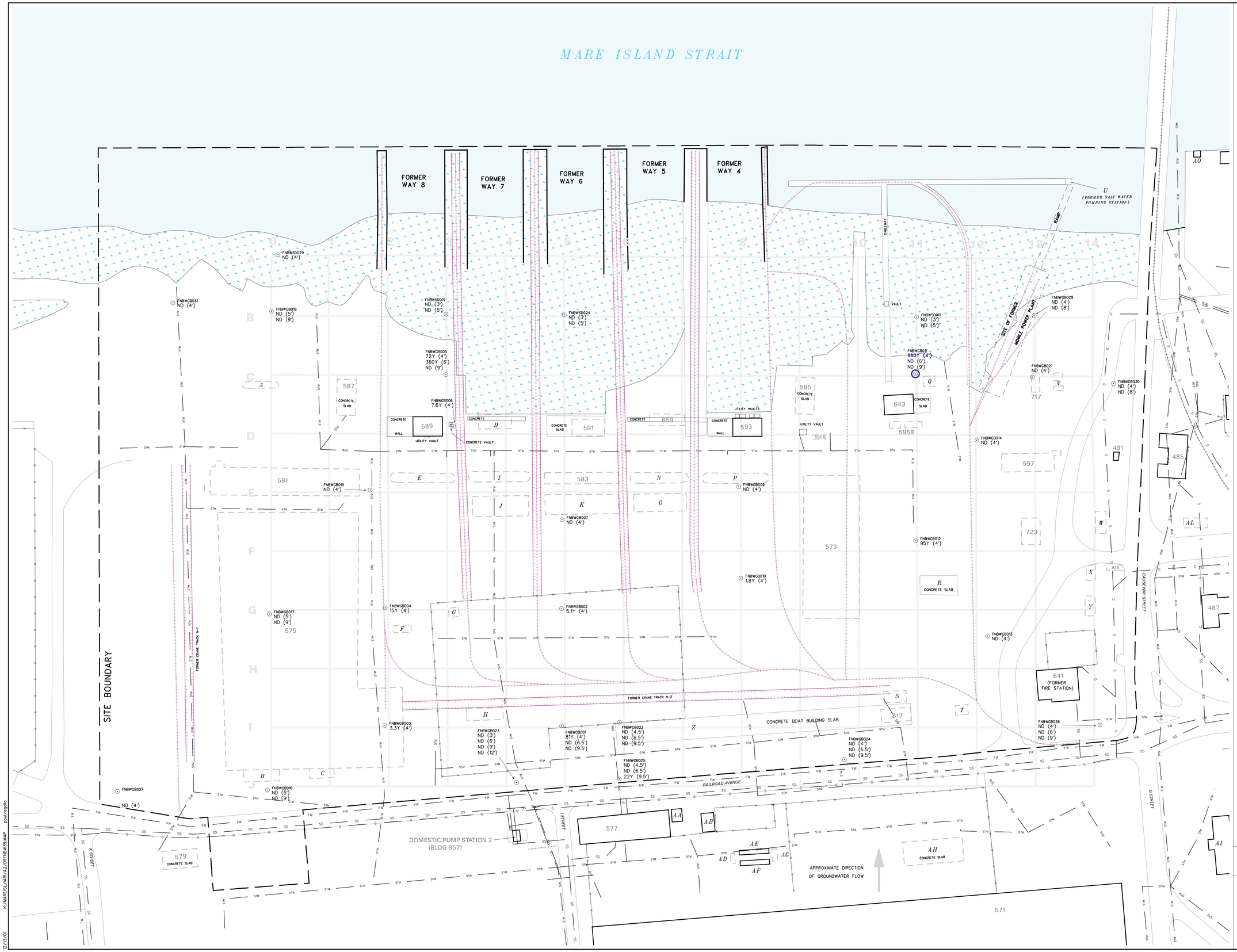
MARE ISLAND, CALIFORNIA

FIGURE 3-4

TPH-dr CONCENTRATIONS IN SOIL, RESIDUE, AND SEDIMENT, 0 TO 3 FEET BGS
FORMER NORTH BUILDING WAYS AREA

K:/NAVFES/MARI/A2/DRT/NBW13.MAP paul.ogallo 12/13/01



LEGEND

⊙	BORING LOCATION
FNBWGB012	SAMPLE POINT IDENTIFICATION
95Y (4')	CONCENTRATION OF TPH-dr IN MG/KG (DEPTH IN FEET BGS)
○	TPH-dr CONCENTRATION IN ONE OR MORE SOIL SAMPLES EXCEEDS COMPARISON CRITERION OF 400 MG/KG
BGS	BELOW GROUND SURFACE
J	ESTIMATED VALUE
MG/KG	MILLIGRAM PER KILOGRAM
ND	NOT DETECTED
TPH-dr	TOTAL PETROLEUM HYDROCARBONS – DIESEL RANGE
Y	OTHER FUEL RANGE
STW	STORM WATER PIPELINE
SS	SANITARY SEWER
FW	FRESH WATER PIPELINE
G	GAS LINE
	RAILROAD TRACKS
	FORMER RAILROAD TRACKS
	FORMER CRANE TRACKS
	FENCE
	CORRUGATED METAL OR CONCRETE RETAINING WALL
	TIDAL WETLAND
643	EXISTING BUILDING AND BUILDING NUMBER
Q	FORMER BUILDING OR STRUCTURE AND BUILDING NUMBER OR LETTER

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35 0 35 70
SCALE IN FEET

Tetra Tech EM Inc.

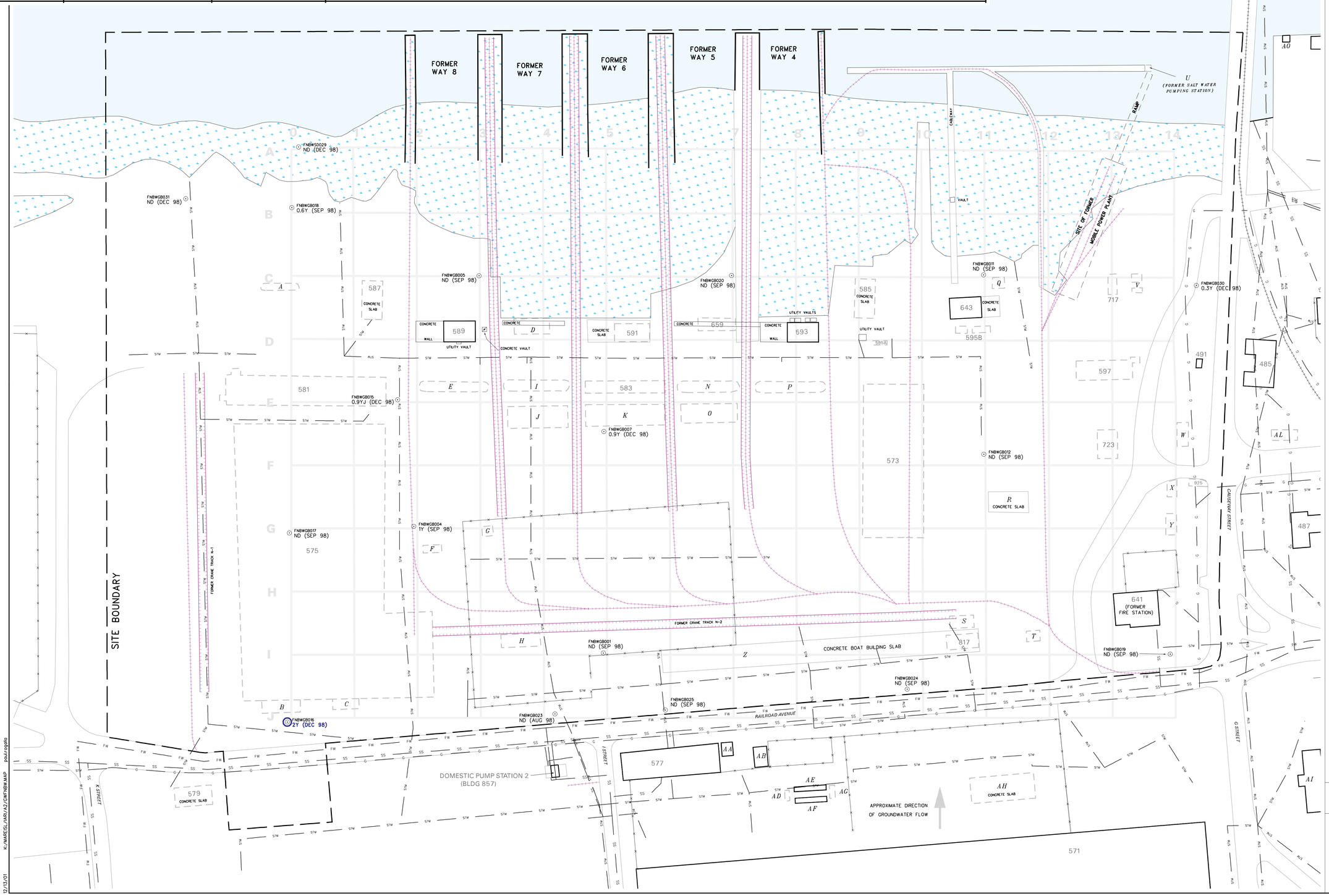
INVESTIGATION AREA A2 REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

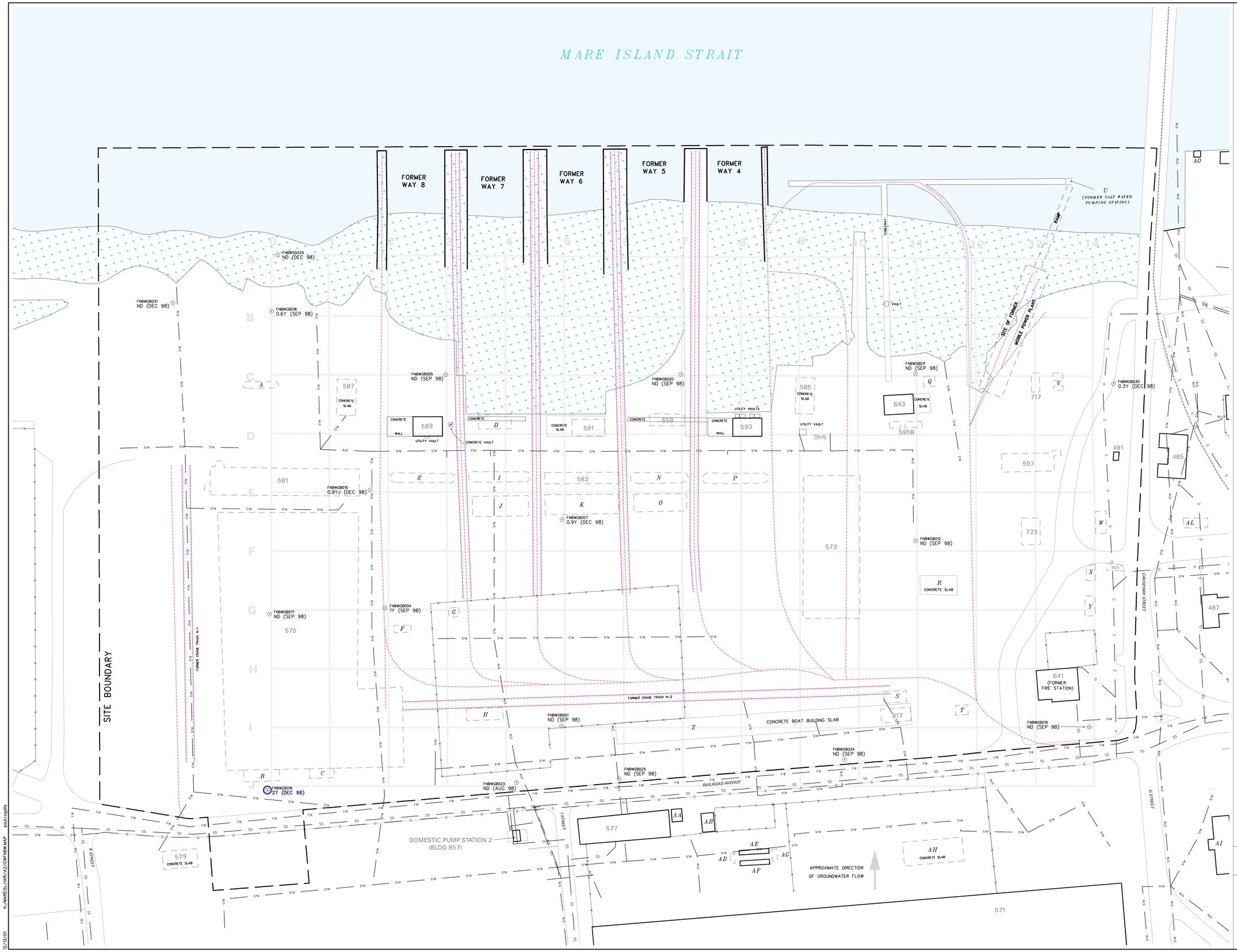
FIGURE 3-5

TPH-dr CONCENTRATIONS IN SOIL AND SEDIMENT, 3 FEET BGS OR DEEPER FORMER NORTH BUILDING WAYS AREA

12/13/01 K:\MARE\ISL\ARI\A2\DWF\BW39.MAP paul.rogalko

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
13	TPH	Section 2.3	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Figure 3-11. Tetra Tech EM Inc. September 22, 2008.





LEGEND

⊙	BORING LOCATION
FNBWGB030	SAMPLE POINT IDENTIFICATION
0.3Y (DEC 98)	CONCENTRATION OF TPH–dr/mr IN MG/L (SAMPLE DATE)
○	TPH–dr/mr CONCENTRATION IN GROUNDWATER EXCEEDS COMPARISON CRITERION OF 1.4 MG/L
J	ESTIMATED VALUE
MG/L	MILLIGRAM PER LITER
ND	NOT DETECTED
TPH–dr/mr	TOTAL PETROLEUM HYDROCARBONS – DIESEL RANGE AND MOTOR–OIL RANGE
Y	OTHER FUEL RANGE
STW	STORM WATER PIPELINE
SS	SANITARY SEWER
FW	FRESH WATER PIPELINE
G	GAS LINE
	RAILROAD TRACKS
	FORMER RAILROAD TRACKS
	FORMER CRANE TRACKS
	FENCE
	CORRUGATED METAL OR CONCRETE RETAINING WALL
	TIDAL WETLAND
643	EXISTING BUILDING AND BUILDING NUMBER
Q	FORMER BUILDING OR STRUCTURE AND BUILDING NUMBER OR LETTER

NOTE: THE GRID SYSTEM IS SHOWN IN GRAY TO FACILITATE THE LOCATION OF SAMPLE POINTS. GRID LOCATIONS FOR ALL SAMPLE POINTS WITHIN THE SITE BOUNDARY ARE LISTED ON TABLE 2–4. MANY STEP–OUT SAMPLE POINTS WERE NOT COLLECTED AT GRID NODES, SO THE SAMPLE POINT COORDINATE FOR MANY STEP–OUT SAMPLE POINTS REPRESENTS THE CLOSEST NODE ON THE GRID SYSTEM.

INVESTIGATION AREA A2 REMEDIAL INVESTIGATION

MARE ISLAND, CALIFORNIA

FIGURE 3–11

TPH–dr/mr CONCENTRATIONS IN GROUNDWATER FORMER NORTH BUILDING WAYS AREA

K:/MARE/SL/IA/R/A2/CWP/NBW.MAP psulcagdio

12/13/01

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
14	RCRA Facility Assessment	Table 1	Resource Conservation and Recovery Act (RCRA) Facility Assessment, Preliminary Review, Mare Island Naval Shipyard (Mare Island), Vallejo, California. Sections 4.1, 4.77, 4.80.11, and 4.81.2. A.T. Kearney, Inc. September 1987.

4.1 SWMU # 1 - #5 RADIOLOGICAL WASTE STORAGE AREAS

4.1.1 Information Summary

Unit Description: Mare Island Naval Ship Yard handles both Nuclear Regulatory Commission (NRC) licensed and unlicensed radiation sources in its shipyard non-nuclear (i.e., not associated with nuclear plants) Radiological Protection Program. Since the early 1960s, the shipyard has held three NRC by-product material licenses for radio chemistry operations, radiacmeter calibration operations, and industrial radiography. All of these licenses are limited such that waste may be disposed of only by transfer to an NRC-licensed recipient. (2)

Radiological wastes at the shipyard are stored at the user's facilities, the Supply Department, or the non-nuclear Decontamination Facility. The locations involved include Buildings 207, 593, 751, 796, and 866. It is unclear from the file review what facilities are being referred to by the term "user's facilities." This will need to be clarified during the visual site inspection. SWMU #1 corresponds with Building 207, SWMU #2 with Building 593, SWMU #3 with Building #751, SWMU #4 with Building #796, and SWMU #5 with Building 866.

The waste is contained in Department of Transportation specification 17H drums. Approximately 20 to 30 drums of wastes are now stored on the shipyard, and will probably be disposed of soon through a licensed contractor. Further plans call for solidification of the wastes with cement or polymers (per applicable NRC regulations) prior to disposal. (2)

Depleted uranium is used on the shipyard as shielding in industrial radiography projector and shipping containers. This material is controlled by NRC license and is returned directly to the manufacturer if damaged. (2)

Date of Startup: The startup dates were not indicated in the file records reviewed.

Date of Closure: These units are presumed to be currently active.

Wastes Managed: Radiological wastes are stored in these units. (2) Additional information on the nature or characteristics of this waste was not provided in the file records reviewed.

Release Controls: The wastes are stored in Department of Transportation specification 17H drums. (2) Other release controls were not identified in the file records reviewed.

History of Releases: There is no file record of releases from these units.

4.1.2 Conclusions

Soil/Groundwater Release Potential: The potential for release to soil and groundwater from these units cannot be adequately evaluated at this time due to insufficient information on waste characteristics, construction details, release controls, and waste management practices.

Surface Water Release Potential: The potential for release to surface water from these units cannot be adequately evaluated at this time due to

insufficient information on waste characteristics, construction details, release controls, and waste management practices.

Air Release Potential: The potential for release to air from these units cannot be adequately evaluated at this time due to insufficient information on waste characteristics, construction details, release controls, waste management practices, and presence of volatile constituents.

Subsurface Gas Release Potential: The potential for subsurface gas release from these units cannot be adequately evaluated at this time due to insufficient information on waste characteristics, construction details, release controls, and waste management practices.

4.1.3 Further Information Needs

In order to adequately evaluate the environmental release potentials from these units, additional information should be obtained. The additional information should include the following:

- Date of startup
- Date of closure, if applicable
- Unit locations
- Construction details and dimensions
- Interior or exterior structure
- Release controls
- Waste management practices
- Waste characteristics/constituents

- Soil sampling and/or groundwater monitoring analysis
- History of releases, spills, or odors

A visual site inspection is recommended to verify unit locations and determine the current condition of the units.

4.77 SWMU #93 STORM SEWER SYSTEM

4.77.1 Information Summary

Unit Description: This unit is a storm sewer system at Mare Island Naval Ship Yard. Many of the wastes now managed at the Industrial Wastewater Treatment System were formerly disposed of to Mare Island Strait (SWMU #82) through this unit. Information concerning construction details, waste management practices, location and extent of coverage, release controls, and dates of operation were not indicated in the file records reviewed.

This unit is known to have managed wastewaters from the following SWMUs: the Boiler Shop Acid Tanks (SWMUs #8-17), the Inside Machine Shop Waste Accumulation Area(s) (SWMU #18), the Sheetmetal Operation Scrap Metal Accumulation Area(s) (SWMU #22), the Plating Shop Sump at Building 225 (SWMU #58), and the Dip Tanks at Building 900 (SWMU #69). It is likely to have managed wastewater originating from a number of other sources as well as managed storm drain water runoff.

This unit was a disposal means for one-time spills which were known to have occurred at the Sulfuric Acid Mixing and Storage Facility at Building 463 (SWMU #63) and at the Waterfront Central Dumpsters (SWMU #67). It is likely that other unrecorded spills were managed by this unit as well. (2)

Date of Startup: The startup date was not indicated in the file records reviewed.

Date of Closure: This unit is presumed to be currently active.

Wastes Managed: Prior to the installation of the Industrial Wastewater Treatment System, this unit managed neutralized acids from the Boiler Shop Acid Tanks (SWMUs #8-17). Prior to 1965, liquid wastes stored at the Inside Machine Shop Waste Accumulation Area(s) (SWMU #18) were discharged to this unit. These wastes included solvents (primarily carbon tetrachloride), coolants, oils, mercury, lead acids and paint strippers. Prior to 1973, all wastewaters generated from the Sheetmetal Operation Scrap Metal Accumulation Area(s) (SWMU #22) were discharged into this unit; this wastewater was composed of rinsewater which probably contained metal cleaning solutions, oakite 160 etching solution, chromic acid, caustic soda, chronachrome, metal brightening compounds and rush inhibitors. Although not specifically identified in the file records, this unit probably managed storm water runoff as well.

The Plating Shop Sump at Building 225 which collects drippings from acid and caustic baths were also directed through this unit. The metal plating solutions include chromium, copper, nickel, cadmium, silver, cyanide, lye, caustic soda, chromic acid, muriatic acid, sulfuric acid, nitric acid, sodium hydroxide and other various solutions for tin, lead, and nickel plating. These wastes are currently being managed at the Industrial Wastewater Treatment System and no longer managed at this unit. Spills of sulfuric acid at the Sulfuric Acid Mixing and Storage Facility at Building 463 (SWMU #63) were reported to have entered into this unit. Overflow of unspecified material occurred at the Waterfront Central Dumpsters (SWMU #67) which necessitated disposal of liquid wastes into the Storm Sewer System. Prior to 1972, untreated wastewater from the Dip Tanks at Building 900 (SWMU #69) was disposed of at this unit; cleansers, deoxidizers, alodines, and irridite chemicals were in the rinsewaters disposed. (2)

Release Controls: No release controls for this unit were identified in the file records reviewed.

History of Releases: There were no releases from this unit identified in the file records reviewed.

4.77.2 Conclusions

Soil/Groundwater Release Potential: The potential for release to soil and groundwater from this unit cannot be adequately evaluated at this time due to insufficient information on waste characteristics, construction details, release controls, and waste management practices.

Surface Water Release Potential: The potential for release to surface water from this unit cannot be adequately evaluated at this time due to insufficient information on waste characteristics, construction details, release controls, and waste management practices.

Air Release Potential: The potential for release to air from this unit cannot be adequately evaluated at this time due to insufficient information on waste characteristics, construction details, release controls, and waste management practices.

Subsurface Gas Release Potential: The potential for subsurface gas release from this unit cannot be adequately evaluated at this time due to insufficient information on waste characteristics, construction details, release controls, and waste management practices.

4.77.3 Further Information Needs

In order to adequately evaluate the environmental release potentials from this unit, additional information should be obtained. The additional information should include the following:

- o Date of startup
- o Unit location
- o Construction details
- o Release controls
- o Waste management practices
- o Access/discharge point(s)
- o waste characteristics/constituents

A visual site inspection is recommended to verify unit location and determine the current condition of the unit.

Facilities Operations Plan. (10) The unit managed oil sludge with PCB contents ranging from 7 to 1,000 parts per million generated from tank and metal cleaning operations. Quantities of waste managed at this unit were reported as 125 gallons per month or 1,500 gallons annually. Because additional information, such as location and unit dimensions, was not identified in the previously mentioned document, it cannot be determined whether this is a unit which has already been identified as a SWMU in this PR Report (such as SWMU #50, the Industrial Wastewater Oil Sump Tank) or whether it is an additional unit.

4.80.10 Outside Machine Shop Past Disposal and Accumulation Practices: Wastes generated at the Outside Machine Shop have been managed in the Waterfront Central Dumpsters (SWMU #67) since 1970. These wastes include lubricant oils, solvents, asbestos, and metal shavings. It is not certain how these wastes were managed prior to 1970; there may be areas associated with past Outside Machine Shop operations which would constitute SWMUs or Areas of Concern. (2)

4.80.11 Sanitary Sewer System: During the file review, reference to a sanitary sewer system was made. (2) No information was provided on the construction, release controls, and waste management practices associated with this system. It is possible that this system may have managed industrial wastes in additional to sanitary wastes.

4.81 AREAS OF CONCERN

4.81.1 PCBs Management and Accumulation Areas: Various PCB spills have occurred on Mare Island Naval Ship Yard during the past. Chief among these is a spill which occurred in Building 866. In March 1981, it was discovered that a floor drain in the cleaning room was plugged with a sludge containing 1,700 ppm of the PCB Arocolor 1254. This room had been used as a transformer repair area. Further investigation showed the presence of PCBs in various sump residues in the industrial waste system leading from Building 866 to the Industrial Wastewater Treatment plant. PCB levels in treated wastewater discharged to the Vallejo POTW are less than 1.0 ppm, below the action levels (7.0 ppm) specified by the State of California. Apparently, most of the PCBs reaching the Industrial Wastewater Treatment plant became entrapped in the sludge. After dewatering, the sludge is hauled away by a contractor to an approved Class I California disposal site. (2)

Other PCB spills of significance since 1980 have occurred at Building 516 and Building 433, both from leaking in-service transformers. At Building 516, the oils leaked into a sump. Samples from the sump indicate that concentrations in excess of 47 ppm are still present. At Building 433, the PCB oil seeped into the adjacent wetland. Contamination levels as high as 147 ppm were reported in the soil. The contaminated soils were scraped up, put into eleven 55-gallon drums, and stored in the Hazardous Materials Container Storage Area at Building 213 (SWMU #27). (2)

4.81.2 Areas Indicating Radium Contamination: Since 1967, shipyard directives have required that radiological materials not be discharged to the sanitary sewer system or the environment. Work areas are monitored and controlled to assure compliance. Review of records indicates that to date

there have been no instances of spills or personnel contamination at Mare Island, although there have been instances where radium was found in areas previously used for radium work or storage. (2)

4.81.3 Chlordane Contamination Areas at Mare Island Elementary School and Wave Barracks: Chlordane has been identified in soil around the Mare Island Elementary School in concentrations exceeding the Total Threshold Limit Concentration (TTLC) of 2.5 mg/kg. Chlordane is believed to have been applied by spray as a termiticide. The nearby Waves Barracks may have been sprayed with a termiticide (chlordane) as well.

4.81.4 Naval Hospital: The Naval Hospital was originally built in 1869-1871 and included expansions added during the history of the base through World War II. During World War II and the following years, it gained recognition for the development and manufacture of plastic limbs in its large Orthopedic Department. Wastes generated by the hospital undoubtedly included discarded wound dressings, biological tissues, empty pharmaceutical containers, and other potentially infectious wastes. A large Incinerator (SWMU #29), located at Railroad Avenue and Fourteenth Street, was reportedly used for destruction of solid and biological waste material. However, neither historical records nor personal interviews positively identified the types, quantities, or ultimate disposition of wastes generated by the hospital. It may be presumed that wastes which were not incinerated were disposed of at the landfill.

The hospital was closed in 1957. The only remaining structure devoted to clinical activity is the NRMC Branch Clinic in Building H-73. The remaining buildings were commissioned to the Combat Systems Technical Schools Command in 1962. (2)

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
15	1995 field survey	Table 1	Preliminary Assessment Final Summary Report Ordnance Sites, Mare Island Naval Shipyard, Vallejo, California. Section 6.3. PRC Environmental Management, Inc. September 1995.

detector's surveying capability (approximately 6 inches).

Further Action Recommended

Further investigation of former target berm locations for the northern range should include geophysical surveying to help detect possible subsurface ordnance materials. A contractor should be hired to screen and remove the lead slugs from identified target berm materials. Soil remaining after the lead slugs have been removed should be sampled to assess residual lead concentrations. Soil with lead above current PRGs should be treated or disposed of at an approved landfill.

6.3 SKEET RANGE

Information Summary

The skeet range operated in the 1930s and 1940s and was located just east of building 499, between Walnut Avenue and Railroad Avenue (Figure 6-3). The firing line formed a semicircular arc, with the firing primarily to the east. The skeet range operated for approximately 10 years and may have had limited use. A skeet range has a firing line area but does not have targets. Skeet pellets were fired toward airborne targets in a fan-shaped area as shown on Figure 6-3. Pellets used in skeet ammunition range in size from approximately 0.08 to 0.1 inches in diameter, and a skeet range would have a wide dispersal of material. Therefore, large concentrations of skeet ammunition would not be expected at this site.

This area has been used for various industrial activities since the skeet range was closed in the early 1940s. Aerial photographs from the 1950s and 1960s indicate that the area was primarily used as a railroad storage area. Skeet ammunition has likely been subjected to physical and chemical weathering and burial with additional fill and gravel to facilitate traffic and storage since its deposition on the surface in the early 1940s. It is unknown whether the Navy excavated the area, but the area was most likely filled with soil and gravel to mitigate the area-wide subsidence of the filled area and to allow for storage and handling activities in all weather conditions at the site.

The skeet range area is currently covered by materials related to railroad storage activities. Railroad tracks are still visible in some areas, and railroad ballast and ties were observed. A storm sewer catch

basin is located just east of the range. The former skeet range is sparsely vegetated, with gravel and asphalt covering much of the area.

The skeet range area was visually inspected and surveyed with a metal detector capable of detecting metallic objects to an approximate depth of 6 inches bgs. No skeet ammunition or related contamination was detected during the survey.

Further Action Recommended

The skeet range area was visually inspected and surveyed with a metal detector. No ordnance, small arms ammunition, or related ordnance contamination was detected during the PA. Further investigation of the skeet range area is not recommended.

6.4 INDOOR SMALL ARMS RANGE

Information Summary

The indoor small arms range is located in the basement of building 569 on California Avenue (Figure 6-4). The indoor range was closed in 1986 due to reported air-borne lead concentrations above acceptable levels. The date the range opened was not determined. The shooting gallery contained five firing lines, each approximately 4 feet wide. The shooting gallery contained intake and exhaust vents for ventilation as well as acoustic panels on the walls and ceilings to reduce the firing noise. The acoustic panels may contain asbestos materials.

The back wall of the target area is covered with lead, including a thick buildup of lead at the base of the wall. Lead impact and splatter zones are also visible on the walls and ceilings near the backstops. Most of the ammunition shell casings and slugs have been removed; however, some slugs remained beneath the backstops.

Observations during the PA revealed that flooding has occurred in the basement firing range area. Cracks were visible in the concrete floor. Code 106 personnel confirmed that water occasionally seeps into the building, particularly during the winter.

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
16	Follow up sampling investigation	Table 1	Technical Memorandum. Results of the Preliminary Assessment and Site Inspection at the Former Skeet Range and Recommendation for Closure. Pages 1 through 5 and Figures 1 through 3. Jerry Dunaway, NAVFAC SWDIV. August 24, 2001.

TECHNICAL MEMORANDUM

Date : August 24, 2001

To : Distribution List

From : Jerry Dunaway

Subject : Results of the Preliminary Assessment and Site Inspection at the Former Skeet Range and Recommendation for Closure

In accordance with the "Federal Facilities Site Remediation Agreement for Mare Island Naval Shipyard", dated September 29, 1992 (California Department of Toxic Substances Control [DTSC] 1992), the Naval Facilities Engineering Command, Southwest Division (SWDIV), completed a preliminary assessment (PA) at the former skeet range at Mare Island (PRC 1995). At the time, the Navy determined that the former skeet range posed no environmental concern and that no further action was warranted at the site. Last December, during the course of the negotiation for the early transfer of the northern part of Mare Island, Legacy Partners (Legacy) conducted soil and groundwater sampling in the vicinity of the former skeet range to help assess the potential need for future action at this PA site. This technical memorandum presents the results of the Legacy investigation as well as the results of other data collected in the vicinity of the former skeet range and recommends that the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) investigation of the former skeet range be closed out with no further action.

SITE LOCATION

The Mare Island peninsula is located in Solano County, California, about 25 miles northeast of San Francisco (Figure 1). Mare Island is within the incorporated boundaries of the city of Vallejo. The former skeet range is located in the northern part of Mare Island, just east of Building 499 between Walnut Avenue and Railroad Avenue (Figure 2). According to the PA report, the firing line formed a semicircular arc, with the firing primarily to the east.

SITE HISTORY

The skeet range operated for approximately 10 years in the 1930s and 1940s and may have had limited use. Skeet pellets were fired toward airborne targets in a fan-shaped pattern as shown on Figure 3. Large concentrations of skeet pellets are not expected at this site, because of the manner the pellets were fired at the targets. The skeet range was closed in the early 1940s and has been used since that time for various industrial activities. According to the PA report, aerial photographs from the 1950s and 1960s indicate that the area was primarily used as a railroad storage area.

The former skeet range is currently covered by materials related to railroad storage activities. Railroad tracks, ballast, and ties are visible in some areas. A storm sewer catch basin is located just east of the range (Figure 3). The former skeet range is sparsely vegetated; gravel and asphalt cover much of the area.

CONCEPTUAL SITE MODEL

As part of the investigation process, a conceptual site model was developed based on information on the historical use of the former skeet range and the results of the subsurface investigations conducted at the site.

Approximately 6 to 7 feet of fill material was deposited over the dredge spoils after the former skeet range was closed. Soil and groundwater samples were collected at this depth to investigate potential release of contaminants to the subsurface (dredge spoils). The Legacy investigation focused on lead and SVOCs because these are considered potential contaminants of concern at firing ranges.

SITE INVESTIGATION

During the PA, the former skeet range area was visually inspected and surveyed with a metal detector. No ordnance, small arms ammunition, or related ordnance contamination was detected during the PA. The PA concluded that further investigation of the former skeet range area is not warranted and recommended the site for no further action.

Soil and groundwater samples were collected in the vicinity of the former skeet range during the remedial investigations at IR17 and the Building 503 Area and Former North Building Ways, respectively. Groundwater samples were collected during four quarterly events. Lithologic logs from soil borings completed during these remedial investigations that are within the footprint of the former skeet range are presented in Attachment A.

Site investigation activities by Legacy included soil sampling from nine soil borings and construction of one monitoring well (Figure 3). Soil samples were collected at two depth intervals from each soil boring: between 2.0 and 4.5 as well as 6.0 and 7.5 feet below ground surface (bgs). These samples were analyzed for lead and SVOCs at an off-site laboratory. One groundwater sample collected from SRMW-01 was analyzed for lead and semivolatile organic compounds (SVOC).

ANALYTICAL RESULTS FOR DETECTED COMPOUNDS

Statistical summaries for soil and groundwater samples collected in the former skeet range area are presented in Tables 1 and 2, respectively. Detected compounds are listed in Tables 3 and 4. Since some samples that correspond to other sites (IR17, Former North Building Ways) were collected in the vicinity of the former skeet range (Figure 3), the results for these samples are included in these tables.

Soil

Lead was detected in 49 of 55 soil samples collected during the site investigations, but only one sample contained a concentration above the residential comparison criteria of 210 milligrams per kilograms (mg/kg). The soil sample collected at 3.5 feet bgs at 17W21 and contained a concentration of 387 mg/kg. 17W21 is a monitoring well installed during the remedial investigation at IR17 and is located just west of the former skeet range. Iron was also detected in two samples with concentrations higher than the 95th percentile ambient value of 62,000 mg/kg. Both soil samples were collected at BGW01 (0.5 and 5.5 feet bgs) at concentrations of 113,000 and 154,000 mg/kg, respectively. BGW01 is located on the southern area of the former skeet range. No other metal was detected at concentrations exceeding the comparison criteria and 95th percentile ambient value.

No volatile organic compounds (VOC) were detected at concentrations above comparison criteria. 2-methylnaphthalene and benzo(a)pyrene were detected in three samples each at concentrations exceeding their comparison criteria of 0.3 and 0.062 mg/kg, respectively. The maximum concentrations were 0.8 and 7 mg/kg, respectively. Benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene were detected at concentrations exceeding their respective comparison criteria. Benzo(g,h,i)perylene and phenanthrene, for which there are no comparison criteria, were detected once each at concentrations exceeding their respective 95th percentile ambient values. These polycyclic aromatic hydrocarbon concentrations are characteristic of the fill at Mare Island and were not caused by activities at the former skeet range. No other SVOCs were detected at concentrations above comparison criteria.

Total petroleum hydrocarbons (TPH) were detected in concentrations above comparison criteria in 10 samples at the former skeet range. TPH-gasoline range was detected at a concentration of 2,700 mg/kg in the 8.0 feet bgs sample from 17VB021 and at 440 mg/kg in the 7.0 feet bgs sample from 17W21, both above the comparison criterion of 150 mg/kg. 17VB021 is a vacuum boring located west of the former skeet range on Walnut Avenue and completed during the remedial investigation at IR17. TPH-motor oil range was detected at a maximum concentration of 2,600 mg/kg in the surface sample from FNBWGB003, a soil boring completed east of the former skeet range.

Groundwater

Barium, aluminum, lead, mercury, nickel, and selenium were the only inorganic compounds detected in groundwater above their respective 95th percentile ambient values. Barium was detected at concentrations above the 95th percentile ambient value in four groundwater samples collected from the former skeet range area. The maximum concentration (1,730 µg/L) was detected at BGW01. Aluminum, lead, mercury, nickel, and selenium were each detected once above their respective 95th percentile ambient values in fourteen groundwater samples (sixteen for lead, thirteen for selenium) collected at the former skeet range area. Aluminum was detected in two samples, with a maximum concentration of 1,620 µg/L detected at 17W21. Nickel was detected once (17W21) at a concentration of 20.4 µg/L, above the 95th ambient value of 7.5 µg/L, but well below the 99th percentile ambient value of 82 µg/L. Lead was detected in three samples, but only once above the 95th percentile ambient value. The maximum concentration (15 µg/L) was detected at BGW01, slightly above the 95th percentile ambient value of 10, but below the 99th percentile ambient value of 22 µg/L. Mercury and selenium were only detected once each in all the samples collected at the former skeet range. Mercury was detected at BGW02 at a concentration (0.25 µg/L) slightly above the 95th percentile ambient value of 0.22 µg/L, but below the 99th percentile ambient value of 0.85 µg/L. BGW02 is adjacent to BGW01, located on the southern part of the former skeet range. Selenium was detected at a concentration (22.9 µg/L) slightly above the 99th percentile ambient value of 20 µg/L.

Benzene was the only VOC detected in groundwater at the former skeet range area above comparison criteria. Benzene was detected in one groundwater sample from 17VB021 at a concentration of 4 µg/L, slightly above the human health ingestion criterion (no ecological receptors are present at the former skeet range) of 1 µg/L. Xylene was detected at five locations (six samples) at the former skeet range area. The maximum concentration (55 µg/L) was detected at 17VB021, well below the human health ingestion criterion of 1,750 µg/L. Ethylbenzene and toluene were detected at four locations samples each, but none above their respective human health ingestion criterion.

The VOCs 1,2,4-trimethylbenzene, 2-butanone, 4-isopropyltoluene, isopropylebenzene, m,p-xylene, n-propylbenzene, and naphthalene were all detected at one location at the former skeet range, but there are no comparison criteria available for these compounds. Acetone, bromodichloromethane, bromoform,

chloroform, and dibromochloromethane were each detected at least at one location, but all well below their respective human health ingestion criterion. Acetone and chloroform are common laboratory contaminants.

Naphthalene was also detected as part of the SVOC analysis at three locations (five samples). The maximum concentration (6 µg/L) was detected at 17VB021. 2,4-dimethylphenol and 4-methylpenol were detected in one sample each, but there are no comparison criteria available for these compounds. No other SVOCs were detected above human health ingestion criteria at the former skeet range.

Alpha-bhc (pesticide) was detected at 17W21 at a concentration of 0.05 µg/L. Di-n-butyltin and n-butyltin (organotins) were also detected at 17W21 in two samples each, the maximum concentration of n-butyltin (60 µg/L) slightly above the human health ingestion criterion of 50 µg/L. TPH-diesel range/motor oil range and TPH-gasoline range were detected in two and four locations, respectively, with maximum detected values of 0.18 and 2.0 mg/L.

CONCLUSIONS

Based on the analytical results for the soil and groundwater samples collected at and in the vicinity of the former skeet range, there is no indication that the former skeet range has resulted in the release of contaminated materials; therefore, the Navy has determined that no action is appropriate for the former skeet range. The former skeet range is not considered to pose an environmental concern.

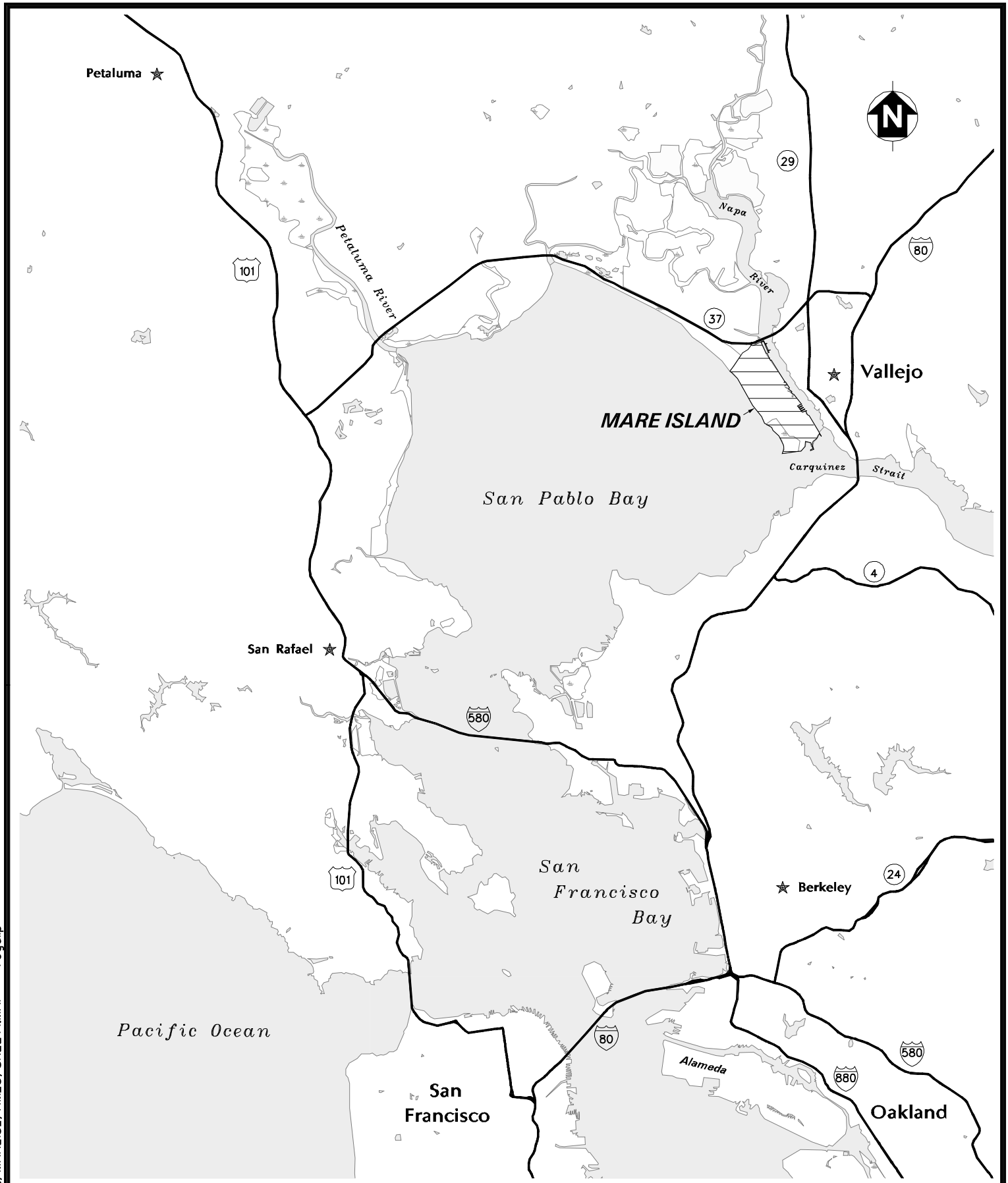
REFERENCES

California Department of Toxic Substances Control. 1992. "Federal Facility Site Remediation Agreement for Mare Island Naval Shipyard (MINS)." September 29.

PRC Environmental Management, Inc. 1995. "Preliminary Assessment Draft Summary Report for Ordnance Sites." December 9.

Tetra Tech EM Inc. (TtEMI). 1999. "Draft Investigation Area A2 Former North Building Ways Remedial Investigation." November 12.

TtEMI. 2001. "Draft Investigation Area A1 IR17 and Building 503 Remedial Investigation." February 28.



2 0 2 4 MILES

10,000 0 20,000 FEET

FORMER SKEET RANGE LETTER REPORT
MARE ISLAND, CALIFORNIA

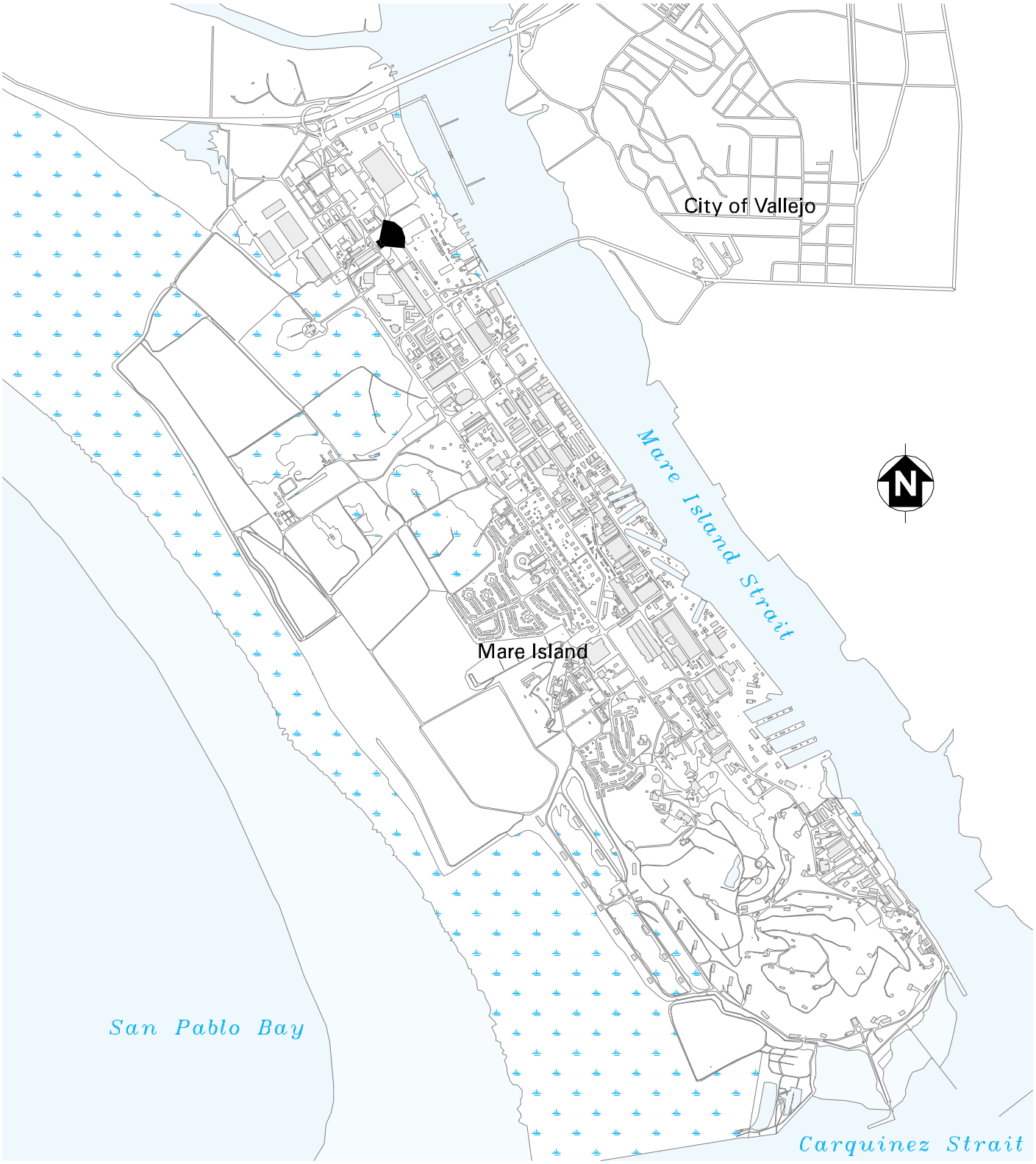
FIGURE 1

MARE ISLAND LOCATION MAP

K:/MAREISL/AMLS/SKEET1.MAP rogallp

05/08/01

TC.0179.10975



LEGEND

LOCATION OF FORMER SKEET RANGE

1250 0 1250 2500

SCALE IN FEET

Tetra Tech EM Inc.

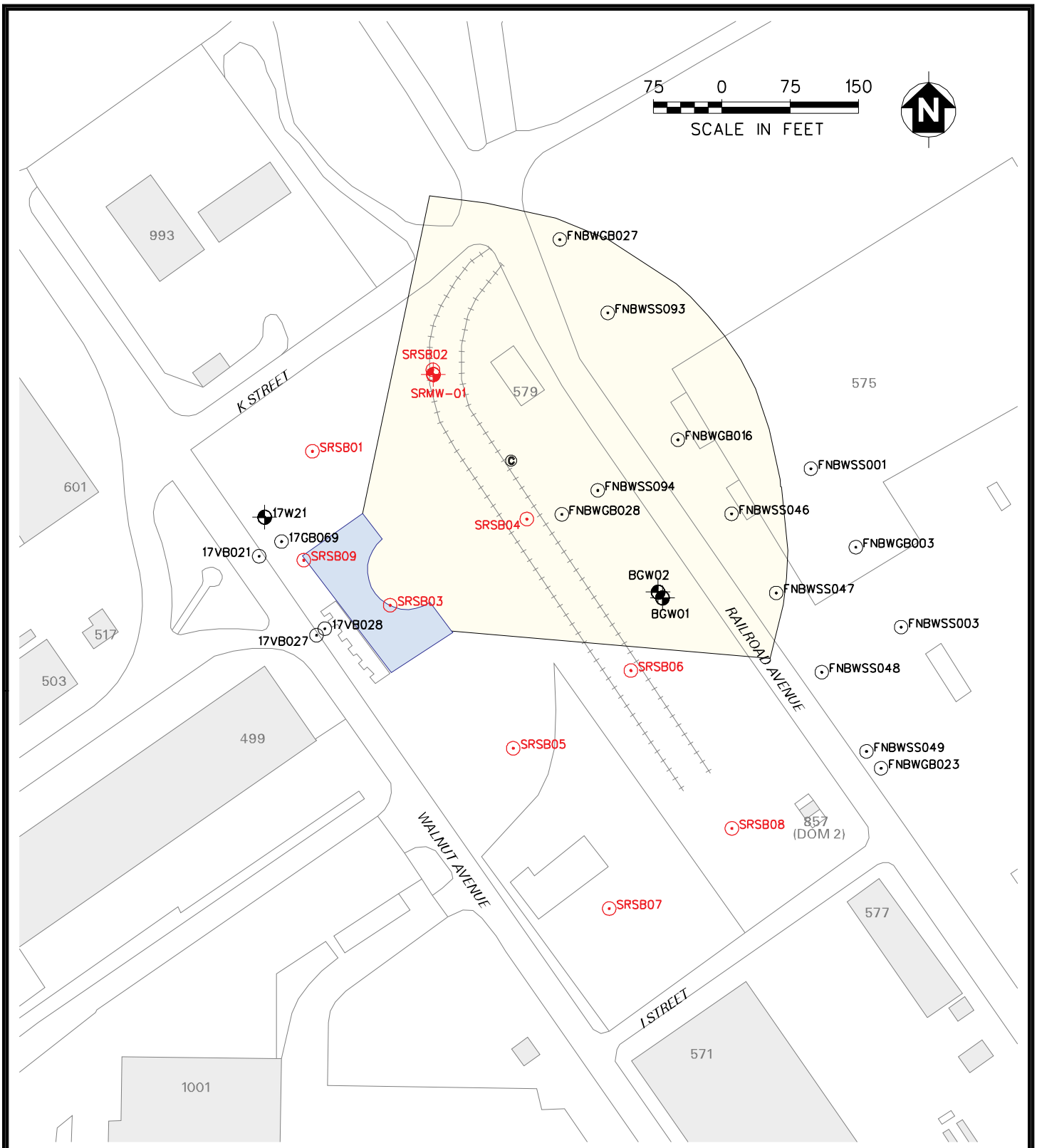
FORMER SKEET RANGE LETTER REPORT
MARE ISLAND, CALIFORNIA

FIGURE 2

SKEET AND FIRING RANGE AREAS LOCATION MAP

05/08/01 K:/MAREISL/AMLS/SKEET2.MAP skeet2.aml PRR

TC.0179.10975



LEGEND

- LEGACY SAMPLE LOCATION
- LEGACY MONITORING WELL
- OTHER SOIL BORING
- OTHER MONITORING WELL
- CATCH BASIN
- APPROXIMATE LOCATION OF REMOVED RAILROAD TRACKS
- FORMER FIRING AREA
- FORMER SKEET RANGE

Tetra Tech EM Inc.

FORMER SKEET RANGE LETTER REPORT
MARE ISLAND, CALIFORNIA

FIGURE 3

SKEET AND FIRING RANGE AREAS

05/08/01 K:/MAREISL/AMLS/SKEET3.MAP skeet3.aml PRR

TC.0179.10975

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
17	Closure of the former skeet range	Table 1	Letter Regarding "Mare Island Naval Shipyard, Technical Memorandum Preliminary Assessment at the Former Skeet Range." From Chip Gribble, DTSC to Jerry Dunaway, NAVFAC SWDIV. February 5, 2002.

Edwin F. Lowry, Director
700 Heinz Avenue, Suite 200
Berkeley, California 94710-2721

Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Gray Davis
Governor

February 5, 2002

Mr. Jerry Dunaway,
Southwest Division, Naval Facilities Engineering Command
1220 Pacific Highway
San Diego, CA 92101-8517

MARE ISLAND NAVAL SHIPYARD, TECHNICAL MEMORANDUM PRELIMINARY ASSESSMENT AT THE FORMER SKEET RANGE, DATED AUGUST 24, 2002

Dear Mr. Dunaway:

The Department of Toxic Substances Control has completed its review of the Technical Memorandum for the Preliminary Assessment and Site Inspection at the Former Skeet Range and Recommendation for Closure. We are satisfied with the Navy's analytical results and have no further comments at this time.

If you have any questions regarding this letter, please contact me at (510) 540-3773.

Sincerely,

Chip Gribble
Remedial Project Manager
Base Closure Unit
Office of Military Facilities

cc: See next page

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
18	Building 589	Table 1	General Radioactive Material Program (G-RAM), Final Radiological Site Inspection Report for the Decommissioning of Mare Island Naval Shipyard, Individual Site Characterization Summaries, Volume II, Book 9 of 34, Building 589. Radiological Engineering Division, Mare Island Naval Shipyard, Vallejo, California. April 1, 1996
			Naval Nuclear Propulsion Program (NNPP), Radiological Final Report for the Decommissioning of Mare Island Naval Shipyard, Other Permanent Facilities (Building 273 – Building A-228), Volume II, Book 6, Building 589. Radiological Engineering Division, Mare Island Naval Shipyard, Vallejo, California. April 1, 1996.

GENERAL RADIOACTIVE MATERIAL PROGRAM (G-RAM)

RADIOLOGICAL SITE INSPECTION REPORT
FINAL

FOR THE
DECOMMISSIONING OF

MARE ISLAND NAVAL SHIPYARD

SITE CHARACTERIZATION SUMMARY

BUILDING 589

BUILDING 589

A. DESCRIPTION

Building 589 is approximately 48' long by 31 'wide by 12' high with a 42'long by 31'wide patio attached to the north end. It is a single-story building constructed of concrete built in 1942. It is located on Waterfront Avenue, east of Railroad Avenue and south of K Street, in grid J1 of the "Map of the Naval Activities Mare Island".

B. BRIEF HISTORY

Building 589 was used as storage for the Public Work Center (PWC). Based on past site occupant interviews in Appendix E of the G-RAM survey plan stating possible use, accumulation or storage of radioactive material, Building 589 was surveyed.

C. DECOMMISSIONING SURVEYS

Category A, Group 1 area radiological decommissioning surveys were performed at Building 589 per Technical Work Document (TWD) 10/949-BLDG589-2708.

Building 775 was selected as an analogous area for Building 589 based on similar construction materials and environmental factors that might affect natural background radiation levels. Natural average background radiation levels obtained at Building 775 were 6500 CPM for the IM-253/PD in the HV-2 GROSS mode.

The radiological decommissioning survey results are summarized below. The sample results are reported with a two sigma uncertainty of less than 100%.

- Gamma scintillation surveys performed with the IM-253/PD (HV-2 GROSS mode) did not detect areas with radiation levels greater than or equal to twice the naturally occurring background radiation levels.

- Gamma radioanalysis of 3 Category A, Group 1 area solid material samples (concrete) obtained from Building 589 was performed to characterize residual activity. The radionuclides of interest for the gamma radioanalysis of the solid material samples was Cobalt-60 (Co-60), Cesium-137 (Cs-137), Radium-226 (Ra-226) and Thorium-232 (Th-232). When the samples were analyzed for specific Cs-137 activity, the samples contained less than the activity limit of 1 pCi/g for Cs-137 authorized by the G-RAM Survey Plan. When the samples were analyzed for specific Ra-226 and Th-232 activity,

the samples contained less than the activity limit of 5 pCi/g for Ra-226 and Th-232 authorized by the G-RAM Survey Plan. In addition, the levels of Uranium-238 (U-238) were below 5 pCi/g.

When the samples were analyzed for specific Co-60 activity, in one sample activity was detected above minimum detectable activity (MDA). Additional samples were taken which also showed acitivity above MDA. The findings were turned over to the Naval Nuclear Propulsion Program closure group for further investigation and remediation.

Based on these survey results, no release to the environment or buildup of radioactivity above the activity limits authorized by the G-RAM Survey Plan for Ra-226, Th-232, Cs-137 and U-238 has occurred at Building 589.

NAVAL NUCLEAR PROPULSION PROGRAM (NNPP)

RADIOLOGICAL FINAL REPORT

FOR THE

DECOMMISSIONING

OF

MARE ISLAND NAVAL SHIPYARD

OTHER PERMANENT FACILITIES
(BUILDING 273 – BUILDING A-228)

VOLUME II, BOOK 6

Prepared by the

Radiological Engineering Division
Mare Island Naval Shipyard
Vallejo, California

April 1, 1996

BUILDING 589

A. Description:

Building 589 was constructed in 1942 and is 48 feet long by 31 feet wide by 12 feet high. There is a patio, 42 feet long by 31 feet wide, attached to the north end. Building 589 is a single-story structure constructed of concrete. This building is located in grid J1 of the "MAP OF NAVAL ACTIVITIES MARE ISLAND."

B. Brief History:

1. Use:

This building is currently used for Public Works Center (PWC) storage and is unoccupied.

2. Radiological History:

Building 589 was identified by an interviewee as a possible accumulation or storage area for radioactive material. This building was originally assigned to be surveyed under the General Radioactive Material (G-RAM) Program. However, the initial surveys detected the presence of low-level Cobalt-60 radioactivity. As a result the building was reassigned to the Naval Nuclear Propulsion Program (NNPP) for the purposes of decommissioning surveys.

C. Decommissioning Surveys:

Group 3 radiological decommissioning surveys were performed in Building 589 in accordance with instructions of Technical Work Document (TWD) 10/931-BLDG589-2293. No Cobalt-60 radioactivity above the Naval Nuclear Propulsion Program limit of 1 pCi/g for solid material samples was detected.

For naturally occurring background radiation level determinations, Building 641 was selected as an analogous area to Building 589 based on similar construction materials and environmental factors. Natural average background radiation levels obtained from Building 641 were 256 counts per minute for the IM-253/PD in the HV-1 PHA mode and 5187 counts per minute for the IM-253/PD in the HV-2 GROSS mode. These surveys were performed within the internal perimeter of Building 641.

C. Decommissioning Surveys (Continued):

The radiological decommissioning survey results are summarized below:

- Beta/gamma scan surveys performed with the IM-247/PD did not detect areas equal to or greater than 450 pCi/20cm^2 equivalent Cobalt-60.

- Gamma scintillation surveys performed with the IM-253/PD (HV-1 PHA) did not detect areas equal to or greater than twice the naturally occurring background radiation levels.

- Gamma scintillation surveys performed with the IM-253/PD (HV-2 GROSS) did not detect areas equal to or greater than twice the naturally occurring background radiation levels.

- A radioanalysis of 184 solid material (concrete/grout/wood) samples was performed to characterize any residual activity. The solid samples were taken from the area of the highest scan survey reading from each identified grid. The results of the radioanalysis are summarized below (see the survey grid maps for specific information):

  - Thirteen samples contained detectable Cobalt-60 to a maximum of 0.333 pCi/g. Thirteen grid areas were remediated and resurveyed and sampled. The results of the re-sampling are reported below.

  - Following remediation, the thirteen grids with detectable Cobalt-60 were re-sampled. All thirteen samples, when analyzed for specific Cobalt-60 were less than the minimum detectable activity (MDA). Based on variations in sample masses and counting duration, these MDA's range from 0.002 to 0.018 pCi/g.

  - The remaining 171 samples contained only naturally occurring radionuclides, predominantly Potassium-40, Thallium-208, Lead-212 and 214, Bismuth-212 and 214, Radium-224 and 226, Actinium-228, Protactinium-231 and 234, Thorium-232 and 234, and Uranium-235. The measurable concentrations of Radium-226 were less than 5 pCi/g.

C. Decommissioning Surveys (Continued):

- When analyzed for specific Cobalt-60, all of the remaining 171 samples were less than the minimum detectable activity (MDA). Based on variations in sample masses and counting duration, these MDAs ranged from 0.002 to 0.019 pCi/g.

- A small amount of Cesium-137 was found in 34 solid material samples. The maximum concentration was 0.575 pCi/g in grid V-15. This quantity is consistent with background levels attributable to fallout from worldwide nuclear weapons testing.

o A radioanalysis of two sediment samples from floor level electrical stuffing tubes, four solid samples from basement tunnels, and sixteen solid samples from floor level wall vents was performed to characterize any residual activity. The results of the radioanalysis are summarized below (see the survey grid maps for specific information):

- Two sediment samples from the Building 589 floor level electrical stuffing tubes were analyzed for specific Cobalt-60. Both samples (F016T and F094T) were less than the minimum detectable activity (MDA). Based on variations in sample masses and counting duration, the MDAs were 0.225 and 0.044 pCi/g. The sample from F016T (soil, organic debris) had a total activity level of 271 pCi/g, which was 100% Potassium-40. Experience has shown that light weight samples with naturally occurring nuclides such as Potassium-40 statistically tend to project a large activity as a result of the nuclide's low abundance in combination with the relatively short counting time sufficient for the Naval Nuclear Propulsion Program (NNPP). This naturally occurring nuclide is not a nuclide of concern in this case. An accurate result for this nuclide would require a large sample and/or much longer count times.

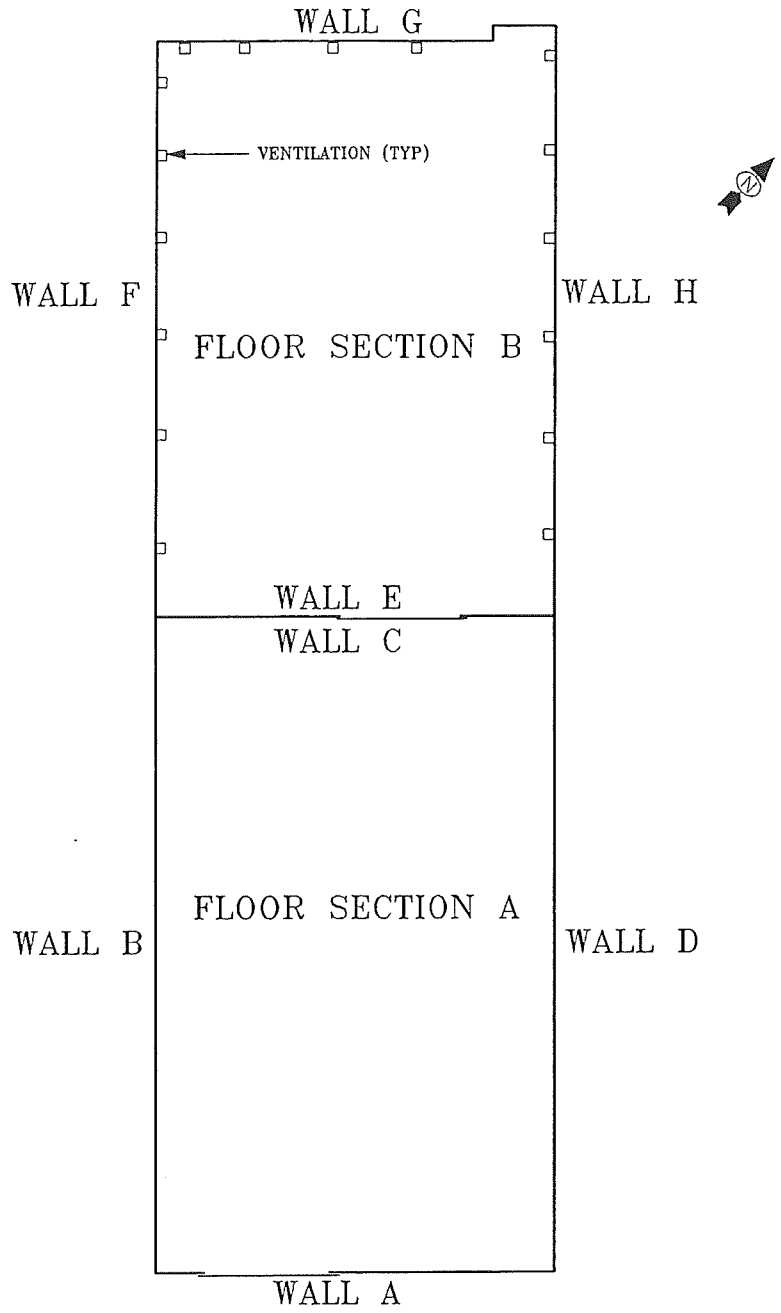
BUILDING 589 (Continued):

C. Decommissioning Surveys (Continued):

- Four sediment samples from the Building 589 basement tunnels contained detectable Cobalt-60 less than 1 pCi/g. The basement tunnels are constructed of concrete and have no evidence of leaks to groundwater. They are, however, open to the environment via the stuffing tubes that, in some instances, are cut off at ground level. The water and sediment present in the tunnels resulted from rain and dirt entering via the stuffing tubes. The basement tunnels were remediated by removing all water and sediment. Four solid material (concrete) samples (B01, B02, B03, and B04) were obtained from the basement after remediation. When analyzed for specific Cobalt-60, the four samples were less than the minimum detectable activity (MDA). Based on variations in sample masses and counting duration, these MDAs ranged from 0.007 to 0.012 pCi/g. No further action was required.

- Sixteen solid samples from the Building 589 floor wall vents were analyzed for specfic Cobalt-60. All sixteen samples were less than minimum detectable activity (MDA). Based on variations in sample masses and counting duration, these MDAs ranged from 0.006 to 0.017 pCi/g. No further action was required.

Based on these survey results, no Cobalt-60 radioactivity greater than the Naval Nuclear Propulsion Program limits remains at Building 589.



BUILDING 589

OVERALL SECTIONAL LAYOUT

BUILDING 589
GROUP 3
FLOOR GRIDS
SECTION A

TO SECTION B

WALL

F001 a: <450 b: 300 c: 5750 d: 7.479 e: <0.006	F002 a: <450 b: 250 c: - d: 6.432 e: <0.010	F003 a: <450 b: 300 c: - d: 6.757 e: <0.014	F004 a: <450 b: 300 c: - d: 10.449 e: <0.010	F005 a: <450 b: 250 c: 5750 d: 9.487 e: <0.009	F006 a: <450 b: 250 c: - d: 7.483 e: <0.009	F007 a: <450 b: 250 c: - d: 5.097 e: <0.008	F008 a: <450 b: 250 c: - d: 6.821 e: <0.003	F009 @ a: <450 b: 300 c: 5250 d: 5.933 e: <0.010		F010 a: <450 b: 300 c: - d: 6.372 e: <0.019
F019 a: <450 b: 250 c: - d: 7.518 e: <0.008	F020 a: <450 b: 250 c: - d: 7.714 e: <0.008	F021 a: <450 b: 250 c: 5750 d: 7.166 e: <0.018	F022 a: <450 b: 250 c: - d: 8.750 e: <0.013	F023 a: <450 b: 225 c: - d: 6.692 e: <0.019	F024 a: <450 b: 200 c: - d: 5.581 e: <0.007	F025 a: <450 b: 225 c: 5750 d: 6.951 e: <0.012	F026 a: <450 b: 200 c: - d: 7.318 e: <0.007	F027 a: <450 b: 225 c: - d: 6.673 e: <0.005		F028 a: <450 b: 225 c: - d: 6.352 e: <0.009
F037 a: <450 b: 300 c: 5500 d: 4.969 e: <0.008	F038 a: <450 b: 275 c: - d: 1.836 e: <0.009	F039 a: <450 b: 275 c: - d: 7.261 e: <0.012	F040 a: <450 b: 275 c: - d: 12.619 e: <0.011	F041 a: <450 b: 350 c: 5750 d: 7.352 e: <0.010	F042 a: <450 b: 350 c: - d: 6.817 e: <0.007	F043 a: <450 b: 325 c: - d: 6.512 e: <0.007	F044 a: <450 b: 325 c: - d: 9.573 e: <0.008	F045 a: <450 b: 350 c: 5750 d: 7.698 e: <0.013		F046 a: <450 b: 250 c: - d: 7.198 e: <0.008
F055 a: <450 b: 300 c: - d: 6.419 e: <0.007	F056 a: <450 b: 300 c: - d: 4.996 e: <0.011	F057 a: <450 b: 300 c: 5750 d: 6.116 e: <0.011	F058 a: <450 b: 300 c: - d: 5.817 e: <0.007	F059 a: <450 b: 200 c: - d: 6.218 e: <0.003	F060 a: <450 b: 300 c: - d: 8.411 e: <0.010	F061 a: <450 b: 350 c: 5750 d: 9.079 e: <0.007	F062 a: <450 b: 325 c: - d: 7.887 e: <0.009	F063 a: <450 b: 350 c: - d: 9.286 e: <0.005		F064 a: <450 b: 250 c: - d: 9.880 e: <0.014
F073 a: <450 b: 300 c: 5750 d: 9.677 e: <0.010	F074 a: <450 b: 300 c: - d: 7.319 e: <0.007	F075 a: <450 b: 300 c: - d: 8.007 e: <0.007	F076 a: <450 b: 300 c: - d: 6.762 e: <0.006	F077 a: <450 b: 300 c: 5750 d: 6.414 e: <0.012	F078 a: <450 b: 300 c: - d: 6.234 e: <0.008	F079 a: <450 b: 300 c: - d: 6.352 e: <0.008	F080 a: <450 b: 275 c: - d: 6.245 e: <0.007	F081 a: <450 b: 250 c: 5500 d: 6.964 e: <0.007		F082 a: <450 b: 225 c: - d: 7.324 e: <0.013
F091 @ a: <450 b: 250 c: - d: 7.892 e: <0.010	F092 a: <450 b: 250 c: - d: 8.721 e: <0.010	F093 a: <450 b: 250 c: 5000 d: 7.415 e: <0.010	F094 # a: <450 b: 225 c: - d: 5.000 e: <0.014	F095 a: <450 b: 225 c: - d: 7.259 e: <0.009	F096 a: <450 b: 250 c: - d: 6.113 e: <0.007	F097 a: <450 b: 250 c: 5500 d: 4.680 e: <0.012	F098 a: <450 b: 250 c: - d: 7.074 e: <0.007	F099 a: <450 b: 250 c: - d: 7.664 e: <0.004		F100 a: <450 b: 250 c: - d: 7.322 e: <0.009

WALL

DOOR

WALL

WALL

DOOR

WALL

@ TUNNEL CONCRETE SAMPLE DATA:

F009(B02)
d: 7.029
e: <0.011

F091(B01)
d: 4.963
e: <0.007

STUFFING TUBE SAMPLE DATA:

F094
d: 0.000
e: <0.044

NOTE: TOTAL ACTIVITY IS REPORTED AS 0.000 [pCi/g] FOR SAMPLES WHERE THE SPECIFIC ACTIVITY CONCENTRATION OF ALL THE RADIONUCLIDES ANALYZED FOR IS LESS THAN THE MINIMUM DETECTABLE ACTIVITY (MDA).

LEGEND:

a: IM-247/PD RESULTS [pCi/20cm²]
b: IM-253/PD (HV-1/PHA) RESULTS [CPM]
c: IM-253/PD (HV-2/GROSS) RESULTS [CPM]
d: SOLID SAMPLE RADIOACTIVITY RESULTS (TOTAL ACTIVITY) [pCi/g]
e: SOLID SAMPLE SPECIFIC Co-60 RESULTS [pCi/g]

NOTES:

ANALOGOUS AREA AVERAGE BACKGROUND RADIATION LEVELS:
IM-253/PD (HV-1/PHA) - 256 CPM
IM-253/PD (HV-2/GROSS) - 5187 CPM

BUILDING 589
GROUP 3
FLOOR GRIDS
SECTION B

LEGEND:

a: IM-247/PD RESULTS [pCi/20cm²]
b: IM-253/PD (HV-1/PHA) RESULTS [CPM]
c: IM-253/PD (HV-2/GROSS) RESULTS [CPM]
d: SOLID SAMPLE RADIOACTIVITY RESULTS (TOTAL ACTIVITY) [pCi/g]
e: SOLID SAMPLE SPECIFIC Co-60 RESULTS [pCi/g]

NOTES:

ANALOGOUS AREA AVERAGE BACKGROUND RADIATION LEVELS:
IM-253/PD (HV-1/PHA) - 256 CPM
IM-253/PD (HV-2/GROSS) - 5187 CPM

W01	W02	W03	W04	W05	W06	W07	W08	W09
a: <450	a: <450	a: <450	a: <450	a: <450	a: <450	a: <450	a: <450	a: <450
b: 300	b: 275	b: 275	b: 250	b: 275	b: 275	b: 250	b: 250	b: 300
c: -	c: 5500	c: -	c: -	c: -	c: 5500	c: -	c: -	c: -
d: 9.469	d: 9.910	d: 9.579	d: 8.836	d: 8.230	d: 7.913	d: 9.787	d: 8.288	d: 9.100
e: <0.009	e: <0.008	e: <0.007	e: <0.007	e: <0.008	e: <0.010	e: <0.004	e: <0.011	e: <0.009

WALL B

W10
a: <450
b: 250
c: 5000
d: 12.370
e: <0.013

W11	W12	W13	W14	W15	W16	W17	W18
a: <450	a: <450	a: <450	a: <450	a: <450	a: <450	a: <450	a: <450
b: 350	b: 350	b: 350	b: 350	b: 350	b: 400	b: 400	b: 400
c: -	c: -	c: -	c: 7000	c: -	c: -	c: -	c: 8000
d: 21.511	d: 24.578	d: 24.908	d: 25.120	d: 14.899	d: 22.311	d: 25.738	d: 23.029
e: <0.016	e: <0.012	e: <0.014	e: <0.009	e: <0.017	e: <0.008	e: <0.006	e: <0.014

WALL F

WALL G

W19	W20	W21	W22	W23	W24
a: <450	a: <450	a: <450	a: <450	a: <450	a: <450
b: 400	b: 450	b: 400	b: 450	b: 450	b: 375
c: -	c: -	c: 8000	c: -	c: -	c: -
d: 22.616	d: 24.356	d: 16.364	d: 20.259	d: 19.798	d: 18.946
e: <0.012	e: <0.017	e: <0.018	e: <0.012	e: <0.013	e: <0.011

W25	W26	W27	W28	W29	W30	W31	W32
a: <450	a: <450	a: <450	a: <450	a: <450	a: <450	a: <450	a: <450
b: 375	b: 450	b: 400	b: 400	b: 350	b: 350	b: 350	b: 350
c: 7500	c: -	c: -	c: -	c: 7500	c: 7000	c: -	c: 6750
d: 22.488	d: 20.884	d: 22.185	d: 19.036	d: 21.729	d: 18.087	d: 16.583	d: 18.617
e: <0.014	e: <0.006	e: <0.013	e: <0.015	e: <0.018	e: <0.007	e: <0.009	e: <0.007

WALL H

W33	W34	W35	W36	W37	W38	W39	W40	W41
a: <450	a: <450	a: <450	a: <450	a: <450	a: <450	a: <450	a: <450	a: <450
b: 300	b: 275	b: 300	b: 275	b: 300	b: 275	b: 300	b: 300	b: 275
c: 6000	c: -	c: -	c: -	c: 6000	c: -	c: -	c: -	c: 6000
d: 6.628	d: 7.986	d: 6.559	d: 6.525	d: 9.225	d: 3.698	d: 7.540	d: 5.762	d: 7.156
e: <0.009	e: <0.009	e: <0.008	e: <0.009	e: <0.008	e: <0.008	e: <0.010	e: <0.009	e: <0.007

WALL D

W42
a: <450
b: 250
c: -
d: 7.855
e: <0.013

WALL A

W43	W44	W45	W46	W47	W48
a: <450	a: <450	a: <450	a: <450	a: <450	a: <450
b: 275	b: 225	b: 225	b: 225	b: 250	b: 225
c: -	c: -	c: 6000	c: -	c: -	c: -
d: 6.928	d: 6.780	d: 6.079	d: 7.532	d: 8.836	d: 9.625
e: <0.014	e: <0.010	e: <0.017	e: <0.006	e: <0.009	e: <0.007

W49	W50	W51	W52	W53	W54
a: <450	a: <450	a: <450	a: <450	a: <450	a: <450
b: 300	b: 250	b: 300	b: 250	b: 300	b: 275
c: 6000	c: -	c: -	c: -	c: 6000	c: -
d: 7.799	d: 4.961	d: 7.653	d: 0.000	d: 6.390	d: 1.034
e: <0.007	e: <0.004	e: <0.006	e: <0.011	e: <0.009	e: <0.017

WALL C

NOTE: TOTAL ACTIVITY IS REPORTED AS 0.000 [pCi/g] FOR SAMPLES WHERE THE SPECIFIC ACTIVITY CONCENTRATION OF ALL THE RADIONUCLIDES ANALYZED FOR IS LESS THAN THE MINIMUM DETECTABLE ACTIVITY (MDA).

W55	W56	W57	W58	W59	W60
a: <450	a: <450	a: <450	a: <450	a: <450	a: <450
b: 350	b: 350	b: 200	b: 250	b: 250	b: 250
c: -	c: -	c: -	c: 5500	c: -	c: -
d: 11.884	d: 9.746	d: 6.154	d: 7.762	d: 9.946	d: 10.084
e: <0.010	e: <0.008	e: <0.015	e: <0.008	e: <0.007	e: <0.008

WALL E

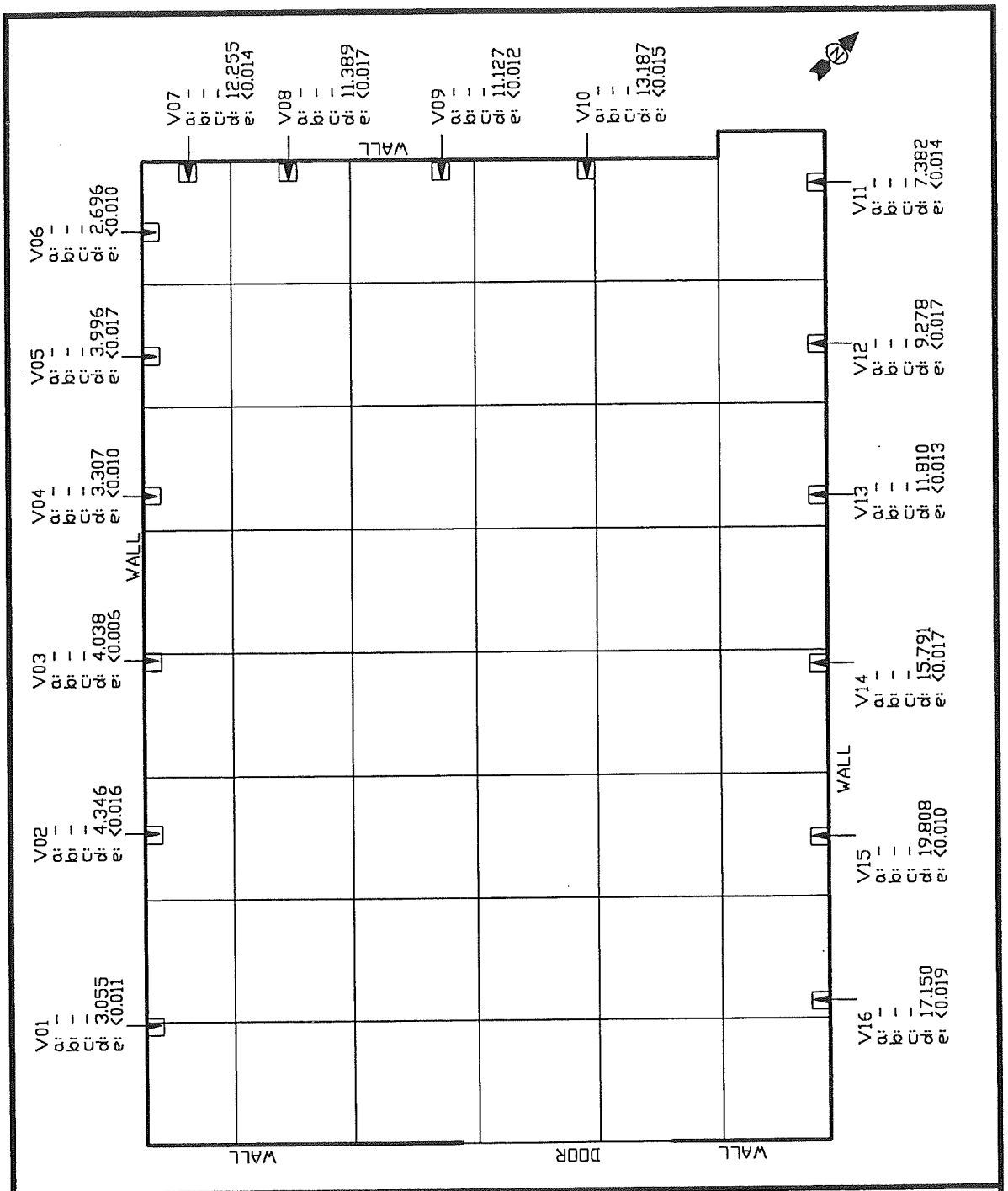
BUILDING 589
GROUP 3
WALL GRIDS

LEGEND:

a: IM-247/PD RESULTS [pCi/20cm^2]
b: IM-253/PD (HV-1/PHA) RESULTS [CPM]
c: IM-253/PD (HV-2/GROSS) RESULTS [CPM]
d: SOLID SAMPLE RADIOACTIVITY RESULTS (TOTAL ACTIVITY) [pCi/g]
e: SOLID SAMPLE SPECIFIC Co-60 RESULTS [pCi/g]

NOTES:

ANALOGOUS AREA AVERAGE BACKGROUND RADIATION LEVELS:
IM-253/PD (HV-1/PHA) - 256 CPM
IM-253/PD (HV-2/GROSS) - 5187 CPM



BUILDING 589 GROUP 3 VENT GRIDS

LEGEND:

a: IM-247/PD RESULTS [pCi/20cm²]
b: IM-253/PD (HV-1/PHA) RESULTS [CPM]
c: IM-253/PD (HV-2/GROSS) RESULTS [CPM]
d: SOLID SAMPLE RADIOACTIVITY RESULTS (TOTAL ACTIVITY) [pCi/g]
e: SOLID SAMPLE SPECIFIC Co-60 RESULTS [pCi/g]

NOTES:

ANALOGOUS AREA AVERAGE BACKGROUND RADIATION LEVELS:
IM-253/PD (HV-1/PHA) - 256 CPM
IM-253/PD (HV-2/GROSS) - 5187 CPM

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
19	Closure letter	Table 1	Letter Regarding the "Naval Nuclear Propulsion Program (NNPP) Radiological Survey Plan for Decommissioning Mare Island Naval Shipyard, Volume I, dated 2/28/96, and Naval Nuclear Propulsion Program Radiological Final Report for Decommissioning Mare Island Naval Shipyard, dated 4/1/96." From Tom Huetteman, USEPA, to Robert O'Brien, Radiological Control Office, Mare Island Naval Shipyard. March 19, 1996.
			Letter Regarding the "Naval Nuclear Propulsion Program (NNPP) Radiological Survey Plan (Volume I, Books 1 and 2, and Dated 2/28/96 for Revision 2 Change 3) and Radiological Final Report (Volume II, Books 1-8, and Dated 4/1/96) for the Decommissioning of Mare Island." From Chip Gribble, DTSC, to Robert. D. O'Brien, Radiological Control Office, Mare Island Naval Shipyard. March 18, 1996.
			Letter Regarding "Mare Island Naval Shipyard – Radioactive Equipment Material Associated with Naval Nuclear Propulsion Plants; Termination of Authorization to Handle." From Commander, Naval Sea Systems Command, to Commander, Mare Island Naval Shipyard. March 12, 1996.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

March 19, 1996

Robert D. O'Brien, Director
Radiological Control Office, Code 105
Mare Island Naval Shipyard
Vallejo, CA 94592-5100

Re: Naval Nuclear Propulsion Program (NNPP) Radiological Survey Plan for Decommissioning of Mare Island Naval Shipyard, Volume I, dated 2/28/96, and Naval Nuclear Propulsion Program Radiological Final Report for Decommissioning of Mare Island Naval Shipyard, Volume II, dated 4/1/96.

Dear Mr. O'Brien:

The U.S. Environmental Protection Agency (EPA) has reviewed the subject documents. The subject documents describe the plans and final results for surveys and any necessary remediation of all known NNPP concerns at Mare Island Naval Shipyard. Our review of the Survey Plan consisted of reviewing the changes made to this document from the previously agreed to plan dated 11/14/95. Our review of the Final Report consisted of reviewing it for consistency with the Survey Plan and with previously agreed to site specific completion reports.

In addition to these reviews, we have also conducted jointly with the State of California various quality assurance oversight activities to assess the quality of the NNPP radiological survey work and to determine its consistency with the agreed to plans and procedures. These joint State and EPA oversight activities included inspections of the radiological counting laboratory at Mare Island, reviews of laboratory and backup documentation for the survey work, periodic observations of survey and remediaiton field work, reanalysis by EPA's National Air and Radiation Environmental Laboratory of selected solid samples collected by the Navy, and independent field instrument surveys.

The findings from the above oversight activities have to date demonstrated data quality and integrity consistent with the standards and procedures established by the NNPP Survey Plan and supporting documents and have not uncovered any problems which would alter the conclusions contained in the Final Report.

Our review of the subject documents finds that they have addressed all our outstanding comments and concerns. Based on this review and the oversight activities conducted by EPA and the State, we agree with the Navy's conclusion that all radiological concerns associated with the NNPP program at Mare Island Naval Shipyard have been resolved.

In addition, we would like to complement the Navy and the Mare Island personnel involved with this program on the tremendous effort and dedication demonstrated in completing this enormous task. We also greatly appreciate your cooperation in working with us to address our concerns and reach agreement on the Final Report.

If you have any questions regarding this letter, please call me at 415/744-2407.

Sincerely,

Tom Huetteman

Tom Huetteman
Remedial Project Manager

cc: Dick Logar, MINS
Chip Gribble, DTSC
Penny Leinwander, DHS
Vince Christian, RWQCB

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
REGION 2
700 HEINZ AVE., SUITE 200
BERKELEY, CA 94710-2737

(510) 540-3724

March 18, 1996

Mr. Bob O'Brien
Director of Radiological Control
Mare Island Naval Shipyard
Vallejo, California 94592-5100

Dear Mr. O'Brien:

NAVAL NUCLEAR PROPULSION PROGRAM (NNPP) RADIOLOGICAL SURVEY PLAN (VOLUME I, BOOKS 1 AND 2, AND DATED 2/28/96 FOR REVISION 2 CHANGE 3) AND RADIOLOGICAL FINAL REPORT (VOLUME II, BOOKS 1-8, AND DATED 4/1/96) FOR THE DECOMMISSIONING OF MARE ISLAND NAVAL SHIPYARD.

The Department of Toxic Substances Control, the Regional Water Quality Control Board, and the Department of Health Services have reviewed the subject documents. Our evaluation of the Radiological Survey Plan (Volume I, Books 1 and 2, Revision 2 Change 3) consisted of reviewing changes made from Revision 2 Change 2, which we had previously agreed to in a DTSC letter dated 12/21/95. Our evaluation of the Radiological Final Report (Volume II, Books 1-8) primarily consisted of reviewing Volume II for consistency with Volume I and for consistency with previously reviewed and agreed to Site Specific Completion Reports, as well as other efforts, discussed below, to assess the quality of the NNPP radiological decommissioning survey program for Mare Island.

In a joint effort with the USEPA to assess the quality of the NNPP radiological decommissioning survey program for Mare Island, we have: inspected on several occasions the Mare Island Analytical Laboratory and assessed quality control procedures and documentation; reviewed backup documentation supporting Site Specific Release Reports and analytical data; observed Navy field surveys and other field work in progress; reanalyzed selected Mare Island samples at the USEPA NAREL Laboratory for data confirmation; and performed independent field instrument surveys at selected sites. The findings from this effort have to date demonstrated data quality and integrity consistent with the standards and procedures established for the NNPP radiological decommissioning survey program and have not uncovered any problems which would alter the conclusions contained in the final report.

The subject documents included survey plans, and survey and remediation results for all identified areas of concern. All outstanding comments regarding the subject documents have been resolved. We, therefore, agree that the Navy has fully addressed and has acceptably documented to State Agencies, resolution of all radiological concerns associated with the Naval Nuclear Propulsion Program at Mare Island.

In addition, we would like to acknowledge the significant cooperative effort on the part of the Navy and the many Mare Island personnel that have been involved in the decommissioning program. The committment to thoroughness and the committment to fully address State Agencies concerns has been exceptional and noteworthy.

Should you have any questions regarding this letter, please call me at (510) 540-3816.

Sincerely,

Chip Gribble

Chip Gribble
Remedial Project Manager
Base Closure Unit
Office of Military Facilities

cc: Mr. Vince Christian
Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

Ms. Penny Leinwander
Department of Health Services
Environmental Management Branch, MS396
P.O. Box 942732
Sacramento, California 94234-7320

Mr. Tom Huetteman
U.S. Environmental Protection Agency
Mail code H-9-2
75 Hawthorne Street
San Francisco, California 94105-3901

Mr. John Hall
Head, Radiological Engineering Division
Mare Island Naval Shipyard
Vallejo, California 94592-5100

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
2531 JEFFERSON DAVIS HWY
ARLINGTON, VA 22242-5160

IN REPLY REFER TO
08R:BD
Ser 08R/96-11194
12 March 1996

From: Commander, Naval Sea Systems Command
To: Commander, Mare Island Naval Shipyard

Subj: **MARE ISLAND NAVAL SHIPYARD - RADIOACTIVE EQUIPMENT AND MATERIAL ASSOCIATED WITH NAVAL NUCLEAR PROPULSION PLANTS; TERMINATION OF AUTHORIZATION TO HANDLE**

Ref: (a) MINS ltr Ser 105.6/2 dtd 1 MAR 96
(b) NAVSEAINST 9210.12 dtd 23 JAN 82
(c) NAVSEA 389-0288 (Radiological Controls for Shipyards)
(d) NAVSEA ltr Ser 08X/96-14020 dtd 11 MAR 96

1. By ref (a), and in accordance with ref (b), Mare Island Naval Shipyard requested termination of authorization to handle radioactive equipment and material associated with Naval nuclear propulsion plants. Ref (a) stated that all radioactive equipment and material associated with Naval nuclear propulsion plants have been removed from Mare Island. Ref (a) also stated that all radiological surveys required to verify removal of all radioactivity in excess of the limits of ref (c) have been completed.

2. NAVSEA reported in ref (d) the results of an inspection to determine the readiness of Mare Island for termination of authorization to handle radioactive equipment and material associated with Naval nuclear propulsion plants. Based upon this inspection, Mare Island has completed all actions needed to support termination of authorization.

3. Mare Island Naval Shipyard's authorization to handle radioactive equipment and material in accordance with ref (b) is terminated.

B. DeMARS
Director, Naval Nuclear Propulsion

Copy to:
NAVSHIPYD Mare Island (Code 105)

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
20	Closure letter	Table 1	Letter Regarding the "Completion of All Mare Island Naval Shipyard General Radioactive Material (G-RAM) Surveys." From Chip Gribble, DTSC, to Juris Sinats, Engineering Field Activity West (EFA West). October 23, 1997.

Cal/EPA

Department of Toxic Substances Control

700 Heinz Avenue Suite 200 Berkeley, CA 94710-2737

Pete Wilson Governor

James M. Strock Secretary for Environmental Protection

Environmental Restoration Branch
Western Division
Naval Facilities Engineering Command
Attn: Mr. Juris Sinats
900 Commodore Drive
San Bruno, California 94066-0720

Dear Mr. Sinats:

COMPLETION OF ALL MARE ISLAND NAVAL SHIPYARD GENERAL RADIOACTIVE MATERIAL (G-RAM) SURVEYS.

The purpose of this letter is to note that the following set of Navy documents (that have been reviewed and approved by the USEPA and Cal/EPA) constitute the final approved G-RAM survey report.

1. Mare Island Naval Shipyard Final Release Report, General Radioactive Material (G-RAM) Radiological Survey Plan, Volumes 1 and 2, Dated 3/28/96, and with change pages received 3/29/96.

2. Radiological Release of Former Mare Island Naval Shipyard Dry Dock No. 2 for Unrestricted Use, dated 7/2/96 (EFA-West forwarding letter dated 7/29/97).

3. General Radioactive Material (G-RAM) Radiological Final Release Report for the Decommisioning of Mare Island Naval Shipyard, New Defense Material Re-Utilization and Marketing Organization Scrapyard Final Release Report, dated 12/5/96 and with change pages faxed 5/14/97 (EFA-West forwarding letter dated 1/9/97).

4. General Radioactive Material (G-RAM) Radiological Final Release Report for the Decommissioning of Mare Island Naval Shipyard, Defense Material Re-Utilization and Marketing Organization (DRMO) Original Scrapyard Final Release Report, dated 3/27/97, and with change pages faxed 4/17/97 and 4/28/97 (EFA-West forwarding letter dated 3/31/97).

5. Groundwater Nuclide Analysis Report for Mare Island Naval Shipyard, dated 8/8/97, and with change pages faxed 8/8/97 (EFA-West forwarding letter dated 6/30/97).

Printed on Recycled Paper

6a. Mare Island General Radioactive Material (G-RAM) Radiological Decommissioning Survey of Building 629 Storage Yard, dated 2/14/96 and with change pages dated 3/11/96.

6b. Additional Radiological Information Concerning Radioactive Fallout, Building 629 Storage Yard, Mare Island, dated 7/1/96 (EFA-West forwarding letter dated 7/23/96).

6c. Radiological Information Concerning Radioactive Fallout, Mare Island Naval Shipyard, Building 629 Storage Yard, Additional Information, dated 1/28/97 (EFA-West forwarding letter dated 2/27/97).

To avoid confusion with the public record, we suggest that items numbered 2 through 6, as listed above, be added to the 27 volume 3-ring binder set that constitutes Volume 2 of item number 1.

Finally, it is important to acknowledge the exceptional committment, outstanding hard work, and superior technical performance on the part of the Navy and the many Mare Island personnel that have worked so tirelessly to fully address all radiological concerns.

Should you have any questions regarding this letter, please call me at (510) 540-3816.

Sincerely,

Chip Gribble
Remedial Project Manager
Base Closure Unit
Office of Military Facilities

cc: Next page

cc: Ms. Penny Leinwander
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P.O. Box 942732
Sacramento, California 94234-7320

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Regional Water Quality Control Board
San Francisco Bay Region
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Ms. Bonnie Arthur
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Mare Island Naval Shipyard
P.O. Box 2193
Vallejo, California 94592-5100

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
21	Building 593	Table 1	General Radioactive Material Program (G-RAM), Final Radiological Site Inspection Report for the Decommissioning of Mare Island Naval Shipyard, Individual Site Characterization Summaries, Volume II, Book 12 of 34, Building 593. Radiological Engineering Division, Mare Island Naval Shipyard, Vallejo, California. April 1, 1996.

BUILDING 593

A. DESCRIPTION

Building 593 is a 91' long by 31' wide by 12' tall single story structure constructed of reinforced concrete and concrete masonry blocks with a partial asphalt and soil apron around the building. Building 593 is located north of Causeway Street and east of Railroad Avenue in grid I1 of the Mare Island survey map. Building 593 was constructed in 1942 and is currently unoccupied.

B. BRIEF HISTORY

This facility was used to decontaminate radium dials and markers. In 1980 the facility's mission was expanded to include mercury decontamination/cleaning and temporary storage of radioactive material, though apparently it was never used for mercury cleaning. By 1985 the decontamination operations had ended and the building was used as the main processing and storage facility for radioactive material and waste generated under the Navy Radiological Affairs Support Program (RASP). Records indicate the following isotopes have been stored or cleaned from components at the facility: Radium-226, Thorium-232, Cesium-137, and Co-60.

C. DECOMMISSIONING SURVEYS

Category C and D, Group 4 radiological decommissioning surveys were performed at Building 593 as documented in Technical Work Document (TWD) 10/949-BLDG593-2609. No Radium-226 (Ra-226) or Thorium-232 (Th-232) activity detected was greater than the 5 pCi/g limit authorized by the G-RAM Survey Plan. No Cobalt-60 (Co-60) activity detected was greater than the minimum detectable activity authorized by the G-RAM Survey Plan. Cesium-137 (Cs-137) activity was detected greater than 1 pCi/g and is discussed in the following paragraphs.

Building 641 was selected as an analogous area for Building 593 based on similar construction materials and environmental factors that might affect natural background radiation levels. Natural average background radiation levels at Building 641 were 5187 CPM for the IM-253/PD in the HV-2 GROSS mode and 40 CPM for the IM-247/PD.

The radiological decommissioning survey results are summarized below. All sample results are reported with a two sigma uncertainty of less than 100%.

- Beta/gamma scan surveys performed with the IM-247/PD detected three grid areas (F159, FP023, and FP107) with radiation levels (300, 160, and 160 CPM respectively) greater than or equal to 100 CPM above the naturally occurring background radiation level of 40 CPM. These grid areas were remediated and the final results are discussed in Section I-8, Building 593 Remediation.

- Gamma scintillation surveys performed with the IM-253/PD (HV-2 GROSS mode) detected two grid areas (G125 and G129) with radiation levels (12,000 CPM each) greater than or equal to twice the naturally occurring background radiation level of 5187.5 CPM. Results of a portable isotopic analysis of the solid material samples taken from these areas indicates the presence of Cs-137 in concentrations greater than the 1 pCi/g limit authorized by the G-ram Survey Plan. These grid areas were remediated and the results are discussed in Section I-8, Building 593 Remediation.

- Beta-Gamma/Alpha wipe surveys performed with the LB770 did not detect areas with activity which exceeded the 9 pCi/100cm^2 alpha or the 90 pCi/100cm^2 beta/gamma activity limit authorized by the G-RAM Survey Plan.

- Gamma radioanalysis of 1096 Category C and D (306 concrete, 125 asphalt, and 665 soil), Group 4 area solid material samples obtained from Building 593 was performed to characterize residual activity. The radionuclides of interest for the gamma radioanalysis of the solid material samples were Co-60, Cs-137, Ra-226, and Th-232, as evidenced by the presence of its daughter product, Actinium-228 (Ac-228). When the samples were analyzed for specific Ra-226 and Ac-228 activity, the samples contained less than the activity limit of 5 pCi/g for Ra-226 or Ac-228 authorized by the G-RAM Survey Plan. When the samples were analyzed for specific Co-60 the samples contained less than minimum detectable activity. A small amount of Cs-137 exceeding 1 pCi/g was found in five solid material samples. Four of these grid areas (G173, G196, G199, and G219) were remediated and discussed in Section F. The fifth grid area (G13) was not remediated but is discussed in Section D under Exposure Units 1-4 for Cs-137. The remaining 1090 samples contained less than the activity limit of 1 pCi/g for Cs-137 authorized by the G-RAM Survey Plan.

D. NON-PARAMETRIC DATA ANALYSIS OF BUILDING 593 FOR RADIUM-226 AND CESIUM-137 CONTAMINATION.

Wilcoxon-Rank Sum Test

In the case of Building 593, the Wilcoxon-Rank Sum test is not applicable because for both the background sample and the actual sample data sets more than 40% of the sample results are "less than MDA" value.

Quantile Test

The Quantile test compares the highest reading samples for both the background data set and the exposure unit. If six or more of the highest seven sample activities were from the exposure unit sample set, the exposure unit is considered to be distinguishable from background and would require evaluation to rule out a false positive result. A bias in the sampling method has been identified which may cause a false-positive result (Type I error)

using the Quantile test. The bias results from the fact that background samples were randomly taken whereas the test samples are taken from the area in the grid having the highest survey reading. This conservative sampling method can result in test samples that are biased towards the high end of the concentration distribution of naturally occurring Ra-226. As a result, a failure of the Quantile test may imply the presence of technologically enhanced Ra-226 that requires remediation when in fact the Ra-226 levels are naturally occurring.

Building 593 solid samples are asphalt, concrete, and soil.

Section II defines the fifteen exposure units and shows the results of the Quantile tests for Ra-226 and Cesium-137.

RADIUM-226

Concrete: Exposure Units 1 through 8, 10, 12 and 14 had concrete samples. Exposure Units 1 through 4 failed the Quantile test for concrete samples and are discussed below. Exposure Units 5 through 8 passed the Quantile Analysis and are indistinguishable from concrete background for Ra-226. Exposure Units 10, 12 and 14 Quantile results were inconclusive and are discussed below.

Asphalt: Exposure Units 9 through 15 had asphalt. Exposure Unit 14 passed the Quantile test and is indistinguishable from asphalt background for Ra-226. Exposure Units 9 through 12 and 15 Quantile results were inconclusive and are discussed below. Exposure Unit 13 failed the Quantile test and is discussed below.

Soil: Exposure Units 9 through 15 had soil samples. Exposure Units 9 through 12 and 15 units passed the Quantile test and are indistinguishable from soil background for Ra-226. Exposure Units 13 and 14 Quantile test results were inconclusive and are discussed below.

<u>Exposure Units 1 through 4 - Concrete</u>

Reason for failure: Concrete samples in the Exposure Units contained naturally occurring Ra-226 above levels identified in the concrete background sample set.

Evaluation: Review of the isotopic analysis sheets for the highest samples to determine if the Ra-226 is naturally occurring (in equilibrium with Th-234) or enhanced (Ra-226 concentration is significantly greater than Th-234 concentration). Because of variations in counting statistics there will be some uncertainty or error associated with the measurement of Ra-226 and Th-234 concentration in a sample. It is clear; however, that if the Ra-226 concentration is less than or equal to the Th-234 concentration, then the Ra-226 is not enhanced, ie, the sample is naturally occurring. If the Ra-226 concentration is higher than the Th-234 concentration, then analysis of the statistical uncertainties in the Ra-226 and Th-234 measurements will be necessary to determine if the Ra-226 concentration is

significantly greater than the Th-234 concentration, ie, Ra-226 is enhanced. The Ra-226 value, therefore, may exceed the Th-234 value, but fall within the range of values considered to be statistically equivalent. If the Ra-226 concentration is greater than the Th-234 concentration, with a statistically significant difference between the two numbers, then the Ra-226 would be considered to be technologically enhanced and would be remediated. An evaluation of the uncertainties in the Ra-226 and Th-234 measurements will be provided if the Ra-226 activity is reported as greater than the Th-234 activity for those samples analyzed in an exposure unit which fails a Non-Parametric statistical test.

EU #	Sample #	Th-234 (pCi/g)	Ra-226 (pCi/g)
1	FP23	3.0241	1.277
3	FP76	2.1960	1.317

In this case the Ra-226 samples concentrations are less than the Th-234 concentration; therefore, the Ra-226 is not enhanced in this sample, i.e., the Ra-226 is naturally occurring. There are now two samples with naturally occurring Ra-226 among the highest exposure unit samples. Therefore, the difference from background identified in Exposure Units 1 through 4 is due either to the bias in the sampling method or to a difference in the natural levels of Ra-226 in the Building 593 concrete aggregate and the concrete sampled as background.

Conclusion: The difference from background identified by the Quantile test in Exposure Units 1 through 4 is related to either a bias in the sampling method that results in the detection of natural levels higher than those represented by the background data set or to a difference in the natural levels of Ra-226 in Building 593 concrete aggregate and the concrete sampled for the background data set. Therefore, Exposure Units 1 through 4 are released as indistinguishable from natural levels of Ra-226.

Exposure Units 10, 12, and 14 - Concrete

Reason for failure: Insufficient number of concrete exposure unit samples.

Evaluation: All nine concrete samples from Exposure Units 10, 12, and 14 had Ra-226 concentrations which were below the highest concrete Ra-226 concentration sampled as background. The highest exposure unit Ra-226 concentration (G113, Exposure Unit 12) is 1.331 pCi/g which is well below the 5 pCi/g limit authorized by the G-RAM Survey Plan.

Conclusion: Exposure Units 10, 12, and 14 are released as indistinguishable from natural levels of Ra-226 for concrete.

Exposure Units 9 through 12 and 15 - Asphalt

Reason for failure: Insufficient number of asphalt exposure unit samples.

Evaluation: Review of the isotopic analysis sheets for the highest samples to determine if the Ra-226 is naturally occurring (in equilibrium with Th-234) or enhanced (Ra-226 concentration is significantly greater than Th-234 concentration).

EU #	Sample	Th-234 (pCi/g)	Ra-226 (pCi/g)
13	G87	3.8675	1.844
12/13	G95	2.3538	1.388
14	G53	4.3211	2.853

In this case the Ra-226 samples concentrations are less than the Th-234 concentration; therefore, the Ra-226 is not enhanced in this sample, i.e., the Ra-226 is naturally occurring. There are now three samples with naturally occurring Ra-226 among the highest exposure unit asphalt samples. Therefore, the difference from background identified in Exposure Units 9 through 12 and 15 is due either to the bias in the sampling method or to a difference in the natural levels of Ra-226 in the Building 593 asphalt aggregate and the asphalt sampled as background.

Conclusion: The difference from background identified by the Quantile test in Exposure Units 9 through 12 and 15 is related to either a bias in the sampling method that results in the detection of natural levels higher than those represented by the background data set or to a difference in the natural levels of Ra-226 in Building 593 concrete aggregate and the concrete sampled for the background data set. Therefore, Exposure Units 9 through 12 and 15 are released as indistinguishable from natural levels of Ra-226 in asphalt.

Exposure Unit 13 - Asphalt

Reason for failure: Asphalt samples in the Exposure Unit contained naturally occurring Ra-226 above levels identified in the asphalt background sample set.

Evaluation: As was discussed in the previous evaluation for Exposure Units 9 through 12 and 15, a review of the isotopic analysis sheets for the highest exposure unit sample Ra-226 concentration, 1.844 pCi/g (G87) indicates the Ra-226 concentration in this sample is naturally occurring. There are now two samples with naturally occurring Ra-226 among the highest exposure unit asphalt samples. Therefore, the difference from background identified in Exposure Unit 13 is due either to the bias in the sampling method or to a difference in the natural levels of Ra-226 in the Building 593 asphalt aggregate and the asphalt sampled as background.

Conclusion: The difference from background identified by the Quantile test in Exposure Unit 13 is related to either a bias in the sampling method that results in the detection of natural levels higher than those represented by the background data set or to a difference in the natural levels of Ra-226 in Building 593 asphalt aggregate and the asphalt sampled for the background data set. Therefore, Exposure Unit 13 is released as indistinguishable from natural levels of Ra-226 in asphalt.

Exposure Units 13 and 14 - Soil

Reason for failure: Insufficient number of soil exposure unit samples.

Evaluation: All eighteen soil samples from Exposure Units 13 and 14 had Ra-226 concentrations which were below the highest soil Ra-226 concentration sampled as background. The highest exposure unit Ra-226 concentration (G85, Exposure Unit 13) is 1.477 pCi/g which is well below the 5 pCi/g limit authorized by the G-RAM Survey Plan.

Conclusion: Exposure Units 13 and 14 are released as indistinguishable from natural levels of Ra-226 for soil.

CESIUM-137

Exposure Units 5 through 8 passed the Quantile test and are released as indistinguishable from background levels of Cs-137 for concrete.

Exposure Units 9 through 12 and 15 passed the Quantile test and are released as indistinguishable from background levels of Cs-137 for soil.

Exposure Units 13 and 14 passed the Quantile test and are released as indistinguishable from background levels of Cs-137 for asphalt.

Exposure Units 10, 12, and 14 Quantile test results were inconclusive for the nine total concrete samples; however, only one sample (G188, Exposure Unit 10) had a higher Cs-137 concentration (0.120 pCi/g) than the highest concrete background Cs-137 concentration of 0.094 pCi/g. The other Exposure Unit 10 sample was less than MDA (<0.024 pCi/g) and was ranked behind twelve background samples. This exposure unit Cs-137 concentration is considered to be comparable to concrete background Cs-137 concentrations and is well below the authorized limit of 1 pCi/g; therefore, Exposure Units 10, 12, and 14 are considered indistinguishable from background levels of Cs-137 for concrete samples.

Exposure Units 13 and 14 Quantile test results were inconclusive for the eighteen total soil samples. All eighteen exposure unit soil samples had Cs-137 concentrations below the highest soil background Cs-137 concentration and were well below the authorized

limit of 1 pCi/g; therefore, Exposure Units 13 and 14 are considered indistinguishable from background levels of Cs-137 for soil samples.

Exposure Units 1 through 4 failed the Quantile test for concrete samples; Exposure Units 9 through 12 and 15 Quantile test results for asphalt were inconclusive with one Cs-137 concentration (G13 - 2.851 pCi/g) greater than 1 pCi/g out of the 70 total.

Reason for failure: Concrete samples in the exposure units contained Cs-137 concentrations above levels identified in the concrete background sample set. Asphalt samples in the exposure units contained Cs-137 concentrations above levels identified in the asphalt background sample set.

Evaluation: All of the high Cs-137 samples were in the exposure units that are exposed to fallout, i.e., the exposure units surrounding Building 593 (9 through 15) as well as the exposure units in the patio area of Building 593 (1 through 4). A site investigation of Building 593 revealed that the highest exposure unit Cs-137 sample (G13, Exposure Unit 15, asphalt) is located in a depression created by a protective cover for a ground wire for the building. This protective cover was affixed to the building at one time and acted like a reservoir for rainfall and runoff. Building 593 is located in a general depression which tends to collect the water runoff from the immediate area in addition to the runoff from the roof of Building 593. The "patio area" portion of Building 593 has wall vents located at floor level on the three outside walls which allows the accumulated water runoff to flood the "patio area" floor. The exposure unit Cs-137 concentrations are plotted on histograms shown in Attachment (1) which shows that the level of concentrations are consistent for all of the exposure units that are exposed to fallout. Therefore, we conclude these high Cs-137 concentrations are a result of worldwide fallout collected by a continuous cycle of water runoff, accumulation and evaporation over a period of time which has concentrated the Cs-137 around Building 593.
Conclusion: Exposure Units 1 through 4 are released as indistinguishable from background levels of Cs-137 for concrete. Exposure Units 9 through 12, and 15 are released as indistinguishable from background levels of Cs-137 for asphalt.

Hot Measurement Test

The hot measurement limit of 5.0 pCi/g Ra-226 was not exceeded in Building 593 for the final isotopic analysis. The hot measurement of 1.0 pCi/g Cs-137 was not exceeded in one of the solid samples (G13) as noted above.

E. OTHER ISOTOPES

Every G-RAM solid sample is analyzed to assure it does not exceed the hot measurement limits for each isotope of interest.

For Building 593, no solid sample exceeds the following limits: for U-238 and Th-232 -- 5 pCi/g.

No Co-60 above minimum detectable was identified in Building 593.

F. BUILDING 593 REMEDIATION

Five areas in and around Building 593 required remediation.

- Three areas in Building 593 had initial Beta-Gamma survey scans (using the Im-247/PD) with readings more than 100 counts above background. Grids FP23, FP107 and F159 had initial Beta-Gamma scans of 160, 160 and 300 cpm, respectively (background was 40 cpm).

  The concrete in all three areas was remediated and the waste disposed of as G-RAM radioactive waste. The post-remediation Beta-Gamma scans were:

FP23	80 gross CPM
FP107	60 gross CPM
F159	80 gross CPM

  Post-remediation solid sample results for Cs-137 were:

FP23	0.17075 pCi/g
FP107	0.18508 pCi/g
F159	<0.0185 pCi/g

- Two areas outside Building 593 had initial Gamma scintillation scans (using the IM-253/PD in HV-2/GROSS mode) more than twice background. Ground grids G125 and G129 had initial gamma counts of 12,000 cpm (twice background was 10,375 cpm).

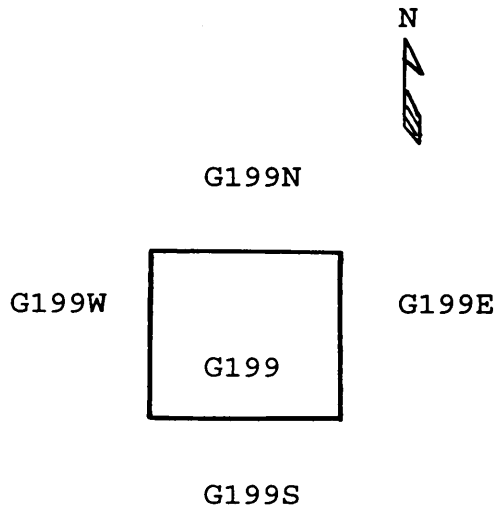
  Both areas are adjacent to each other and were remediated by removing soil in a 3' by 3' grid which overlapped grids G125 and G129 and subsequently, was recorded as G125. The soil was removed to a depth of 4' and solid samples were taken at depths of one foot, two feet, three feet, and four feet. The remediated soil was disposed of as G-RAM radioactive waste. The solid sample Cs-137 activity is shown below:

G125 1ft	0.1635 pCi/g
G125 2ft	<0.0184 pCi/g
G125 3ft	0.0743 pCi/g
G125 4ft	<0.0233 pCi/g

- Gamma radioanalysis of solid sample material revealed two asphalt samples (G199 and G219) and two soil samples (G173 and G196) with Cs-137 concentrations greater than the 1 pCi/g limit authorized by the G-RAM Survey Plan. The concentrations for these four samples was 1.452, 1.190, 1.009, and 1.945 pCi/g respectively. Four additional samples were taken adjacent to each of the original four samples as well as a resample of the original location. Two samples, G196NE and G196SE were still greater than 1 pCi/g (1.1470 and 1.8077 respectively). A 3' by 3' grid was centered on grid G196E which overlapped G197 and soil was removed to a depth

G196NE and G196SE were still greater than 1 pCi/g (1.1470 and 1.8077 respectively). A 3' by 3' grid was centered on grid G196E which overlapped G197 and soil was removed to a depth varying from 2 inches in grid G197 to 10 inches in grid G196 and a final solid sample was taken. The remediated soil was disposed of as G-RAM radioactive waste. The final solid sample Cs-137 activity is shown below:

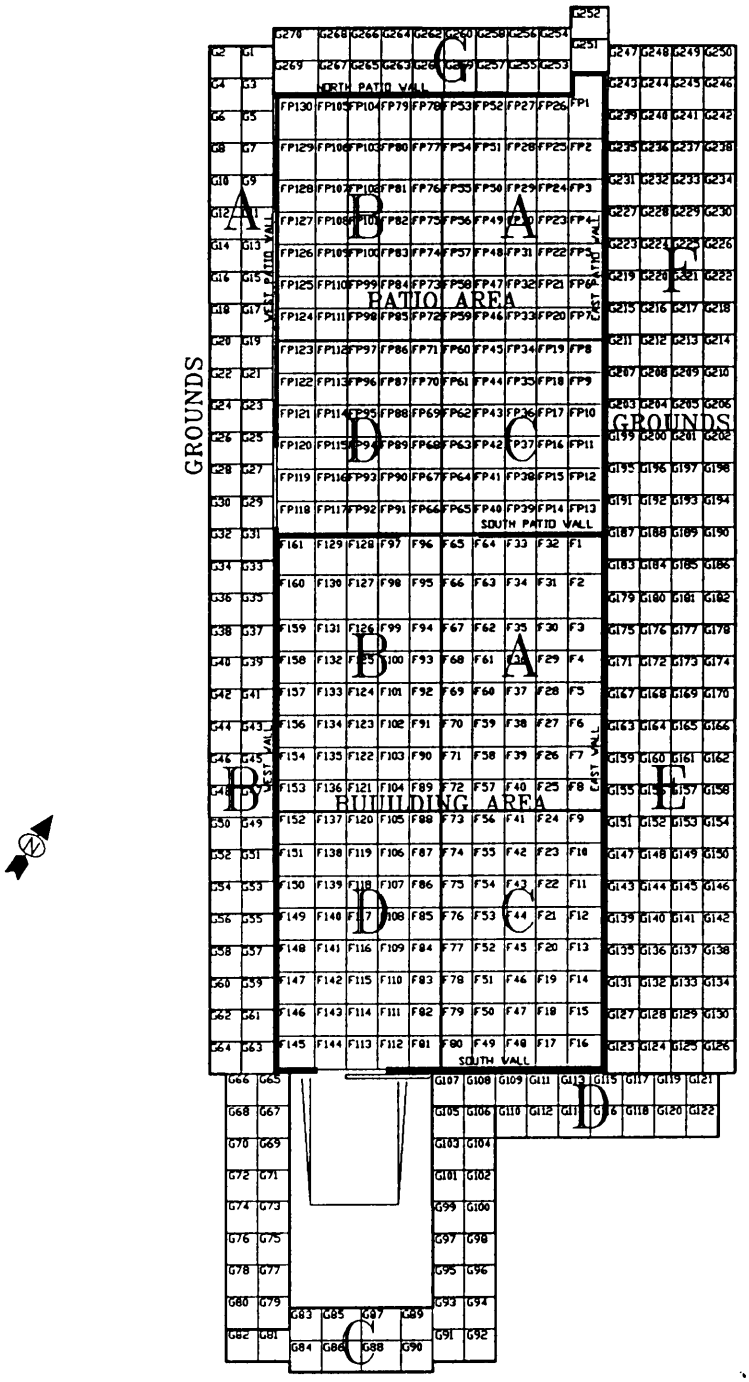
G173N	0.438 pCi/g
G173S	0.159 pCi/g
G173E	0.310 pCi/g
G173W	0.856 pCi/g
G173	0.626 pCi/g
G199N	0.155 pCi/g
G199S	0.143 pCi/g
G199E	0.144 pCi/g
G199W	0.112 pCi/g
G199	0.169 pCi/g
G219N	0.096 pCi/g
G219S	0.212 pCi/g
G219E	0.102 pCi/g
G219W	0.172 pCi/g
G219	0.257 pCi/g
G196N	0.314 pCi/g
G196S	0.734 pCi/g
G196W	0.166 pCi/g
G196	0.212 pCi/g
G197NW	0.196 pCi/g
G197SW	0.605 pCi/g
G196A1	0.068 pCi/g



Typical Grid

G. CONCLUSION

Based on these survey results, radioactivity above the activity limits authorized by the G-RAM Survey Plan remains at Building 593 in one site Grid G13 which contains Cs-137 which is considered to be the result of worldwide nuclear weapons testing. No action is required.



BUILDING 593

BUILIDING, PATIO AND GROUNDS OVERALL SECTIONAL LAYOUT

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
22	Building 643	Table 1	Naval Nuclear Propulsion Program, Radiological Final Report for the Decommissioning of Mare Island Naval Shipyard, Other Permanent Facilities (Building 273 – Building A-228), Volume II, Book 6, Building 643. Radiological Engineering Division, Mare Island Naval Shipyard, Vallejo, California. April 1, 1996.

BUILDING 643

A. Description:

Building 643 was built in the 1930s. It is approximately 60' in length by 33' in width and 10' in height. The building is constructed of cinder block with a concrete foundation and no roof. The concrete foundation is approximately 80' in length by 33' in width. This structure is located in grid I-1 of the "MAP OF NAVAL ACTIVITIES MARE ISLAND".

B. Brief History:

1. Use:

This building was originally a Shop 03 Electrical Distribution Center. This building was later used as a radioactive liquid solidification facility. Currently the building is vacant.

2. Radiological History:

This area was a RCA with portions inside of the RCA being a CSCA. The CSCA was a self-contained tent comprised of Herculite floor, walls, and ceiling. The tent was provided with radiologically filtered ventilation to maintain a negative differential pressure during solidification operations. Equipment, parts and material contaminated with loose surface radioactivity were handled/worked within this area. No known spreads of contamination have occurred in this area. Detailed radiological surveys were performed in 1967 to release the area for unrestricted use. All radioactive material and radioactivity were removed from the site. The Release for Unrestricted Use Report for Building 643, Memorandum 9900 Ser 105.2/42 dated 12 May 1980, documents that final surveys included direct frisk surveys and gamma scintillation surveys. The final surveys found no radioactivity above the Naval Nuclear Propulsion Program (NNPP) limits and the building was released for unrestricted use.

C. Decommissioning Survey:

Modified Group 2 radiological decommissioning surveys were performed in Building 643 in accordance with instructions of Technical Work Document (TWD) 10/931-BLDG643-2270. Building 643 is a former radiological area which has been previously surveyed and released. Solid material samples were obtained from every other 10' X 10' grid where previous release criteria indicated a potential for residual radioactivity above the NNPP limit of 1 pCi/g. No Cobalt-60 radioactivity above the NNPP limit of 1 pCi/g for solid material samples was detected.

C. Decommissioning Survey (Continued):

For naturally occurring background radiation level determinations, Building 641 was selected as an analogous area to Building 643 based on similar construction materials and environmental factors. Natural average background radiation levels obtained from Building 641 were 256 counts per minute for the IM-253/PD in the HV-1 PHA mode. This survey was performed within the internal perimeter of Building 641.

The radiological decommissioning survey results are summarized below.

- Beta/gamma scan surveys performed with the IM-247/PD did not detect areas equal to or greater than 450 pCi/20cm^2 equivalent Cobalt-60.

- Gamma scintillation surveys performed with the IM-253/PD (HV-1 PHA) did not detect areas equal to or greater than twice naturally occurring background radiation levels.

- A radioanalysis of 12 solid (concrete) samples obtained from Building 643 was performed to characterize any residual radioactivity. The results of this radioanalysis are summarized below (see survey grid map for specific information):

  - One sample contained detectable Cobalt-60. The concentration was 0.038 pCi/g in grid F05. The sample results with detectable Cobalt-60 are reported with a two sigma uncertainty of less than one hundred percent. This residual Cobalt-60 radioactivity is below the limits specified for unrestricted use. No further action was required.

  - The remaining 11 samples contained only naturally occurring radionuclides, predominantly Potassium-40, Thallium-208, Lead-212 and 214, Bismuth-212 and 214, Radium-224 and 226, Actinium-228, Thorium-232 and Protactinium-234. The measurable concentrations of Radium-226 were less than 5 pCi/g.

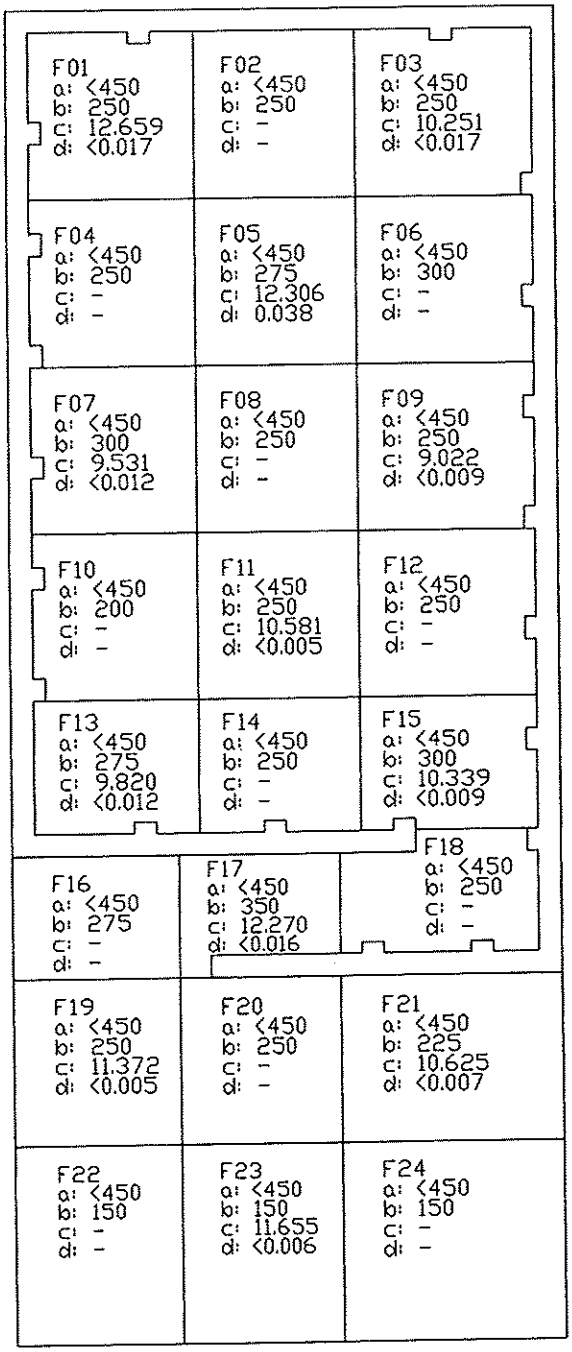
  - When analyzed for specific Cobalt-60, the remaining 11 samples were less than the minimum detectable activity (MDA). Based on variations in sample masses and counting duration, these MDAs ranged from 0.005 to 0.017 pCi/g.

BUILDING 643 (Continued)

C. Decommissioning Survey (Continued):

- A small amount of Cesium-137 was found in all 12 solid material samples. The maximum concentration was 0.232 pCi/g in grid F21. This quantity is consistent with background levels attributable to fallout from worldwide nuclear weapons testing.

Based on these survey results, no radioactivity in excess of the NNPP limits remains at Building 643.



BUILDING 643

FLOOR GRIDS

LEGEND:

a: IM-247/PD RESULTS [pCi/20cm²]
b: IM-253/PD (HV-1/PHA) RESULTS [CPM]
c: SOLID SAMPLE RADIOACTIVITY RESULTS (TOTAL ACTIVITY) [pCi/g]
d: SOLID SAMPLE SPECIFIC Co-60 RESULTS [pCi/g]

NOTE:
ANALOGOUS AREA AVERAGE BACKGROUND RADIATION LEVELS:
IM-253/PD (HV-1/PHA) - 256 CPM

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
23	DOM1 and DOM2	Table 1	Letter Concurring with No Further Action for Sanitary Sewer Pump Stations (DOM)-1, -2, and -17. From Chip Gribble, DTSC Remedial Project Manager, to Jerry Dunaway, Navy. May 4, 2000.
			Letter Concurring with No Further Action for Sanitary Sewer Pump Stations (DOM)-1, -2, and -17. From Bonnie Arthur, EPA Remedial Project Manager, to Jerry Dunaway, Navy. May 4, 2000.

Winston H. Hickox
Secretary for
Environmental
Protection

Governor

May 4, 2000

Southwest Division
Naval Facilities Engineering Command
Attn: Mr. Jerry Dunaway
1220 Pacific Highway
San Diego, California 92132-5190

Post-It™ brand fax transmittal memo 7671	# of pages ▸ 1
To Jerry Dunaway	From Chip Gribble
Co. Navy Southwest Div	Co. DTSC
Dept.	Phone # 510-540-3773
Fax # 619-532-0977	Fax #

Dear Mr. Dunaway:

MARE ISLAND RESULTS OF THE SITE INVESTIGATION AT SANITARY SEWER PUMP STATION (DOM)-17, NAVY LETTER DATED 5/2/00

MARE ISLAND RESULTS OF THE SITE INVESTIGATION SAMPLING AT SANITARY WASTEWATER PUMP STATIONS DOM-1 AND DOM-2 LOCATED IN INVESTIGATION AREA A1, NAVY LETTER DATED 5/2/00

The Department of Toxic Substances Control has reviewed the subject documents. We agree with the Navy recommendation that no further action is appropriate at DOM-1, DOM-2, and DOM-17 sites. However, we do not agree with the Navy statement for DOM-1 and DOM-2 that no chemicals of concern were released. Although the data indicate that chemicals of concern are present in the immediate vicinity if the DOM-1 and DOM-2 sites, we have concluded that contamination at these sites is negligible, and as such, does not warrant further concern.

Should you have any questions regarding this letter, please call me at (510) 540-3773.

Sincerely,

Chip Gribble
Remedial Project Manager
Base Closure Unit
Office of Military Facilities

cc: Mr. Michael Rochette, RWQCB
Ms. Bonnie Arthur, USEPA

N00221.000314
MARE ISLAND
SSIC. NO. 5090.3

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

May 4, 2000

Mr. Jerry Dunaway
Southwest Division, Naval Facilities Engineering Command
BRAC Operations Department
1220 Pacific Highway
San Diego, CA 92132

Dear Mr. Dunaway:

EPA reviewed the "Results of the Site Investigation at Sanitary Wastewater Pump Stations DOM-1, DOM-2, and DOM -17." As discussed at the January 1999 meetings, we concur with the Navy that no further investigation is required at these sites. According to our review of the data, there have been releases of chemicals of concern, however, the contamination is low level and limited to a small area at DOMs 1 and 2. Thus, we recommend no further action for these Preliminary Assessment/Site Investigation sites. If you have any questions regarding this letter, I can be reached at (415)744-2368.

Sincerely,

Bonnie Arthur
Remedial Project Manager
Federal Facilities Cleanup Branch

cc: Mr. Chip Gribble, DTSC
Mr. Michael Rochette, RWQCB

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
24	Samples	Table 1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Tables 3-1, 3-2, 3-3, 3-4; and Appendix G, Tables G-1 and G-2. Tetra Tech EM Inc. September 22, 2008.

TABLE 3-1

LABORATORY ANALYSIS PERFORMED
FORMER NORTH BUILDING WAYS AREA
MARE ISLAND, CALIFORNIA

Analyte	Analytical Method	Direct-Push Soil Samples	Near-Surface Sediment Samples	Hand-Auger Sediment Samples	Residue Samples	Surface Soil Samples
Nonaqueous Samples Analyzed by Off-Site Laboratories						
Chromium VI	EPA 7196	3	3	0	0	12
Low-Level PCBs	MOD EPA 8080/8082	0	0	4	0	0
Low-Level Pesticides	MOD EPA 8080/8081	0	0	4	0	0
CLP Metals	CLP Metals	10	27	6	1	71
Percent Moisture	CLP	22	28	6	1	66
pH	EPA SW-846	0	27	0	1	70
CLP SVOCs	CLP SVOA	73	5	5	0	18
TPH-e	MOD EPA 8015A	81	28	8	1	79
TPH-p	MOD EPA 8015A	35	28	1	1	70
TOC	SM 5310B	8	1	1	0	1
CLP VOCs	CLP VOA	46	5	7	0	12
CLP Pesticides/PCBs	CLP Pesticides/PCBs	15	27	4	1	70
PCBs	EPA 8080/8082	0	1	2	4	0
Nonaqueous Samples Analyzed by On-Site Laboratory						
Metals	XRF	15	0	0	0	1

TABLE 3-1 (Continued)

LABORATORY ANALYSIS PERFORMED
FORMER NORTH BUILDING WAYS AREA
MARE ISLAND, CALIFORNIA

Analyte	Analytical Method	Direct-Push Grab Groundwater Samples	Hand-Auger Grab Groundwater Samples
Aqueous Samples Analyzed by Off-Site Laboratory			
Low-Level VOCs	MOD CLP VOA	17	1
CLP SVOCs	CLP SVOA	17	1
TPH-p	MOD EPA 8015A	17	1
TPH-e	MOD EPA 8015 A	17	1

Notes:

CLP	Contract Laboratory Program
EPA	U.S. Environmental Protection Agency
MOD	Modified
PCB	Polychlorinated biphenyl
SM	Standard Method
SVOA	Semivolatile organic analysis
SVOC	Semivolatile organic compound
TOC	Total organic carbon
TPH-e	Total petroleum hydrocarbons, extractable
TPH-p	Total petroleum hydrocarbons, purgeable
VOA	Volatile organic analysis
VOC	Volatile organic compound
XRF	X-ray fluorescence

TABLE 3-2

FORMER NORTH BUILDING WAYS AREA STATISTICAL SUMMARY OF SOIL ANALYSES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Analyte	Number of Detections/ Analyses[a]	Maximum Detected Conc. (mg/kg)	Average of Detected Conc. (mg/kg)	Number of Samples with Conc. Greater than the "Other" Criteria (mg/kg)[b]	Number of Samples with Conc. Greater than the "Other" Criteria and the 95th Ambient[c]	Number of Discrete Loc. with Sample Conc. Greater than the "Other" Criteria and the 95th Ambient[c]	Number of Samples with Conc. Greater than the "Other" Criteria and the 99th Ambient[c]	Number of Discrete Loc. with Sample Conc. Greater than the "Other" Criteria and the 99th Ambient[c]	Comparison Criteria		
									"Other" (mg/kg)[b]	95th Ambient Value (mg/kg)	99th Ambient Value (mg/kg)
METALS											
ALUMINUM	79/79	29,100	12,000	0	0	0	0	0	75,000	35,000	42,000
ANTIMONY	63/88	10.5	1.3	0	0	0	0	0	30	8.5	12
ARSENIC	69/79	25.1	5.5	69	0	0	0	0	0.38	36	44
BARIUM	79/79	474	96.8	0	0	0	0	0	5,200	NA	NA
BERYLLIUM	61/79	1.6	0.26	0	0	0	0	0	150	0.9	1.1
CADMIUM	6/95	3.8 J	0.77	0	0	0	0	0	9	5.2	5.6
CALCIUM	95/95	42,100 J	10,500	NP	NE	NE	NE	NE	NP	NA	NA
CHROMIUM	95/95	440	53.9	0	0	0	0	0	77,000	140	160
CHROMIUM VI	0/15	ND	ND	0	0	0	0	0	0.2	NA	NA
COBALT	78/95	34.8 J	12.4	0	0	0	0	0	3,300	NA	NA
COPPER	93/95	684 J	64.8	0	0	0	0	0	2,800	120	150
IRON	95/95	130,000 J	31,200	72	5	4	2	1	22,000	62,000	87,000
LEAD	92/95	968 J	81.6	7	7	7	7	7	210	59	59
MAGNESIUM	79/79	15,700	6,050	NP	NE	NE	NE	NE	NP	NA	NA
MANGANESE	95/95	1,470	509	0	0	0	0	0	3,100	1,600	2,400
MERCURY	63/79	10.2 J	0.69	0	0	0	0	0	22	2	10
MOLYBDENUM	19/79	6.8 J	0.91	0	0	0	0	0	370	NA	NA
NICKEL	95/96	169 J	36.6	1	1	1	1	1	150	130	150
POTASSIUM	95/95	23,200	3,800	NP	NE	NE	NE	NE	NP	NA	NA
SELENIUM	44/75	1.8	0.70	0	0	0	0	0	370	NA	NA
SILVER	4/95	5.8 J	1.8	0	0	0	0	0	370	NA	NA
SODIUM	32/59	3,450 J	517	NP	NE	NE	NE	NE	NP	NA	NA
THALLIUM	11/79	1.6	0.84	0	0	0	0	0	5.2	NA	NA
TIN	16/16	40.6	14.2	0	0	0	0	0	45,000	NA	NA
TITANIUM	16/16	6,750	4,250	NP	NE	NE	NE	NE	NP	NA	NA
VANADIUM	95/95	291	72.6	0	0	0	0	0	520	190	220
ZINC	95/95	1,980	161	0	0	0	0	0	22,000	230	270
VOLATILE ORGANIC COMPOUNDS											
2-BUTANONE	2/58	0.02 J	0.02	0	0	0	0	0	6,900	NA	NA

12/14/01

TABLE 3-2 (Continued)

FORMER NORTH BUILDING WAYS AREA STATISTICAL SUMMARY OF SOIL ANALYSES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Analyte	Number of Detections/ Analyses[a]	Maximum Detected Conc. (mg/kg)	Average of Detected Conc. (mg/kg)	Number of Samples with Conc. Greater than the "Other" Criteria (mg/kg)[b]	Number of Samples with Conc. Greater than the "Other" Criteria and the 95th Ambient[c]	Number of Discrete Loc. with Sample Conc. Greater than the "Other" Criteria and the 95th Ambient[c]	Number of Samples with Conc. Greater than the "Other" Criteria and the 99th Ambient[c]	Number of Discrete Loc. with Sample Conc. Greater than the "Other" Criteria and the 99th Ambient[c]	Comparison Criteria		
									"Other" (mg/kg)[b]	95th Ambient Value (mg/kg)	99th Ambient Value (mg/kg)
VOLATILE ORGANIC COMPOUNDS											
ACETONE	5/58	0.3	0.2	0	0	0	0	0	1,400	NA	NA
CARBON DISULFIDE	6/58	0.005 J	0.003	0	0	0	0	0	350	NA	NA
TOLUENE	2/58	0.008 J	0.005	0	0	0	0	0	520	NA	NA
XYLENE (TOTAL)	1/58	0.004 J	0.004	0	0	0	0	0	210	NA	NA
TOTAL VOCS	13/58	0.3	0.08	0	0	0	0	0	1	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS											
1,2,4-TRICHLOROBENZENE	1/91	0.04 J	0.04	0	0	0	0	0	480	NA	NA
2-METHYLNAPHTHALENE	3/91	0.2 J	0.1	NP	0	0	0	0	NP	0.3	0.37
ACENAPHTHENE	1/91	0.02 J	0.02	0	0	0	0	0	2,600	0.27	0.46
ANTHRACENE	4/90	0.2 J	0.05	0	0	0	0	0	14,000	0.33	0.65
BENZO(A)ANTHRACENE	18/89	0.3 J	0.1	0	0	0	0	0	0.56	0.47	0.66
BENZO(A)PYRENE	25/83	0.3 J	0.09	14	0	0	0	0	0.056	0.87	1.2
BENZO(B)FLUORANTHENE	24/83	0.6 J	0.2	1	0	0	0	0	0.56	0.62	0.8
BENZO(G,H,I)PERYLENE	17/83	0.3 J	0.08	NP	0	0	0	0	NP	0.28	0.44
BENZO(K)FLUORANTHENE	8/83	0.6 J	0.1	0	0	0	0	0	0.61	0.82	1.4
BIS(2-ETHYLHEXYL)PHTHALATE	1/91	1	1	0	0	0	0	0	32	NA	NA
CARBAZOLE	2/91	0.07 J	0.05	0	0	0	0	0	22	NA	NA
CHRYSENE	36/91	0.8 J	0.1	0	0	0	0	0	6.1	1.1	2.3
DIBENZ(A,H)ANTHRACENE	4/83	0.06 J	0.04	1	0	0	0	0	0.056	0.59	0.76
FLUORANTHENE	40/91	1	0.1	0	0	0	0	0	2,000	0.5	0.63
FLUORENE	1/91	0.08 J	0.08	0	0	0	0	0	1,800	0.15	0.19
INDENO(1,2,3-CD)PYRENE	13/83	0.1 J	0.06	0	0	0	0	0	0.56	0.3	0.52
NAPHTHALENE	1/91	0.2 J	0.2	0	0	0	0	0	55	0.32	0.38
PENTACHLOROPHENOL	2/83	0.5 J	0.3	0	0	0	0	0	2.5	NA	NA
PHENANTHRENE	15/91	0.5 J	0.09	NP	0	0	0	0	NP	1	1.4
PYRENE	47/90	0.6 J	0.1	0	0	0	0	0	1,500	0.55	1.1
TOTAL PAHS	50/91	4	0.6	NP	NE	NE	NE	NE	NP	NA	NA
TOTAL SVOCS	53/91	5	0.6	0	0	0	0	0	10	NA	NA

12/14/01

TABLE 3-2 (Continued)

FORMER NORTH BUILDING WAYS AREA STATISTICAL SUMMARY OF SOIL ANALYSES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Analyte	Number of Detections/ Analyses[a]	Maximum Detected Conc. (mg/kg)	Average of Detected Conc. (mg/kg)	Number of Samples with Conc. Greater than the "Other" Criteria (mg/kg)[b]	Number of Samples with Conc. Greater than the "Other" Criteria and the 95th Ambient[c]	Number of Discrete Loc. with Sample Conc. Greater than the "Other" Criteria and the 95th Ambient[c]	Number of Samples with Conc. Greater than the "Other" Criteria and the 99th Ambient[c]	Number of Discrete Loc. with Sample Conc. Greater than the "Other" Criteria and the 99th Ambient[c]	Comparison Criteria		
									"Other" (mg/kg)[b]	95th Ambient Value (mg/kg)	99th Ambient Value (mg/kg)
PESTICIDES											
4,4'-DDD	19/84	0.2	0.02	0	0	0	0	0	2.4	NA	NA
4,4'-DDE	11/84	0.04	0.009	0	0	0	0	0	1.7	NA	NA
4,4'-DDT	55/85	0.2	0.02	0	0	0	0	0	1.7	NA	NA
ALDRIN	1/84	0.002 J	0.002	0	0	0	0	0	0.026	NA	NA
ALPHA-BHC	25/84	0.04 J	0.01	0	0	0	0	0	0.086	NA	NA
ALPHA-CHLORDANE	35/84	0.03	0.005	0	0	0	0	0	1.6	NA	NA
BETA-BHC	13/84	0.01 J	0.005	0	0	0	0	0	0.3	NA	NA
DELTA-BHC	11/84	0.008 J	0.002	NP	NE	NE	NE	NE	NP	NA	NA
DIELDRIN	7/84	0.006 J	0.004	0	0	0	0	0	0.028	NA	NA
ENDOSULFAN I	10/84	0.005 J	0.002	0	0	0	0	0	330	NA	NA
ENDOSULFAN II	1/85	0.004 J	0.004	0	0	0	0	0	330	NA	NA
ENDOSULFAN SULFATE	13/85	0.02 J	0.006	NP	NE	NE	NE	NE	NP	NA	NA
ENDRIN	7/84	0.004 J	0.003	0	0	0	0	0	16	NA	NA
ENDRIN ALDEHYDE	30/84	0.04	0.006	NP	NE	NE	NE	NE	NP	NA	NA
ENDRIN KETONE	18/84	0.01 J	0.005	NP	NE	NE	NE	NE	NP	NA	NA
GAMMA-BHC (LINDANE)	19/84	0.01 J	0.004	0	0	0	0	0	0.42	NA	NA
GAMMA-CHLORDANE	29/84	0.03	0.006	0	0	0	0	0	1.6	NA	NA
HEPTACHLOR	4/84	0.005 J	0.002	0	0	0	0	0	0.99	NA	NA
HEPTACHLOR EPOXIDE	12/84	0.004 J	0.001	0	0	0	0	0	0.049	NA	NA
METHOXYCHLOR	3/85	0.02 J	0.01	0	0	0	0	0	270	NA	NA
TOTAL DDTS	56/85	0.5	0.02	NP	NE	NE	NE	NE	NP	NA	NA
TOTAL PESTICIDES	67/85	0.5	0.04	NP	NE	NE	NE	NE	NP	NA	NA
PCBs											
AROCLOR-1254	1/91	0.2	0.2	0	0	0	0	0	1	NA	NA
AROCLOR-1260	45/91	0.6	0.08	0	0	0	0	0	1	NA	NA
TOTAL PCBS	45/91	0.6	0.08	0	0	0	0	0	1	NA	NA
PETROLEUM INDICATORS											
DIESEL RANGE	31/160	7,800 Y	420	4	4	4	4	4	400	NA	NA

12/14/01

TABLE 3-2 (Continued)

FORMER NORTH BUILDING WAYS AREA STATISTICAL SUMMARY OF SOIL ANALYSES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Analyte	Number of Detections/ Analyses[a]	Maximum Detected Conc. (mg/kg)	Average of Detected Conc. (mg/kg)	Number of Samples with Conc. Greater than the "Other" Criteria (mg/kg)[b]	Number of Samples with Conc. Greater than the "Other" Criteria and the 95th Ambient[c]	Number of Discrete Loc. with Sample Conc. Greater than the "Other" Criteria and the 95th Ambient[c]	Number of Samples with Conc. Greater than the "Other" Criteria and the 99th Ambient[c]	Number of Discrete Loc. with Sample Conc. Greater than the "Other" Criteria and the 99th Ambient[c]	Comparison Criteria		
									"Other" (mg/kg)[b]	95th Ambient Value (mg/kg)	99th Ambient Value (mg/kg)
PETROLEUM INDICATORS											
GASOLINE RANGE	2/104	2 Y	1	0	0	0	0	0	150	NA	NA
MOTOR OIL RANGE	128/160	12,000 Y	890	54	54	43	54	43	400	NA	NA
TOTAL ORGANIC CARBON											
TOC	6/9	62,000	15,000	NP	NE	NE	NE	NE	NP	NA	NA

Notes:

a The number of samples analyzed is a compilation of samples collected at the site during the Group II/III accelerated study and offshore ecological risk assessment.

b "Other" is composed of alternative criteria for lead, PCBs, and TPH; and EPA preliminary remediation goals for residential use (EPA 1998).

c If no ambient value exists, the number of discrete locations with sample concentrations greater than the PRG or the Group II/III screening value is shown.

Ambient = Estimated ambient metal concentrations and Navy-proposed estimated PAH concentrations in fill soils for 95th and 99th percentile (TtEMI 1998).

BHC = Hexachlorocyclohexane

Conc. = Concentration

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethene

DDT = Dichlorodiphenyltrichloroethane

EPA = U.S. Environmental Protection Agency

J = Estimated concentration

Loc. = Location

mg/kg = Milligrams per kilogram

NA = No ambient limit has been established

12/14/01

TABLE 3-2 (Continued)

FORMER NORTH BUILDING WAYS AREA STATISTICAL SUMMARY OF SOIL ANALYSES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Notes (continued):

ND = Not detected

NE = No comparison criteria or ambient limit has been established

NP = No comparison criteria has been established

PAH = Polynuclear aromatic hydrocarbon

PCB = Polychlorinated biphenyl

PRG = EPA preliminary remediation goal for residential use (EPA 1998b)

SVOC = Semivolatile organic compound

TOC = Total organic carbon

TPH = Total petroleum hydrocarbons

VOC = Volatile organic compound

Y = Chromatogram indicates the presence of petroleum fuel

Inorganic results less than 10 are reported to two significant figures, and results greater than 10 are reported to three significant figures.

Organic results less than 10 are reported to one significant figure, and results greater than 10 are reported to two significant figures.

TPH results less than 10 are reported to two significant figure, and results greater than 10 are reported to three significant figures.

"R" and "Z" qualified data (rejected results and nonfuel TPH results, respectively) were excluded from the statistical summary.

TABLE 3-3

FORMER NORTH BUILDING WAYS AREA STATISTICAL SUMMARY OF SEDIMENT ANALYSES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Analyte	Number of Detections/ Analyses[a]	Maximum Detected Conc. (mg/kg)	Average of Detected Conc. (mg/kg)	Number of Samples with Conc. Greater than the "Other" Criteria (mg/kg)[b]	Number of Samples with Conc. Greater than the "Other" Criteria and the 95th Ambient[c]	Number of Discrete Loc. with Sample Conc. Greater than the "Other" Criteria and the 95th Ambient[c]	Number of Samples with Conc. Greater than the "Other" Criteria and the 99th Ambient[c]	Number of Discrete Loc. with Sample Conc. Greater than the "Other" Criteria and the 99th Ambient[c]	Comparison Criteria		
									"Other" (mg/kg)[b]	95th Ambient Value (mg/kg)	99th Ambient Value (mg/kg)
METALS											
ALUMINUM	36/36	39,600 J	25,800	0	0	0	0	0	75,000	35,000	42,000
ANTIMONY	20/29	7.7 J	1.5	0	0	0	0	0	30	8.5	12
ARSENIC	34/36	35.2	13.8	34	0	0	0	0	0.38	36	44
BARIUM	36/36	211 J	68.4	0	0	0	0	0	5,200	NA	NA
BERYLLIUM	29/36	0.83	0.53	0	0	0	0	0	150	0.9	1.1
CADMIUM	2/36	7.0	3.7	0	0	0	0	0	9	5.2	5.6
CALCIUM	36/36	9,070	3,140	NP	NE	NE	NE	NE	NP	NA	NA
CHROMIUM	36/36	294 J	78.9	0	0	0	0	0	77,000	140	160
CHROMIUM VI	0/3	ND	ND	0	0	0	0	0	0.2	NA	NA
COBALT	36/36	34.8 J	18.1	0	0	0	0	0	3,300	NA	NA
COPPER	36/36	324 J	78.8	0	0	0	0	0	2,800	120	150
IRON	36/36	74,700	38,400	31	3	2	0	0	22,000	62,000	87,000
LEAD	36/36	875	93.9	4	4	3	4	3	210	59	59
MAGNESIUM	36/36	15,600	10,200	NP	NE	NE	NE	NE	NP	NA	NA
MANGANESE	36/36	1,750 J	411	0	0	0	0	0	3,100	1,600	2,400
MERCURY	33/35	1.2 J	0.48	0	0	0	0	0	22	2	10
MOLYBDENUM	15/36	3.8	1.6	0	0	0	0	0	370	NA	NA
NICKEL	36/36	160 J	74.3	1	1	1	1	1	150	130	150
POTASSIUM	36/36	4,730	3,420	NP	NE	NE	NE	NE	NP	NA	NA
SELENIUM	24/35	2.1	1.3	0	0	0	0	0	370	NA	NA
SILVER	0/34	ND	ND	0	0	0	0	0	370	NA	NA
SODIUM	36/36	12,200	7,140	NP	NE	NE	NE	NE	NP	NA	NA
THALLIUM	3/36	1.3 J	1.1	0	0	0	0	0	5.2	NA	NA
TIN	3/3	5.0 J	4.6	0	0	0	0	0	45,000	NA	NA
VANADIUM	36/36	265	92.2	0	0	0	0	0	520	190	220
ZINC	36/36	1,850 J	190	0	0	0	0	0	22,000	230	270
VOLATILE ORGANIC COMPOUNDS											
CARBON DISULFIDE	4/12	0.02 J	0.01	0	0	0	0	0	350	NA	NA

12/14/01

TABLE 3-3 (Continued)

FORMER NORTH BUILDING WAYS AREA STATISTICAL SUMMARY OF SEDIMENT ANALYSES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Analyte	Number of Detections/ Analyses[a]	Maximum Detected Conc. (mg/kg)	Average of Detected Conc. (mg/kg)	Number of Samples with Conc. Greater than the "Other" Criteria (mg/kg)[b]	Number of Samples with Conc. Greater than the "Other" Criteria and the 95th Ambient[c]	Number of Discrete Loc. with Sample Conc. Greater than the "Other" Criteria and the 95th Ambient[c]	Number of Samples with Conc. Greater than the "Other" Criteria and the 99th Ambient[c]	Number of Discrete Loc. with Sample Conc. Greater than the "Other" Criteria and the 99th Ambient[c]	Comparison Criteria		
									"Other" (mg/kg)[b]	95th Ambient Value (mg/kg)	99th Ambient Value (mg/kg)
VOLATILE ORGANIC COMPOUNDS											
TOLUENE	1/12	0.004 J	0.004	0	0	0	0	0	520	NA	NA
TRICHLOROETHENE	1/12	0.002 J	0.002	0	0	0	0	0	2.7	NA	NA
TOTAL VOCS	5/12	0.02	0.01	0	0	0	0	0	1	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS											
1-METHYLNAPHTHALENE	3/3	0.01 J	0.01	NP	NE	NE	NE	NE	NP	NA	NA
1-METHYLPHENANTHRENE	1/3	0.01	0.01	NP	NE	NE	NE	NE	NP	NA	NA
2,3,5-TRIMETHYLNAPHTHALENE	2/3	0.005 J	0.005	NP	NE	NE	NE	NE	NP	NA	NA
2,6-DIMETHYLNAPHTHALENE	2/3	0.007 J	0.007	NP	NE	NE	NE	NE	NP	NA	NA
2-METHYLNAPHTHALENE	3/12	0.02 J	0.02	NP	0	0	0	0	NP	0.3	0.37
ACENAPHTHENE	2/12	0.006 J	0.005	0	0	0	0	0	2,600	0.27	0.46
ACENAPHTHYLENE	2/12	0.003 J	0.003	NP	0	0	0	0	NP	0.11	0.24
ANTHRACENE	4/12	0.05 J	0.02	0	0	0	0	0	14,000	0.33	0.65
BENZO(A)ANTHRACENE	4/12	0.08	0.06	0	0	0	0	0	0.56	0.47	0.66
BENZO(A)PYRENE	3/11	0.1	0.1	3	0	0	0	0	0.056	0.87	1.2
BENZO(B)FLUORANTHENE	2/11	0.3 J	0.3	0	0	0	0	0	0.56	0.62	0.8
BENZO(E)PYRENE	3/3	0.1	0.09	NP	NE	NE	NE	NE	NP	NA	NA
BENZO(G,H,I)PERYLENE	3/11	0.1	0.1	NP	0	0	0	0	NP	0.28	0.44
BENZO(K)FLUORANTHENE	1/11	0.06 J	0.06	0	0	0	0	0	0.61	0.82	1.4
BIPHENYL	2/3	0.006 J	0.005	NP	NE	NE	NE	NE	NP	NA	NA
CHRYSENE	4/12	0.1	0.09	0	0	0	0	0	6.1	1.1	2.3
DIBENZ(A,H)ANTHRACENE	2/11	0.04	0.04	0	0	0	0	0	0.056	0.59	0.76
FLUORANTHENE	4/12	0.2 J	0.2	0	0	0	0	0	2,000	0.5	0.63
FLUORENE	3/12	0.02 J	0.01	0	0	0	0	0	1,800	0.15	0.19
INDENO(1,2,3-CD)PYRENE	3/11	0.1	0.08	0	0	0	0	0	0.56	0.3	0.52
NAPHTHALENE	3/12	0.06 J	0.03	0	0	0	0	0	55	0.32	0.38
PERYLENE	3/3	0.1	0.08	NP	NE	NE	NE	NE	NP	NA	NA
PHENANTHRENE	4/12	0.07 J	0.06	NP	0	0	0	0	NP	1	1.4
PYRENE	5/12	0.3 J	0.2	0	0	0	0	0	1,500	0.55	1.1
TOTAL PAHS	5/12	1	0.8	NP	NE	NE	NE	NE	NP	NA	NA

12/14/01

TABLE 3-3 (Continued)

FORMER NORTH BUILDING WAYS AREA STATISTICAL SUMMARY OF SEDIMENT ANALYSES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Analyte	Number of Detections/ Analyses[a]	Maximum Detected Conc. (mg/kg)	Average of Detected Conc. (mg/kg)	Number of Samples with Conc. Greater than the "Other" Criteria (mg/kg)[b]	Number of Samples with Conc. Greater than the "Other" Criteria and the 95th Ambient[c]	Number of Discrete Loc. with Sample Conc. Greater than the "Other" Criteria and the 95th Ambient[c]	Number of Samples with Conc. Greater than the "Other" Criteria and the 99th Ambient[c]	Number of Discrete Loc. with Sample Conc. Greater than the "Other" Criteria and the 99th Ambient[c]	Comparison Criteria		
									"Other" (mg/kg)[b]	95th Ambient Value (mg/kg)	99th Ambient Value (mg/kg)
SEMIVOLATILE ORGANIC COMPOUNDS											
TOTAL SVOCS	5/13	2	1	0	0	0	0	0	10	NA	NA
PESTICIDES											
2,4'-DDD	5/10	0.01	0.003	NP	NE	NE	NE	NE	NP	NA	NA
2,4'-DDT	2/10	0.0009 J	0.0007	NP	NE	NE	NE	NE	NP	NA	NA
4,4'-DDD	7/37	0.02	0.005	0	0	0	0	0	2.4	NA	NA
4,4'-DDE	5/37	0.008	0.003	0	0	0	0	0	1.7	NA	NA
4,4'-DDT	7/37	0.02	0.005	0	0	0	0	0	1.7	NA	NA
ALPHA-CHLORDANE	4/37	0.005 J	0.003	0	0	0	0	0	1.6	NA	NA
CIS-NONACHLOR	2/10	0.001 J	0.001	NP	NE	NE	NE	NE	NP	NA	NA
DELTA-BHC	1/36	0.0003 J	0.0003	NP	NE	NE	NE	NE	NP	NA	NA
DIELDRIN	2/37	0.0006	0.0005	0	0	0	0	0	0.028	NA	NA
GAMMA-CHLORDANE	4/37	0.005	0.003	0	0	0	0	0	1.6	NA	NA
METHOXYCHLOR	2/37	0.001	0.001	0	0	0	0	0	270	NA	NA
OXYCHLORDANE	1/10	0.0002	0.0002	NP	NE	NE	NE	NE	NP	NA	NA
TRANS-NONACHLOR	2/10	0.004 J	0.004	NP	NE	NE	NE	NE	NP	NA	NA
TOTAL DDTS	9/37	0.06	0.01	NP	NE	NE	NE	NE	NP	NA	NA
TOTAL PESTICIDES	10/37	0.07	0.01	NP	NE	NE	NE	NE	NP	NA	NA
PCBs											
AROCLOR-1260	9/31	0.08	0.04	0	0	0	0	0	1	NA	NA
PCB-101	5/10	0.005	0.002	NP	NE	NE	NE	NE	NP	NA	NA
PCB-114	1/10	0.002	0.002	NP	NE	NE	NE	NE	NP	NA	NA
PCB-118	2/10	0.0003 J	0.0003	NP	NE	NE	NE	NE	NP	NA	NA
PCB-128	1/10	0.0004	0.0004	NP	NE	NE	NE	NE	NP	NA	NA
PCB-138	6/10	0.04	0.01	NP	NE	NE	NE	NE	NP	NA	NA
PCB-153	6/10	0.05	0.01	NP	NE	NE	NE	NE	NP	NA	NA
PCB-157	1/10	0.1	0.1	NP	NE	NE	NE	NE	NP	NA	NA
PCB-170	4/10	0.05 J	0.01	NP	NE	NE	NE	NE	NP	NA	NA
PCB-180	6/10	0.1	0.02	NP	NE	NE	NE	NE	NP	NA	NA

12/14/01

TABLE 3-3 (Continued)

FORMER NORTH BUILDING WAYS AREA STATISTICAL SUMMARY OF SEDIMENT ANALYSES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Analyte	Number of Detections/ Analyses[a]	Maximum Detected Conc. (mg/kg)	Average of Detected Conc. (mg/kg)	Number of Samples with Conc. Greater than the "Other" Criteria (mg/kg)[b]	Number of Samples with Conc. Greater than the "Other" Criteria and the 95th Ambient[c]	Number of Discrete Loc. with Sample Conc. Greater than the "Other" Criteria and the 95th Ambient[c]	Number of Samples with Conc. Greater than the "Other" Criteria and the 99th Ambient[c]	Number of Discrete Loc. with Sample Conc. Greater than the "Other" Criteria and the 99th Ambient[c]	Comparison Criteria		
									"Other" (mg/kg)[b]	95th Ambient Value (mg/kg)	99th Ambient Value (mg/kg)
PCBs											
PCB-187	5/10	0.04	0.01	NP	NE	NE	NE	NE	NP	NA	NA
PCB-195	3/10	0.007 J	0.004	NP	NE	NE	NE	NE	NP	NA	NA
PCB-206	1/10	0.002	0.002	NP	NE	NE	NE	NE	NP	NA	NA
PCB-209	3/10	0.002	0.001	NP	NE	NE	NE	NE	NP	NA	NA
PCB-66	1/10	0.0002	0.0002	NP	NE	NE	NE	NE	NP	NA	NA
TOTAL PCBS	15/37	0.4	0.06	0	0	0	0	0	1	NA	NA
PETROLEUM INDICATORS											
DIESEL RANGE	1/38	39 J	39	0	0	0	0	0	400	NA	NA
GASOLINE RANGE	3/31	620 Y	210	1	1	1	1	1	150	NA	NA
MOTOR OIL RANGE	20/38	1,100 Y	230	3	3	3	3	3	400	NA	NA
TOTAL ORGANIC CARBON											
TOC	5/5	14,000	11,000	NP	NE	NE	NE	NE	NP	NA	NA

Notes:

a The number of samples analyzed is a compilation of samples collected at the site during the Group II/III accelerated study and offshore ecological risk assessment.

b "Other" is composed of alternative criteria for lead, PCBs, and TPH; and EPA preliminary remediation goals for residential use (EPA 1998).

c If no ambient value exists, the number of discrete locations with sample concentrations greater than the PRG or the Group II/III screening value is shown.

Ambient = Estimated ambient metal concentrations and Navy-proposed estimated PAH concentrations in fill soils for 95th and 99th percentile (TtEMI 1998).

BHC = Hexachlorocyclohexane

Conc. = Concentration

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethene

DDT = Dichlorodiphenyltrichloroethane

TABLE 3-3 (Continued)

FORMER NORTH BUILDING WAYS AREA STATISTICAL SUMMARY OF SEDIMENT ANALYSES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Notes (continued):

EPA = U.S. Environmental Protection Agency

J = Estimated concentration

Loc. = Location

mg/kg = Milligrams per kilogram

NA = No ambient limit has been established

ND = Not detected

NE = No comparison criteria or ambient limit has been established

NP = No comparison criteria has been established

PAH = Polynuclear aromatic hydrocarbon

PCB = Polychlorinated biphenyl

PRG = EPA preliminary remediation goal for residential use (EPA 1998b)

SVOC = Semivolatile organic compound

TOC = Total organic carbon

TPH = Total petroleum hydrocarbons

VOC = Volatile organic compound

Y = Chromatogram indicates the presence of petroleum fuel

Inorganic results less than 10 are reported to two significant figures, and results greater than 10 are reported to three significant figures.

Organic results less than 10 are reported to one significant figure, and results greater than 10 are reported to two significant figures.

TPH results less than 10 are reported to two significant figure, and results greater than 10 are reported to three significant figures.

"R" and "Z" qualified data (rejected results and nonfuel TPH results, respectively) were excluded from the statistical summary.

TABLE 3-4

FORMER NORTH BUILDING WAYS AREA STATISTICAL SUMMARY OF GRAB GROUNDWATER ANALYSES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Analyte	Number of Detections/ Analyses[a]	Maximum Detected Concentration	Average of Detected Values	Number of Loc. Where Samples Had Detectable Concentrations	Number of Samples with Concentrations Greater than Ecological Water Quality Criterion	Ecological Water Quality Criterion	Ecological Water Quality Criterion Source[b]	Number of Samples with Concentrations Greater than Ambient 95th Value	Ambient 95th Value	Ambient 99th Value
VOLATILE ORGANIC COMPOUNDS (µg/L)										
1,2-DICHLOROETHANE	1/18	0.7 J	0.7	1	0	20,000	ß	--	--	--
2-BUTANONE	2/18	110	63	2	--	--	--	--	--	--
4-METHYL-2-PENTANONE	1/18	0.8 J	0.8	1	--	--	--	--	--	--
ACETONE	16/18	180	77	16	--	--	--	--	--	--
CHLOROMETHANE	1/18	0.7 J	0.7	1	0	6,400	Γ	--	--	--
ETHYLBENZENE	3/18	0.7 J	0.5	3	0	43	τ	--	--	--
TOLUENE	7/18	1 J	0.5	7	0	5,000	Γ	--	--	--
XYLENE (TOTAL)	4/18	4	2	4	--	--	--	--	--	--
TOTAL BTEX	9/18	6	2	9	--	--	--	--	--	--
TOTAL VOCS	17/18	180	80	17	--	--	--	--	--	--
SEMIVOLATILE ORGANIC COMPOUNDS (µg/L)										
1,3-DICHLOROBENZENE	3/18	0.9 J	0.7	3	0	129	Γ	--	--	--
2,4-DICHLOROPHENOL	5/18	2 J	1	5	0	365	ß	--	--	--
4-METHYLPHENOL	3/18	6 J	3	3	--	--	--	--	--	--
ACENAPHTHENE	1/18	2 J	2	1	0	710	Γ	--	--	--
BENZO(B)FLUORANTHENE	1/18	2 J	2	1	0	30	τ	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	1/18	28	28	1	0	160	ß	--	--	--
CARBAZOLE	1/18	2 J	2	1	--	--	--	--	--	--
FLUORANTHENE	1/18	4 J	4	1	0	16	Γ	--	--	--
N-NITROSODIPHENYLAMINE (1)	1/18	19 J	19	1	0	585	σ	--	--	--
NAPHTHALENE	1/18	2 J	2	1	0	620	ß	--	--	--
PHENANTHRENE	2/18	2 J	2	2	0	4.6	Γ	--	--	--
PHENOL	2/18	2 J	2	2	0	2,560	ß	--	--	--
PYRENE	1/18	11 J	11	1	0	30	τ	--	--	--
TOTAL PAHS	2/18	19	12	2	--	--	--	--	--	--
TOTAL PHENOLS	8/18	6.0	2.6	8	--	--	--	--	--	--
PETROLEUM INDICATORS (mg/L)										
TPH-DR/MR	6/18	2.0	0.95	6	1	1.4	*	--	--	--

Notes:

a The number of samples analyzed is a compilation of samples collected at the site during the Group II/III Investigation.

b Ecological water quality criterion source:
- * - Tetra Tech EM Inc. comparison criteria for TPH extractables and TPH purgeables.
- ß - EPA National Ambient Water Quality Criteria for Freshwater Aquatic Life Protection (chronic)
- Γ - EPA National Ambient Water Quality Criteria for Saltwater Aquatic Life Protection (chronic)
- σ - Ten percent of the EPA National Ambient Water Quality Criteria for Freshwater Aquatic Life Protection (acute)
- τ - Ten percent of the EPA National Ambient Water Quality Criteria for Saltwater Aquatic Life Protection (acute)

-- = No water quality criterion available

BTEX = Benzene, toluene, ethylbenzene, and xylenes (total)

CRQL = Contract-required Quantitation Limit

EPA = U.S. Environmental Protection Agency

J = Estimated concentration

Loc. = Location

µg/L = Micrograms per liter

mg/L = Milligrams per liter

TABLE 3-4 (Continued)

FORMER NORTH BUILDING WAYS AREA STATISTICAL SUMMARY OF GRAB GROUNDWATER ANALYSES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Notes (continued):

PAH = Polynuclear aromatic hydrocarbon

TPH = Total petroleum hydrocarbons

TPH-DR/MR = Sum of total petroleum hydrocarbons in the diesel and motor oil ranges and other ("Y"-qualified) extractable fuels

VOC = Volatile organic compound

Organic results less than 10 are reported to one significant figure, and results greater than 10 are reported to two significant figures.

TPH results less than 10 are reported to two significant figures, and results greater than 10 are reported to three significant figures.

TABLE G-1

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**PC8808**	**PC8809**	**PC8810**	**PC8811**	**FNBWGB001**	**FNBWGB001**
Sample Depth (feet bgs)	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.5	2.0 - 3.0
Sample Date	03/06/2001	03/06/2001	03/06/2001	03/06/2001	10/07/1997	04/09/1998
Matrix	SLUDGE	SLUDGE	SLUDGE	SLUDGE	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	NA	NA	NA	NA	9,600 J	NA
ANTIMONY	NA	NA	NA	NA	0.90 J	10.5 *
ARSENIC	NA	NA	NA	NA	**4.8 J** !	NA
BARIUM	NA	NA	NA	NA	91.9 J	NA
BERYLLIUM	NA	NA	NA	NA	0.16 J	NA
CADMIUM	NA	NA	NA	NA	0.03 UJ	10.0 U
CALCIUM	NA	NA	NA	NA	9,720 J	30,200
CHROMIUM	NA	NA	NA	NA	33.1 J	174 *α
COBALT	NA	NA	NA	NA	10.4 J	10.0 U
COPPER	NA	NA	NA	NA	56.1 J	73.6
IRON	NA	NA	NA	NA	**23,500 J**	**41,700**
LEAD	NA	NA	NA	NA	**968 J** *α	122 *α
MAGNESIUM	NA	NA	NA	NA	5,850 J	NA
MANGANESE	NA	NA	NA	NA	491 J	827
MERCURY	NA	NA	NA	NA	0.59 J	NA
MOLYBDENUM	NA	NA	NA	NA	0.34 UJ	NA
NICKEL	NA	NA	NA	NA	29.3 J	55.6
POTASSIUM	NA	NA	NA	NA	765	18,100
SELENIUM	NA	NA	NA	NA	0.90 J	NA
SILVER	NA	NA	NA	NA	0.10 UJ	10.0 U
SODIUM	NA	NA	NA	NA	35.9 U	NA
THALLIUM	NA	NA	NA	NA	0.50 U	NA
TIN	NA	NA	NA	NA	NA	29.6
TITANIUM	NA	NA	NA	NA	NA	3,580
VANADIUM	NA	NA	NA	NA	49.2 J	107
ZINC	NA	NA	NA	NA	541 J *α	241 *
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	0.01 U
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	NA	0.01 U
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	NA	0.01 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	PC8808	PC8809	PC8810	PC8811	FNBWGB001	FNBWGB001
Sample Depth (feet bgs)	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.5	2.0 - 3.0
Sample Date	03/06/2001	03/06/2001	03/06/2001	03/06/2001	10/07/1997	04/09/1998
Matrix	SLUDGE	SLUDGE	SLUDGE	SLUDGE	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1-DICHLOROETHANE	NA	NA	NA	NA	NA	0.01 U
1,1-DICHLOROETHENE	NA	NA	NA	NA	NA	0.01 U
1,2-DICHLOROETHANE	NA	NA	NA	NA	NA	0.01 U
1,2-DICHLOROETHENE (TOTAL)	NA	NA	NA	NA	NA	0.01 U
1,2-DICHLOROPROPANE	NA	NA	NA	NA	NA	0.01 U
2-BUTANONE	NA	NA	NA	NA	NA	0.01 UJ
2-HEXANONE	NA	NA	NA	NA	NA	0.01 UJ
4-METHYL-2-PENTANONE	NA	NA	NA	NA	NA	0.01 UJ
ACETONE	NA	NA	NA	NA	NA	0.01 UJ
BENZENE	NA	NA	NA	NA	NA	0.01 U
BROMODICHLOROMETHANE	NA	NA	NA	NA	NA	0.01 U
BROMOFORM	NA	NA	NA	NA	NA	0.01 UJ
BROMOMETHANE	NA	NA	NA	NA	NA	0.01 U
CARBON DISULFIDE	NA	NA	NA	NA	NA	0.01 U
CARBON TETRACHLORIDE	NA	NA	NA	NA	NA	0.01 U
CHLOROBENZENE	NA	NA	NA	NA	NA	0.01 U
CHLOROETHANE	NA	NA	NA	NA	NA	0.01 U
CHLOROFORM	NA	NA	NA	NA	NA	0.01 U
CHLOROMETHANE	NA	NA	NA	NA	NA	0.01 UJ
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	0.01 U
DIBROMOCHLOROMETHANE	NA	NA	NA	NA	NA	0.01 U
ETHYLBENZENE	NA	NA	NA	NA	NA	0.01 U
METHYLENE CHLORIDE	NA	NA	NA	NA	NA	0.01 U
STYRENE	NA	NA	NA	NA	NA	0.01 U
TETRACHLOROETHENE	NA	NA	NA	NA	NA	0.01 U
TOLUENE	NA	NA	NA	NA	NA	0.01 U
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	0.01 U
TRICHLOROETHENE	NA	NA	NA	NA	NA	0.01 U
VINYL CHLORIDE	NA	NA	NA	NA	NA	0.01 U
XYLENE (TOTAL)	NA	NA	NA	NA	NA	0.01 U
TOTAL VOCS	NA	NA	NA	NA	NA	0 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**PC8808**	**PC8809**	**PC8810**	**PC8811**	**FNBWGB001**	**FNBWGB001**
Sample Depth (feet bgs)	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.5	2.0 - 3.0
Sample Date	03/06/2001	03/06/2001	03/06/2001	03/06/2001	10/07/1997	04/09/1998
Matrix	SLUDGE	SLUDGE	SLUDGE	SLUDGE	SOIL	SOIL
PESTICIDES (mg/kg)						
4,4'-DDD	NA	NA	NA	NA	0.003 U	NA
4,4'-DDE	NA	NA	NA	NA	0.003 U	NA
4,4'-DDT	NA	NA	NA	NA	0.009	NA
ALDRIN	NA	NA	NA	NA	0.002 U	NA
ALPHA-BHC	NA	NA	NA	NA	0.002 U	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	0.002 J	NA
BETA-BHC	NA	NA	NA	NA	0.002 U	NA
DELTA-BHC	NA	NA	NA	NA	0.002 U	NA
DIELDRIN	NA	NA	NA	NA	0.003 U	NA
ENDOSULFAN I	NA	NA	NA	NA	0.002 U	NA
ENDOSULFAN II	NA	NA	NA	NA	0.003 U	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	0.003 U	NA
ENDRIN	NA	NA	NA	NA	0.003 U	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	0.003 U	NA
ENDRIN KETONE	NA	NA	NA	NA	0.003 U	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	0.002 U	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	0.002 J	NA
HEPTACHLOR	NA	NA	NA	NA	0.0003 U	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	0.0003 U	NA
METHOXYCHLOR	NA	NA	NA	NA	0.02 U	NA
TOXAPHENE	NA	NA	NA	NA	0.09 U	NA
PCBs (mg/kg)						
AROCLOR-1016	0.03 U	0.04 U	0.03 U	0.03 U	0.02 U	NA
AROCLOR-1221	0.03 U	0.04 U	0.03 U	0.04 U	0.02 U	NA
AROCLOR-1232	0.01 U	0.02 U	0.01 U	0.02 U	0.02 U	NA
AROCLOR-1242	0.06 U	0.07 U	0.06 U	0.06 U	0.02 U	NA
AROCLOR-1248	0.04 U	0.04 U	0.03 U	0.04 U	0.02 U	NA
AROCLOR-1254	0.03 U	0.03 U	0.03 U	0.03 U	0.02 U	NA
AROCLOR-1260	0.1 J	0.09 J	0.1 J	0.04 J	0.2	NA
TOTAL PCBS	0.1 J	0.09 J	0.1 J	0.04 J	0.2	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**PC8808**	**PC8809**	**PC8810**	**PC8811**	**FNBWGB001**	**FNBWGB001**
Sample Depth (feet bgs)	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.5	2.0 - 3.0
Sample Date	03/06/2001	03/06/2001	03/06/2001	03/06/2001	10/07/1997	04/09/1998
Matrix	SLUDGE	SLUDGE	SLUDGE	SLUDGE	SOIL	SOIL
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	NA	NA	NA	NA	51.0 U	76.0 Y
GASOLINE RANGE	NA	NA	NA	NA	0.50 UJ	NA
MOTOR OIL RANGE	NA	NA	NA	NA	**610 Y**	**890 Y**
pH						
PH	NA	NA	NA	NA	8.2	NA
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	NA	NA	NA	NA	2.2	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB001**	**FNBWGB001**	**FNBWGB001**	**FNBWGB002**	**FNBWGB002**	**FNBWGB002** [s]
Sample Depth (feet bgs)	4.0 - 5.0	6.5 - 7.0	9.5 - 10.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0
Sample Date	04/09/1998	09/17/1998	09/17/1998	09/18/1997	04/09/1998	04/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	NA	NA	NA	9,440 J	NA	NA
ANTIMONY	10.0 U	NA	NA	0.81 J	NA	NA
ARSENIC	NA	NA	NA	**1.6**	NA	NA
BARIUM	NA	NA	NA	62.2	NA	NA
BERYLLIUM	NA	NA	NA	0.01 U	NA	NA
CADMIUM	10.0 U	NA	NA	0.04 U	NA	NA
CALCIUM	18,300	NA	NA	5,790 J	NA	NA
CHROMIUM	115	NA	NA	10.7 J	NA	NA
COBALT	10.0 U	NA	NA	12.8	NA	NA
COPPER	55.1	NA	NA	20.1 J	NA	NA
IRON	**41,200**	NA	NA	**29,200 J**	NA	NA
LEAD	26.0	NA	NA	11.2 J	NA	NA
MAGNESIUM	NA	NA	NA	4,840 J	NA	NA
MANGANESE	794	NA	NA	452 J	NA	NA
MERCURY	NA	NA	NA	0.21 UJ	NA	NA
MOLYBDENUM	NA	NA	NA	0.13 U	NA	NA
NICKEL	46.6	NA	NA	10.4	NA	NA
POTASSIUM	16,200	NA	NA	454 J	NA	NA
SELENIUM	NA	NA	NA	0.44 U	NA	NA
SILVER	10.0 U	NA	NA	0.12 U	NA	NA
SODIUM	NA	NA	NA	46.9 R	NA	NA
THALLIUM	NA	NA	NA	0.65 U	NA	NA
TIN	13.9	NA	NA	NA	NA	NA
TITANIUM	3,790	NA	NA	NA	NA	NA
VANADIUM	137	NA	NA	73.5 J	NA	NA
ZINC	125	NA	NA	51.2 J	NA	NA
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
1,1,2,2-TETRACHLOROETHANE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
1,1,2-TRICHLOROETHANE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB001	FNBWGB001	FNBWGB001	FNBWGB002	FNBWGB002	FNBWGB002 [s]
Sample Depth (feet bgs)	4.0 - 5.0	6.5 - 7.0	9.5 - 10.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0
Sample Date	04/09/1998	09/17/1998	09/17/1998	09/18/1997	04/09/1998	04/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1-DICHLOROETHANE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
1,1-DICHLOROETHENE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
1,2-DICHLOROETHANE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
1,2-DICHLOROETHENE (TOTAL)	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
1,2-DICHLOROPROPANE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
2-BUTANONE	0.01 UJ	NA	NA	0.01 UJ	0.01 UJ	0.02 UJ
2-HEXANONE	0.01 UJ	NA	NA	0.01 UJ	0.01 UJ	0.02 U
4-METHYL-2-PENTANONE	0.01 UJ	NA	NA	0.01 U	0.01 UJ	0.02 U
ACETONE	0.01 UJ	NA	NA	0.01 UJ	0.01 UJ	0.08 UJ
BENZENE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
BROMODICHLOROMETHANE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
BROMOFORM	0.01 UJ	NA	NA	0.01 U	0.01 UJ	0.02 U
BROMOMETHANE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
CARBON DISULFIDE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
CARBON TETRACHLORIDE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
CHLOROBENZENE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
CHLOROETHANE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
CHLOROFORM	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
CHLOROMETHANE	0.01 UJ	NA	NA	0.01 U	0.01 UJ	0.02 U
CIS-1,3-DICHLOROPROPENE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
DIBROMOCHLOROMETHANE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
ETHYLBENZENE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
METHYLENE CHLORIDE	0.01 U	NA	NA	0.01 UJ	0.01 U	0.02 U
STYRENE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
TETRACHLOROETHENE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
TOLUENE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
TRANS-1,3-DICHLOROPROPENE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
TRICHLOROETHENE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
VINYL CHLORIDE	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
XYLENE (TOTAL)	0.01 U	NA	NA	0.01 U	0.01 U	0.02 U
TOTAL VOCS	0 U	NA	NA	0 U	0 U	0 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB001**	**FNBWGB001**	**FNBWGB001**	**FNBWGB002**	**FNBWGB002**	**FNBWGB002** [s]
Sample Depth (feet bgs)	4.0 - 5.0	6.5 - 7.0	9.5 - 10.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0
Sample Date	04/09/1998	09/17/1998	09/17/1998	09/18/1997	04/09/1998	04/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
1,2-DICHLOROBENZENE	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.3 U
1,3-DICHLOROBENZENE	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.3 U
1,4-DICHLOROBENZENE	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.3 U
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	0.4 UJ	0.4 UJ	0.4 U	0.4 U	0.5 U
2,4,5-TRICHLOROPHENOL	NA	0.9 U	0.9 U	0.9 U	1 U	1 U
2,4,6-TRICHLOROPHENOL	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
2,4-DICHLOROPHENOL	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
2,4-DIMETHYLPHENOL	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
2,4-DINITROPHENOL	NA	0.9 U	0.9 U	0.9 U	1 UJ	1 U
2,4-DINITROTOLUENE	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
2,6-DINITROTOLUENE	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
2-CHLORONAPHTHALENE	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
2-CHLOROPHENOL	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
2-METHYLNAPHTHALENE	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
2-METHYLPHENOL	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
2-NITROANILINE	NA	0.9 UJ	0.9 UJ	0.9 UJ	1 U	1 U
2-NITROPHENOL	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
3,3'-DICHLOROBENZIDINE	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 UJ
3-NITROANILINE	NA	0.9 U	0.9 U	0.9 U	1 UJ	1 U
4,6-DINITRO-2-METHYLPHENOL	NA	0.9 U	0.9 U	0.9 U	1 U	1 U
4-BROMOPHENYL-PHENYLETHER	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
4-CHLORO-3-METHYLPHENOL	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
4-CHLOROANILINE	NA	0.4 U	0.4 U	0.4 U	0.4 UJ	0.5 U
4-CHLOROPHENYL-PHENYLETHER	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
4-METHYLPHENOL	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
4-NITROANILINE	NA	0.9 U	0.9 U	0.9 U	1 UJ	1 U
4-NITROPHENOL	NA	0.9 UJ	0.9 UJ	0.9 UJ	1 UJ	1 U
ACENAPHTHENE	NA	0.4 U	0.02 J	0.4 U	0.4 U	0.5 U
ACENAPHTHYLENE	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
ANTHRACENE	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB001**	**FNBWGB001**	**FNBWGB001**	**FNBWGB002**	**FNBWGB002**	**FNBWGB002** [s]
Sample Depth (feet bgs)	4.0 - 5.0	6.5 - 7.0	9.5 - 10.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0
Sample Date	04/09/1998	09/17/1998	09/17/1998	09/18/1997	04/09/1998	04/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)ANTHRACENE	NA	0.4 U	0.4 U	0.04 J	0.4 U	0.5 U
BENZO(A)PYRENE	NA	0.4 U	0.4 U	**0.1 J**	0.4 U	0.5 U
BENZO(B)FLUORANTHENE	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
BENZO(G,H,I)PERYLENE	NA	0.4 U	0.4 U	0.4 U	0.4 UJ	0.5 U
BENZO(K)FLUORANTHENE	NA	0.4 U	0.4 U	0.1 J	0.4 U	0.5 U
BIS(2-CHLOROETHOXY)METHANE	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
BIS(2-CHLOROETHYL)ETHER	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
BIS(2-ETHYLHEXYL)PHTHALATE	NA	0.2 UJ	0.2 UJ	0.4 UJ	0.2 UJ	0.2 U
BUTYLBENZYLPHTHALATE	NA	0.4 U	0.4 U	0.4 UJ	0.4 UJ	0.5 U
CARBAZOLE	NA	0.4 U	0.4 U	0.4 U	0.4 UJ	0.5 U
CHRYSENE	NA	0.4 U	0.02 J	0.08 J	0.4 U	0.5 U
DI-N-BUTYLPHTHALATE	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
DI-N-OCTYLPHTHALATE	NA	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ	0.5 UJ
DIBENZ(A,H)ANTHRACENE	NA	0.4 U	0.4 U	0.4 U	0.4 UJ	0.5 U
DIBENZOFURAN	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
DIETHYLPHTHALATE	NA	0.4 UJ	0.4 UJ	0.4 UJ	0.4 U	0.5 U
DIMETHYLPHTHALATE	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
FLUORANTHENE	NA	0.4 U	0.04 J	0.04 J	0.4 U	0.5 U
FLUORENE	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
HEXACHLOROBENZENE	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
HEXACHLOROBUTADIENE	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
HEXACHLOROCYCLOPENTADIENE	NA	0.4 UJ	0.4 UJ	0.4 U	0.4 UJ	0.5 U
HEXACHLOROETHANE	NA	0.4 UJ	0.4 UJ	0.4 U	0.4 U	0.5 U
INDENO(1,2,3-CD)PYRENE	NA	0.4 U	0.4 U	0.4 U	0.4 UJ	0.5 U
ISOPHORONE	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
N-NITROSO-DI-N-PROPYLAMINE	NA	0.4 UJ	0.4 UJ	0.4 UJ	0.4 U	0.5 U
N-NITROSODIPHENYLAMINE (1)	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
NAPHTHALENE	NA	0.4 U	0.2 J	0.4 U	0.4 U	0.5 U
NITROBENZENE	NA	0.4 UJ	0.4 UJ	0.4 UJ	0.4 U	0.5 U
PENTACHLOROPHENOL	NA	0.9 U	0.9 U	0.9 U	1 U	1 UJ
PHENANTHRENE	NA	0.4 U	0.04 J	0.4 U	0.4 U	0.5 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB001**	**FNBWGB001**	**FNBWGB001**	**FNBWGB002**	**FNBWGB002**	**FNBWGB002** [s]
Sample Depth (feet bgs)	4.0 - 5.0	6.5 - 7.0	9.5 - 10.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0
Sample Date	04/09/1998	09/17/1998	09/17/1998	09/18/1997	04/09/1998	04/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PHENOL	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
PYRENE	NA	0.4 U	0.02 J	0.03 J	0.4 UJ	0.04 J
TOTAL SVOCS	NA	0 U	0.4 J	0.4 J	0 U	0.04 J
PESTICIDES (mg/kg)						
4,4'-DDD	NA	NA	NA	0.003 J	NA	NA
4,4'-DDE	NA	NA	NA	0.004 U	NA	NA
4,4'-DDT	NA	NA	NA	0.03 J	NA	NA
ALDRIN	NA	NA	NA	0.002 UJ	NA	NA
ALPHA-BHC	NA	NA	NA	0.002 U	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	0.007 J	NA	NA
BETA-BHC	NA	NA	NA	0.002 U	NA	NA
DELTA-BHC	NA	NA	NA	0.002 U	NA	NA
DIELDRIN	NA	NA	NA	0.004 UJ	NA	NA
ENDOSULFAN I	NA	NA	NA	0.002 U	NA	NA
ENDOSULFAN II	NA	NA	NA	0.004 U	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	0.004 U	NA	NA
ENDRIN	NA	NA	NA	0.004 UJ	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	0.003 J	NA	NA
ENDRIN KETONE	NA	NA	NA	0.004 U	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	0.002 UJ	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	0.008	NA	NA
HEPTACHLOR	NA	NA	NA	0.0003 UJ	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	0.0007 J	NA	NA
METHOXYCHLOR	NA	NA	NA	0.02 U	NA	NA
TOXAPHENE	NA	NA	NA	0.09 U	NA	NA
PCBs (mg/kg)						
AROCLOR-1016	NA	NA	NA	0.02 U	NA	NA
AROCLOR-1221	NA	NA	NA	0.02 U	NA	NA
AROCLOR-1232	NA	NA	NA	0.02 U	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB001**	**FNBWGB001**	**FNBWGB001**	**FNBWGB002**	**FNBWGB002**	**FNBWGB002** [s]
Sample Depth (feet bgs)	4.0 - 5.0	6.5 - 7.0	9.5 - 10.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0
Sample Date	04/09/1998	09/17/1998	09/17/1998	09/18/1997	04/09/1998	04/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PCBs (mg/kg)						
AROCLOR-1242	NA	NA	NA	0.02 U	NA	NA
AROCLOR-1248	NA	NA	NA	0.02 U	NA	NA
AROCLOR-1254	NA	NA	NA	0.02 U	NA	NA
AROCLOR-1260	NA	NA	NA	0.09	NA	NA
TOTAL PCBS	NA	NA	NA	0.09	NA	NA
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	81.0 Y	17.0 U	18.0 U	56.0 U	1.2 U	5.1 Y
GASOLINE RANGE	NA	NA	NA	0.51 R	NA	NA
MOTOR OIL RANGE	**2,000 Y**	86.0 U	91.0 U	**730 J**	6.0 U	69.5 Y
pH						
PH	NA	NA	NA	6.3	NA	NA
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	NA	NA	NA	10.4	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB003**	**FNBWGB003**	**FNBWGB003**	**FNBWGB004**	**FNBWGB004**	**FNBWGB004**
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0
Sample Date	09/17/1997	04/09/1998	04/09/1998	04/09/1998	04/09/1998	04/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	12,600 J	NA	NA	NA	NA	NA
ANTIMONY	1.5 UJ	NA	NA	10.0 U	10.0 U	10.0 U
ARSENIC	**0.68 J**	NA	NA	NA	NA	NA
BARIUM	33.6	NA	NA	NA	NA	NA
BERYLLIUM	0.01 U	NA	NA	NA	NA	NA
CADMIUM	0.04 U	NA	NA	10.0 U	10.0 U	10.0 U
CALCIUM	6,750 J	NA	NA	22,000	14,100	13,700
CHROMIUM	23.2 J	NA	NA	440 *α	80.4	80.4
CHROMIUM VI	NA	NA	NA	0.06 U	NA	NA
COBALT	14.6	NA	NA	10.0 U	10.0 U	10.0 U
COPPER	27.4 J	NA	NA	454 *α	30.2	45.8
IRON	**31,800 J**	NA	NA	**52,600**	**29,800**	**45,600**
LEAD	55.8 J	NA	NA	**248** ***α**	10.0 U	9.4 J
MAGNESIUM	6,730 J	NA	NA	NA	NA	NA
MANGANESE	488 J	NA	NA	917	351	612
MERCURY	0.10 UJ	NA	NA	NA	NA	NA
MOLYBDENUM	0.13 U	NA	NA	NA	NA	NA
NICKEL	21.5	NA	NA	133 *	21.2	39.3
POTASSIUM	851 J	NA	NA	14,600	21,000	19,500
SELENIUM	0.42 U	NA	NA	NA	NA	NA
SILVER	0.11 U	NA	NA	5.8 J	10.0 U	10.0 U
SODIUM	45.0 R	NA	NA	NA	NA	NA
THALLIUM	0.63 U	NA	NA	NA	NA	NA
TIN	NA	NA	NA	40.6	11.5	13.7
TITANIUM	NA	NA	NA	4,380	3,930	4,740
VANADIUM	89.1 J	NA	NA	135	89.1	149
ZINC	82.6 J	NA	NA	550 *α	71.3	99.9
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
1,1,2,2-TETRACHLOROETHANE	NA	0.01 UJ	0.01 U	NA	0.01 U	0.01 UJ

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB003	FNBWGB003	FNBWGB003	FNBWGB004	FNBWGB004	FNBWGB004
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0
Sample Date	09/17/1997	04/09/1998	04/09/1998	04/09/1998	04/09/1998	04/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,2-TRICHLOROETHANE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
1,1-DICHLOROETHANE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
1,1-DICHLOROETHENE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
1,2-DICHLOROETHANE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
1,2-DICHLOROETHENE (TOTAL)	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
1,2-DICHLOROPROPANE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
2-BUTANONE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
2-HEXANONE	NA	0.01 UJ	0.01 U	NA	0.01 U	0.01 UJ
4-METHYL-2-PENTANONE	NA	0.01 UJ	0.01 U	NA	0.01 U	0.01 UJ
ACETONE	NA	0.01 UJ	0.01 UJ	NA	0.01 UJ	0.01 UJ
BENZENE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
BROMODICHLOROMETHANE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
BROMOFORM	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
BROMOMETHANE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
CARBON DISULFIDE	NA	0.01 U	0.01 U	NA	0.002 J	0.005 J
CARBON TETRACHLORIDE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
CHLOROBENZENE	NA	0.01 UJ	0.01 U	NA	0.01 U	0.01 UJ
CHLOROETHANE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
CHLOROFORM	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
CHLOROMETHANE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
CIS-1,3-DICHLOROPROPENE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
DIBROMOCHLOROMETHANE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
ETHYLBENZENE	NA	0.01 UJ	0.01 U	NA	0.01 U	0.01 UJ
METHYLENE CHLORIDE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
STYRENE	NA	0.01 UJ	0.01 U	NA	0.01 U	0.01 UJ
TETRACHLOROETHENE	NA	0.01 UJ	0.01 U	NA	0.01 U	0.01 UJ
TOLUENE	NA	0.002 J	0.01 U	NA	0.01 U	0.01 UJ
TRANS-1,3-DICHLOROPROPENE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
TRICHLOROETHENE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
VINYL CHLORIDE	NA	0.01 U	0.01 U	NA	0.01 U	0.01 UJ
XYLENE (TOTAL)	NA	0.01 UJ	0.01 U	NA	0.01 U	0.01 UJ

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB003**	**FNBWGB003**	**FNBWGB003**	**FNBWGB004**	**FNBWGB004**	**FNBWGB004**
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0
Sample Date	09/17/1997	04/09/1998	04/09/1998	04/09/1998	04/09/1998	04/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
TOTAL VOCS	NA	0.002 J	0 U	NA	0.002 J	0.005 J
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	NA	NA	NA	0.4 U	0.4 U	0.4 U
1,2-DICHLOROBENZENE	NA	NA	NA	0.2 U	0.2 U	0.2 U
1,3-DICHLOROBENZENE	NA	NA	NA	0.2 U	0.2 U	0.2 U
1,4-DICHLOROBENZENE	NA	NA	NA	0.2 U	0.2 U	0.2 U
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	0.4 U	0.4 U	0.4 U
2,4,5-TRICHLOROPHENOL	NA	NA	NA	1 U	1 U	1 U
2,4,6-TRICHLOROPHENOL	NA	NA	NA	0.4 U	0.4 U	0.4 U
2,4-DICHLOROPHENOL	NA	NA	NA	0.4 U	0.4 U	0.4 U
2,4-DIMETHYLPHENOL	NA	NA	NA	0.4 U	0.4 U	0.4 U
2,4-DINITROPHENOL	NA	NA	NA	1 U	1 U	1 U
2,4-DINITROTOLUENE	NA	NA	NA	0.4 U	0.4 U	0.4 U
2,6-DINITROTOLUENE	NA	NA	NA	0.4 U	0.4 U	0.4 U
2-CHLORONAPHTHALENE	NA	NA	NA	0.4 U	0.4 U	0.4 U
2-CHLOROPHENOL	NA	NA	NA	0.4 U	0.4 U	0.4 U
2-METHYLNAPHTHALENE	NA	NA	NA	0.4 U	0.02 J	0.4 U
2-METHYLPHENOL	NA	NA	NA	0.4 U	0.4 U	0.4 U
2-NITROANILINE	NA	NA	NA	1 U	1 U	1 U
2-NITROPHENOL	NA	NA	NA	0.4 U	0.4 U	0.4 U
3,3'-DICHLOROBENZIDINE	NA	NA	NA	0.4 U	0.4 UJ	0.4 UJ
3-NITROANILINE	NA	NA	NA	1 UJ	1 U	1 U
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	1 U	1 U	1 U
4-BROMOPHENYL-PHENYLETHER	NA	NA	NA	0.4 U	0.4 U	0.4 U
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	0.4 U	0.4 U	0.4 U
4-CHLOROANILINE	NA	NA	NA	0.4 U	0.4 U	0.4 U
4-CHLOROPHENYL-PHENYLETHER	NA	NA	NA	0.4 U	0.4 U	0.4 U
4-METHYLPHENOL	NA	NA	NA	0.4 U	0.4 U	0.4 U
4-NITROANILINE	NA	NA	NA	1 U	1 U	1 U
4-NITROPHENOL	NA	NA	NA	1 U	1 U	1 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB003**	**FNBWGB003**	**FNBWGB003**	**FNBWGB004**	**FNBWGB004**	**FNBWGB004**
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0
Sample Date	09/17/1997	04/09/1998	04/09/1998	04/09/1998	04/09/1998	04/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
ACENAPHTHENE	NA	NA	NA	0.4 U	0.4 U	0.4 U
ACENAPHTHYLENE	NA	NA	NA	0.4 U	0.4 U	0.4 U
ANTHRACENE	NA	NA	NA	0.4 U	0.4 U	0.4 U
BENZO(A)ANTHRACENE	NA	NA	NA	0.03 J	0.4 U	0.4 U
BENZO(A)PYRENE	NA	NA	NA	0.05 J	0.4 U	0.4 U
BENZO(B)FLUORANTHENE	NA	NA	NA	0.04 J	0.4 U	0.4 U
BENZO(G,H,I)PERYLENE	NA	NA	NA	0.04 J	0.4 U	0.4 U
BENZO(K)FLUORANTHENE	NA	NA	NA	0.04 J	0.4 U	0.4 U
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	0.4 U	0.4 U	0.4 U
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	0.4 U	0.4 U	0.4 U
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	0.2 UJ	0.2 UJ	0.2 UJ
BUTYLBENZYLPHTHALATE	NA	NA	NA	0.4 U	0.4 U	0.4 U
CARBAZOLE	NA	NA	NA	0.4 U	0.4 U	0.4 U
CHRYSENE	NA	NA	NA	0.06 J	0.4 U	0.4 U
DI-N-BUTYLPHTHALATE	NA	NA	NA	0.4 U	0.4 U	0.4 U
DI-N-OCTYLPHTHALATE	NA	NA	NA	0.4 U	0.4 UJ	0.4 UJ
DIBENZ(A,H)ANTHRACENE	NA	NA	NA	0.4 UJ	0.4 U	0.4 U
DIBENZOFURAN	NA	NA	NA	0.4 U	0.4 U	0.4 U
DIETHYLPHTHALATE	NA	NA	NA	0.4 U	0.4 U	0.4 U
DIMETHYLPHTHALATE	NA	NA	NA	0.4 UJ	0.4 U	0.4 U
FLUORANTHENE	NA	NA	NA	0.06 J	0.4 U	0.4 U
FLUORENE	NA	NA	NA	0.4 U	0.4 U	0.4 U
HEXACHLOROBENZENE	NA	NA	NA	0.4 U	0.4 U	0.4 U
HEXACHLOROBUTADIENE	NA	NA	NA	0.4 U	0.4 U	0.4 U
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	0.4 UJ	0.4 U	0.4 U
HEXACHLOROETHANE	NA	NA	NA	0.4 U	0.4 U	0.4 U
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	0.02 J	0.4 U	0.4 U
ISOPHORONE	NA	NA	NA	0.4 U	0.4 U	0.4 U
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	0.4 U	0.4 U	0.4 U
N-NITROSODIPHENYLAMINE (1)	NA	NA	NA	0.4 U	0.4 U	0.4 U
NAPHTHALENE	NA	NA	NA	0.4 U	0.4 U	0.4 U

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB003	FNBWGB003	FNBWGB003	FNBWGB004	FNBWGB004	FNBWGB004
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0
Sample Date	09/17/1997	04/09/1998	04/09/1998	04/09/1998	04/09/1998	04/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
NITROBENZENE	NA	NA	NA	0.4 U	0.4 U	0.4 U
PENTACHLOROPHENOL	NA	NA	NA	1 UJ	1 UJ	1 UJ
PHENANTHRENE	NA	NA	NA	0.04 J	0.4 U	0.4 U
PHENOL	NA	NA	NA	0.4 U	0.4 U	0.4 U
PYRENE	NA	NA	NA	0.1 J	0.4 U	0.4 U
TOTAL SVOCS	NA	NA	NA	0.5 J	0.02 J	0 U
PESTICIDES (mg/kg)						
4,4'-DDD	0.004 U	NA	NA	0.004 U	0.004 U	0.004 U
4,4'-DDE	0.004 U	NA	NA	0.004 U	0.004 U	0.004 U
4,4'-DDT	0.002 J	NA	NA	0.01	0.004 U	0.004 U
ALDRIN	0.002 U	NA	NA	0.002 U	0.002 U	0.002 U
ALPHA-BHC	0.002 U	NA	NA	0.002 U	0.002 U	0.002 U
ALPHA-CHLORDANE	0.002 U	NA	NA	0.003	0.002 U	0.002 U
BETA-BHC	0.002 U	NA	NA	0.002 U	0.002 U	0.002 U
DELTA-BHC	0.002 U	NA	NA	0.002 U	0.002 U	0.002 U
DIELDRIN	0.004 U	NA	NA	0.004 U	0.004 U	0.004 U
ENDOSULFAN I	0.002 U	NA	NA	0.002 U	0.002 U	0.002 U
ENDOSULFAN II	0.004 U	NA	NA	0.004 U	0.004 U	0.004 U
ENDOSULFAN SULFATE	0.004 U	NA	NA	0.004 U	0.004 U	0.004 U
ENDRIN	0.004 U	NA	NA	0.004 U	0.004 U	0.004 U
ENDRIN ALDEHYDE	0.003 J	NA	NA	0.004 U	0.004 U	0.004 U
ENDRIN KETONE	0.004 U	NA	NA	0.004 U	0.004 U	0.004 U
GAMMA-BHC (LINDANE)	0.002 U	NA	NA	0.002 U	0.002 U	0.002 U
GAMMA-CHLORDANE	0.002 U	NA	NA	0.003	0.002 U	0.002 U
HEPTACHLOR	0.0003 UJ	NA	NA	0.0003 U	0.0004 U	0.0003 U
HEPTACHLOR EPOXIDE	0.0003 UJ	NA	NA	0.0003 U	0.0004 U	0.0003 U
METHOXYCHLOR	0.02 U	NA	NA	0.02 U	0.02 U	0.02 U
TOXAPHENE	0.09 U	NA	NA	0.1 U	0.1 U	0.1 U
PCBs (mg/kg)						
AROCLOR-1016	0.02 U	NA	NA	0.02 U	0.02 U	0.02 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB003**	**FNBWGB003**	**FNBWGB003**	**FNBWGB004**	**FNBWGB004**	**FNBWGB004**
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0
Sample Date	09/17/1997	04/09/1998	04/09/1998	04/09/1998	04/09/1998	04/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PCBs (mg/kg)						
AROCLOR-1221	0.02 U	NA	NA	0.04 U	0.04 U	0.04 U
AROCLOR-1232	0.02 U	NA	NA	0.02 U	0.02 U	0.02 U
AROCLOR-1242	0.02 U	NA	NA	0.02 U	0.02 U	0.02 U
AROCLOR-1248	0.02 U	NA	NA	0.02 U	0.02 U	0.02 U
AROCLOR-1254	0.02 U	NA	NA	0.02 U	0.02 U	0.02 U
AROCLOR-1260	0.02 U	NA	NA	0.08	0.02 U	0.02 U
TOTAL PCBS	0 U	NA	NA	0.08	0 U	0 U
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	110 U	120 Y	3.3 Y	40.0 Y	**1,000 Y**	15.0 Y
GASOLINE RANGE	0.51 UJ	NA	NA	0.56 U	0.57 U	0.57 U
MOTOR OIL RANGE	**2,500 Y**	**1,400 Y**	16.0 Y	**740 Y**	**8,800 Y**	72.0 Y
STODDARD SOLVENT	NA	NA	NA	1.1 U	NA	NA
pH						
PH	8.1	NA	NA	NA	NA	NA
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	9.2	NA	NA	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB005**	**FNBWGB005**	**FNBWGB005**	**FNBWGB005** [s]	**FNBWGB005**	**FNBWGB006**
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	9.0 - 10.0	2.0 - 3.0
Sample Date	10/06/1997	04/09/1998	04/09/1998	09/01/1998	09/01/1998	04/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	7,460 J	NA	NA	NA	NA	NA
ANTIMONY	2.7 J	NA	NA	NA	NA	10.0 U
ARSENIC	**3.9 J** !	NA	NA	NA	NA	NA
BARIUM	134 J	NA	NA	NA	NA	NA
BERYLLIUM	0.11 J	NA	NA	NA	NA	NA
CADMIUM	0.22 J	NA	NA	NA	NA	10.0 U
CALCIUM	5,500 J	NA	NA	NA	NA	13,500
CHROMIUM	45.1 J	NA	NA	NA	NA	102
COBALT	8.2 J	NA	NA	NA	NA	10.0 U
COPPER	55.9 J	NA	NA	NA	NA	72.5
IRON	16,800 J	NA	NA	NA	NA	**28,800**
LEAD	203 J *α	NA	NA	NA	NA	34.8
MAGNESIUM	4,890 J	NA	NA	NA	NA	NA
MANGANESE	271 J	NA	NA	NA	NA	560
MERCURY	10.2 J *α	NA	NA	NA	NA	NA
MOLYBDENUM	1.2 J	NA	NA	NA	NA	NA
NICKEL	48.9 J	NA	NA	NA	NA	67.6
POTASSIUM	759	NA	NA	NA	NA	20,100
SELENIUM	0.53 J	NA	NA	NA	NA	NA
SILVER	0.14 UJ	NA	NA	NA	NA	10.0 U
SODIUM	41.1 U	NA	NA	NA	NA	NA
THALLIUM	0.57 U	NA	NA	NA	NA	NA
TIN	NA	NA	NA	NA	NA	14.8
TITANIUM	NA	NA	NA	NA	NA	2,780
VANADIUM	57.3 J	NA	NA	NA	NA	56.0
ZINC	266 J *	NA	NA	NA	NA	876 *α
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	NA	0.01 U	0.02 U	NA	NA	0.01 U
1,1,2,2-TETRACHLOROETHANE	NA	0.01 U	0.02 U	NA	NA	0.01 UJ
1,1,2-TRICHLOROETHANE	NA	0.01 U	0.02 U	NA	NA	0.01 U

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB005	FNBWGB005	FNBWGB005	FNBWGB005 [s]	FNBWGB005	FNBWGB006
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	9.0 - 10.0	2.0 - 3.0
Sample Date	10/06/1997	04/09/1998	04/09/1998	09/01/1998	09/01/1998	04/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1-DICHLOROETHANE	NA	0.01 U	0.02 U	NA	NA	0.01 U
1,1-DICHLOROETHENE	NA	0.01 U	0.02 U	NA	NA	0.01 U
1,2-DICHLOROETHANE	NA	0.01 U	0.02 U	NA	NA	0.01 U
1,2-DICHLOROETHENE (TOTAL)	NA	0.01 U	0.02 U	NA	NA	0.01 U
1,2-DICHLOROPROPANE	NA	0.01 U	0.02 U	NA	NA	0.01 U
2-BUTANONE	NA	0.01 U	0.02 U	NA	NA	0.01 U
2-HEXANONE	NA	0.01 U	0.02 U	NA	NA	0.01 UJ
4-METHYL-2-PENTANONE	NA	0.01 U	0.02 U	NA	NA	0.01 UJ
ACETONE	NA	0.01 UJ	0.02 UJ	NA	NA	0.01 UJ
BENZENE	NA	0.01 U	0.02 U	NA	NA	0.01 U
BROMODICHLOROMETHANE	NA	0.01 U	0.02 U	NA	NA	0.01 U
BROMOFORM	NA	0.01 U	0.02 U	NA	NA	0.01 U
BROMOMETHANE	NA	0.01 U	0.02 U	NA	NA	0.01 U
CARBON DISULFIDE	NA	0.01 U	0.003 J	NA	NA	0.01 U
CARBON TETRACHLORIDE	NA	0.01 U	0.02 U	NA	NA	0.01 U
CHLOROBENZENE	NA	0.01 U	0.02 U	NA	NA	0.01 UJ
CHLOROETHANE	NA	0.01 U	0.02 U	NA	NA	0.01 U
CHLOROFORM	NA	0.01 U	0.02 U	NA	NA	0.01 U
CHLOROMETHANE	NA	0.01 U	0.02 U	NA	NA	0.01 U
CIS-1,3-DICHLOROPROPENE	NA	0.01 U	0.02 U	NA	NA	0.01 U
DIBROMOCHLOROMETHANE	NA	0.01 U	0.02 U	NA	NA	0.01 U
ETHYLBENZENE	NA	0.01 U	0.02 U	NA	NA	0.01 UJ
METHYLENE CHLORIDE	NA	0.01 U	0.02 U	NA	NA	0.01 U
STYRENE	NA	0.01 U	0.02 U	NA	NA	0.01 UJ
TETRACHLOROETHENE	NA	0.01 U	0.02 U	NA	NA	0.01 UJ
TOLUENE	NA	0.01 U	0.02 U	NA	NA	0.01 UJ
TRANS-1,3-DICHLOROPROPENE	NA	0.01 U	0.02 U	NA	NA	0.01 U
TRICHLOROETHENE	NA	0.01 U	0.02 U	NA	NA	0.01 U
VINYL CHLORIDE	NA	0.01 U	0.02 U	NA	NA	0.01 U
XYLENE (TOTAL)	NA	0.01 U	0.02 U	NA	NA	0.01 UJ
TOTAL VOCS	NA	0 U	0.003 J	NA	NA	0 U

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB005	FNBWGB005	FNBWGB005	FNBWGB005 [s]	FNBWGB005	FNBWGB006
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	9.0 - 10.0	2.0 - 3.0
Sample Date	10/06/1997	04/09/1998	04/09/1998	09/01/1998	09/01/1998	04/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	NA	NA	NA	0.9 U	0.6 U	NA
1,2-DICHLOROBENZENE	NA	NA	NA	0.4 U	0.3 U	NA
1,3-DICHLOROBENZENE	NA	NA	NA	0.4 U	0.3 U	NA
1,4-DICHLOROBENZENE	NA	NA	NA	0.4 U	0.3 U	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	0.9 U	0.6 U	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	2 U	2 U	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	0.9 U	0.6 U	NA
2,4-DICHLOROPHENOL	NA	NA	NA	0.9 U	0.6 U	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	0.9 U	0.6 U	NA
2,4-DINITROPHENOL	NA	NA	NA	2 UJ	2 UJ	NA
2,4-DINITROTOLUENE	NA	NA	NA	0.9 U	0.6 U	NA
2,6-DINITROTOLUENE	NA	NA	NA	0.9 U	0.6 U	NA
2-CHLORONAPHTHALENE	NA	NA	NA	0.9 U	0.6 U	NA
2-CHLOROPHENOL	NA	NA	NA	0.9 U	0.6 U	NA
2-METHYLNAPHTHALENE	NA	NA	NA	0.9 U	0.6 U	NA
2-METHYLPHENOL	NA	NA	NA	0.9 UJ	0.6 UJ	NA
2-NITROANILINE	NA	NA	NA	2 U	2 U	NA
2-NITROPHENOL	NA	NA	NA	0.9 U	0.6 U	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	0.9 U	0.6 U	NA
3-NITROANILINE	NA	NA	NA	2 UJ	2 UJ	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	2 U	2 U	NA
4-BROMOPHENYL-PHENYLETHER	NA	NA	NA	0.9 U	0.6 U	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	0.9 U	0.6 U	NA
4-CHLOROANILINE	NA	NA	NA	0.9 U	0.6 U	NA
4-CHLOROPHENYL-PHENYLETHER	NA	NA	NA	0.9 U	0.6 U	NA
4-METHYLPHENOL	NA	NA	NA	0.9 U	0.6 U	NA
4-NITROANILINE	NA	NA	NA	2 UJ	2 UJ	NA
4-NITROPHENOL	NA	NA	NA	2 UJ	2 UJ	NA
ACENAPHTHENE	NA	NA	NA	0.9 U	0.6 U	NA
ACENAPHTHYLENE	NA	NA	NA	0.9 U	0.6 U	NA
ANTHRACENE	NA	NA	NA	0.9 U	0.6 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB005**	**FNBWGB005**	**FNBWGB005**	**FNBWGB005** [s]	**FNBWGB005**	**FNBWGB006**
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	9.0 - 10.0	2.0 - 3.0
Sample Date	10/06/1997	04/09/1998	04/09/1998	09/01/1998	09/01/1998	04/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)ANTHRACENE	NA	NA	NA	0.9 U	0.6 U	NA
BENZO(A)PYRENE	NA	NA	NA	0.9 U	0.6 U	NA
BENZO(B)FLUORANTHENE	NA	NA	NA	0.9 U	0.6 U	NA
BENZO(G,H,I)PERYLENE	NA	NA	NA	0.9 U	0.6 U	NA
BENZO(K)FLUORANTHENE	NA	NA	NA	0.9 U	0.6 U	NA
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	0.9 U	0.6 U	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	0.9 U	0.6 U	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	0.4 UJ	0.2 UJ	NA
BUTYLBENZYLPHTHALATE	NA	NA	NA	0.9 U	0.6 U	NA
CARBAZOLE	NA	NA	NA	0.9 U	0.6 U	NA
CHRYSENE	NA	NA	NA	0.9 U	0.6 U	NA
DI-N-BUTYLPHTHALATE	NA	NA	NA	0.9 U	0.6 U	NA
DI-N-OCTYLPHTHALATE	NA	NA	NA	0.9 UJ	0.6 UJ	NA
DIBENZ(A,H)ANTHRACENE	NA	NA	NA	0.9 U	0.6 U	NA
DIBENZOFURAN	NA	NA	NA	0.9 U	0.6 U	NA
DIETHYLPHTHALATE	NA	NA	NA	0.9 U	0.6 U	NA
DIMETHYLPHTHALATE	NA	NA	NA	0.9 U	0.6 U	NA
FLUORANTHENE	NA	NA	NA	0.9 U	0.6 U	NA
FLUORENE	NA	NA	NA	0.9 U	0.6 U	NA
HEXACHLOROBENZENE	NA	NA	NA	0.9 U	0.6 U	NA
HEXACHLOROBUTADIENE	NA	NA	NA	0.9 U	0.6 U	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	0.9 U	0.6 U	NA
HEXACHLOROETHANE	NA	NA	NA	0.9 U	0.6 U	NA
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	0.9 U	0.6 U	NA
ISOPHORONE	NA	NA	NA	0.9 U	0.6 U	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	0.9 U	0.6 U	NA
N-NITROSODIPHENYLAMINE (1)	NA	NA	NA	0.9 U	0.6 U	NA
NAPHTHALENE	NA	NA	NA	0.9 U	0.6 U	NA
NITROBENZENE	NA	NA	NA	0.9 U	0.6 U	NA
PENTACHLOROPHENOL	NA	NA	NA	2 U	2 U	NA
PHENANTHRENE	NA	NA	NA	0.1 J	0.6 U	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB005**	**FNBWGB005**	**FNBWGB005**	**FNBWGB005** [s]	**FNBWGB005**	**FNBWGB006**
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	9.0 - 10.0	2.0 - 3.0
Sample Date	10/06/1997	04/09/1998	04/09/1998	09/01/1998	09/01/1998	04/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PHENOL	NA	NA	NA	0.9 U	0.6 U	NA
PYRENE	NA	NA	NA	0.9 U	0.6 U	NA
TOTAL SVOCS	NA	NA	NA	0.1 J	0 U	NA
PESTICIDES (mg/kg)						
4,4'-DDD	0.002 J	NA	NA	NA	NA	NA
4,4'-DDE	0.01	NA	NA	NA	NA	NA
4,4'-DDT	0.02 J	NA	NA	NA	NA	NA
ALDRIN	0.002 U	NA	NA	NA	NA	NA
ALPHA-BHC	0.002 U	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	0.001 J	NA	NA	NA	NA	NA
BETA-BHC	0.002 U	NA	NA	NA	NA	NA
DELTA-BHC	0.002 U	NA	NA	NA	NA	NA
DIELDRIN	0.004 U	NA	NA	NA	NA	NA
ENDOSULFAN I	0.002 J	NA	NA	NA	NA	NA
ENDOSULFAN II	0.004 UJ	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	0.008 J	NA	NA	NA	NA	NA
ENDRIN	0.004 J	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	0.005 J	NA	NA	NA	NA	NA
ENDRIN KETONE	0.01 J	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.002 U	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	0.002 U	NA	NA	NA	NA	NA
HEPTACHLOR	0.0003 U	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	0.0003 U	NA	NA	NA	NA	NA
METHOXYCHLOR	0.02 U	NA	NA	NA	NA	NA
TOXAPHENE	0.09 U	NA	NA	NA	NA	NA
PCBs (mg/kg)						
AROCLOR-1016	0.02 U	NA	NA	NA	NA	NA
AROCLOR-1221	0.02 U	NA	NA	NA	NA	NA
AROCLOR-1232	0.02 U	NA	NA	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB005**	**FNBWGB005**	**FNBWGB005**	**FNBWGB005** [s]	**FNBWGB005**	**FNBWGB006**
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	9.0 - 10.0	2.0 - 3.0
Sample Date	10/06/1997	04/09/1998	04/09/1998	09/01/1998	09/01/1998	04/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PCBs (mg/kg)						
AROCLOR-1242	0.02 U	NA	NA	NA	NA	NA
AROCLOR-1248	0.02 U	NA	NA	NA	NA	NA
AROCLOR-1254	0.02 U	NA	NA	NA	NA	NA
AROCLOR-1260	0.02 U	NA	NA	NA	NA	NA
TOTAL PCBS	0 U	NA	NA	NA	NA	NA
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	260 U	810 U	72.0 Y	360 Y	1.8 U	150 Y
GASOLINE RANGE	0.50 UJ	NA	NA	NA	NA	NA
MOTOR OIL RANGE	**6,600 Y**	**5,400 Y**	**1,100 Y**	76.0 Y	24.0 Y	**2,800 Y**
pH						
PH	7.7	NA	NA	NA	NA	NA
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	6.2	NA	NA	47.0	45.0	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB006**	**FNBWGB007**	**FNBWGB007**	**FNBWGB007**	**FNBWGB008**	**FNBWGB008**
Sample Depth (feet bgs)	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0
Sample Date	04/09/1998	04/09/1998	04/09/1998	04/09/1998	10/10/1997	04/10/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	NA	NA	NA	NA	8,530 J	NA
ANTIMONY	10.0 U	10.0 U	10.0 U	10.0 U	1.3 J	10.0 U
ARSENIC	NA	NA	NA	NA	2.7 UJ	NA
BARIUM	NA	NA	NA	NA	60.1 J	NA
BERYLLIUM	NA	NA	NA	NA	0.07 UJ	NA
CADMIUM	10.0 U	10.0 U	10.0 U	10.0 U	0.04 U	10.0 U
CALCIUM	10,400	40,800	11,200	7,320	6,370 J	17,000
CHROMIUM	53.1	94.3	95.6	116	37.4 J	143 *
CHROMIUM VI	NA	NA	0.06 U	NA	NA	NA
COBALT	10.0 U	10.0 U	10.0 U	10.0 U	10.4 J	10.0 U
COPPER	49.8	49.5	38.0	60.0	42.8 J	15.6 U
IRON	**30,400**	**65,100** *	**45,300**	**44,600**	21,400 J	**38,000**
LEAD	**210** *α	36.8	10.0 U	19.6	**336 J** *α	12.6
MAGNESIUM	NA	NA	NA	NA	5,310 J	NA
MANGANESE	559	1,130	1,100	597	301 J	762
MERCURY	NA	NA	NA	NA	0.11 J	NA
MOLYBDENUM	NA	NA	NA	NA	0.28 UJ	NA
NICKEL	21.4	28.5	46.6	72.3	36.0 J	107
POTASSIUM	23,200	7,800	19,800	17,900	747	13,800
SELENIUM	NA	NA	NA	NA	0.45 J	NA
SILVER	10.0 U	10.0 U	10.0 U	10.0 U	0.10 U	10.0 U
SODIUM	NA	NA	NA	NA	38.4 U	NA
THALLIUM	NA	NA	NA	NA	0.54 U	NA
TIN	9.5 J	9.8 J	13.4	10.9	NA	8.6 J
TITANIUM	2,400	6,470	4,290	4,610	NA	3,520
VANADIUM	45.1	241 *α	118	149	46.9 J	114
ZINC	180	113	110	117	128 J	65.9
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
1,1,2,2-TETRACHLOROETHANE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB006	FNBWGB007	FNBWGB007	FNBWGB007	FNBWGB008	FNBWGB008
Sample Depth (feet bgs)	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0
Sample Date	04/09/1998	04/09/1998	04/09/1998	04/09/1998	10/10/1997	04/10/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,2-TRICHLOROETHANE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
1,1-DICHLOROETHANE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
1,1-DICHLOROETHENE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
1,2-DICHLOROETHANE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
1,2-DICHLOROETHENE (TOTAL)	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
1,2-DICHLOROPROPANE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
2-BUTANONE	0.01 U	NA	0.01 U	0.03 UJ	0.01 UJ	0.01 UJ
2-HEXANONE	0.01 U	NA	0.01 U	0.02 U	0.01 UJ	0.01 UJ
4-METHYL-2-PENTANONE	0.01 U	NA	0.01 U	0.02 U	0.01 UJ	0.01 UJ
ACETONE	0.01 UJ	NA	0.01 UJ	0.1 J	0.01 UJ	0.01 UJ
BENZENE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
BROMODICHLOROMETHANE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
BROMOFORM	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 UJ
BROMOMETHANE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
CARBON DISULFIDE	0.01 U	NA	0.01 U	0.002 J	0.01 U	0.01 U
CARBON TETRACHLORIDE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
CHLOROBENZENE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
CHLOROETHANE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
CHLOROFORM	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
CHLOROMETHANE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 UJ
CIS-1,3-DICHLOROPROPENE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
DIBROMOCHLOROMETHANE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
ETHYLBENZENE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
METHYLENE CHLORIDE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
STYRENE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
TETRACHLOROETHENE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
TOLUENE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
TRANS-1,3-DICHLOROPROPENE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
TRICHLOROETHENE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
VINYL CHLORIDE	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U
XYLENE (TOTAL)	0.01 U	NA	0.01 U	0.02 U	0.01 U	0.01 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB006**	**FNBWGB007**	**FNBWGB007**	**FNBWGB007**	**FNBWGB008**	**FNBWGB008**
Sample Depth (feet bgs)	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0
Sample Date	04/09/1998	04/09/1998	04/09/1998	04/09/1998	10/10/1997	04/10/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
TOTAL VOCS	0 U	NA	0 U	0.1 J	0 U	0 U
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
1,2-DICHLOROBENZENE	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-DICHLOROBENZENE	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-DICHLOROBENZENE	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
2,4,5-TRICHLOROPHENOL	NA	0.9 U	1 U	1 U	0.9 U	1 U
2,4,6-TRICHLOROPHENOL	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
2,4-DICHLOROPHENOL	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
2,4-DIMETHYLPHENOL	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
2,4-DINITROPHENOL	NA	0.9 U	1 U	1 U	0.9 U	1 U
2,4-DINITROTOLUENE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
2,6-DINITROTOLUENE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
2-CHLORONAPHTHALENE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
2-CHLOROPHENOL	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
2-METHYLNAPHTHALENE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
2-METHYLPHENOL	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
2-NITROANILINE	NA	0.9 U	1 U	1 U	0.9 U	1 U
2-NITROPHENOL	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
3,3'-DICHLOROBENZIDINE	NA	0.4 U	0.4 UJ	0.5 UJ	0.4 U	0.4 U
3-NITROANILINE	NA	0.9 UJ	1 U	1 UJ	0.9 U	1 U
4,6-DINITRO-2-METHYLPHENOL	NA	0.9 U	1 U	1 UJ	0.9 U	1 U
4-BROMOPHENYL-PHENYLETHER	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
4-CHLORO-3-METHYLPHENOL	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
4-CHLOROANILINE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
4-CHLOROPHENYL-PHENYLETHER	NA	0.4 U	0.4 U	0.5 UJ	0.4 U	0.4 U
4-METHYLPHENOL	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
4-NITROANILINE	NA	0.9 U	1 U	1 U	0.9 U	1 U
4-NITROPHENOL	NA	0.9 U	1 U	1 U	0.9 UJ	1 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB006**	**FNBWGB007**	**FNBWGB007**	**FNBWGB007**	**FNBWGB008**	**FNBWGB008**
Sample Depth (feet bgs)	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0
Sample Date	04/09/1998	04/09/1998	04/09/1998	04/09/1998	10/10/1997	04/10/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
ACENAPHTHENE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
ACENAPHTHYLENE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
ANTHRACENE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
BENZO(A)ANTHRACENE	NA	0.4 U	0.4 U	0.5 U	0.1 J	0.4 U
BENZO(A)PYRENE	NA	0.05 J	0.4 U	0.5 U	**0.2 J**	0.4 U
BENZO(B)FLUORANTHENE	NA	0.4 U	0.4 U	0.03 J	**0.6 J**	0.4 U
BENZO(G,H,I)PERYLENE	NA	0.4 UJ	0.4 U	0.03 J	0.2 J	0.4 U
BENZO(K)FLUORANTHENE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
BIS(2-CHLOROETHOXY)METHANE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
BIS(2-CHLOROETHYL)ETHER	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
BIS(2-ETHYLHEXYL)PHTHALATE	NA	0.1 U	0.2 UJ	0.2 UJ	0.1 UJ	0.2 UJ
BUTYLBENZYLPHTHALATE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
CARBAZOLE	NA	0.4 U	0.4 U	0.5 UJ	0.02 J	0.4 U
CHRYSENE	NA	0.05 J	0.4 U	0.5 U	0.4 J	0.4 U
DI-N-BUTYLPHTHALATE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
DI-N-OCTYLPHTHALATE	NA	0.4 U	0.4 UJ	0.5 U	0.4 U	0.4 U
DIBENZ(A,H)ANTHRACENE	NA	0.4 UJ	0.4 U	0.5 U	**0.06 J**	0.4 U
DIBENZOFURAN	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
DIETHYLPHTHALATE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
DIMETHYLPHTHALATE	NA	0.4 U	0.4 U	0.5 U	0.4 UJ	0.4 U
FLUORANTHENE	NA	0.4 U	0.4 U	0.04 J	0.3 J	0.4 U
FLUORENE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
HEXACHLOROBENZENE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
HEXACHLOROBUTADIENE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
HEXACHLOROCYCLOPENTADIENE	NA	0.4 UJ	0.4 U	0.5 UJ	0.4 U	0.4 U
HEXACHLOROETHANE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
INDENO(1,2,3-CD)PYRENE	NA	0.4 UJ	0.4 U	0.5 U	0.1 J	0.4 U
ISOPHORONE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
N-NITROSO-DI-N-PROPYLAMINE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
N-NITROSODIPHENYLAMINE (1)	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
NAPHTHALENE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB006	FNBWGB007	FNBWGB007	FNBWGB007	FNBWGB008	FNBWGB008
Sample Depth (feet bgs)	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0
Sample Date	04/09/1998	04/09/1998	04/09/1998	04/09/1998	10/10/1997	04/10/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
NITROBENZENE	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
PENTACHLOROPHENOL	NA	0.9 UJ	1 UJ	1 UJ	0.9 U	1 U
PHENANTHRENE	NA	0.4 U	0.4 U	0.5 U	0.1 J	0.4 U
PHENOL	NA	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
PYRENE	NA	0.02 J	0.4 U	0.05 J	0.5 J	0.4 U
TOTAL SVOCS	NA	0.1 J	0 U	0.2 J	3 J	0 U
PESTICIDES (mg/kg)						
4,4'-DDD	NA	0.004 U	0.004 U	0.005 U	0.004 U	NA
4,4'-DDE	NA	0.004 U	0.004 U	0.005 U	0.004 U	NA
4,4'-DDT	NA	0.003 J	0.004 U	0.005 U	0.005	NA
ALDRIN	NA	0.002 U	0.002 U	0.002 U	0.002 U	NA
ALPHA-BHC	NA	0.002 U	0.002 U	0.002 U	0.008 UJ	NA
ALPHA-CHLORDANE	NA	0.001 J	0.002 U	0.002 U	0.003	NA
BETA-BHC	NA	0.002 U	0.002 U	0.002 U	0.003 UJ	NA
DELTA-BHC	NA	0.002 U	0.002 U	0.002 U	0.002 UJ	NA
DIELDRIN	NA	0.004 U	0.004 U	0.005 U	0.004 U	NA
ENDOSULFAN I	NA	0.002 U	0.002 U	0.002 U	0.002 U	NA
ENDOSULFAN II	NA	0.004 U	0.004 U	0.005 U	0.004 U	NA
ENDOSULFAN SULFATE	NA	0.004 U	0.004 U	0.005 U	0.004 U	NA
ENDRIN	NA	0.004 U	0.004 U	0.005 U	0.004 U	NA
ENDRIN ALDEHYDE	NA	0.004 U	0.004 U	0.005 U	0.004	NA
ENDRIN KETONE	NA	0.004 U	0.004 U	0.005 U	0.004 UJ	NA
GAMMA-BHC (LINDANE)	NA	0.002 U	0.002 U	0.002 U	0.003 UJ	NA
GAMMA-CHLORDANE	NA	0.001 J	0.002 U	0.002 U	0.002 J	NA
HEPTACHLOR	NA	0.0003 U	0.0003 U	0.0004 U	0.0003 UJ	NA
HEPTACHLOR EPOXIDE	NA	0.0003 U	0.0003 U	0.0004 U	0.0003 U	NA
METHOXYCHLOR	NA	0.02 U	0.02 U	0.03 U	0.02 U	NA
TOXAPHENE	NA	0.09 U	0.1 U	0.1 U	0.09 U	NA
PCBs (mg/kg)						
AROCLOR-1016	NA	0.02 U	0.02 U	0.02 U	0.02 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB006**	**FNBWGB007**	**FNBWGB007**	**FNBWGB007**	**FNBWGB008**	**FNBWGB008**
Sample Depth (feet bgs)	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0
Sample Date	04/09/1998	04/09/1998	04/09/1998	04/09/1998	10/10/1997	04/10/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PCBs (mg/kg)						
AROCLOR-1221	NA	0.04 U	0.04 U	0.05 U	0.02 U	NA
AROCLOR-1232	NA	0.02 U	0.02 U	0.02 U	0.02 U	NA
AROCLOR-1242	NA	0.02 U	0.02 U	0.02 U	0.02 U	NA
AROCLOR-1248	NA	0.02 U	0.02 U	0.02 U	0.02 U	NA
AROCLOR-1254	NA	0.02 U	0.02 U	0.02 U	0.02 U	NA
AROCLOR-1260	NA	0.04	0.02 U	0.02 U	0.05	NA
TOTAL PCBS	NA	0.04	0 U	0 U	0.05	NA
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	7.6 Y	59.0 Y	5.2 Y	1.2 U	54.0 UJ	NA
GASOLINE RANGE	NA	0.56 U	0.61 U	0.59 U	0.50 U	NA
MOTOR OIL RANGE	58.0 Y	**970 Y**	19.0 Y	5.9 U	380 Y	NA
pH						
PH	NA	NA	NA	NA	6.6	NA
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	NA	NA	NA	NA	7.1	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB008**	**FNBWGB009**	**FNBWGB009**	**FNBWGB009**	**FNBWGB010**	**FNBWGB010**
Sample Depth (feet bgs)	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0
Sample Date	04/10/1998	10/03/1997	04/10/1998	04/10/1998	04/10/1998	04/10/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	NA	12,100 J	NA	NA	12,900	11,600
ANTIMONY	10.0 U	3.0 J	10.0 U	10.0 U	2.2 UJ	1.9 UJ
ARSENIC	NA	**15.1 J** !	NA	NA	**2.0 J**	**2.1**
BARIUM	NA	78.6 J	NA	NA	110	103
BERYLLIUM	NA	0.03 UJ	NA	NA	0.39 J	0.34 J
CADMIUM	10.0 U	0.04 UJ	10.0 U	10.0 U	0.15 U	0.13 UJ
CALCIUM	10,400	7,780 J	25,700	7,270	13,700	11,800
CHROMIUM	64.7	310 J *α	74.6	145 *	49.6	46.4
COBALT	10.0 U	21.5 J	10.0 U	10.0 U	11.8	11.0 J
COPPER	16.6	381 *α	38.4	46.2	68.9 J	41.7 J
IRON	**26,500**	**130,000 J** *!α	**93,600** *α	**46,600**	**28,400**	**27,000**
LEAD	8.4 J	159 J *α	11.2	11.2	85.2 *α	127 *α
MAGNESIUM	NA	10,500	NA	NA	6,880	6,940
MANGANESE	311	978 J	1,280	339	479	429
MERCURY	NA	0.35	NA	NA	0.22	0.18
MOLYBDENUM	NA	6.8 J	NA	NA	0.72 U	0.62 U
NICKEL	23.3	**169 J** *α	10.0 U	109	36.9	32.3
POTASSIUM	21,100	1,650	6,310	15,400	1,220	1,030
SELENIUM	NA	1.8	NA	NA	0.68 UJ	0.58 UJ
SILVER	10.0 U	0.37 J	10.0 U	10.0 U	0.50 U	0.43 UJ
SODIUM	NA	523	NA	NA	114 U	96.9 U
THALLIUM	NA	0.59 U	NA	NA	1.2 UJ	1.1 UJ
TIN	12.5	NA	6.5 J	13.3	NA	NA
TITANIUM	3,490	NA	6,750	4,960	NA	NA
VANADIUM	76.7	49.6 J	291 *α	151	63.9	59.0
ZINC	71.6	816 J *α	123	99.1	112 J	94.6 J
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
1,1,2,2-TETRACHLOROETHANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
1,1,2-TRICHLOROETHANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB008	FNBWGB009	FNBWGB009	FNBWGB009	FNBWGB010	FNBWGB010
Sample Depth (feet bgs)	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0
Sample Date	04/10/1998	10/03/1997	04/10/1998	04/10/1998	04/10/1998	04/10/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1-DICHLOROETHANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
1,1-DICHLOROETHENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
1,2-DICHLOROETHANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
1,2-DICHLOROETHENE (TOTAL)	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
1,2-DICHLOROPROPANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
2-BUTANONE	0.01 UJ	0.01 U	0.01 UJ	0.01 UJ	NA	0.01 UJ
2-HEXANONE	0.01 UJ	0.01 U	0.01 UJ	0.01 UJ	NA	0.01 UJ
4-METHYL-2-PENTANONE	0.01 UJ	0.01 U	0.01 UJ	0.01 UJ	NA	0.01 UJ
ACETONE	0.02 UJ	0.01 UJ	0.01 UJ	0.04 UJ	NA	0.01 UJ
BENZENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
BROMODICHLOROMETHANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
BROMOFORM	0.01 UJ	0.01 U	0.01 UJ	0.01 UJ	NA	0.01 UJ
BROMOMETHANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
CARBON DISULFIDE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
CARBON TETRACHLORIDE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
CHLOROBENZENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
CHLOROETHANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
CHLOROFORM	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 UJ
CHLOROMETHANE	0.01 UJ	0.01 U	0.01 UJ	0.01 UJ	NA	0.01 UJ
CIS-1,3-DICHLOROPROPENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
DIBROMOCHLOROMETHANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
ETHYLBENZENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
METHYLENE CHLORIDE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
STYRENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
TETRACHLOROETHENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
TOLUENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
TRANS-1,3-DICHLOROPROPENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
TRICHLOROETHENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
VINYL CHLORIDE	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
XYLENE (TOTAL)	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.01 U
TOTAL VOCS	0 U	0 U	0 U	0 U	NA	0 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB008**	**FNBWGB009**	**FNBWGB009**	**FNBWGB009**	**FNBWGB010**	**FNBWGB010**
Sample Depth (feet bgs)	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0
Sample Date	04/10/1998	10/03/1997	04/10/1998	04/10/1998	04/10/1998	04/10/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-DICHLOROBENZENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-DICHLOROBENZENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-DICHLOROBENZENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2,4,5-TRICHLOROPHENOL	1 U	0.9 U	0.9 U	1 U	0.9 U	0.9 U
2,4,6-TRICHLOROPHENOL	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2,4-DICHLOROPHENOL	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2,4-DIMETHYLPHENOL	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2,4-DINITROPHENOL	1 U	0.9 UJ	0.9 U	1 U	0.9 U	0.9 U
2,4-DINITROTOLUENE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2,6-DINITROTOLUENE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2-CHLORONAPHTHALENE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2-CHLOROPHENOL	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2-METHYLNAPHTHALENE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2-METHYLPHENOL	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2-NITROANILINE	1 U	0.9 U	0.9 U	1 U	0.9 U	0.9 U
2-NITROPHENOL	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
3,3'-DICHLOROBENZIDINE	0.4 U	0.3 UJ	0.4 U	0.4 U	0.4 R	0.4 R
3-NITROANILINE	1 U	0.9 U	0.9 U	1 U	0.9 U	0.9 U
4,6-DINITRO-2-METHYLPHENOL	1 U	0.9 UJ	0.9 U	1 U	0.9 UJ	0.9 UJ
4-BROMOPHENYL-PHENYLETHER	0.4 U	0.3 U	0.4 U	0.4 U	0.4 UJ	0.4 UJ
4-CHLORO-3-METHYLPHENOL	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
4-CHLOROANILINE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
4-CHLOROPHENYL-PHENYLETHER	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
4-METHYLPHENOL	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
4-NITROANILINE	1 U	0.9 U	0.9 U	1 U	0.9 U	0.9 U
4-NITROPHENOL	1 U	0.9 U	0.9 U	1 U	0.9 U	0.9 U
ACENAPHTHENE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
ACENAPHTHYLENE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
ANTHRACENE	0.4 U	0.03 J	0.4 U	0.4 U	0.4 UJ	0.4 UJ

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB008**	**FNBWGB009**	**FNBWGB009**	**FNBWGB009**	**FNBWGB010**	**FNBWGB010**
Sample Depth (feet bgs)	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0
Sample Date	04/10/1998	10/03/1997	04/10/1998	04/10/1998	04/10/1998	04/10/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)ANTHRACENE	0.4 U	0.2 J	0.4 U	0.4 U	0.07 J	0.4 R
BENZO(A)PYRENE	0.4 U	**0.2 J**	0.4 U	0.4 U	0.4 R	0.4 R
BENZO(B)FLUORANTHENE	0.4 U	0.6 Y	0.4 U	0.4 U	0.4 R	0.4 R
BENZO(G,H,I)PERYLENE	0.4 U	0.05 J	0.4 U	0.4 U	0.4 R	0.4 R
BENZO(K)FLUORANTHENE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 R	0.4 R
BIS(2-CHLOROETHOXY)METHANE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
BIS(2-CHLOROETHYL)ETHER	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.2 UJ	0.2 UJ	0.2 U	0.2 UJ	0.1 UJ	0.2 UJ
BUTYLBENZYLPHTHALATE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 R	0.4 R
CARBAZOLE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 UJ	0.4 UJ
CHRYSENE	0.4 U	0.3 J	0.4 U	0.4 U	0.1 J	0.1 J
DI-N-BUTYLPHTHALATE	0.4 U	0.7 UJ	0.4 U	0.4 U	0.4 UJ	0.4 UJ
DI-N-OCTYLPHTHALATE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 R	0.4 R
DIBENZ(A,H)ANTHRACENE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 R	0.4 R
DIBENZOFURAN	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
DIETHYLPHTHALATE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
DIMETHYLPHTHALATE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
FLUORANTHENE	0.4 U	0.3 J	0.4 U	0.4 U	0.05 J	0.02 J
FLUORENE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
HEXACHLOROBENZENE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 UJ	0.4 UJ
HEXACHLOROBUTADIENE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
HEXACHLOROCYCLOPENTADIENE	0.4 U	0.3 UJ	0.4 U	0.4 U	0.4 U	0.4 U
HEXACHLOROETHANE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
INDENO(1,2,3-CD)PYRENE	0.4 U	0.03 J	0.4 U	0.4 U	0.4 R	0.4 R
ISOPHORONE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
N-NITROSO-DI-N-PROPYLAMINE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 UJ	0.4 UJ
N-NITROSODIPHENYLAMINE (1)	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
NAPHTHALENE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
NITROBENZENE	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
PENTACHLOROPHENOL	1 U	0.9 U	0.9 U	1 U	0.9 UJ	0.9 UJ
PHENANTHRENE	0.4 U	0.08 J	0.4 U	0.4 U	0.03 J	0.4 U

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB008**	**FNBWGB009**	**FNBWGB009**	**FNBWGB009**	**FNBWGB010**	**FNBWGB010**
Sample Depth (feet bgs)	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0
Sample Date	04/10/1998	10/03/1997	04/10/1998	04/10/1998	04/10/1998	04/10/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PHENOL	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
PYRENE	0.4 U	0.3 J	0.4 U	0.4 U	0.2 J	0.07 J
TOTAL SVOCS	0 U	2 JY	0 U	0 U	0.4 J	0.2 J
PESTICIDES (mg/kg)						
4,4'-DDD	NA	0.003 UJ	NA	NA	0.004 U	0.004 U
4,4'-DDE	NA	0.003 UJ	NA	NA	0.004 U	0.004 U
4,4'-DDT	NA	0.003 UJ	NA	NA	0.004 J	0.004 U
ALDRIN	NA	0.002 UJ	NA	NA	0.002 U	0.002 U
ALPHA-BHC	NA	0.01	NA	NA	0.002 U	0.002 J
ALPHA-CHLORDANE	NA	0.004 J	NA	NA	0.001 J	0.002 U
BETA-BHC	NA	0.002 UJ	NA	NA	0.002 U	0.002 U
DELTA-BHC	NA	0.002 UJ	NA	NA	0.002 U	0.002 U
DIELDRIN	NA	0.003 UJ	NA	NA	0.004 U	0.004 U
ENDOSULFAN I	NA	0.002 J	NA	NA	0.002 U	0.002 U
ENDOSULFAN II	NA	0.003 UJ	NA	NA	0.004 U	0.004 U
ENDOSULFAN SULFATE	NA	0.003 UJ	NA	NA	0.004 U	0.004 U
ENDRIN	NA	0.003 UJ	NA	NA	0.004 UJ	0.004 UJ
ENDRIN ALDEHYDE	NA	0.007 J	NA	NA	0.004 U	0.004 U
ENDRIN KETONE	NA	0.003 UJ	NA	NA	0.004 U	0.004 U
GAMMA-BHC (LINDANE)	NA	0.003 J	NA	NA	0.002 U	0.002 U
GAMMA-CHLORDANE	NA	0.002 J	NA	NA	0.002 U	0.002 U
HEPTACHLOR	NA	0.0003 UJ	NA	NA	0.0003 U	0.0003 U
HEPTACHLOR EPOXIDE	NA	0.004 J	NA	NA	0.0003 UJ	0.0003 UJ
METHOXYCHLOR	NA	0.02 UJ	NA	NA	0.02 U	0.02 U
TOXAPHENE	NA	0.09 U	NA	NA	0.09 U	0.09 U
PCBs (mg/kg)						
AROCLOR-1016	NA	0.02 U	NA	NA	0.02 U	0.02 U
AROCLOR-1221	NA	0.02 U	NA	NA	0.04 U	0.03 U
AROCLOR-1232	NA	0.02 U	NA	NA	0.02 U	0.02 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB008**	**FNBWGB009**	**FNBWGB009**	**FNBWGB009**	**FNBWGB010**	**FNBWGB010**
Sample Depth (feet bgs)	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0
Sample Date	04/10/1998	10/03/1997	04/10/1998	04/10/1998	04/10/1998	04/10/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PCBs (mg/kg)						
AROCLOR-1242	NA	0.02 U	NA	NA	0.02 U	0.02 U
AROCLOR-1248	NA	0.02 U	NA	NA	0.02 U	0.02 U
AROCLOR-1254	NA	0.02 U	NA	NA	0.02 U	0.02 U
AROCLOR-1260	NA	0.02 U	NA	NA	0.01 J	0.02 U
TOTAL PCBS	NA	0 U	NA	NA	0.01 J	0 U
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	NA	52.0 U	**1,800 Y**	1.3 U	74.0 Y	66.0 Y
GASOLINE RANGE	NA	0.50 UJ	NA	NA	0.55 U	0.53 U
MOTOR OIL RANGE	NA	**650 Y**	**12,000 Y**	6.7 U	**1,700 Y**	**1,200 Y**
pH						
PH	NA	7.8	NA	NA	NA	NA
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	NA	3.1	NA	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB010**	**FNBWGB011**	**FNBWGB011**	**FNBWGB011**	**FNBWGB011**	**FNBWGB011**
Sample Depth (feet bgs)	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	9.0 - 10.0
Sample Date	04/10/1998	10/08/1997	04/10/1998	04/10/1998	09/04/1998	09/04/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	8,270	11,000 J	NA	NA	NA	NA
ANTIMONY	2.0 UJ	0.86 J	NA	NA	NA	NA
ARSENIC	**4.2** !	**5.1 J** !	NA	NA	NA	NA
BARIUM	109	87.4 J	NA	NA	NA	NA
BERYLLIUM	0.44 J	0.11 J	NA	NA	NA	NA
CADMIUM	0.14 U	0.04 UJ	NA	NA	NA	NA
CALCIUM	1,680	11,400 J	NA	NA	NA	NA
CHROMIUM	16.3	36.7 J	NA	NA	NA	NA
COBALT	6.3 J	12.9 J	NA	NA	NA	NA
COPPER	17.0 J	57.9 J	NA	NA	NA	NA
IRON	18,000	**25,100 J**	NA	NA	NA	NA
LEAD	5.5	60.0 J *α	NA	NA	NA	NA
MAGNESIUM	2,780	5,790 J	NA	NA	NA	NA
MANGANESE	144	493 J	NA	NA	NA	NA
MERCURY	0.10 U	0.61 J	NA	NA	NA	NA
MOLYBDENUM	0.65 U	0.35 J	NA	NA	NA	NA
NICKEL	15.9	32.6 J	NA	NA	NA	NA
POTASSIUM	1,090	933	NA	NA	NA	NA
SELENIUM	0.61 UJ	0.43 J	NA	NA	NA	NA
SILVER	0.45 U	0.11 U	NA	NA	NA	NA
SODIUM	301 J	116 J	NA	NA	NA	NA
THALLIUM	1.1 UJ	0.62 U	NA	NA	NA	NA
VANADIUM	29.3	55.0 J	NA	NA	NA	NA
ZINC	36.3 J	116 J	NA	NA	NA	NA
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
1,1,2,2-TETRACHLOROETHANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
1,1,2-TRICHLOROETHANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
1,1-DICHLOROETHANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
1,1-DICHLOROETHENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB010	FNBWGB011	FNBWGB011	FNBWGB011	FNBWGB011	FNBWGB011
Sample Depth (feet bgs)	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	9.0 - 10.0
Sample Date	04/10/1998	10/08/1997	04/10/1998	04/10/1998	09/04/1998	09/04/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROETHANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
1,2-DICHLOROETHENE (TOTAL)	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
1,2-DICHLOROPROPANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
2-BUTANONE	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	NA	NA
2-HEXANONE	0.01 UJ	0.01 U	0.01 UJ	0.01 UJ	NA	NA
4-METHYL-2-PENTANONE	0.01 UJ	0.01 U	0.01 UJ	0.01 UJ	NA	NA
ACETONE	0.08 J	0.01 UJ	0.03 UJ	0.01 UJ	NA	NA
BENZENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
BROMODICHLOROMETHANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
BROMOFORM	0.01 UJ	0.01 U	0.01 UJ	0.01 UJ	NA	NA
BROMOMETHANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
CARBON DISULFIDE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
CARBON TETRACHLORIDE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
CHLOROBENZENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
CHLOROETHANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
CHLOROFORM	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
CHLOROMETHANE	0.01 UJ	0.01 U	0.01 UJ	0.01 UJ	NA	NA
CIS-1,3-DICHLOROPROPENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
DIBROMOCHLOROMETHANE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
ETHYLBENZENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
METHYLENE CHLORIDE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
STYRENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
TETRACHLOROETHENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
TOLUENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
TRANS-1,3-DICHLOROPROPENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
TRICHLOROETHENE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
VINYL CHLORIDE	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
XYLENE (TOTAL)	0.01 U	0.01 U	0.01 U	0.01 U	NA	NA
TOTAL VOCS	0.08 J	0 U	0 U	0 U	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	0.4 U	0.7 UJ	0.4 U	0.4 U	0.6 U	0.6 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB010**	**FNBWGB011**	**FNBWGB011**	**FNBWGB011**	**FNBWGB011**	**FNBWGB011**
Sample Depth (feet bgs)	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	9.0 - 10.0
Sample Date	04/10/1998	10/08/1997	04/10/1998	04/10/1998	09/04/1998	09/04/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROBENZENE	0.2 U	0.3 U	0.2 U	0.2 U	0.3 U	0.3 U
1,3-DICHLOROBENZENE	0.2 U	0.3 U	0.2 U	0.2 U	0.3 U	0.3 U
1,4-DICHLOROBENZENE	0.2 U	0.3 U	0.2 U	0.2 U	0.3 U	0.3 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
2,4,5-TRICHLOROPHENOL	0.9 U	2 U	1 U	1 U	2 U	2 U
2,4,6-TRICHLOROPHENOL	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
2,4-DICHLOROPHENOL	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
2,4-DIMETHYLPHENOL	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
2,4-DINITROPHENOL	0.9 U	2 UJ	1 U	1 U	2 U	2 U
2,4-DINITROTOLUENE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
2,6-DINITROTOLUENE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
2-CHLORONAPHTHALENE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
2-CHLOROPHENOL	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
2-METHYLNAPHTHALENE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
2-METHYLPHENOL	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
2-NITROANILINE	0.9 U	2 U	1 U	1 U	2 U	2 U
2-NITROPHENOL	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
3,3'-DICHLOROBENZIDINE	0.4 U	0.7 UJ	0.4 U	0.4 U	0.6 U	0.6 U
3-NITROANILINE	0.9 U	2 UJ	1 U	1 U	2 U	2 U
4,6-DINITRO-2-METHYLPHENOL	0.9 U	2 UJ	1 U	1 U	2 U	2 U
4-BROMOPHENYL-PHENYLETHER	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
4-CHLORO-3-METHYLPHENOL	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
4-CHLOROANILINE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
4-CHLOROPHENYL-PHENYLETHER	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
4-METHYLPHENOL	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
4-NITROANILINE	0.9 U	2 UJ	1 U	1 U	2 U	2 U
4-NITROPHENOL	0.9 U	2 UJ	1 U	1 U	2 U	2 U
ACENAPHTHENE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
ACENAPHTHYLENE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
ANTHRACENE	0.4 U	0.2 J	0.4 U	0.4 U	0.6 U	0.6 U
BENZO(A)ANTHRACENE	0.4 U	0.3 J	0.4 U	0.06 J	0.6 U	0.6 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB010**	**FNBWGB011**	**FNBWGB011**	**FNBWGB011**	**FNBWGB011**	**FNBWGB011**
Sample Depth (feet bgs)	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	9.0 - 10.0
Sample Date	04/10/1998	10/08/1997	04/10/1998	04/10/1998	09/04/1998	09/04/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)PYRENE	0.4 U	**0.3 J**	0.4 U	**0.09 J**	0.04 J	0.6 U
BENZO(B)FLUORANTHENE	0.4 U	0.4 J	0.4 U	0.2 J	0.03 J	0.6 U
BENZO(G,H,I)PERYLENE	0.4 U	0.08 J	0.4 U	0.4 U	0.03 J	0.6 U
BENZO(K)FLUORANTHENE	0.4 U	0.6 J	0.4 U	0.4 U	0.6 U	0.6 U
BIS(2-CHLOROETHOXY)METHANE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
BIS(2-CHLOROETHYL)ETHER	0.4 U	0.7 UJ	0.4 U	0.4 U	0.6 U	0.6 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.2 UJ	0.3 UJ	0.2 U	0.2 UJ	0.2 UJ	0.3 UJ
BUTYLBENZYLPHTHALATE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
CARBAZOLE	0.4 U	0.07 J	0.4 U	0.4 U	0.6 U	0.6 U
CHRYSENE	0.4 U	0.5 J	0.4 U	0.2 J	0.03 J	0.6 U
DI-N-BUTYLPHTHALATE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
DI-N-OCTYLPHTHALATE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
DIBENZ(A,H)ANTHRACENE	0.4 U	0.04 J	0.4 U	0.4 U	0.6 U	0.6 U
DIBENZOFURAN	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
DIETHYLPHTHALATE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
DIMETHYLPHTHALATE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
FLUORANTHENE	0.4 U	1 *α	0.4 U	0.2 J	0.05 J	0.6 U
FLUORENE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
HEXACHLOROBENZENE	0.4 U	0.7 UJ	0.4 U	0.4 U	0.6 U	0.6 U
HEXACHLOROBUTADIENE	0.4 U	0.7 UJ	0.4 U	0.4 U	0.6 U	0.6 U
HEXACHLOROCYCLOPENTADIENE	0.4 U	0.7 UJ	0.4 U	0.4 U	0.6 U	0.6 U
HEXACHLOROETHANE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
INDENO(1,2,3-CD)PYRENE	0.4 U	0.08 J	0.4 U	0.4 U	0.6 U	0.6 U
ISOPHORONE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
N-NITROSO-DI-N-PROPYLAMINE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
N-NITROSODIPHENYLAMINE (1)	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
NAPHTHALENE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
NITROBENZENE	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U
PENTACHLOROPHENOL	0.9 U	2 UJ	1 U	1 U	2 U	2 U
PHENANTHRENE	0.4 U	0.5 J	0.4 U	0.06 J	0.6 U	0.6 U
PHENOL	0.4 U	0.7 U	0.4 U	0.4 U	0.6 U	0.6 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB010**	**FNBWGB011**	**FNBWGB011**	**FNBWGB011**	**FNBWGB011**	**FNBWGB011**
Sample Depth (feet bgs)	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	9.0 - 10.0
Sample Date	04/10/1998	10/08/1997	04/10/1998	04/10/1998	09/04/1998	09/04/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PYRENE	0.4 U	0.6 J	0.4 U	0.2 J	0.08 J	0.6 U
TOTAL SVOCS	0 U	5 J	0 U	0.9 J	0.3 J	0 U
PESTICIDES (mg/kg)						
4,4'-DDD	0.004 U	0.006	NA	NA	NA	NA
4,4'-DDE	0.004 U	0.003 U	NA	NA	NA	NA
4,4'-DDT	0.004 U	0.01 J	NA	NA	NA	NA
ALDRIN	0.002 U	0.002 U	NA	NA	NA	NA
ALPHA-BHC	0.002 U	0.002 U	NA	NA	NA	NA
ALPHA-CHLORDANE	0.002 U	0.001 J	NA	NA	NA	NA
BETA-BHC	0.002 U	0.002 U	NA	NA	NA	NA
DELTA-BHC	0.002 U	0.002 U	NA	NA	NA	NA
DIELDRIN	0.004 U	0.003 U	NA	NA	NA	NA
ENDOSULFAN I	0.002 U	0.002 U	NA	NA	NA	NA
ENDOSULFAN II	0.004 U	0.003 U	NA	NA	NA	NA
ENDOSULFAN SULFATE	0.004 U	0.003 U	NA	NA	NA	NA
ENDRIN	0.004 U	0.003 UJ	NA	NA	NA	NA
ENDRIN ALDEHYDE	0.004 U	0.003 U	NA	NA	NA	NA
ENDRIN KETONE	0.004 U	0.002 J	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.002 U	0.002 UJ	NA	NA	NA	NA
GAMMA-CHLORDANE	0.002 U	0.001 J	NA	NA	NA	NA
HEPTACHLOR	0.0003 U	0.0003 U	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	0.0003 U	0.0003 U	NA	NA	NA	NA
METHOXYCHLOR	0.02 U	0.02 UJ	NA	NA	NA	NA
TOXAPHENE	0.1 U	0.09 U	NA	NA	NA	NA
PCBs (mg/kg)						
AROCLOR-1016	0.02 U	0.02 U	NA	NA	NA	NA
AROCLOR-1221	0.04 U	0.02 U	NA	NA	NA	NA
AROCLOR-1232	0.02 U	0.02 U	NA	NA	NA	NA
AROCLOR-1242	0.02 U	0.02 U	NA	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB010**	**FNBWGB011**	**FNBWGB011**	**FNBWGB011**	**FNBWGB011**	**FNBWGB011**
Sample Depth (feet bgs)	4.0 - 5.0	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	6.0 - 7.0	9.0 - 10.0
Sample Date	04/10/1998	10/08/1997	04/10/1998	04/10/1998	09/04/1998	09/04/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PCBs (mg/kg)						
AROCLOR-1248	0.02 U	0.02 U	NA	NA	NA	NA
AROCLOR-1254	0.02 U	0.02 U	NA	NA	NA	NA
AROCLOR-1260	0.02 U	0.06	NA	NA	NA	NA
TOTAL PCBS	0 U	0.06	NA	NA	NA	NA
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	1.8 Y	21.0 U	24.0 Y	**660 Y**	1.2 U	1.9 U
GASOLINE RANGE	0.61 U	0.50 UJ	NA	0.60 U	NA	NA
MOTOR OIL RANGE	10.0 Y	**510 Y**	**770 Y**	**11,000 Y**	87.0 Y	94.0 Y
pH						
PH	NA	6.5	NA	NA	NA	NA
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	NA	4.5	NA	NA	18.0	48.0

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB012**	**FNBWGB012**	**FNBWGB013**	**FNBWGB013**	**FNBWGB013**	**FNBWGB014**
Sample Depth (feet bgs)	2.0 - 3.0	4.0 - 5.0	2.0 - 3.0	4.0 - 5.0	2.0 - 3.0	2.0 - 3.0
Sample Date	04/14/1998	04/14/1998	04/14/1998	04/14/1998	04/16/1998	04/14/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	7,470	27,500	NA	29,100	7,990	10,800
ANTIMONY	2.1 UJ	3.0 UJ	NA	2.8 UJ	2.1 UJ	2.4 UJ
ARSENIC	1.1 U	**6.1** !	NA	**12.2** !	**5.5** !	**8.3** !
BARIUM	128	80.7	NA	149	87.9	144
BERYLLIUM	0.25 J	0.78 J	NA	0.79 J	0.31 J	0.62 J
CADMIUM	0.15 U	0.21 U	NA	0.19 U	0.15 U	0.17 U
CALCIUM	1,860	3,190	NA	4,880	1,970	3,750
CHROMIUM	12.6	76.3	NA	93.2	16.5	23.3
CHROMIUM VI	0.06 U	NA	NA	NA	NA	NA
COBALT	5.1 J	17.3	NA	20.1	4.9 J	8.4 J
COPPER	15.5 J	57.2 J	NA	90.5 J	13.0 J	32.0 J
IRON	11,000	**38,900**	NA	**47,600**	**23,000**	**26,200**
LEAD	2.7	14.7	NA	31.2	1.4	7.5
MAGNESIUM	4,150	9,810	NA	13,100	3,670	5,350
MANGANESE	157	577	NA	911	182	283
MERCURY	0.11 U	0.68	NA	1.0	0.11 U	0.12 U
MOLYBDENUM	0.71 U	0.97 U	NA	0.92 J	0.81 J	0.82 J
NICKEL	8.1 J	77.1	NA	107	12.3	29.7
POTASSIUM	2,680	3,120	NA	3,140	2,420	2,370
SELENIUM	0.66 UJ	0.92 UJ	NA	0.86 UJ	0.66 UJ	0.73 UJ
SILVER	0.49 U	0.68 U	NA	0.64 U	0.49 U	0.54 U
SODIUM	262 J	1,250 J	NA	538 J	115 J	829 J
THALLIUM	1.2 UJ	1.7 UJ	NA	1.6 UJ	1.2 UJ	1.3 UJ
VANADIUM	22.1	93.1	NA	93.2	36.9	37.9
ZINC	38.3 J	99.4 J	NA	178 J	46.9 J	75.3 J
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
1,1,2,2-TETRACHLOROETHANE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
1,1,2-TRICHLOROETHANE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
1,1-DICHLOROETHANE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB012	FNBWGB012	FNBWGB013	FNBWGB013	FNBWGB013	FNBWGB014
Sample Depth (feet bgs)	2.0 - 3.0	4.0 - 5.0	2.0 - 3.0	4.0 - 5.0	2.0 - 3.0	2.0 - 3.0
Sample Date	04/14/1998	04/14/1998	04/14/1998	04/14/1998	04/16/1998	04/14/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1-DICHLOROETHENE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
1,2-DICHLOROETHANE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
1,2-DICHLOROETHENE (TOTAL)	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
1,2-DICHLOROPROPANE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
2-BUTANONE	0.01 U	0.02 U	0.01 U	0.05 UJ	NA	0.01 U
2-HEXANONE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
4-METHYL-2-PENTANONE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
ACETONE	0.01 UJ	0.05 UJ	0.01 UJ	0.2 J	NA	0.05 UJ
BENZENE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
BROMODICHLOROMETHANE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
BROMOFORM	0.01 UJ	0.02 UJ	0.01 UJ	0.02 UJ	NA	0.01 UJ
BROMOMETHANE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
CARBON DISULFIDE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
CARBON TETRACHLORIDE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
CHLOROBENZENE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
CHLOROETHANE	0.01 UJ	0.02 UJ	0.01 UJ	0.02 UJ	NA	0.01 UJ
CHLOROFORM	0.01 UJ	0.02 UJ	0.01 UJ	0.02 UJ	NA	0.01 UJ
CHLOROMETHANE	0.01 UJ	0.02 UJ	0.01 UJ	0.02 UJ	NA	0.01 UJ
CIS-1,3-DICHLOROPROPENE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
DIBROMOCHLOROMETHANE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
ETHYLBENZENE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
METHYLENE CHLORIDE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
STYRENE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
TETRACHLOROETHENE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
TOLUENE	0.01 U	0.02 U	0.008 J	0.02 U	NA	0.01 U
TRANS-1,3-DICHLOROPROPENE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
TRICHLOROETHENE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
VINYL CHLORIDE	0.01 U	0.02 U	0.01 U	0.02 U	NA	0.01 U
XYLENE (TOTAL)	0.01 U	0.02 U	0.004 J	0.02 U	NA	0.01 U
TOTAL VOCS	0 U	0 U	0.01 J	0.2 J	NA	0 U
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB012**	**FNBWGB012**	**FNBWGB013**	**FNBWGB013**	**FNBWGB013**	**FNBWGB014**
Sample Depth (feet bgs)	2.0 - 3.0	4.0 - 5.0	2.0 - 3.0	4.0 - 5.0	2.0 - 3.0	2.0 - 3.0
Sample Date	04/14/1998	04/14/1998	04/14/1998	04/14/1998	04/16/1998	04/14/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROBENZENE	0.2 U	0.3 U	0.9 U	0.3 U	NA	0.2 U
1,3-DICHLOROBENZENE	0.2 U	0.3 U	0.9 U	0.3 U	NA	0.2 U
1,4-DICHLOROBENZENE	0.2 U	0.3 U	0.9 U	0.3 U	NA	0.2 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
2,4,5-TRICHLOROPHENOL	1 U	1 U	5 U	1 U	NA	1 U
2,4,6-TRICHLOROPHENOL	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
2,4-DICHLOROPHENOL	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
2,4-DIMETHYLPHENOL	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
2,4-DINITROPHENOL	1 U	1 U	5 U	1 U	NA	1 U
2,4-DINITROTOLUENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
2,6-DINITROTOLUENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
2-CHLORONAPHTHALENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
2-CHLOROPHENOL	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
2-METHYLNAPHTHALENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.03 J
2-METHYLPHENOL	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
2-NITROANILINE	1 U	1 U	5 U	1 U	NA	1 U
2-NITROPHENOL	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
3,3'-DICHLOROBENZIDINE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
3-NITROANILINE	1 U	1 U	5 U	1 U	NA	1 U
4,6-DINITRO-2-METHYLPHENOL	1 U	1 U	5 U	1 U	NA	1 U
4-BROMOPHENYL-PHENYLETHER	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
4-CHLORO-3-METHYLPHENOL	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
4-CHLOROANILINE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
4-CHLOROPHENYL-PHENYLETHER	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
4-METHYLPHENOL	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
4-NITROANILINE	1 U	1 U	5 U	1 U	NA	1 U
4-NITROPHENOL	1 U	1 U	5 U	1 U	NA	1 U
ACENAPHTHENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
ACENAPHTHYLENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
ANTHRACENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
BENZO(A)ANTHRACENE	0.4 U	0.5 U	0.3 J	0.5 U	NA	0.4 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB012**	**FNBWGB012**	**FNBWGB013**	**FNBWGB013**	**FNBWGB013**	**FNBWGB014**
Sample Depth (feet bgs)	2.0 - 3.0	4.0 - 5.0	2.0 - 3.0	4.0 - 5.0	2.0 - 3.0	2.0 - 3.0
Sample Date	04/14/1998	04/14/1998	04/14/1998	04/14/1998	04/16/1998	04/14/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)PYRENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
BENZO(B)FLUORANTHENE	0.4 U	0.5 U	0.5 J	0.5 U	NA	0.4 U
BENZO(G,H,I)PERYLENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
BENZO(K)FLUORANTHENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
BIS(2-CHLOROETHOXY)METHANE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
BIS(2-CHLOROETHYL)ETHER	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.2 U	0.2 U	0.7 U	0.2 U	NA	0.2 UJ
BUTYLBENZYLPHTHALATE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
CARBAZOLE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
CHRYSENE	0.4 U	0.5 U	0.5 J	0.5 U	NA	0.4 U
DI-N-BUTYLPHTHALATE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
DI-N-OCTYLPHTHALATE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
DIBENZ(A,H)ANTHRACENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
DIBENZOFURAN	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
DIETHYLPHTHALATE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
DIMETHYLPHTHALATE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
FLUORANTHENE	0.4 U	0.03 J	0.3 J	0.05 J	NA	0.4 U
FLUORENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
HEXACHLOROBENZENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
HEXACHLOROBUTADIENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
HEXACHLOROCYCLOPENTADIENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
HEXACHLOROETHANE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
INDENO(1,2,3-CD)PYRENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
ISOPHORONE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
N-NITROSO-DI-N-PROPYLAMINE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
N-NITROSODIPHENYLAMINE (1)	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
NAPHTHALENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
NITROBENZENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
PENTACHLOROPHENOL	1 U	1 U	5 U	1 U	NA	1 U
PHENANTHRENE	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U
PHENOL	0.4 U	0.5 U	2 U	0.5 U	NA	0.4 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB012**	**FNBWGB012**	**FNBWGB013**	**FNBWGB013**	**FNBWGB013**	**FNBWGB014**
Sample Depth (feet bgs)	2.0 - 3.0	4.0 - 5.0	2.0 - 3.0	4.0 - 5.0	2.0 - 3.0	2.0 - 3.0
Sample Date	04/14/1998	04/14/1998	04/14/1998	04/14/1998	04/16/1998	04/14/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PYRENE	0.4 U	0.04 J	0.4 J	0.08 J	NA	0.4 U
TOTAL SVOCS	0 U	0.06 J	2 J	0.1 J	NA	0.03 J
PESTICIDES (mg/kg)						
4,4'-DDD	0.004 U	0.005 U	NA	0.005 U	0.004 UJ	0.004 U
4,4'-DDE	0.004 U	0.005 U	NA	0.005 U	0.004 UJ	0.004 U
4,4'-DDT	0.004 U	0.005 U	NA	0.005 U	0.004 UJ	0.004 U
ALDRIN	0.002 U	0.003 U	NA	0.003 U	0.002 UJ	0.002 U
ALPHA-BHC	0.002 U	0.003 U	NA	0.003 U	0.002 UJ	0.002 U
ALPHA-CHLORDANE	0.002 U	0.003 U	NA	0.003 U	0.002 UJ	0.002 U
BETA-BHC	0.002 UJ	0.003 UJ	NA	0.003 UJ	0.002 UJ	0.002 UJ
DELTA-BHC	0.002 U	0.003 U	NA	0.003 U	0.002 UJ	0.002 U
DIELDRIN	0.004 U	0.005 U	NA	0.005 U	0.004 UJ	0.004 U
ENDOSULFAN I	0.002 U	0.003 U	NA	0.003 U	0.002 UJ	0.002 U
ENDOSULFAN II	0.004 U	0.005 U	NA	0.005 U	0.004 UJ	0.004 U
ENDOSULFAN SULFATE	0.004 U	0.005 U	NA	0.005 U	0.004 UJ	0.004 U
ENDRIN	0.004 U	0.005 U	NA	0.005 U	0.004 UJ	0.004
ENDRIN ALDEHYDE	0.004 U	0.005 U	NA	0.005 U	0.004 UJ	0.04
ENDRIN KETONE	0.004 U	0.005 U	NA	0.005 U	0.004 UJ	0.004 U
GAMMA-BHC (LINDANE)	0.002 U	0.003 U	NA	0.003 U	0.002 UJ	0.002 U
GAMMA-CHLORDANE	0.002 U	0.003 U	NA	0.003 U	0.002 UJ	0.002 U
HEPTACHLOR	0.0004 UJ	0.0005 UJ	NA	0.0005 UJ	0.0004 UJ	0.0004 UJ
HEPTACHLOR EPOXIDE	0.0004 U	0.0005 U	NA	0.0005 U	0.0004 UJ	0.0004 U
METHOXYCHLOR	0.02 U	0.03 U	NA	0.03 U	0.02 UJ	0.02 U
TOXAPHENE	0.1 U	0.1 U	NA	0.1 U	0.1 UJ	0.1 U
PCBs (mg/kg)						
AROCLOR-1016	0.02 U	0.03 U	NA	0.03 U	0.02 UJ	0.02 U
AROCLOR-1221	0.04 U	0.05 U	NA	0.05 U	0.04 UJ	0.04 U
AROCLOR-1232	0.02 U	0.03 U	NA	0.03 U	0.02 UJ	0.02 U
AROCLOR-1242	0.02 U	0.03 U	NA	0.03 U	0.02 UJ	0.02 U

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB012**	**FNBWGB012**	**FNBWGB013**	**FNBWGB013**	**FNBWGB013**	**FNBWGB014**
Sample Depth (feet bgs)	2.0 - 3.0	4.0 - 5.0	2.0 - 3.0	4.0 - 5.0	2.0 - 3.0	2.0 - 3.0
Sample Date	04/14/1998	04/14/1998	04/14/1998	04/14/1998	04/16/1998	04/14/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PCBs (mg/kg)						
AROCLOR-1248	0.02 U	0.03 U	NA	0.03 U	0.02 UJ	0.02 U
AROCLOR-1254	0.02 U	0.03 U	NA	0.03 U	0.02 UJ	0.02 U
AROCLOR-1260	0.04	0.02 J	NA	0.06	0.02 UJ	0.4
TOTAL PCBS	0.04	0.02 J	NA	0.06	0 U	0.4
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	**7,800 Y**	95.0 Y	120 Y	1.2 U	NA	5.8 Y
GASOLINE RANGE	1.5 Y	1.5 U	0.53 U	0.62 U	NA	0.59 U
JP4	NA	1.5 U	NA	NA	NA	NA
MOTOR OIL RANGE	**4,600 Y**	340 Y	**1,200 Y**	7.0 Y	NA	36.0 Y

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB014**	**FNBWGB015**	**FNBWGB015**	**FNBWGB015**	**FNBWGB015**	**FNBWGB016**
Sample Depth (feet bgs)	4.0 - 5.0	2.0 - 3.0	4.0 - 5.0	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5
Sample Date	04/14/1998	05/20/1998	05/20/1998	12/09/1998	12/09/1998	04/03/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	26,600	NA	NA	NA	NA	NA
ANTIMONY	3.0 UJ	NA	NA	NA	NA	NA
ARSENIC	**15.2** !	NA	NA	NA	NA	NA
BARIUM	65.2	NA	NA	NA	NA	NA
BERYLLIUM	0.76 J	NA	NA	NA	NA	NA
CADMIUM	0.21 U	NA	NA	NA	NA	NA
CALCIUM	3,180	NA	NA	NA	NA	NA
CHROMIUM	75.0	NA	NA	NA	NA	NA
COBALT	21.4	NA	NA	NA	NA	NA
COPPER	65.9 J	NA	NA	NA	NA	NA
IRON	**41,100**	NA	NA	NA	NA	NA
LEAD	30.5	NA	NA	NA	NA	NA
MAGNESIUM	9,770	NA	NA	NA	NA	NA
MANGANESE	745	NA	NA	NA	NA	NA
MERCURY	0.67	NA	NA	NA	NA	NA
MOLYBDENUM	0.99 U	NA	NA	NA	NA	NA
NICKEL	79.2	NA	NA	NA	NA	NA
POTASSIUM	2,970	NA	NA	NA	NA	NA
SELENIUM	0.93 UJ	NA	NA	NA	NA	NA
SILVER	0.69 U	NA	NA	NA	NA	NA
SODIUM	1,740	NA	NA	NA	NA	NA
THALLIUM	1.7 UJ	NA	NA	NA	NA	NA
VANADIUM	90.0	NA	NA	NA	NA	NA
ZINC	159 J	NA	NA	NA	NA	NA
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	0.02 U	0.01 U	0.01 U	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	0.02 U	0.01 U	0.01 U	NA	NA	NA
1,1,2-TRICHLOROETHANE	0.02 U	0.01 U	0.01 U	NA	NA	NA
1,1-DICHLOROETHANE	0.02 U	0.01 U	0.01 U	NA	NA	NA
1,1-DICHLOROETHENE	0.02 U	0.01 U	0.01 U	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB014	FNBWGB015	FNBWGB015	FNBWGB015	FNBWGB015	FNBWGB016
Sample Depth (feet bgs)	4.0 - 5.0	2.0 - 3.0	4.0 - 5.0	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5
Sample Date	04/14/1998	05/20/1998	05/20/1998	12/09/1998	12/09/1998	04/03/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROETHANE	0.02 U	0.01 U	0.01 U	NA	NA	NA
1,2-DICHLOROETHENE (TOTAL)	0.02 U	0.01 U	0.01 U	NA	NA	NA
1,2-DICHLOROPROPANE	0.02 U	0.01 U	0.01 U	NA	NA	NA
2-BUTANONE	0.05 UJ	0.01 U	0.01 U	NA	NA	NA
2-HEXANONE	0.02 U	0.01 U	0.01 U	NA	NA	NA
4-METHYL-2-PENTANONE	0.02 U	0.01 U	0.01 U	NA	NA	NA
ACETONE	0.3 J	0.01 UJ	0.02 UJ	NA	NA	NA
BENZENE	0.02 U	0.01 U	0.01 U	NA	NA	NA
BROMODICHLOROMETHANE	0.02 U	0.01 U	0.01 U	NA	NA	NA
BROMOFORM	0.02 UJ	0.01 U	0.01 U	NA	NA	NA
BROMOMETHANE	0.02 U	0.01 U	0.01 U	NA	NA	NA
CARBON DISULFIDE	0.02 U	0.01 U	0.01 U	NA	NA	NA
CARBON TETRACHLORIDE	0.02 U	0.01 U	0.01 U	NA	NA	NA
CHLOROBENZENE	0.02 U	0.01 U	0.01 U	NA	NA	NA
CHLOROETHANE	0.02 UJ	0.01 U	0.01 U	NA	NA	NA
CHLOROFORM	0.02 U	0.01 U	0.01 U	NA	NA	NA
CHLOROMETHANE	0.02 UJ	0.01 U	0.01 U	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	0.02 U	0.01 U	0.01 U	NA	NA	NA
DIBROMOCHLOROMETHANE	0.02 U	0.01 U	0.01 U	NA	NA	NA
ETHYLBENZENE	0.02 U	0.01 U	0.01 U	NA	NA	NA
METHYLENE CHLORIDE	0.02 U	0.01 U	0.01 U	NA	NA	NA
STYRENE	0.02 U	0.01 U	0.01 U	NA	NA	NA
TETRACHLOROETHENE	0.02 U	0.01 U	0.01 U	NA	NA	NA
TOLUENE	0.02 U	0.01 U	0.01 U	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	0.02 U	0.01 U	0.01 U	NA	NA	NA
TRICHLOROETHENE	0.02 U	0.01 U	0.01 U	NA	NA	NA
VINYL CHLORIDE	0.02 U	0.01 U	0.01 U	NA	NA	NA
XYLENE (TOTAL)	0.02 U	0.01 U	0.01 U	NA	NA	NA
TOTAL VOCS	0.3 J	0 U	0 U	NA	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	0.5 U	NA	NA	0.4 U	0.4 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB014	FNBWGB015	FNBWGB015	FNBWGB015	FNBWGB015	FNBWGB016
Sample Depth (feet bgs)	4.0 - 5.0	2.0 - 3.0	4.0 - 5.0	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5
Sample Date	04/14/1998	05/20/1998	05/20/1998	12/09/1998	12/09/1998	04/03/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROBENZENE	0.3 U	NA	NA	0.2 U	0.2 U	NA
1,3-DICHLOROBENZENE	0.3 U	NA	NA	0.2 U	0.2 U	NA
1,4-DICHLOROBENZENE	0.3 U	NA	NA	0.2 U	0.2 U	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	0.5 U	NA	NA	0.4 U	0.4 U	NA
2,4,5-TRICHLOROPHENOL	1 U	NA	NA	0.9 U	0.9 U	NA
2,4,6-TRICHLOROPHENOL	0.5 U	NA	NA	0.4 U	0.4 U	NA
2,4-DICHLOROPHENOL	0.5 U	NA	NA	0.4 U	0.4 U	NA
2,4-DIMETHYLPHENOL	0.5 U	NA	NA	0.4 U	0.4 U	NA
2,4-DINITROPHENOL	1 U	NA	NA	0.9 U	0.9 U	NA
2,4-DINITROTOLUENE	0.5 U	NA	NA	0.4 U	0.4 U	NA
2,6-DINITROTOLUENE	0.5 U	NA	NA	0.4 U	0.4 U	NA
2-CHLORONAPHTHALENE	0.5 U	NA	NA	0.4 U	0.4 U	NA
2-CHLOROPHENOL	0.5 U	NA	NA	0.4 U	0.4 U	NA
2-METHYLNAPHTHALENE	0.5 U	NA	NA	0.4 U	0.4 U	NA
2-METHYLPHENOL	0.5 U	NA	NA	0.4 U	0.4 U	NA
2-NITROANILINE	1 U	NA	NA	0.9 U	0.9 U	NA
2-NITROPHENOL	0.5 U	NA	NA	0.4 U	0.4 U	NA
3,3'-DICHLOROBENZIDINE	0.5 U	NA	NA	0.4 U	0.4 U	NA
3-NITROANILINE	1 U	NA	NA	0.9 U	0.9 U	NA
4,6-DINITRO-2-METHYLPHENOL	1 U	NA	NA	0.9 U	0.9 U	NA
4-BROMOPHENYL-PHENYLETHER	0.5 U	NA	NA	0.4 U	0.4 U	NA
4-CHLORO-3-METHYLPHENOL	0.5 U	NA	NA	0.4 U	0.4 U	NA
4-CHLOROANILINE	0.5 U	NA	NA	0.4 U	0.4 U	NA
4-CHLOROPHENYL-PHENYLETHER	0.5 U	NA	NA	0.4 U	0.4 U	NA
4-METHYLPHENOL	0.5 U	NA	NA	0.4 U	0.4 U	NA
4-NITROANILINE	1 U	NA	NA	0.9 U	0.9 U	NA
4-NITROPHENOL	1 U	NA	NA	0.9 U	0.9 U	NA
ACENAPHTHENE	0.5 U	NA	NA	0.4 U	0.4 U	NA
ACENAPHTHYLENE	0.5 U	NA	NA	0.4 U	0.4 U	NA
ANTHRACENE	0.5 U	NA	NA	0.4 U	0.4 U	NA
BENZO(A)ANTHRACENE	0.5 U	NA	NA	0.04 J	0.4 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB014**	**FNBWGB015**	**FNBWGB015**	**FNBWGB015**	**FNBWGB015**	**FNBWGB016**
Sample Depth (feet bgs)	4.0 - 5.0	2.0 - 3.0	4.0 - 5.0	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5
Sample Date	04/14/1998	05/20/1998	05/20/1998	12/09/1998	12/09/1998	04/03/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)PYRENE	0.5 U	NA	NA	**0.08 J**	0.4 UJ	NA
BENZO(B)FLUORANTHENE	0.5 U	NA	NA	0.1 J	0.4 UJ	NA
BENZO(G,H,I)PERYLENE	0.5 U	NA	NA	0.3 J	0.4 UJ	NA
BENZO(K)FLUORANTHENE	0.5 U	NA	NA	0.4 U	0.4 UJ	NA
BIS(2-CHLOROETHOXY)METHANE	0.5 U	NA	NA	0.4 U	0.4 U	NA
BIS(2-CHLOROETHYL)ETHER	0.5 U	NA	NA	0.4 U	0.4 U	NA
BIS(2-ETHYLHEXYL)PHTHALATE	0.2 U	NA	NA	0.2 UJ	0.1 UJ	NA
BUTYLBENZYLPHTHALATE	0.5 U	NA	NA	0.4 U	0.4 U	NA
CARBAZOLE	0.5 U	NA	NA	0.4 U	0.4 U	NA
CHRYSENE	0.02 J	NA	NA	0.05 J	0.4 U	NA
DI-N-BUTYLPHTHALATE	0.5 U	NA	NA	0.4 U	0.4 U	NA
DI-N-OCTYLPHTHALATE	0.5 U	NA	NA	0.4 UJ	0.4 UJ	NA
DIBENZ(A,H)ANTHRACENE	0.5 U	NA	NA	0.04 J	0.4 UJ	NA
DIBENZOFURAN	0.5 U	NA	NA	0.4 U	0.4 U	NA
DIETHYLPHTHALATE	0.5 U	NA	NA	0.4 U	0.4 U	NA
DIMETHYLPHTHALATE	0.5 U	NA	NA	0.4 U	0.4 U	NA
FLUORANTHENE	0.04 J	NA	NA	0.05 J	0.4 U	NA
FLUORENE	0.5 U	NA	NA	0.4 U	0.4 U	NA
HEXACHLOROBENZENE	0.5 U	NA	NA	0.4 U	0.4 U	NA
HEXACHLOROBUTADIENE	0.5 U	NA	NA	0.4 U	0.4 U	NA
HEXACHLOROCYCLOPENTADIENE	0.5 U	NA	NA	0.4 UJ	0.4 UJ	NA
HEXACHLOROETHANE	0.5 U	NA	NA	0.4 U	0.4 U	NA
INDENO(1,2,3-CD)PYRENE	0.5 U	NA	NA	0.1 J	0.4 UJ	NA
ISOPHORONE	0.5 U	NA	NA	0.4 U	0.4 U	NA
N-NITROSO-DI-N-PROPYLAMINE	0.5 U	NA	NA	0.4 U	0.4 U	NA
N-NITROSODIPHENYLAMINE (1)	0.5 U	NA	NA	0.4 U	0.4 U	NA
NAPHTHALENE	0.5 U	NA	NA	0.4 U	0.4 U	NA
NITROBENZENE	0.5 U	NA	NA	0.4 U	0.4 U	NA
PENTACHLOROPHENOL	1 U	NA	NA	0.9 U	0.9 U	NA
PHENANTHRENE	0.5 U	NA	NA	0.4 U	0.4 U	NA
PHENOL	0.5 U	NA	NA	0.4 U	0.4 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB014**	**FNBWGB015**	**FNBWGB015**	**FNBWGB015**	**FNBWGB015**	**FNBWGB016**
Sample Depth (feet bgs)	4.0 - 5.0	2.0 - 3.0	4.0 - 5.0	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5
Sample Date	04/14/1998	05/20/1998	05/20/1998	12/09/1998	12/09/1998	04/03/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PYRENE	0.06 J	NA	NA	0.06 J	0.4 U	NA
TOTAL SVOCS	0.1 J	NA	NA	0.8 J	0 U	NA
PESTICIDES (mg/kg)						
4,4'-DDD	0.005 U	NA	NA	NA	NA	NA
4,4'-DDE	0.005 U	NA	NA	NA	NA	NA
4,4'-DDT	0.003 J	NA	NA	NA	NA	NA
ALDRIN	0.003 U	NA	NA	NA	NA	NA
ALPHA-BHC	0.003 U	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	0.003 U	NA	NA	NA	NA	NA
BETA-BHC	0.003 UJ	NA	NA	NA	NA	NA
DELTA-BHC	0.003 U	NA	NA	NA	NA	NA
DIELDRIN	0.005 U	NA	NA	NA	NA	NA
ENDOSULFAN I	0.003 U	NA	NA	NA	NA	NA
ENDOSULFAN II	0.005 U	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	0.005 U	NA	NA	NA	NA	NA
ENDRIN	0.005 U	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	0.005 U	NA	NA	NA	NA	NA
ENDRIN KETONE	0.005 U	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.003 U	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	0.003 U	NA	NA	NA	NA	NA
HEPTACHLOR	0.0005 UJ	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	0.0005 U	NA	NA	NA	NA	NA
METHOXYCHLOR	0.03 U	NA	NA	NA	NA	NA
TOXAPHENE	0.1 U	NA	NA	NA	NA	NA
PCBs (mg/kg)						
AROCLOR-1016	0.03 U	NA	NA	NA	NA	NA
AROCLOR-1221	0.05 U	NA	NA	NA	NA	NA
AROCLOR-1232	0.03 U	NA	NA	NA	NA	NA
AROCLOR-1242	0.03 U	NA	NA	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB014**	**FNBWGB015**	**FNBWGB015**	**FNBWGB015**	**FNBWGB015**	**FNBWGB016**
Sample Depth (feet bgs)	4.0 - 5.0	2.0 - 3.0	4.0 - 5.0	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5
Sample Date	04/14/1998	05/20/1998	05/20/1998	12/09/1998	12/09/1998	04/03/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PCBs (mg/kg)						
AROCLOR-1248	0.03 U	NA	NA	NA	NA	NA
AROCLOR-1254	0.03 U	NA	NA	NA	NA	NA
AROCLOR-1260	0.06	NA	NA	NA	NA	NA
TOTAL PCBS	0.06	NA	NA	NA	NA	NA
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	1.3 U	1.1 U	1.2 U	NA	NA	65.0 Y
GASOLINE RANGE	0.63 U	NA	NA	0.50 UJ	0.50 UJ	NA
MOTOR OIL RANGE	14.0 Y	21.0 Y	28.0 Y	NA	NA	**2,600 Y**
TOTAL ORGANIC CARBON (mg/kg)						
TOC	NA	NA	NA	110 U	110 U	NA
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	NA	12.0	17.0	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB016	FNBWGB016	FNBWGB016	FNBWGB016	FNBWGB016	FNBWGB016
Sample Depth (feet bgs)	2.0 - 3.0	5.0 - 6.0	9.0 - 10.0	0.0 - 0.5	2.0 - 3.0	5.0 - 6.0
Sample Date	09/01/1998	09/01/1998	09/01/1998	12/09/1998	12/09/1998	12/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	NA	NA	NA	0.01 U	0.01 U	0.02 U
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	0.01 U	0.01 U	0.02 U
1,1,2-TRICHLOROETHANE	NA	NA	NA	0.01 U	0.01 U	0.02 U
1,1-DICHLOROETHANE	NA	NA	NA	0.01 U	0.01 U	0.02 U
1,1-DICHLOROETHENE	NA	NA	NA	0.01 U	0.01 U	0.02 U
1,2-DICHLOROETHANE	NA	NA	NA	0.01 U	0.01 U	0.02 U
1,2-DICHLOROETHENE (TOTAL)	NA	NA	NA	0.01 U	0.01 U	0.02 U
1,2-DICHLOROPROPANE	NA	NA	NA	0.01 U	0.01 U	0.02 U
2-BUTANONE	NA	NA	NA	0.01 U	0.01 U	0.02 U
2-HEXANONE	NA	NA	NA	0.01 U	0.01 U	0.02 U
4-METHYL-2-PENTANONE	NA	NA	NA	0.01 U	0.01 U	0.02 U
ACETONE	NA	NA	NA	0.01 U	0.01 UJ	0.02 UJ
BENZENE	NA	NA	NA	0.01 U	0.01 U	0.02 U
BROMODICHLOROMETHANE	NA	NA	NA	0.01 U	0.01 U	0.02 U
BROMOFORM	NA	NA	NA	0.01 U	0.01 U	0.02 U
BROMOMETHANE	NA	NA	NA	0.01 U	0.01 U	0.02 U
CARBON DISULFIDE	NA	NA	NA	0.01 U	0.01 U	0.004 J
CARBON TETRACHLORIDE	NA	NA	NA	0.01 U	0.01 U	0.02 U
CHLOROBENZENE	NA	NA	NA	0.01 U	0.01 U	0.02 U
CHLOROETHANE	NA	NA	NA	0.01 U	0.01 U	0.02 U
CHLOROFORM	NA	NA	NA	0.01 U	0.01 U	0.02 U
CHLOROMETHANE	NA	NA	NA	0.01 U	0.01 U	0.02 U
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	0.01 U	0.01 U	0.02 U
DIBROMOCHLOROMETHANE	NA	NA	NA	0.01 U	0.01 U	0.02 U
ETHYLBENZENE	NA	NA	NA	0.01 U	0.01 U	0.02 U
METHYLENE CHLORIDE	NA	NA	NA	0.01 U	0.01 U	0.02 U
STYRENE	NA	NA	NA	0.01 U	0.01 U	0.02 U
TETRACHLOROETHENE	NA	NA	NA	0.01 U	0.01 U	0.02 U
TOLUENE	NA	NA	NA	0.01 U	0.01 U	0.02 U
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	0.01 U	0.01 U	0.02 U
TRICHLOROETHENE	NA	NA	NA	0.01 U	0.01 U	0.02 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB016	FNBWGB016	FNBWGB016	FNBWGB016	FNBWGB016	FNBWGB016
Sample Depth (feet bgs)	2.0 - 3.0	5.0 - 6.0	9.0 - 10.0	0.0 - 0.5	2.0 - 3.0	5.0 - 6.0
Sample Date	09/01/1998	09/01/1998	09/01/1998	12/09/1998	12/09/1998	12/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
VINYL CHLORIDE	NA	NA	NA	0.01 U	0.01 U	0.02 U
XYLENE (TOTAL)	NA	NA	NA	0.01 U	0.01 U	0.02 U
TOTAL VOCS	NA	NA	NA	0 U	0 U	0.004 J
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
1,2-DICHLOROBENZENE	0.2 U	0.3 U	0.3 U	0.7 U	NA	NA
1,3-DICHLOROBENZENE	0.2 U	0.3 U	0.3 U	0.7 U	NA	NA
1,4-DICHLOROBENZENE	0.2 U	0.3 U	0.3 U	0.7 U	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	0.4 U	0.5 U	0.6 U	1 U	NA	NA
2,4,5-TRICHLOROPHENOL	1 U	1 U	1 U	3 U	NA	NA
2,4,6-TRICHLOROPHENOL	0.4 U	0.5 U	0.6 U	1 U	NA	NA
2,4-DICHLOROPHENOL	0.4 U	0.5 U	0.6 U	1 U	NA	NA
2,4-DIMETHYLPHENOL	0.4 UJ	0.5 UJ	0.6 UJ	1 U	NA	NA
2,4-DINITROPHENOL	1 UJ	1 UJ	1 UJ	3 U	NA	NA
2,4-DINITROTOLUENE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
2,6-DINITROTOLUENE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
2-CHLORONAPHTHALENE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
2-CHLOROPHENOL	0.4 U	0.5 U	0.6 U	1 U	NA	NA
2-METHYLNAPHTHALENE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
2-METHYLPHENOL	0.4 U	0.5 U	0.6 U	1 U	NA	NA
2-NITROANILINE	1 U	1 U	1 U	3 U	NA	NA
2-NITROPHENOL	0.4 U	0.5 U	0.6 U	1 U	NA	NA
3,3'-DICHLOROBENZIDINE	0.4 U	0.5 U	0.6 U	1 UJ	NA	NA
3-NITROANILINE	1 U	1 U	1 U	3 U	NA	NA
4,6-DINITRO-2-METHYLPHENOL	1 U	1 U	1 U	3 U	NA	NA
4-BROMOPHENYL-PHENYLETHER	0.4 U	0.5 U	0.6 U	1 U	NA	NA
4-CHLORO-3-METHYLPHENOL	0.4 U	0.5 U	0.6 U	1 U	NA	NA
4-CHLOROANILINE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
4-CHLOROPHENYL-PHENYLETHER	0.4 U	0.5 U	0.6 U	1 U	NA	NA
4-METHYLPHENOL	0.4 U	0.5 U	0.6 U	1 U	NA	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB016**	**FNBWGB016**	**FNBWGB016**	**FNBWGB016**	**FNBWGB016**	**FNBWGB016**
Sample Depth (feet bgs)	2.0 - 3.0	5.0 - 6.0	9.0 - 10.0	0.0 - 0.5	2.0 - 3.0	5.0 - 6.0
Sample Date	09/01/1998	09/01/1998	09/01/1998	12/09/1998	12/09/1998	12/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
4-NITROANILINE	1 U	1 U	1 U	3 U	NA	NA
4-NITROPHENOL	1 U	1 U	1 U	3 U	NA	NA
ACENAPHTHENE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
ACENAPHTHYLENE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
ANTHRACENE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
BENZO(A)ANTHRACENE	0.4 U	0.5 U	0.03 J	1 UJ	NA	NA
BENZO(A)PYRENE	0.4 UJ	0.05 J	**0.07 J**	1 R	NA	NA
BENZO(B)FLUORANTHENE	0.4 UJ	0.07 J	0.05 J	1 R	NA	NA
BENZO(G,H,I)PERYLENE	0.4 UJ	0.05 J	0.07 J	1 R	NA	NA
BENZO(K)FLUORANTHENE	0.4 UJ	0.5 U	0.05 J	1 R	NA	NA
BIS(2-CHLOROETHOXY)METHANE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
BIS(2-CHLOROETHYL)ETHER	0.4 U	0.5 U	0.6 U	1 U	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	1	0.2 U	0.2 U	0.5 UJ	NA	NA
BUTYLBENZYLPHTHALATE	0.4 UJ	0.5 U	0.6 U	1 UJ	NA	NA
CARBAZOLE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
CHRYSENE	0.08 J	0.03 J	0.04 J	0.3 J	NA	NA
DI-N-BUTYLPHTHALATE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
DI-N-OCTYLPHTHALATE	0.4 UJ	0.5 UJ	0.6 UJ	1 R	NA	NA
DIBENZ(A,H)ANTHRACENE	0.4 UJ	0.5 U	0.6 U	1 R	NA	NA
DIBENZOFURAN	0.4 U	0.5 U	0.6 U	1 U	NA	NA
DIETHYLPHTHALATE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
DIMETHYLPHTHALATE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
FLUORANTHENE	0.4 U	0.05 J	0.07 J	1 U	NA	NA
FLUORENE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
HEXACHLOROBENZENE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
HEXACHLOROBUTADIENE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
HEXACHLOROCYCLOPENTADIENE	0.4 UJ	0.5 UJ	0.6 UJ	1 UJ	NA	NA
HEXACHLOROETHANE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
INDENO(1,2,3-CD)PYRENE	0.4 UJ	0.03 J	0.04 J	1 R	NA	NA
ISOPHORONE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	0.4 U	0.5 U	0.6 U	1 U	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB016**	**FNBWGB016**	**FNBWGB016**	**FNBWGB016**	**FNBWGB016**	**FNBWGB016**
Sample Depth (feet bgs)	2.0 - 3.0	5.0 - 6.0	9.0 - 10.0	0.0 - 0.5	2.0 - 3.0	5.0 - 6.0
Sample Date	09/01/1998	09/01/1998	09/01/1998	12/09/1998	12/09/1998	12/09/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
N-NITROSODIPHENYLAMINE (1)	0.4 U	0.5 U	0.6 U	1 U	NA	NA
NAPHTHALENE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
NITROBENZENE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
PENTACHLOROPHENOL	0.2 J	1 R	1 R	3 U	NA	NA
PHENANTHRENE	0.4 U	0.5 U	0.6 U	1 U	NA	NA
PHENOL	0.4 U	0.5 U	0.6 U	1 U	NA	NA
PYRENE	0.03 J	0.09 J	0.1 J	1 UJ	NA	NA
TOTAL SVOCS	2 J	0.4 J	0.6 J	0.3 J	NA	NA
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	13.0 U	1.7 U	1.7 U	NA	NA	NA
GASOLINE RANGE	NA	NA	NA	0.50 UJ	0.70 U	0.80 UJ
MOTOR OIL RANGE	**2,300 Y**	260 Y	250 Y	NA	NA	NA
TOTAL ORGANIC CARBON (mg/kg)						
TOC	NA	NA	NA	NA	440	5,600
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	5.0	42.0	40.0	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB016	FNBWGB017	FNBWGB017 [s]	FNBWGB017	FNBWGB017	FNBWGB018 [s]
Sample Depth (feet bgs)	9.0 - 10.0	0.0 - 0.5	2.0 - 3.0	5.0 - 6.0	9.0 - 10.0	0.0 - 0.5
Sample Date	12/09/1998	04/03/1998	09/01/1998	09/01/1998	09/01/1998	04/03/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	0.02 U	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	0.02 U	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	0.02 U	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	0.02 U	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	0.02 U	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	0.02 U	NA	NA	NA	NA	NA
1,2-DICHLOROETHENE (TOTAL)	0.02 U	NA	NA	NA	NA	NA
1,2-DICHLOROPROPANE	0.02 U	NA	NA	NA	NA	NA
2-BUTANONE	0.07 UJ	NA	NA	NA	NA	NA
2-HEXANONE	0.02 U	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	0.02 U	NA	NA	NA	NA	NA
ACETONE	0.3	NA	NA	NA	NA	NA
BENZENE	0.02 U	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	0.02 U	NA	NA	NA	NA	NA
BROMOFORM	0.02 U	NA	NA	NA	NA	NA
BROMOMETHANE	0.02 U	NA	NA	NA	NA	NA
CARBON DISULFIDE	0.004 J	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	0.02 U	NA	NA	NA	NA	NA
CHLOROBENZENE	0.02 U	NA	NA	NA	NA	NA
CHLOROETHANE	0.02 U	NA	NA	NA	NA	NA
CHLOROFORM	0.02 U	NA	NA	NA	NA	NA
CHLOROMETHANE	0.02 U	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	0.02 U	NA	NA	NA	NA	NA
DIBROMOCHLOROMETHANE	0.02 U	NA	NA	NA	NA	NA
ETHYLBENZENE	0.02 U	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	0.02 U	NA	NA	NA	NA	NA
STYRENE	0.02 U	NA	NA	NA	NA	NA
TETRACHLOROETHENE	0.02 U	NA	NA	NA	NA	NA
TOLUENE	0.02 U	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	0.02 U	NA	NA	NA	NA	NA
TRICHLOROETHENE	0.02 U	NA	NA	NA	NA	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB016	FNBWGB017	FNBWGB017 [s]	FNBWGB017	FNBWGB017	FNBWGB018 [s]
Sample Depth (feet bgs)	9.0 - 10.0	0.0 - 0.5	2.0 - 3.0	5.0 - 6.0	9.0 - 10.0	0.0 - 0.5
Sample Date	12/09/1998	04/03/1998	09/01/1998	09/01/1998	09/01/1998	04/03/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
VINYL CHLORIDE	0.02 U	NA	NA	NA	NA	NA
XYLENE (TOTAL)	0.02 U	NA	NA	NA	NA	NA
TOTAL VOCS	0.3 J	NA	NA	NA	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	NA	NA	0.4 U	0.5 U	0.6 U	NA
1,2-DICHLOROBENZENE	NA	NA	0.2 U	0.3 U	0.3 U	NA
1,3-DICHLOROBENZENE	NA	NA	0.2 U	0.3 U	0.3 U	NA
1,4-DICHLOROBENZENE	NA	NA	0.2 U	0.3 U	0.3 U	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	0.4 U	0.5 U	0.6 U	NA
2,4,5-TRICHLOROPHENOL	NA	NA	1 U	1 U	2 U	NA
2,4,6-TRICHLOROPHENOL	NA	NA	0.4 U	0.5 U	0.6 U	NA
2,4-DICHLOROPHENOL	NA	NA	0.4 U	0.5 U	0.6 U	NA
2,4-DIMETHYLPHENOL	NA	NA	0.4 UJ	0.5 U	0.6 U	NA
2,4-DINITROPHENOL	NA	NA	1 UJ	1 UJ	2 UJ	NA
2,4-DINITROTOLUENE	NA	NA	0.4 U	0.5 U	0.6 U	NA
2,6-DINITROTOLUENE	NA	NA	0.4 U	0.5 U	0.6 U	NA
2-CHLORONAPHTHALENE	NA	NA	0.4 U	0.5 U	0.6 U	NA
2-CHLOROPHENOL	NA	NA	0.4 U	0.5 U	0.6 U	NA
2-METHYLNAPHTHALENE	NA	NA	0.4 U	0.5 U	0.6 U	NA
2-METHYLPHENOL	NA	NA	0.4 U	0.5 UJ	0.6 UJ	NA
2-NITROANILINE	NA	NA	1 U	1 U	2 U	NA
2-NITROPHENOL	NA	NA	0.4 U	0.5 U	0.6 U	NA
3,3'-DICHLOROBENZIDINE	NA	NA	0.4 U	0.5 U	0.6 U	NA
3-NITROANILINE	NA	NA	1 U	1 UJ	2 UJ	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	1 U	1 U	2 U	NA
4-BROMOPHENYL-PHENYLETHER	NA	NA	0.4 U	0.5 U	0.6 U	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	0.4 U	0.5 U	0.6 U	NA
4-CHLOROANILINE	NA	NA	0.4 U	0.5 U	0.6 U	NA
4-CHLOROPHENYL-PHENYLETHER	NA	NA	0.4 U	0.5 U	0.6 U	NA
4-METHYLPHENOL	NA	NA	0.4 U	0.5 U	0.6 U	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB016**	**FNBWGB017**	**FNBWGB017 [s]**	**FNBWGB017**	**FNBWGB017**	**FNBWGB018 [s]**
Sample Depth (feet bgs)	9.0 - 10.0	0.0 - 0.5	2.0 - 3.0	5.0 - 6.0	9.0 - 10.0	0.0 - 0.5
Sample Date	12/09/1998	04/03/1998	09/01/1998	09/01/1998	09/01/1998	04/03/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
4-NITROANILINE	NA	NA	1 U	1 UJ	2 UJ	NA
4-NITROPHENOL	NA	NA	1 U	1 UJ	2 UJ	NA
ACENAPHTHENE	NA	NA	0.4 U	0.5 U	0.6 U	NA
ACENAPHTHYLENE	NA	NA	0.4 U	0.5 U	0.6 U	NA
ANTHRACENE	NA	NA	0.4 U	0.5 U	0.6 U	NA
BENZO(A)ANTHRACENE	NA	NA	0.4 U	0.03 J	0.03 J	NA
BENZO(A)PYRENE	NA	NA	0.4 UJ	**0.06 J**	**0.06 J**	NA
BENZO(B)FLUORANTHENE	NA	NA	0.4 UJ	0.08 J	0.05 J	NA
BENZO(G,H,I)PERYLENE	NA	NA	0.4 UJ	0.1 J	0.07 J	NA
BENZO(K)FLUORANTHENE	NA	NA	0.4 UJ	0.5 U	0.6 U	NA
BIS(2-CHLOROETHOXY)METHANE	NA	NA	0.4 U	0.5 U	0.6 U	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	0.4 U	0.5 U	0.6 U	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	0.2 UJ	0.2 UJ	0.2 UJ	NA
BUTYLBENZYLPHTHALATE	NA	NA	0.4 U	0.5 U	0.6 U	NA
CARBAZOLE	NA	NA	0.4 U	0.5 U	0.6 U	NA
CHRYSENE	NA	NA	0.4 U	0.04 J	0.03 J	NA
DI-N-BUTYLPHTHALATE	NA	NA	0.4 U	0.5 U	0.6 U	NA
DI-N-OCTYLPHTHALATE	NA	NA	0.4 UJ	0.5 UJ	0.6 UJ	NA
DIBENZ(A,H)ANTHRACENE	NA	NA	0.4 UJ	0.5 U	0.6 U	NA
DIBENZOFURAN	NA	NA	0.4 U	0.5 U	0.6 U	NA
DIETHYLPHTHALATE	NA	NA	0.4 U	0.5 U	0.6 U	NA
DIMETHYLPHTHALATE	NA	NA	0.4 U	0.5 U	0.6 U	NA
FLUORANTHENE	NA	NA	0.4 U	0.09 J	0.08 J	NA
FLUORENE	NA	NA	0.4 U	0.5 U	0.6 U	NA
HEXACHLOROBENZENE	NA	NA	0.4 U	0.5 U	0.6 U	NA
HEXACHLOROBUTADIENE	NA	NA	0.4 U	0.5 U	0.6 U	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	0.4 UJ	0.5 U	0.6 U	NA
HEXACHLOROETHANE	NA	NA	0.4 U	0.5 U	0.6 U	NA
INDENO(1,2,3-CD)PYRENE	NA	NA	0.4 UJ	0.06 J	0.04 J	NA
ISOPHORONE	NA	NA	0.4 U	0.5 U	0.6 U	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	0.4 U	0.5 U	0.6 U	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB016**	**FNBWGB017**	**FNBWGB017 [s]**	**FNBWGB017**	**FNBWGB017**	**FNBWGB018 [s]**
Sample Depth (feet bgs)	9.0 - 10.0	0.0 - 0.5	2.0 - 3.0	5.0 - 6.0	9.0 - 10.0	0.0 - 0.5
Sample Date	12/09/1998	04/03/1998	09/01/1998	09/01/1998	09/01/1998	04/03/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
N-NITROSODIPHENYLAMINE (1)	NA	NA	0.4 U	0.5 U	0.6 U	NA
NAPHTHALENE	NA	NA	0.4 U	0.5 U	0.6 U	NA
NITROBENZENE	NA	NA	0.4 U	0.5 U	0.6 U	NA
PENTACHLOROPHENOL	NA	NA	1 R	1 U	2 U	NA
PHENANTHRENE	NA	NA	0.4 U	0.5 U	0.6 U	NA
PHENOL	NA	NA	0.4 U	0.5 U	0.6 U	NA
PYRENE	NA	NA	0.4 U	0.1 J	0.1 J	NA
TOTAL SVOCS	NA	NA	0 U	0.6 J	0.5 J	NA
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	NA	130 U	1.1 U	1.3 UJ	1.8 U	11.0 U
GASOLINE RANGE	0.80 UJ	NA	NA	NA	NA	NA
MOTOR OIL RANGE	NA	**5,700 Y**	200 Y	6.4 UJ	74.0 Y	**642 Y**
TOTAL ORGANIC CARBON (mg/kg)						
TOC	7,400	NA	NA	NA	NA	NA
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	NA	NA	8.0	22.0	45.0	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB018**	**FNBWGB018**	**FNBWGB018**	**FNBWGB020**	**FNBWGB021**	**FNBWGB021**
Sample Depth (feet bgs)	2.0 - 3.0	5.0 - 6.0	9.0 - 10.0	0.0 - 0.5	0.0 - 0.5	0.5 - 1.0
Sample Date	09/01/1998	09/01/1998	09/01/1998	10/09/1997	10/08/1997	09/03/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	NA	NA	NA	14,500 J	5,550 J	NA
ANTIMONY	NA	NA	NA	0.36 J	0.61 J	NA
ARSENIC	NA	NA	NA	**6.3 J** !	**4.3 J** !	NA
BARIUM	NA	NA	NA	204 J	62.9 J	NA
BERYLLIUM	NA	NA	NA	0.32 J	0.42 J	NA
CADMIUM	NA	NA	NA	0.05 UJ	0.04 UJ	NA
CALCIUM	NA	NA	NA	11,200 J	3,520 J	NA
CHROMIUM	NA	NA	NA	34.5 J	15.9 J	NA
COBALT	NA	NA	NA	9.8 J	5.6 J	NA
COPPER	NA	NA	NA	36.0 J	81.0 J	NA
IRON	NA	NA	NA	**22,200 J**	15,400 J	NA
LEAD	NA	NA	NA	87.5 J *α	51.9 J	NA
MAGNESIUM	NA	NA	NA	5,020 J	2,360 J	NA
MANGANESE	NA	NA	NA	488 J	235 J	NA
MERCURY	NA	NA	NA	0.18 J	1.5 J	NA
MOLYBDENUM	NA	NA	NA	0.14 UJ	0.27 UJ	NA
NICKEL	NA	NA	NA	31.1 J	18.6 J	NA
POTASSIUM	NA	NA	NA	1,890	702	NA
SELENIUM	NA	NA	NA	0.45 UJ	0.39 R	NA
SILVER	NA	NA	NA	0.12 U	0.11 UJ	NA
SODIUM	NA	NA	NA	83.8 J	41.5 U	NA
THALLIUM	NA	NA	NA	0.68 U	0.58 U	NA
VANADIUM	NA	NA	NA	40.3 J	28.3 J	NA
ZINC	NA	NA	NA	100 J	138 J	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	0.5 UJ	0.6 U	0.4 U	NA	NA	0.4 U
1,2-DICHLOROBENZENE	0.3 U	0.3 U	0.2 U	NA	NA	0.2 U
1,3-DICHLOROBENZENE	0.3 U	0.3 U	0.2 U	NA	NA	0.2 U
1,4-DICHLOROBENZENE	0.3 U	0.3 U	0.2 U	NA	NA	0.2 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.5 U	0.6 U	0.4 U	NA	NA	0.4 UJ

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB018**	**FNBWGB018**	**FNBWGB018**	**FNBWGB020**	**FNBWGB021**	**FNBWGB021**
Sample Depth (feet bgs)	2.0 - 3.0	5.0 - 6.0	9.0 - 10.0	0.0 - 0.5	0.0 - 0.5	0.5 - 1.0
Sample Date	09/01/1998	09/01/1998	09/01/1998	10/09/1997	10/08/1997	09/03/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
2,4,5-TRICHLOROPHENOL	1 U	1 U	1 U	NA	NA	0.9 U
2,4,6-TRICHLOROPHENOL	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
2,4-DICHLOROPHENOL	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
2,4-DIMETHYLPHENOL	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
2,4-DINITROPHENOL	1 U	1 UJ	1 UJ	NA	NA	0.9 U
2,4-DINITROTOLUENE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
2,6-DINITROTOLUENE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
2-CHLORONAPHTHALENE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
2-CHLOROPHENOL	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
2-METHYLNAPHTHALENE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
2-METHYLPHENOL	0.5 UJ	0.6 UJ	0.4 UJ	NA	NA	0.4 U
2-NITROANILINE	1 U	1 U	1 U	NA	NA	0.9 U
2-NITROPHENOL	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
3,3'-DICHLOROBENZIDINE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 UJ
3-NITROANILINE	1 UJ	1 UJ	1 UJ	NA	NA	0.9 U
4,6-DINITRO-2-METHYLPHENOL	1 U	1 U	1 U	NA	NA	0.9 U
4-BROMOPHENYL-PHENYLETHER	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
4-CHLORO-3-METHYLPHENOL	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
4-CHLOROANILINE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
4-CHLOROPHENYL-PHENYLETHER	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
4-METHYLPHENOL	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
4-NITROANILINE	1 UJ	1 UJ	1 UJ	NA	NA	0.9 U
4-NITROPHENOL	1 UJ	1 UJ	1 UJ	NA	NA	0.9 U
ACENAPHTHENE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
ACENAPHTHYLENE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
ANTHRACENE	0.5 U	0.6 U	0.4 U	NA	NA	0.004 J
BENZO(A)ANTHRACENE	0.5 U	0.6 U	0.4 U	NA	NA	0.05 J
BENZO(A)PYRENE	0.06 J	0.06 J	0.4 U	NA	NA	0.4 UJ
BENZO(B)FLUORANTHENE	0.07 J	0.07 J	0.4 U	NA	NA	0.05 J
BENZO(G,H,I)PERYLENE	0.5 U	0.6 U	0.4 U	NA	NA	0.05 J
BENZO(K)FLUORANTHENE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 UJ

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB018**	**FNBWGB018**	**FNBWGB018**	**FNBWGB020**	**FNBWGB021**	**FNBWGB021**
Sample Depth (feet bgs)	2.0 - 3.0	5.0 - 6.0	9.0 - 10.0	0.0 - 0.5	0.0 - 0.5	0.5 - 1.0
Sample Date	09/01/1998	09/01/1998	09/01/1998	10/09/1997	10/08/1997	09/03/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BIS(2-CHLOROETHOXY)METHANE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
BIS(2-CHLOROETHYL)ETHER	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.2 UJ	0.2 UJ	0.2 UJ	NA	NA	0.1 UJ
BUTYLBENZYLPHTHALATE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 UJ
CARBAZOLE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
CHRYSENE	0.04 J	0.6 U	0.4 U	NA	NA	0.05 J
DI-N-BUTYLPHTHALATE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
DI-N-OCTYLPHTHALATE	0.5 U	0.6 UJ	0.4 UJ	NA	NA	0.4 UJ
DIBENZ(A,H)ANTHRACENE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 UJ
DIBENZOFURAN	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
DIETHYLPHTHALATE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
DIMETHYLPHTHALATE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
FLUORANTHENE	0.07 J	0.1 J	0.4 U	NA	NA	0.02 J
FLUORENE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
HEXACHLOROBENZENE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
HEXACHLOROBUTADIENE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
HEXACHLOROCYCLOPENTADIENE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
HEXACHLOROETHANE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
INDENO(1,2,3-CD)PYRENE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 UJ
ISOPHORONE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
N-NITROSO-DI-N-PROPYLAMINE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
N-NITROSODIPHENYLAMINE (1)	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
NAPHTHALENE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
NITROBENZENE	0.5 U	0.6 U	0.4 U	NA	NA	0.4 U
PENTACHLOROPHENOL	1 U	1 U	1 U	NA	NA	0.9 U
PHENANTHRENE	0.5 U	0.04 J	0.4 U	NA	NA	0.006 J
PHENOL	0.5 U	0.6 U	0.4 U	NA	NA	0.4 UJ
PYRENE	0.09 J	0.1 J	0.4 U	NA	NA	0.02 J
TOTAL SVOCS	0.3 J	0.4 J	0 U	NA	NA	0.2 J
PESTICIDES (mg/kg)						
4,4'-DDD	NA	NA	NA	0.004 U	0.003 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB018**	**FNBWGB018**	**FNBWGB018**	**FNBWGB020**	**FNBWGB021**	**FNBWGB021**
Sample Depth (feet bgs)	2.0 - 3.0	5.0 - 6.0	9.0 - 10.0	0.0 - 0.5	0.0 - 0.5	0.5 - 1.0
Sample Date	09/01/1998	09/01/1998	09/01/1998	10/09/1997	10/08/1997	09/03/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PESTICIDES (mg/kg)						
4,4'-DDE	NA	NA	NA	0.004 U	0.003 U	NA
4,4'-DDT	NA	NA	NA	0.006	0.009 J	NA
ALDRIN	NA	NA	NA	0.002 U	0.002 U	NA
ALPHA-BHC	NA	NA	NA	0.003 UJ	0.01	NA
ALPHA-CHLORDANE	NA	NA	NA	0.002 U	0.002 U	NA
BETA-BHC	NA	NA	NA	0.002 U	0.004	NA
DELTA-BHC	NA	NA	NA	0.002 U	0.002	NA
DIELDRIN	NA	NA	NA	0.004 U	0.003 U	NA
ENDOSULFAN I	NA	NA	NA	0.002 U	0.002 U	NA
ENDOSULFAN II	NA	NA	NA	0.004 U	0.003 UJ	NA
ENDOSULFAN SULFATE	NA	NA	NA	0.004 U	0.002 J	NA
ENDRIN	NA	NA	NA	0.004 U	0.003 UJ	NA
ENDRIN ALDEHYDE	NA	NA	NA	0.004 U	0.003 UJ	NA
ENDRIN KETONE	NA	NA	NA	0.004 U	0.003 UJ	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	0.002 U	0.005	NA
GAMMA-CHLORDANE	NA	NA	NA	0.002 U	0.002 U	NA
HEPTACHLOR	NA	NA	NA	0.0003 U	0.0003 U	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	0.0003 U	0.0003 U	NA
METHOXYCHLOR	NA	NA	NA	0.02 U	0.02 U	NA
TOXAPHENE	NA	NA	NA	0.1 U	0.09 U	NA
PCBs (mg/kg)						
AROCLOR-1016	NA	NA	NA	0.02 U	0.02 U	NA
AROCLOR-1221	NA	NA	NA	0.02 U	0.02 U	NA
AROCLOR-1232	NA	NA	NA	0.02 U	0.02 U	NA
AROCLOR-1242	NA	NA	NA	0.02 U	0.02 U	NA
AROCLOR-1248	NA	NA	NA	0.02 U	0.02 U	NA
AROCLOR-1254	NA	NA	NA	0.02 U	0.02 U	NA
AROCLOR-1260	NA	NA	NA	0.05	0.02 U	NA
TOTAL PCBS	NA	NA	NA	0.05	0 U	NA
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	1.5 U	1.9 U	1.8 U	15.0 Y	10.0 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB018**	**FNBWGB018**	**FNBWGB018**	**FNBWGB020**	**FNBWGB021**	**FNBWGB021**
Sample Depth (feet bgs)	2.0 - 3.0	5.0 - 6.0	9.0 - 10.0	0.0 - 0.5	0.0 - 0.5	0.5 - 1.0
Sample Date	09/01/1998	09/01/1998	09/01/1998	10/09/1997	10/08/1997	09/03/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PETROLEUM INDICATORS (mg/kg)						
GASOLINE RANGE	NA	NA	NA	0.60 UJ	0.50 UJ	NA
MOTOR OIL RANGE	250 Y	180 Y	17.0 Y	77.0 Y	270 Y	NA
pH						
PH	NA	NA	NA	7.0	8.3	NA
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	34.0	48.0	45.0	12.4	3.5	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB021**	**FNBWGB021**	**FNBWGB022**	**FNBWGB022**	**FNBWGB022**	**FNBWGB022**
Sample Depth (feet bgs)	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.5 - 3.0	4.5 - 5.0	6.5 - 7.0
Sample Date	09/03/1998	09/03/1998	10/13/1997	09/17/1998	09/17/1998	09/17/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	NA	NA	19,400	NA	NA	NA
ANTIMONY	NA	NA	0.65 UJ	NA	NA	NA
ARSENIC	NA	NA	**2.8** !	NA	NA	NA
BARIUM	NA	NA	54.2	NA	NA	NA
BERYLLIUM	NA	NA	0.01 U	NA	NA	NA
CADMIUM	NA	NA	0.04 U	NA	NA	NA
CALCIUM	NA	NA	9,700	NA	NA	NA
CHROMIUM	NA	NA	23.6	NA	NA	NA
COBALT	NA	NA	20.3	NA	NA	NA
COPPER	NA	NA	40.8	NA	NA	NA
IRON	NA	NA	**44,200**	NA	NA	NA
LEAD	NA	NA	5.2	NA	NA	NA
MAGNESIUM	NA	NA	12,200	NA	NA	NA
MANGANESE	NA	NA	768	NA	NA	NA
MERCURY	NA	NA	0.11	NA	NA	NA
MOLYBDENUM	NA	NA	0.13 UJ	NA	NA	NA
NICKEL	NA	NA	22.1	NA	NA	NA
POTASSIUM	NA	NA	918 J	NA	NA	NA
SELENIUM	NA	NA	1.4	NA	NA	NA
SILVER	NA	NA	0.12 U	NA	NA	NA
SODIUM	NA	NA	47.6 U	NA	NA	NA
THALLIUM	NA	NA	0.66 UJ	NA	NA	NA
VANADIUM	NA	NA	114	NA	NA	NA
ZINC	NA	NA	76.9	NA	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	0.7 U	0.9 U	NA	NA	NA	NA
1,2-DICHLOROBENZENE	0.3 U	0.4 U	NA	NA	NA	NA
1,3-DICHLOROBENZENE	0.3 U	0.4 U	NA	NA	NA	NA
1,4-DICHLOROBENZENE	0.3 U	0.4 U	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	0.7 U	0.9 U	NA	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB021**	**FNBWGB021**	**FNBWGB022**	**FNBWGB022**	**FNBWGB022**	**FNBWGB022**
Sample Depth (feet bgs)	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.5 - 3.0	4.5 - 5.0	6.5 - 7.0
Sample Date	09/03/1998	09/03/1998	10/13/1997	09/17/1998	09/17/1998	09/17/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
2,4,5-TRICHLOROPHENOL	2 U	2 U	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	0.7 U	0.9 U	NA	NA	NA	NA
2,4-DICHLOROPHENOL	0.7 U	0.9 U	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	0.7 U	0.9 U	NA	NA	NA	NA
2,4-DINITROPHENOL	2 U	2 U	NA	NA	NA	NA
2,4-DINITROTOLUENE	0.7 U	0.9 U	NA	NA	NA	NA
2,6-DINITROTOLUENE	0.7 U	0.9 U	NA	NA	NA	NA
2-CHLORONAPHTHALENE	0.7 U	0.9 U	NA	NA	NA	NA
2-CHLOROPHENOL	0.7 U	0.9 U	NA	NA	NA	NA
2-METHYLNAPHTHALENE	0.7 U	0.9 U	NA	NA	NA	NA
2-METHYLPHENOL	0.7 U	0.9 U	NA	NA	NA	NA
2-NITROANILINE	2 U	2 U	NA	NA	NA	NA
2-NITROPHENOL	0.7 U	0.9 U	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	0.7 U	0.9 U	NA	NA	NA	NA
3-NITROANILINE	2 U	2 U	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	2 U	2 U	NA	NA	NA	NA
4-BROMOPHENYL-PHENYLETHER	0.7 U	0.9 U	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	0.7 U	0.9 U	NA	NA	NA	NA
4-CHLOROANILINE	0.7 U	0.9 U	NA	NA	NA	NA
4-CHLOROPHENYL-PHENYLETHER	0.7 U	0.9 U	NA	NA	NA	NA
4-METHYLPHENOL	0.7 U	0.9 U	NA	NA	NA	NA
4-NITROANILINE	2 U	2 U	NA	NA	NA	NA
4-NITROPHENOL	2 U	2 U	NA	NA	NA	NA
ACENAPHTHENE	0.7 U	0.9 U	NA	NA	NA	NA
ACENAPHTHYLENE	0.7 U	0.9 U	NA	NA	NA	NA
ANTHRACENE	0.7 U	0.9 U	NA	NA	NA	NA
BENZO(A)ANTHRACENE	0.7 U	0.1 J	NA	NA	NA	NA
BENZO(A)PYRENE	0.7 UJ	**0.2 J**	NA	NA	NA	NA
BENZO(B)FLUORANTHENE	0.08 J	0.4 J	NA	NA	NA	NA
BENZO(G,H,I)PERYLENE	0.7 UJ	0.2 J	NA	NA	NA	NA
BENZO(K)FLUORANTHENE	0.7 UJ	0.9 UJ	NA	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB021**	**FNBWGB021**	**FNBWGB022**	**FNBWGB022**	**FNBWGB022**	**FNBWGB022**
Sample Depth (feet bgs)	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.5 - 3.0	4.5 - 5.0	6.5 - 7.0
Sample Date	09/03/1998	09/03/1998	10/13/1997	09/17/1998	09/17/1998	09/17/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BIS(2-CHLOROETHOXY)METHANE	0.7 U	0.9 U	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	0.7 U	0.9 U	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	0.3 UJ	0.4 UJ	NA	NA	NA	NA
BUTYLBENZYLPHTHALATE	0.7 U	0.9 U	NA	NA	NA	NA
CARBAZOLE	0.7 U	0.9 U	NA	NA	NA	NA
CHRYSENE	0.1 J	0.3 J	NA	NA	NA	NA
DI-N-BUTYLPHTHALATE	0.7 U	0.9 U	NA	NA	NA	NA
DI-N-OCTYLPHTHALATE	0.7 UJ	0.9 UJ	NA	NA	NA	NA
DIBENZ(A,H)ANTHRACENE	0.7 UJ	0.9 UJ	NA	NA	NA	NA
DIBENZOFURAN	0.7 U	0.9 U	NA	NA	NA	NA
DIETHYLPHTHALATE	0.7 U	0.9 U	NA	NA	NA	NA
DIMETHYLPHTHALATE	0.7 U	0.9 U	NA	NA	NA	NA
FLUORANTHENE	0.03 J	0.04 J	NA	NA	NA	NA
FLUORENE	0.7 U	0.9 U	NA	NA	NA	NA
HEXACHLOROBENZENE	0.7 U	0.9 U	NA	NA	NA	NA
HEXACHLOROBUTADIENE	0.7 U	0.9 U	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	0.7 U	0.9 U	NA	NA	NA	NA
HEXACHLOROETHANE	0.7 U	0.9 U	NA	NA	NA	NA
INDENO(1,2,3-CD)PYRENE	0.7 UJ	0.1 J	NA	NA	NA	NA
ISOPHORONE	0.7 U	0.9 U	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	0.7 U	0.9 U	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE (1)	0.7 U	0.9 U	NA	NA	NA	NA
NAPHTHALENE	0.7 U	0.9 U	NA	NA	NA	NA
NITROBENZENE	0.7 U	0.9 U	NA	NA	NA	NA
PENTACHLOROPHENOL	2 U	2 U	NA	NA	NA	NA
PHENANTHRENE	0.7 U	0.9 U	NA	NA	NA	NA
PHENOL	0.7 U	0.9 U	NA	NA	NA	NA
PYRENE	0.05 J	0.06 J	NA	NA	NA	NA
TOTAL SVOCS	0.3 J	1 J	NA	NA	NA	NA
PESTICIDES (mg/kg)						
4,4'-DDD	NA	NA	0.004 UJ	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB021**	**FNBWGB021**	**FNBWGB022**	**FNBWGB022**	**FNBWGB022**	**FNBWGB022**
Sample Depth (feet bgs)	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.5 - 3.0	4.5 - 5.0	6.5 - 7.0
Sample Date	09/03/1998	09/03/1998	10/13/1997	09/17/1998	09/17/1998	09/17/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PESTICIDES (mg/kg)						
4,4'-DDE	NA	NA	0.004 UJ	NA	NA	NA
4,4'-DDT	NA	NA	0.004 UJ	NA	NA	NA
ALDRIN	NA	NA	0.002 U	NA	NA	NA
ALPHA-BHC	NA	NA	0.002 U	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	0.002 UJ	NA	NA	NA
BETA-BHC	NA	NA	0.002 U	NA	NA	NA
DELTA-BHC	NA	NA	0.002 U	NA	NA	NA
DIELDRIN	NA	NA	0.004 UJ	NA	NA	NA
ENDOSULFAN I	NA	NA	0.002 UJ	NA	NA	NA
ENDOSULFAN II	NA	NA	0.004 UJ	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	0.004 UJ	NA	NA	NA
ENDRIN	NA	NA	0.004 UJ	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	0.004 UJ	NA	NA	NA
ENDRIN KETONE	NA	NA	0.004 UJ	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	0.002 U	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	0.002 UJ	NA	NA	NA
HEPTACHLOR	NA	NA	0.0003 U	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	0.0003 U	NA	NA	NA
METHOXYCHLOR	NA	NA	0.02 UJ	NA	NA	NA
TOXAPHENE	NA	NA	0.09 U	NA	NA	NA
PCBs (mg/kg)						
AROCLOR-1016	NA	NA	0.02 U	NA	NA	NA
AROCLOR-1221	NA	NA	0.02 U	NA	NA	NA
AROCLOR-1232	NA	NA	0.02 U	NA	NA	NA
AROCLOR-1242	NA	NA	0.02 U	NA	NA	NA
AROCLOR-1248	NA	NA	0.02 U	NA	NA	NA
AROCLOR-1254	NA	NA	0.02 U	NA	NA	NA
AROCLOR-1260	NA	NA	0.02 U	NA	NA	NA
TOTAL PCBS	NA	NA	0 U	NA	NA	NA
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	10.0 U	1.5 U	11.0 U	13.0 U	18.0 U	18.0 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB021**	**FNBWGB021**	**FNBWGB022**	**FNBWGB022**	**FNBWGB022**	**FNBWGB022**
Sample Depth (feet bgs)	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.5 - 3.0	4.5 - 5.0	6.5 - 7.0
Sample Date	09/03/1998	09/03/1998	10/13/1997	09/17/1998	09/17/1998	09/17/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PETROLEUM INDICATORS (mg/kg)						
GASOLINE RANGE	NA	NA	0.60 UJ	NA	NA	NA
MOTOR OIL RANGE	**1,400 Y**	290 Y	79.0 Y	65.0 U	88.0 U	88.0 U
pH						
PH	NA	NA	7.9	NA	NA	NA
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	3.0	35.0	10.0	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB022**	**FNBWGB023**	**FNBWGB023**	**FNBWGB023**	**FNBWGB023**	**FNBWGB023**
Sample Depth (feet bgs)	9.5 - 10.0	0.0 - 0.5	3.0 - 4.0	6.0 - 7.0	9.0 - 10.0	12.0 - 13.0
Sample Date	09/17/1998	08/31/1998	08/31/1998	08/31/1998	08/31/1998	08/31/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ANTIMONY	NA	10.0 U	NA	NA	NA	NA
CADMIUM	NA	10.0 U	NA	NA	NA	NA
CALCIUM	NA	19,300	NA	NA	NA	NA
CHROMIUM	NA	79.1	NA	NA	NA	NA
COBALT	NA	10.0 U	NA	NA	NA	NA
COPPER	NA	10.0 U	NA	NA	NA	NA
IRON	NA	**23,100**	NA	NA	NA	NA
LEAD	NA	15.0	NA	NA	NA	NA
MANGANESE	NA	572	NA	NA	NA	NA
NICKEL	NA	30.9	NA	23.1	NA	NA
POTASSIUM	NA	20,800	NA	NA	NA	NA
SILVER	NA	10.0 U	NA	NA	NA	NA
TIN	NA	10.3	NA	NA	NA	NA
TITANIUM	NA	3,450	NA	NA	NA	NA
VANADIUM	NA	95.9	NA	NA	NA	NA
ZINC	NA	35.1	NA	NA	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-DICHLOROBENZENE	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-DICHLOROBENZENE	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-DICHLOROBENZENE	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2,4,5-TRICHLOROPHENOL	NA	0.9 U	1 U	1 U	1 U	1 U
2,4,6-TRICHLOROPHENOL	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2,4-DICHLOROPHENOL	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2,4-DIMETHYLPHENOL	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2,4-DINITROPHENOL	NA	0.9 U	1 U	1 U	1 U	1 U
2,4-DINITROTOLUENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2,6-DINITROTOLUENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2-CHLORONAPHTHALENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB022**	**FNBWGB023**	**FNBWGB023**	**FNBWGB023**	**FNBWGB023**	**FNBWGB023**
Sample Depth (feet bgs)	9.5 - 10.0	0.0 - 0.5	3.0 - 4.0	6.0 - 7.0	9.0 - 10.0	12.0 - 13.0
Sample Date	09/17/1998	08/31/1998	08/31/1998	08/31/1998	08/31/1998	08/31/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
2-CHLOROPHENOL	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2-METHYLNAPHTHALENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2-METHYLPHENOL	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
2-NITROANILINE	NA	0.9 U	1 U	1 U	1 U	1 U
2-NITROPHENOL	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
3,3'-DICHLOROBENZIDINE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
3-NITROANILINE	NA	0.9 U	1 U	1 U	1 U	1 U
4,6-DINITRO-2-METHYLPHENOL	NA	0.9 U	1 U	1 U	1 U	1 U
4-BROMOPHENYL-PHENYLETHER	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
4-CHLORO-3-METHYLPHENOL	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
4-CHLOROANILINE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
4-CHLOROPHENYL-PHENYLETHER	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
4-METHYLPHENOL	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
4-NITROANILINE	NA	0.9 U	1 U	1 U	1 U	1 U
4-NITROPHENOL	NA	0.9 U	1 U	1 U	1 U	1 U
ACENAPHTHENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
ACENAPHTHYLENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
ANTHRACENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
BENZO(A)ANTHRACENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
BENZO(A)PYRENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
BENZO(B)FLUORANTHENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
BENZO(G,H,I)PERYLENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
BENZO(K)FLUORANTHENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
BIS(2-CHLOROETHOXY)METHANE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
BIS(2-CHLOROETHYL)ETHER	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
BIS(2-ETHYLHEXYL)PHTHALATE	NA	0.1 U	0.2 UJ	0.2 UJ	0.2 U	0.2 UJ
BUTYLBENZYLPHTHALATE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
CARBAZOLE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
CHRYSENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
DI-N-BUTYLPHTHALATE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
DI-N-OCTYLPHTHALATE	NA	0.3 UJ	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB022**	**FNBWGB023**	**FNBWGB023**	**FNBWGB023**	**FNBWGB023**	**FNBWGB023**
Sample Depth (feet bgs)	9.5 - 10.0	0.0 - 0.5	3.0 - 4.0	6.0 - 7.0	9.0 - 10.0	12.0 - 13.0
Sample Date	09/17/1998	08/31/1998	08/31/1998	08/31/1998	08/31/1998	08/31/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
DIBENZ(A,H)ANTHRACENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
DIBENZOFURAN	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
DIETHYLPHTHALATE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
DIMETHYLPHTHALATE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
FLUORANTHENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
FLUORENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
HEXACHLOROBENZENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
HEXACHLOROBUTADIENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
HEXACHLOROCYCLOPENTADIENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
HEXACHLOROETHANE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
INDENO(1,2,3-CD)PYRENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
ISOPHORONE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
N-NITROSO-DI-N-PROPYLAMINE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
N-NITROSODIPHENYLAMINE (1)	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
NAPHTHALENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
NITROBENZENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
PENTACHLOROPHENOL	NA	0.5 J	1 R	1 R	1 R	1 R
PHENANTHRENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
PHENOL	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
PYRENE	NA	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
TOTAL SVOCS	NA	0.5 J	0 U	0 U	0 U	0 U
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	19.0 U	1.0 U	1.2 U	1.3 U	1.2 U	1.2 U
MOTOR OIL RANGE	94.0 U	23.0 Y	5.9 U	11.0 Y	28.0 Y	13.0 Y
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	NA	2.0	15.0	22.0	14.0	15.0

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB024	FNBWGB024	FNBWGB024	FNBWGB024	FNBWGB025	FNBWGB025
Sample Depth (feet bgs)	0.0 - 0.5	4.0 - 4.5	6.5 - 7.0	9.5 - 10.0	2.0 - 2.5	6.5 - 7.0
Sample Date	09/18/1998	09/18/1998	09/18/1998	09/18/1998	09/17/1998	09/17/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
1,2-DICHLOROBENZENE	0.2 U	0.2 U	0.3 U	0.3 U	0.3 U	0.2 U
1,3-DICHLOROBENZENE	0.2 U	0.2 U	0.3 U	0.3 U	0.3 U	0.2 U
1,4-DICHLOROBENZENE	0.2 U	0.2 U	0.3 U	0.3 U	0.3 U	0.2 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
2,4,5-TRICHLOROPHENOL	0.9 U	1 U	1 U	1 U	2 U	1 U
2,4,6-TRICHLOROPHENOL	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
2,4-DICHLOROPHENOL	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
2,4-DIMETHYLPHENOL	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
2,4-DINITROPHENOL	0.9 U	1 U	1 U	1 U	2 UJ	1 UJ
2,4-DINITROTOLUENE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
2,6-DINITROTOLUENE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
2-CHLORONAPHTHALENE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
2-CHLOROPHENOL	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
2-METHYLNAPHTHALENE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
2-METHYLPHENOL	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
2-NITROANILINE	0.9 U	1 U	1 U	1 U	2 U	1 U
2-NITROPHENOL	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
3,3'-DICHLOROBENZIDINE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 UJ	0.4 U
3-NITROANILINE	0.9 U	1 U	1 U	1 U	2 U	1 U
4,6-DINITRO-2-METHYLPHENOL	0.9 U	1 U	1 U	1 U	2 UJ	1 U
4-BROMOPHENYL-PHENYLETHER	0.4 U	0.4 U	0.6 U	0.6 U	0.7 UJ	0.4 U
4-CHLORO-3-METHYLPHENOL	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
4-CHLOROANILINE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
4-CHLOROPHENYL-PHENYLETHER	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
4-METHYLPHENOL	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
4-NITROANILINE	0.9 U	1 U	1 U	1 U	2 U	1 U
4-NITROPHENOL	0.9 U	1 U	1 U	1 U	2 U	1 U
ACENAPHTHENE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
ACENAPHTHYLENE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
ANTHRACENE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 UJ	0.4 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB024	FNBWGB024	FNBWGB024	FNBWGB024	FNBWGB025	FNBWGB025
Sample Depth (feet bgs)	0.0 - 0.5	4.0 - 4.5	6.5 - 7.0	9.5 - 10.0	2.0 - 2.5	6.5 - 7.0
Sample Date	09/18/1998	09/18/1998	09/18/1998	09/18/1998	09/17/1998	09/17/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)ANTHRACENE	0.4 U	0.4 U	0.6 U	0.03 J	0.7 UJ	0.4 U
BENZO(A)PYRENE	0.02 J	0.4 U	0.03 J	0.05 J	0.7 UJ	0.4 U
BENZO(B)FLUORANTHENE	0.02 J	0.4 U	0.6 U	0.04 J	0.7 UJ	0.4 U
BENZO(G,H,I)PERYLENE	0.4 U	0.4 U	0.04 J	0.06 J	0.7 UJ	0.4 U
BENZO(K)FLUORANTHENE	0.02 J	0.4 U	0.6 U	0.03 J	0.7 UJ	0.4 U
BIS(2-CHLOROETHOXY)METHANE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
BIS(2-CHLOROETHYL)ETHER	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.1 UJ	0.2 U	0.2 U	0.2 U	0.3 UJ	0.2 UJ
BUTYLBENZYLPHTHALATE	0.4 U	0.4 UJ	0.6 UJ	0.6 U	0.7 UJ	0.4 U
CARBAZOLE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 UJ	0.4 U
CHRYSENE	0.02 J	0.4 U	0.6 U	0.04 J	0.7 UJ	0.4 U
DI-N-BUTYLPHTHALATE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 UJ	0.4 U
DI-N-OCTYLPHTHALATE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 UJ	0.4 UJ
DIBENZ(A,H)ANTHRACENE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 UJ	0.4 U
DIBENZOFURAN	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
DIETHYLPHTHALATE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
DIMETHYLPHTHALATE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
FLUORANTHENE	0.03 J	0.4 U	0.04 J	0.08 J	0.7 UJ	0.4 U
FLUORENE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
HEXACHLOROBENZENE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 UJ	0.4 U
HEXACHLOROBUTADIENE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
HEXACHLOROCYCLOPENTADIENE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
HEXACHLOROETHANE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
INDENO(1,2,3-CD)PYRENE	0.4 U	0.4 U	0.6 U	0.04 J	0.7 UJ	0.4 U
ISOPHORONE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
N-NITROSO-DI-N-PROPYLAMINE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
N-NITROSODIPHENYLAMINE (1)	0.4 U	0.4 U	0.6 U	0.6 U	0.7 UJ	0.4 U
NAPHTHALENE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
NITROBENZENE	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
PENTACHLOROPHENOL	0.9 U	1 U	1 U	1 U	2 UJ	1 U
PHENANTHRENE	0.4 U	0.4 U	0.6 U	0.03 J	0.7 UJ	0.4 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB024**	**FNBWGB024**	**FNBWGB024**	**FNBWGB024**	**FNBWGB025**	**FNBWGB025**
Sample Depth (feet bgs)	0.0 - 0.5	4.0 - 4.5	6.5 - 7.0	9.5 - 10.0	2.0 - 2.5	6.5 - 7.0
Sample Date	09/18/1998	09/18/1998	09/18/1998	09/18/1998	09/17/1998	09/17/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PHENOL	0.4 U	0.4 U	0.6 U	0.6 U	0.7 U	0.4 U
PYRENE	0.02 J	0.4 U	0.05 J	0.1 J	0.7 UJ	0.4 U
TOTAL SVOCS	0.1 J	0 U	0.2 J	0.5 J	0 U	0 U
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	10.0 U	12.0 U	17.0 U	17.0 U	10.0 U	13.0 U
MOTOR OIL RANGE	59.0 Y	62.0 U	86.0 U	85.0 U	320 Y	63.0 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB025**	**FNBWGB025**	**FNBWGB026**	**FNBWGB026**	**FNBWGB026**	**FNBWGB026**
Sample Depth (feet bgs)	9.5 - 10.0	4.5 - 5.0	2.0 - 2.5	4.0 - 4.5	6.0 - 6.5	9.0 - 9.5
Sample Date	09/17/1998	09/18/1998	10/01/1998	10/01/1998	10/01/1998	10/01/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
1,2-DICHLOROBENZENE	0.3 U	0.2 U	0.2 U	0.2 U	0.3 U	0.3 U
1,3-DICHLOROBENZENE	0.3 U	0.2 U	0.2 U	0.2 U	0.3 U	0.3 U
1,4-DICHLOROBENZENE	0.3 U	0.2 U	0.2 U	0.2 U	0.3 U	0.3 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
2,4,5-TRICHLOROPHENOL	2 U	0.9 U	0.9 U	0.9 U	1 U	1 U
2,4,6-TRICHLOROPHENOL	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
2,4-DICHLOROPHENOL	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
2,4-DIMETHYLPHENOL	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
2,4-DINITROPHENOL	2 UJ	0.9 U	0.9 U	0.9 U	1 U	1 U
2,4-DINITROTOLUENE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
2,6-DINITROTOLUENE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
2-CHLORONAPHTHALENE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
2-CHLOROPHENOL	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
2-METHYLNAPHTHALENE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
2-METHYLPHENOL	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
2-NITROANILINE	2 U	0.9 U	0.9 U	0.9 U	1 U	1 U
2-NITROPHENOL	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
3,3'-DICHLOROBENZIDINE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
3-NITROANILINE	2 U	0.9 U	0.9 U	0.9 U	1 U	1 U
4,6-DINITRO-2-METHYLPHENOL	2 U	0.9 U	0.9 U	0.9 U	1 U	1 U
4-BROMOPHENYL-PHENYLETHER	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
4-CHLORO-3-METHYLPHENOL	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
4-CHLOROANILINE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
4-CHLOROPHENYL-PHENYLETHER	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
4-METHYLPHENOL	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
4-NITROANILINE	2 U	0.9 U	0.9 U	0.9 U	1 U	1 U
4-NITROPHENOL	2 U	0.9 U	0.9 U	0.9 U	1 U	1 U
ACENAPHTHENE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
ACENAPHTHYLENE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
ANTHRACENE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB025	FNBWGB025	FNBWGB026	FNBWGB026	FNBWGB026	FNBWGB026
Sample Depth (feet bgs)	9.5 - 10.0	4.5 - 5.0	2.0 - 2.5	4.0 - 4.5	6.0 - 6.5	9.0 - 9.5
Sample Date	09/17/1998	09/18/1998	10/01/1998	10/01/1998	10/01/1998	10/01/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)ANTHRACENE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
BENZO(A)PYRENE	0.7 U	0.4 UJ	0.4 U	0.4 U	0.5 U	0.03 J
BENZO(B)FLUORANTHENE	0.7 U	0.4 UJ	0.4 U	0.4 U	0.5 U	0.6 U
BENZO(G,H,I)PERYLENE	0.7 U	0.4 UJ	0.4 UJ	0.4 UJ	0.5 UJ	0.04 J
BENZO(K)FLUORANTHENE	0.7 U	0.4 UJ	0.4 U	0.4 U	0.5 U	0.6 U
BIS(2-CHLOROETHOXY)METHANE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
BIS(2-CHLOROETHYL)ETHER	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.3 UJ	0.3 UJ	0.2 UJ	0.2 U	0.2 U	0.2 U
BUTYLBENZYLPHTHALATE	0.7 U	0.4 UJ	0.4 U	0.4 U	0.5 U	0.6 U
CARBAZOLE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
CHRYSENE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
DI-N-BUTYLPHTHALATE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 UJ
DI-N-OCTYLPHTHALATE	0.7 UJ	0.4 UJ	0.4 U	0.4 U	0.5 U	0.6 U
DIBENZ(A,H)ANTHRACENE	0.7 U	0.4 UJ	0.4 U	0.4 U	0.5 U	0.6 U
DIBENZOFURAN	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
DIETHYLPHTHALATE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
DIMETHYLPHTHALATE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
FLUORANTHENE	0.7 U	0.4 U	0.4 U	0.4 U	0.03 J	0.03 J
FLUORENE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
HEXACHLOROBENZENE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
HEXACHLOROBUTADIENE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
HEXACHLOROCYCLOPENTADIENE	0.7 U	0.4 U	0.4 UJ	0.4 UJ	0.5 UJ	0.6 UJ
HEXACHLOROETHANE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
INDENO(1,2,3-CD)PYRENE	0.7 U	0.4 UJ	0.4 U	0.4 U	0.5 U	0.03 J
ISOPHORONE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
N-NITROSO-DI-N-PROPYLAMINE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
N-NITROSODIPHENYLAMINE (1)	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
NAPHTHALENE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
NITROBENZENE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
PENTACHLOROPHENOL	2 U	0.9 U	0.9 U	0.9 U	1 U	1 U
PHENANTHRENE	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB025**	**FNBWGB025**	**FNBWGB026**	**FNBWGB026**	**FNBWGB026**	**FNBWGB026**
Sample Depth (feet bgs)	9.5 - 10.0	4.5 - 5.0	2.0 - 2.5	4.0 - 4.5	6.0 - 6.5	9.0 - 9.5
Sample Date	09/17/1998	09/18/1998	10/01/1998	10/01/1998	10/01/1998	10/01/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PHENOL	0.7 U	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U
PYRENE	0.04 J	0.4 U	0.4 U	0.4 U	0.05 J	0.05 J
TOTAL SVOCS	0.04 J	0 U	0 U	0 U	0.08 J	0.2 J
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	22.0 Y	11.0 U	11.0 U	11.0 U	16.0 U	17.0 U
MOTOR OIL RANGE	120 Y	180 Y	56.0 U	57.0 U	81.0 U	83.0 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB027**	**FNBWGB027**	**FNBWGB027**	**FNBWGB028**	**FNBWGB028**	**FNBWGB029**
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 4.0	0.0 - 0.5
Sample Date	12/09/1998	12/09/1998	12/09/1998	12/09/1998	12/09/1998	10/08/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	NA	NA	NA	NA	NA	8,560 J
ANTIMONY	NA	NA	NA	NA	NA	1.6 J
ARSENIC	NA	NA	NA	NA	NA	**6.8 J** !
BARIUM	NA	NA	NA	NA	NA	77.3 J
BERYLLIUM	NA	NA	NA	NA	NA	0.38 J
CADMIUM	NA	NA	NA	NA	NA	0.04 UJ
CALCIUM	NA	NA	NA	NA	NA	2,150 J
CHROMIUM	NA	NA	NA	NA	NA	22.3 J
COBALT	NA	NA	NA	NA	NA	6.3 J
COPPER	NA	NA	NA	NA	NA	24.1 J
IRON	NA	NA	NA	NA	NA	17,700 J
LEAD	NA	NA	NA	NA	NA	29.8 J
MAGNESIUM	NA	NA	NA	NA	NA	2,840 J
MANGANESE	NA	NA	NA	NA	NA	326 J
MERCURY	NA	NA	NA	NA	NA	0.26 J
MOLYBDENUM	NA	NA	NA	NA	NA	0.43 UJ
NICKEL	NA	NA	NA	NA	NA	25.5 J
POTASSIUM	NA	NA	NA	NA	NA	802
SELENIUM	NA	NA	NA	NA	NA	0.45 J
SILVER	NA	NA	NA	NA	NA	0.10 UJ
SODIUM	NA	NA	NA	NA	NA	453 J
THALLIUM	NA	NA	NA	NA	NA	0.56 U
VANADIUM	NA	NA	NA	NA	NA	33.0 J
ZINC	NA	NA	NA	NA	NA	96.9 J
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,1,2,2-TETRACHLOROETHANE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,1,2-TRICHLOROETHANE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,1-DICHLOROETHANE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,1-DICHLOROETHENE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB027	FNBWGB027	FNBWGB027	FNBWGB028	FNBWGB028	FNBWGB029
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 4.0	0.0 - 0.5
Sample Date	12/09/1998	12/09/1998	12/09/1998	12/09/1998	12/09/1998	10/08/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROETHANE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2-DICHLOROETHENE (TOTAL)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2-DICHLOROPROPANE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-BUTANONE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 UJ
2-HEXANONE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-METHYL-2-PENTANONE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ACETONE	0.01 UJ	0.01 UJ	0.01 UJ	0.03 UJ	0.03 UJ	0.01 UJ
BENZENE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
BROMODICHLOROMETHANE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
BROMOFORM	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
BROMOMETHANE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
CARBON DISULFIDE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
CARBON TETRACHLORIDE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
CHLOROBENZENE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
CHLOROETHANE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
CHLOROFORM	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
CHLOROMETHANE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
CIS-1,3-DICHLOROPROPENE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
DIBROMOCHLOROMETHANE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
ETHYLBENZENE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
METHYLENE CHLORIDE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
STYRENE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
TETRACHLOROETHENE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
TOLUENE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
TRANS-1,3-DICHLOROPROPENE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
TRICHLOROETHENE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
VINYL CHLORIDE	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
XYLENE (TOTAL)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
TOTAL VOCS	0 U	0 U	0 U	0 U	0 U	0 U
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 UJ

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB027	FNBWGB027	FNBWGB027	FNBWGB028	FNBWGB028	FNBWGB029
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 4.0	0.0 - 0.5
Sample Date	12/09/1998	12/09/1998	12/09/1998	12/09/1998	12/09/1998	10/08/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROBENZENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-DICHLOROBENZENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-DICHLOROBENZENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
2,4,5-TRICHLOROPHENOL	0.9 U	1 U	1 U	0.9 U	0.9 U	0.9 U
2,4,6-TRICHLOROPHENOL	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
2,4-DICHLOROPHENOL	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
2,4-DIMETHYLPHENOL	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
2,4-DINITROPHENOL	0.9 U	1 U	1 U	0.9 U	0.9 U	0.9 UJ
2,4-DINITROTOLUENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
2,6-DINITROTOLUENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
2-CHLORONAPHTHALENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
2-CHLOROPHENOL	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
2-METHYLNAPHTHALENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
2-METHYLPHENOL	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
2-NITROANILINE	0.9 U	1 U	1 U	0.9 U	0.9 U	0.9 U
2-NITROPHENOL	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
3,3'-DICHLOROBENZIDINE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 UJ
3-NITROANILINE	0.9 U	1 U	1 U	0.9 U	0.9 U	0.9 UJ
4,6-DINITRO-2-METHYLPHENOL	0.9 U	1 U	1 U	0.9 U	0.9 U	0.9 UJ
4-BROMOPHENYL-PHENYLETHER	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
4-CHLORO-3-METHYLPHENOL	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
4-CHLOROANILINE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
4-CHLOROPHENYL-PHENYLETHER	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
4-METHYLPHENOL	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
4-NITROANILINE	0.9 U	1 U	1 U	0.9 U	0.9 U	0.9 UJ
4-NITROPHENOL	0.9 U	1 U	1 U	0.9 U	0.9 U	0.9 UJ
ACENAPHTHENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
ACENAPHTHYLENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
ANTHRACENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
BENZO(A)ANTHRACENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB027	FNBWGB027	FNBWGB027	FNBWGB028	FNBWGB028	FNBWGB029
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 4.0	0.0 - 0.5
Sample Date	12/09/1998	12/09/1998	12/09/1998	12/09/1998	12/09/1998	10/08/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)PYRENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.03 J
BENZO(B)FLUORANTHENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.2 J
BENZO(G,H,I)PERYLENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.08 J
BENZO(K)FLUORANTHENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
BIS(2-CHLOROETHOXY)METHANE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
BIS(2-CHLOROETHYL)ETHER	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 UJ
BIS(2-ETHYLHEXYL)PHTHALATE	0.2 UJ	0.2 UJ	0.2 UJ	0.1 U	0.2 U	0.1 UJ
BUTYLBENZYLPHTHALATE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
CARBAZOLE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
CHRYSENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.06 J
DI-N-BUTYLPHTHALATE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 UJ
DI-N-OCTYLPHTHALATE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
DIBENZ(A,H)ANTHRACENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.03 J
DIBENZOFURAN	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
DIETHYLPHTHALATE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
DIMETHYLPHTHALATE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
FLUORANTHENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.02 J
FLUORENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
HEXACHLOROBENZENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 UJ
HEXACHLOROBUTADIENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 UJ
HEXACHLOROCYCLOPENTADIENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 UJ
HEXACHLOROETHANE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
INDENO(1,2,3-CD)PYRENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.07 J
ISOPHORONE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
N-NITROSO-DI-N-PROPYLAMINE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
N-NITROSODIPHENYLAMINE (1)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
NAPHTHALENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
NITROBENZENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
PENTACHLOROPHENOL	0.9 UJ	1 UJ	1 UJ	0.9 UJ	0.9 UJ	0.9 UJ
PHENANTHRENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
PHENOL	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB027**	**FNBWGB027**	**FNBWGB027**	**FNBWGB028**	**FNBWGB028**	**FNBWGB029**
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 4.0	0.0 - 0.5
Sample Date	12/09/1998	12/09/1998	12/09/1998	12/09/1998	12/09/1998	10/08/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PYRENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.02 J
TOTAL SVOCS	0 U	0 U	0 U	0 U	0 U	0.5 J
PESTICIDES (mg/kg)						
4,4'-DDD	NA	NA	NA	NA	NA	0.003 U
4,4'-DDE	NA	NA	NA	NA	NA	0.003 U
4,4'-DDT	NA	NA	NA	NA	NA	0.003 U
ALDRIN	NA	NA	NA	NA	NA	0.002 U
ALPHA-BHC	NA	NA	NA	NA	NA	0.04 J
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	0.002 U
BETA-BHC	NA	NA	NA	NA	NA	0.01 J
DELTA-BHC	NA	NA	NA	NA	NA	0.008 J
DIELDRIN	NA	NA	NA	NA	NA	0.003 U
ENDOSULFAN I	NA	NA	NA	NA	NA	0.002 U
ENDOSULFAN II	NA	NA	NA	NA	NA	0.003 U
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	0.003 U
ENDRIN	NA	NA	NA	NA	NA	0.003 U
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	0.003 U
ENDRIN KETONE	NA	NA	NA	NA	NA	0.003 U
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	0.01 J
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	0.002 U
HEPTACHLOR	NA	NA	NA	NA	NA	0.0003 U
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	0.0003 U
METHOXYCHLOR	NA	NA	NA	NA	NA	0.02 U
TOXAPHENE	NA	NA	NA	NA	NA	0.09 U
PCBs (mg/kg)						
AROCLOR-1016	NA	NA	NA	NA	NA	0.02 U
AROCLOR-1221	NA	NA	NA	NA	NA	0.02 U
AROCLOR-1232	NA	NA	NA	NA	NA	0.02 U
AROCLOR-1242	NA	NA	NA	NA	NA	0.02 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB027**	**FNBWGB027**	**FNBWGB027**	**FNBWGB028**	**FNBWGB028**	**FNBWGB029**
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	0.0 - 0.5	2.0 - 4.0	0.0 - 0.5
Sample Date	12/09/1998	12/09/1998	12/09/1998	12/09/1998	12/09/1998	10/08/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PCBs (mg/kg)						
AROCLOR-1248	NA	NA	NA	NA	NA	0.02 U
AROCLOR-1254	NA	NA	NA	NA	NA	0.02 U
AROCLOR-1260	NA	NA	NA	NA	NA	0.02 J
TOTAL PCBS	NA	NA	NA	NA	NA	0.02 J
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	11.0 U	12.0 U	12.0 U	11.0 U	11.0 U	10.0 U
GASOLINE RANGE	0.60 U	0.60 U	0.60 U	0.60 U	0.50 U	0.50 UJ
MOTOR OIL RANGE	190 Y	130 Y	58.0 U	56.0 U	57.0 U	180 Y
pH						
PH	NA	NA	NA	NA	NA	6.3
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	NA	NA	NA	NA	NA	3.7

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB029**	**FNBWGB029**	**FNBWGB029**	**FNBWGB029**	**FNBWGB030**	**FNBWGB030**
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	8.0 - 9.0	2.0 - 3.0	4.0 - 5.0
Sample Date	04/15/1998	12/10/1998	12/10/1998	12/10/1998	12/10/1998	12/10/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
CHROMIUM VI	0.06 U	NA	NA	NA	NA	NA
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
1,1,2,2-TETRACHLOROETHANE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
1,1,2-TRICHLOROETHANE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
1,1-DICHLOROETHANE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
1,1-DICHLOROETHENE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
1,2-DICHLOROETHANE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
1,2-DICHLOROETHENE (TOTAL)	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
1,2-DICHLOROPROPANE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
2-BUTANONE	NA	0.01 U	0.01 U	0.01 J	0.01 U	0.01 U
2-HEXANONE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
4-METHYL-2-PENTANONE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
ACETONE	NA	0.02 UJ	0.03 UJ	0.05 UJ	0.01 UJ	0.01 U
BENZENE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
BROMODICHLOROMETHANE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
BROMOFORM	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
BROMOMETHANE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
CARBON DISULFIDE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
CARBON TETRACHLORIDE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
CHLOROBENZENE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
CHLOROETHANE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
CHLOROFORM	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
CHLOROMETHANE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
CIS-1,3-DICHLOROPROPENE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
DIBROMOCHLOROMETHANE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
ETHYLBENZENE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
METHYLENE CHLORIDE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
STYRENE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
TETRACHLOROETHENE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB029	FNBWGB029	FNBWGB029	FNBWGB029	FNBWGB030	FNBWGB030
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	8.0 - 9.0	2.0 - 3.0	4.0 - 5.0
Sample Date	04/15/1998	12/10/1998	12/10/1998	12/10/1998	12/10/1998	12/10/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
TOLUENE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
TRANS-1,3-DICHLOROPROPENE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
TRICHLOROETHENE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
VINYL CHLORIDE	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
XYLENE (TOTAL)	NA	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U
TOTAL VOCS	NA	0 U	0 U	0.01 J	0 U	0 U
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
1,2-DICHLOROBENZENE	NA	0.2 U	0.2 U	0.3 U	0.2 U	0.2 U
1,3-DICHLOROBENZENE	NA	0.2 U	0.2 U	0.3 U	0.2 U	0.2 U
1,4-DICHLOROBENZENE	NA	0.2 U	0.2 U	0.3 U	0.2 U	0.2 U
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
2,4,5-TRICHLOROPHENOL	NA	0.9 U	1 U	2 U	1 U	1 U
2,4,6-TRICHLOROPHENOL	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
2,4-DICHLOROPHENOL	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
2,4-DIMETHYLPHENOL	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
2,4-DINITROPHENOL	NA	0.9 U	1 U	2 U	1 U	1 U
2,4-DINITROTOLUENE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
2,6-DINITROTOLUENE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
2-CHLORONAPHTHALENE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
2-CHLOROPHENOL	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
2-METHYLNAPHTHALENE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
2-METHYLPHENOL	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
2-NITROANILINE	NA	0.9 U	1 U	2 U	1 U	1 U
2-NITROPHENOL	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
3,3'-DICHLOROBENZIDINE	NA	0.4 UJ	0.4 UJ	0.6 UJ	0.4 U	0.5 UJ
3-NITROANILINE	NA	0.9 U	1 U	2 U	1 U	1 U
4,6-DINITRO-2-METHYLPHENOL	NA	0.9 U	1 U	2 U	1 U	1 U
4-BROMOPHENYL-PHENYLETHER	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
4-CHLORO-3-METHYLPHENOL	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB029	FNBWGB029	FNBWGB029	FNBWGB029	FNBWGB030	FNBWGB030
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	8.0 - 9.0	2.0 - 3.0	4.0 - 5.0
Sample Date	04/15/1998	12/10/1998	12/10/1998	12/10/1998	12/10/1998	12/10/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
4-CHLOROANILINE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
4-CHLOROPHENYL-PHENYLETHER	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
4-METHYLPHENOL	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
4-NITROANILINE	NA	0.9 U	1 U	2 U	1 U	1 U
4-NITROPHENOL	NA	0.9 U	1 U	2 U	1 U	1 U
ACENAPHTHENE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
ACENAPHTHYLENE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
ANTHRACENE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
BENZO(A)ANTHRACENE	NA	0.4 UJ	0.4 UJ	0.6 UJ	0.4 U	0.5 UJ
BENZO(A)PYRENE	NA	0.4 UJ	0.4 UJ	0.6 UJ	0.4 U	0.5 UJ
BENZO(B)FLUORANTHENE	NA	0.4 UJ	0.4 UJ	0.6 UJ	0.4 U	0.5 UJ
BENZO(G,H,I)PERYLENE	NA	0.4 UJ	0.4 UJ	0.6 UJ	0.4 U	0.5 UJ
BENZO(K)FLUORANTHENE	NA	0.4 UJ	0.4 UJ	0.6 UJ	0.4 U	0.5 UJ
BIS(2-CHLOROETHOXY)METHANE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
BIS(2-CHLOROETHYL)ETHER	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
BIS(2-ETHYLHEXYL)PHTHALATE	NA	0.2 UJ	0.3 UJ	0.3 UJ	0.2 UJ	0.2 UJ
BUTYLBENZYLPHTHALATE	NA	0.4 UJ	0.4 UJ	0.6 UJ	0.4 U	0.5 UJ
CARBAZOLE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
CHRYSENE	NA	0.4 UJ	0.4 UJ	0.6 UJ	0.4 U	0.5 UJ
DI-N-BUTYLPHTHALATE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
DI-N-OCTYLPHTHALATE	NA	0.4 UJ	0.4 UJ	0.6 UJ	0.4 U	0.5 UJ
DIBENZ(A,H)ANTHRACENE	NA	0.4 UJ	0.4 UJ	0.6 UJ	0.4 U	0.5 UJ
DIBENZOFURAN	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
DIETHYLPHTHALATE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
DIMETHYLPHTHALATE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
FLUORANTHENE	NA	0.4 U	0.4 U	0.09 J	0.4 U	0.5 U
FLUORENE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
HEXACHLOROBENZENE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
HEXACHLOROBUTADIENE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
HEXACHLOROCYCLOPENTADIENE	NA	0.4 UJ	0.4 UJ	0.6 UJ	0.4 UJ	0.5 UJ
HEXACHLOROETHANE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB029**	**FNBWGB029**	**FNBWGB029**	**FNBWGB029**	**FNBWGB030**	**FNBWGB030**
Sample Depth (feet bgs)	0.0 - 0.5	2.0 - 3.0	4.0 - 5.0	8.0 - 9.0	2.0 - 3.0	4.0 - 5.0
Sample Date	04/15/1998	12/10/1998	12/10/1998	12/10/1998	12/10/1998	12/10/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
INDENO(1,2,3-CD)PYRENE	NA	0.4 UJ	0.4 UJ	0.6 UJ	0.4 U	0.5 UJ
ISOPHORONE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
N-NITROSO-DI-N-PROPYLAMINE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
N-NITROSODIPHENYLAMINE (1)	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
NAPHTHALENE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
NITROBENZENE	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
PENTACHLOROPHENOL	NA	0.9 UJ	1 UJ	2 UJ	1 UJ	1 UJ
PHENANTHRENE	NA	0.4 U	0.4 U	0.04 J	0.4 U	0.5 U
PHENOL	NA	0.4 U	0.4 U	0.6 U	0.4 U	0.5 U
PYRENE	NA	0.4 UJ	0.4 UJ	0.3 J	0.4 U	0.07 J
TOTAL SVOCS	NA	0 U	0 U	0.4 J	0 U	0.07 J
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	NA	11.0 U	12.0 U	19.0 U	12.0 U	15.0 U
GASOLINE RANGE	NA	0.60 UJ	0.60 UJ	1.0 UJ	0.60 UJ	0.70 U
MOTOR OIL RANGE	NA	57.0 U	60.0 U	180 Y	59.0 U	81.0 Y
TOTAL ORGANIC CARBON (mg/kg)						
TOC	NA	110 U	1,400	15,000	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB030**	**FNBWGB031**	**FNBWGB031**	**FNBWGB031**	**FNBWSS001**	**FNBWSS003**
Sample Depth (feet bgs)	8.0 - 9.0	0.0 - 0.5	0.0 - 0.5	4.0 - 5.0	0.0 - 0.5	0.0 - 0.5
Sample Date	12/10/1998	09/17/1998	12/09/1998	12/09/1998	09/17/1997	09/17/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	NA	NA	NA	NA	16,500 J	14,700 J
ANTIMONY	NA	NA	NA	NA	1.5 J	1.1 J
ARSENIC	NA	NA	NA	NA	1.1 UJ	**25.1** !
BARIUM	NA	NA	NA	NA	46.7	49.0
BERYLLIUM	NA	NA	NA	NA	0.01 U	0.10 J
CADMIUM	NA	NA	NA	NA	0.05 U	0.05 U
CALCIUM	NA	NA	NA	NA	8,520 J	2,610 J
CHROMIUM	NA	NA	NA	NA	15.4 J	50.7 J
COBALT	NA	NA	NA	NA	20.4	6.9
COPPER	NA	NA	NA	NA	41.8 J	38.6 J
IRON	NA	NA	NA	NA	**46,500 J**	**55,400 J**
LEAD	NA	NA	NA	NA	12.5 J	25.3 J
MAGNESIUM	NA	NA	NA	NA	10,800 J	3,710 J
MANGANESE	NA	NA	NA	NA	740 J	139 J
MERCURY	NA	NA	NA	NA	0.14 UJ	0.36 J
MOLYBDENUM	NA	NA	NA	NA	0.14 U	1.9
NICKEL	NA	NA	NA	NA	12.9	27.0
POTASSIUM	NA	NA	NA	NA	632 J	4,020 J
SELENIUM	NA	NA	NA	NA	0.62	0.82
SILVER	NA	NA	NA	NA	0.13 U	0.17 UJ
SODIUM	NA	NA	NA	NA	49.9 R	3,450 J
THALLIUM	NA	NA	NA	NA	1.0 J	0.71 U
VANADIUM	NA	NA	NA	NA	142 J	59.9 J
ZINC	NA	NA	NA	NA	76.0 J	48.0 J
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	0.02 U	NA	NA	0.01 U	NA	NA
1,1,2,2-TETRACHLOROETHANE	0.02 U	NA	NA	0.01 U	NA	NA
1,1,2-TRICHLOROETHANE	0.02 U	NA	NA	0.01 U	NA	NA
1,1-DICHLOROETHANE	0.02 U	NA	NA	0.01 U	NA	NA
1,1-DICHLOROETHENE	0.02 U	NA	NA	0.01 U	NA	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWGB030	FNBWGB031	FNBWGB031	FNBWGB031	FNBWSS001	FNBWSS003
Sample Depth (feet bgs)	8.0 - 9.0	0.0 - 0.5	0.0 - 0.5	4.0 - 5.0	0.0 - 0.5	0.0 - 0.5
Sample Date	12/10/1998	09/17/1998	12/09/1998	12/09/1998	09/17/1997	09/17/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROETHANE	0.02 U	NA	NA	0.01 U	NA	NA
1,2-DICHLOROETHENE (TOTAL)	0.02 U	NA	NA	0.01 U	NA	NA
1,2-DICHLOROPROPANE	0.02 U	NA	NA	0.01 U	NA	NA
2-BUTANONE	0.02 J	NA	NA	0.01 U	NA	NA
2-HEXANONE	0.02 U	NA	NA	0.01 U	NA	NA
4-METHYL-2-PENTANONE	0.02 U	NA	NA	0.01 U	NA	NA
ACETONE	0.09 UJ	NA	NA	0.01 U	NA	NA
BENZENE	0.02 U	NA	NA	0.01 U	NA	NA
BROMODICHLOROMETHANE	0.02 U	NA	NA	0.01 U	NA	NA
BROMOFORM	0.02 U	NA	NA	0.01 U	NA	NA
BROMOMETHANE	0.02 U	NA	NA	0.01 U	NA	NA
CARBON DISULFIDE	0.02 U	NA	NA	0.01 U	NA	NA
CARBON TETRACHLORIDE	0.02 U	NA	NA	0.01 U	NA	NA
CHLOROBENZENE	0.02 U	NA	NA	0.01 U	NA	NA
CHLOROETHANE	0.02 U	NA	NA	0.01 U	NA	NA
CHLOROFORM	0.02 U	NA	NA	0.01 U	NA	NA
CHLOROMETHANE	0.02 U	NA	NA	0.01 U	NA	NA
CIS-1,3-DICHLOROPROPENE	0.02 U	NA	NA	0.01 U	NA	NA
DIBROMOCHLOROMETHANE	0.02 U	NA	NA	0.01 U	NA	NA
ETHYLBENZENE	0.02 U	NA	NA	0.01 U	NA	NA
METHYLENE CHLORIDE	0.02 U	NA	NA	0.01 U	NA	NA
STYRENE	0.02 U	NA	NA	0.01 U	NA	NA
TETRACHLOROETHENE	0.02 U	NA	NA	0.01 U	NA	NA
TOLUENE	0.02 U	NA	NA	0.01 U	NA	NA
TRANS-1,3-DICHLOROPROPENE	0.02 U	NA	NA	0.01 U	NA	NA
TRICHLOROETHENE	0.02 U	NA	NA	0.01 U	NA	NA
VINYL CHLORIDE	0.02 U	NA	NA	0.01 U	NA	NA
XYLENE (TOTAL)	0.02 U	NA	NA	0.01 U	NA	NA
TOTAL VOCS	0.02 J	NA	NA	0 U	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	0.5 U	0.6 U	NA	0.4 U	NA	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB030**	**FNBWGB031**	**FNBWGB031**	**FNBWGB031**	**FNBWSS001**	**FNBWSS003**
Sample Depth (feet bgs)	8.0 - 9.0	0.0 - 0.5	0.0 - 0.5	4.0 - 5.0	0.0 - 0.5	0.0 - 0.5
Sample Date	12/10/1998	09/17/1998	12/09/1998	12/09/1998	09/17/1997	09/17/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROBENZENE	0.3 U	0.3 U	NA	0.2 U	NA	NA
1,3-DICHLOROBENZENE	0.3 U	0.3 U	NA	0.2 U	NA	NA
1,4-DICHLOROBENZENE	0.3 U	0.3 U	NA	0.2 U	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	0.5 U	0.6 UJ	NA	0.4 U	NA	NA
2,4,5-TRICHLOROPHENOL	1 U	1 U	NA	1 U	NA	NA
2,4,6-TRICHLOROPHENOL	0.5 U	0.6 U	NA	0.4 U	NA	NA
2,4-DICHLOROPHENOL	0.5 U	0.6 U	NA	0.4 U	NA	NA
2,4-DIMETHYLPHENOL	0.5 U	0.6 U	NA	0.4 U	NA	NA
2,4-DINITROPHENOL	1 U	1 U	NA	1 U	NA	NA
2,4-DINITROTOLUENE	0.5 U	0.6 U	NA	0.4 U	NA	NA
2,6-DINITROTOLUENE	0.5 U	0.6 U	NA	0.4 U	NA	NA
2-CHLORONAPHTHALENE	0.5 U	0.6 U	NA	0.4 U	NA	NA
2-CHLOROPHENOL	0.5 U	0.6 U	NA	0.4 U	NA	NA
2-METHYLNAPHTHALENE	0.5 U	0.6 U	NA	0.4 U	NA	NA
2-METHYLPHENOL	0.5 U	0.6 U	NA	0.4 U	NA	NA
2-NITROANILINE	1 U	1 UJ	NA	1 U	NA	NA
2-NITROPHENOL	0.5 U	0.6 U	NA	0.4 U	NA	NA
3,3'-DICHLOROBENZIDINE	0.5 UJ	0.6 U	NA	0.4 R	NA	NA
3-NITROANILINE	1 U	1 U	NA	1 U	NA	NA
4,6-DINITRO-2-METHYLPHENOL	1 U	1 U	NA	1 UJ	NA	NA
4-BROMOPHENYL-PHENYLETHER	0.5 U	0.6 U	NA	0.4 UJ	NA	NA
4-CHLORO-3-METHYLPHENOL	0.5 U	0.6 U	NA	0.4 U	NA	NA
4-CHLOROANILINE	0.5 U	0.6 U	NA	0.4 U	NA	NA
4-CHLOROPHENYL-PHENYLETHER	0.5 U	0.6 U	NA	0.4 U	NA	NA
4-METHYLPHENOL	0.5 U	0.6 U	NA	0.4 U	NA	NA
4-NITROANILINE	1 U	1 U	NA	1 UJ	NA	NA
4-NITROPHENOL	1 U	1 UJ	NA	1 U	NA	NA
ACENAPHTHENE	0.5 U	0.6 U	NA	0.4 U	NA	NA
ACENAPHTHYLENE	0.5 U	0.6 U	NA	0.4 U	NA	NA
ANTHRACENE	0.5 U	0.6 U	NA	0.4 R	NA	NA
BENZO(A)ANTHRACENE	0.5 UJ	0.06 J	NA	0.4 R	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB030**	**FNBWGB031**	**FNBWGB031**	**FNBWGB031**	**FNBWSS001**	**FNBWSS003**
Sample Depth (feet bgs)	8.0 - 9.0	0.0 - 0.5	0.0 - 0.5	4.0 - 5.0	0.0 - 0.5	0.0 - 0.5
Sample Date	12/10/1998	09/17/1998	12/09/1998	12/09/1998	09/17/1997	09/17/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)PYRENE	0.5 U	0.6 UJ	NA	0.4 R	NA	NA
BENZO(B)FLUORANTHENE	0.5 U	0.1 J	NA	0.4 R	NA	NA
BENZO(G,H,I)PERYLENE	0.5 U	0.6 UJ	NA	0.4 R	NA	NA
BENZO(K)FLUORANTHENE	0.5 U	0.6 UJ	NA	0.4 R	NA	NA
BIS(2-CHLOROETHOXY)METHANE	0.5 U	0.6 U	NA	0.4 U	NA	NA
BIS(2-CHLOROETHYL)ETHER	0.5 U	0.6 U	NA	0.4 U	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	0.2 UJ	0.3 UJ	NA	0.6 UJ	NA	NA
BUTYLBENZYLPHTHALATE	0.5 UJ	0.6 UJ	NA	0.4 R	NA	NA
CARBAZOLE	0.5 U	0.6 U	NA	0.4 UJ	NA	NA
CHRYSENE	0.5 UJ	0.09 J	NA	0.05 J	NA	NA
DI-N-BUTYLPHTHALATE	0.5 U	0.6 UJ	NA	0.4 UJ	NA	NA
DI-N-OCTYLPHTHALATE	0.5 U	0.6 UJ	NA	0.4 R	NA	NA
DIBENZ(A,H)ANTHRACENE	0.5 U	0.6 UJ	NA	0.4 R	NA	NA
DIBENZOFURAN	0.5 U	0.6 U	NA	0.4 U	NA	NA
DIETHYLPHTHALATE	0.5 U	0.6 UJ	NA	0.4 U	NA	NA
DIMETHYLPHTHALATE	0.5 U	0.6 U	NA	0.4 U	NA	NA
FLUORANTHENE	0.04 J	0.1 J	NA	0.4 UJ	NA	NA
FLUORENE	0.5 U	0.6 U	NA	0.4 U	NA	NA
HEXACHLOROBENZENE	0.5 U	0.6 U	NA	0.4 UJ	NA	NA
HEXACHLOROBUTADIENE	0.5 U	0.6 U	NA	0.4 U	NA	NA
HEXACHLOROCYCLOPENTADIENE	0.5 UJ	0.6 UJ	NA	0.4 UJ	NA	NA
HEXACHLOROETHANE	0.5 U	0.6 UJ	NA	0.4 U	NA	NA
INDENO(1,2,3-CD)PYRENE	0.5 U	0.6 UJ	NA	0.4 R	NA	NA
ISOPHORONE	0.5 U	0.6 U	NA	0.4 U	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	0.5 U	0.6 UJ	NA	0.4 U	NA	NA
N-NITROSODIPHENYLAMINE (1)	0.5 U	0.6 U	NA	0.4 UJ	NA	NA
NAPHTHALENE	0.5 U	0.6 U	NA	0.4 U	NA	NA
NITROBENZENE	0.5 U	0.6 UJ	NA	0.4 U	NA	NA
PENTACHLOROPHENOL	1 UJ	1 U	NA	1 UJ	NA	NA
PHENANTHRENE	0.5 U	0.04 J	NA	0.4 UJ	NA	NA
PHENOL	0.5 U	0.6 U	NA	0.4 U	NA	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB030**	**FNBWGB031**	**FNBWGB031**	**FNBWGB031**	**FNBWSS001**	**FNBWSS003**
Sample Depth (feet bgs)	8.0 - 9.0	0.0 - 0.5	0.0 - 0.5	4.0 - 5.0	0.0 - 0.5	0.0 - 0.5
Sample Date	12/10/1998	09/17/1998	12/09/1998	12/09/1998	09/17/1997	09/17/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PYRENE	0.2 J	0.1 J	NA	0.4 R	NA	NA
TOTAL SVOCS	0.2 J	0.6 J	NA	0.05 J	NA	NA
PESTICIDES (mg/kg)						
4,4'-DDD	NA	NA	NA	NA	0.004 U	0.01 J
4,4'-DDE	NA	NA	NA	NA	0.004 U	0.01
4,4'-DDT	NA	NA	NA	NA	0.007	0.1
ALDRIN	NA	NA	NA	NA	0.002 U	0.002 U
ALPHA-BHC	NA	NA	NA	NA	0.002 U	0.002 U
ALPHA-CHLORDANE	NA	NA	NA	NA	0.002 U	0.002 U
BETA-BHC	NA	NA	NA	NA	0.002 U	0.002 U
DELTA-BHC	NA	NA	NA	NA	0.002 U	0.002 U
DIELDRIN	NA	NA	NA	NA	0.004 U	0.004 U
ENDOSULFAN I	NA	NA	NA	NA	0.002 U	0.002 U
ENDOSULFAN II	NA	NA	NA	NA	0.004 U	0.004 U
ENDOSULFAN SULFATE	NA	NA	NA	NA	0.004 U	0.01 J
ENDRIN	NA	NA	NA	NA	0.004 U	0.004 U
ENDRIN ALDEHYDE	NA	NA	NA	NA	0.004 U	0.004 U
ENDRIN KETONE	NA	NA	NA	NA	0.004 U	0.004 U
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	0.002 U	0.002 U
GAMMA-CHLORDANE	NA	NA	NA	NA	0.002 U	0.002 U
HEPTACHLOR	NA	NA	NA	NA	0.0004 UJ	0.0004 UJ
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	0.0004 UJ	0.0004 UJ
METHOXYCHLOR	NA	NA	NA	NA	0.02 U	0.02 U
TOXAPHENE	NA	NA	NA	NA	0.1 U	0.1 U
PCBs (mg/kg)						
AROCLOR-1016	NA	NA	NA	NA	0.02 U	0.02 U
AROCLOR-1221	NA	NA	NA	NA	0.02 U	0.02 U
AROCLOR-1232	NA	NA	NA	NA	0.02 U	0.02 U
AROCLOR-1242	NA	NA	NA	NA	0.02 U	0.02 U

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB030**	**FNBWGB031**	**FNBWGB031**	**FNBWGB031**	**FNBWSS001**	**FNBWSS003**
Sample Depth (feet bgs)	8.0 - 9.0	0.0 - 0.5	0.0 - 0.5	4.0 - 5.0	0.0 - 0.5	0.0 - 0.5
Sample Date	12/10/1998	09/17/1998	12/09/1998	12/09/1998	09/17/1997	09/17/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PCBs (mg/kg)						
AROCLOR-1248	NA	NA	NA	NA	0.02 U	0.02 U
AROCLOR-1254	NA	NA	NA	NA	0.02 U	0.02 U
AROCLOR-1260	NA	NA	NA	NA	0.03	0.02 U
TOTAL PCBS	NA	NA	NA	NA	0.03	0 U
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	16.0 U	10.0 U	NA	12.0 U	12.0 U	13.0 U
GASOLINE RANGE	0.80 U	NA	0.60 UJ	0.60 UJ	0.54 UJ	0.63 UJ
MOTOR OIL RANGE	79.0 U	140 Y	NA	60.0 U	110 Y	85.0 Y
pH						
PH	NA	NA	NA	NA	8.0	4.6
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	NA	NA	NA	NA	14.0	21.1

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS003**	**FNBWSS004**	**FNBWSS005**	**FNBWSS006**	**FNBWSS007**	**FNBWSS009**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	04/15/1998	09/17/1997	09/18/1997	09/18/1997	09/18/1997	09/18/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	NA	8,830 J	8,040 J	12,900 J	17,900 J	6,280 J
ANTIMONY	NA	0.52 J	0.60 J	0.74 J	1.5 J	0.79 J
ARSENIC	NA	**5.6** !	**4.2** !	**4.6** !	**2.6**	**3.0** !
BARIUM	NA	59.3	66.6	98.8	38.7	83.4
BERYLLIUM	NA	0.41 J	0.21 J	0.42 J	0.01 U	0.19 J
CADMIUM	NA	0.04 U	0.05 U	0.04 U	0.04 U	0.04 U
CALCIUM	NA	2,710 J	6,080 J	11,600 J	10,000 J	5,310 J
CHROMIUM	NA	22.1 J	25.6 J	25.6 J	21.7 J	22.4 J
CHROMIUM VI	0.07 U	NA	NA	NA	NA	NA
COBALT	NA	6.2	7.8	12.4	22.5	7.6
COPPER	NA	24.4 J	27.0 J	38.4 J	684 J *α	36.7 J
IRON	NA	**23,500 J**	18,200 J	**30,800 J**	**53,200 J**	16,000 J
LEAD	NA	37.1 J	45.2 J	28.2 J	16.5 J	87.4 J *α
MAGNESIUM	NA	3,300 J	3,880 J	5,690 J	13,300 J	3,260 J
MANGANESE	NA	532 J	460 J	459 J	823 J	478 J
MERCURY	NA	0.05 UJ	0.77 J	0.25 UJ	0.23 UJ	0.37 J
MOLYBDENUM	NA	0.48 UJ	0.18 UJ	0.22 UJ	0.13 U	0.12 U
NICKEL	NA	16.9	25.6	26.0	44.7	20.3
POTASSIUM	NA	1,040 J	803 J	909 J	830 J	529 J
SELENIUM	NA	0.43 U	0.45 U	0.44 U	0.62	0.39 U
SILVER	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.11 U
SODIUM	NA	46.3 R	48.8 R	47.4 R	45.7 R	42.0 R
THALLIUM	NA	0.65 U	0.68 U	0.66 U	0.64 U	0.59 U
VANADIUM	NA	39.5 J	37.2 J	66.0 J	142 J	28.9 J
ZINC	NA	99.5 J	70.1 J	89.5 J	86.6 J	104 J
PESTICIDES (mg/kg)						
4,4'-DDD	NA	0.004 J	0.2	0.01	0.004 U	0.004 R
4,4'-DDE	NA	0.004 U	0.04	0.004 U	0.004 U	0.004 R
4,4'-DDT	NA	0.02	0.2	0.01	0.004 U	0.005 J
ALDRIN	NA	0.002 U	0.002 U	0.002 U	0.002 U	0.002 R

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS003	FNBWSS004	FNBWSS005	FNBWSS006	FNBWSS007	FNBWSS009
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	04/15/1998	09/17/1997	09/18/1997	09/18/1997	09/18/1997	09/18/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PESTICIDES (mg/kg)						
ALPHA-BHC	NA	0.002 U	0.001 J	0.002 U	0.002 U	0.002 R
ALPHA-CHLORDANE	NA	0.002 U	0.01 J	0.02 J	0.002 U	0.002 R
BETA-BHC	NA	0.002 U	0.002 U	0.002 U	0.002 U	0.002 R
DELTA-BHC	NA	0.002 U	0.002 U	0.002 U	0.002 U	0.002 R
DIELDRIN	NA	0.004 U	0.004 U	0.004 U	0.004 U	0.004 R
ENDOSULFAN I	NA	0.002 U	0.002 U	0.002 U	0.002 U	0.002 R
ENDOSULFAN II	NA	0.004 U	0.004 U	0.004 U	0.004 U	0.004 J
ENDOSULFAN SULFATE	NA	0.004 U	0.02	0.004 U	0.004 U	0.02 J
ENDRIN	NA	0.004 U	0.004 U	0.004 U	0.004 U	0.004 R
ENDRIN ALDEHYDE	NA	0.003 J	0.003 J	0.006 J	0.004 U	0.004 R
ENDRIN KETONE	NA	0.004 U	0.004 U	0.004 U	0.004 U	0.004 R
GAMMA-BHC (LINDANE)	NA	0.002 U	0.002 U	0.002 U	0.002 U	0.002 R
GAMMA-CHLORDANE	NA	0.002 U	0.01	0.02	0.002 U	0.002 R
HEPTACHLOR	NA	0.0003 UJ	0.0007 J	0.002 J	0.0003 UJ	0.0003 R
HEPTACHLOR EPOXIDE	NA	0.0003 UJ	0.001 J	0.002 J	0.0003 UJ	0.0003 R
METHOXYCHLOR	NA	0.02 U	0.02 J	0.02 U	0.02 U	0.02 J
TOXAPHENE	NA	0.1 U	0.1 U	0.1 U	0.09 U	0.09 R
PCBs (mg/kg)						
AROCLOR-1016	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 R
AROCLOR-1221	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 R
AROCLOR-1232	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 R
AROCLOR-1242	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 R
AROCLOR-1248	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 R
AROCLOR-1254	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 R
AROCLOR-1260	NA	0.07	0.02 U	0.02 U	0.02 U	0.02 R
TOTAL PCBS	NA	0.07	0 U	0 U	0 U	0 U
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	NA	11.0 U	57.0 U	59.0 U	11.0 U	54.0 U
GASOLINE RANGE	NA	0.54 UJ	0.57 UJ	0.56 UJ	0.50 U	0.79 J

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS003**	**FNBWSS004**	**FNBWSS005**	**FNBWSS006**	**FNBWSS007**	**FNBWSS009**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	04/15/1998	09/17/1997	09/18/1997	09/18/1997	09/18/1997	09/18/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PETROLEUM INDICATORS (mg/kg)						
MOTOR OIL RANGE	NA	280 Y	**1,200 Y**	**520 Y**	300 Y	**890 Y**
pH						
PH	NA	7.6	8.5	9.1	8.0	8.9
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	NA	11.0	13.0	14.7	8.0	7.6

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS010**	**FNBWSS011**	**FNBWSS011**	**FNBWSS012**	**FNBWSS013**	**FNBWSS014**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	09/18/1997	09/26/1997	04/09/1998	09/26/1997	09/26/1997	09/26/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	7,500 J	14,400	NA	18,200	13,500	11,800
ANTIMONY	0.41 J	1.1 J	NA	0.31 R	0.78 J	0.94 J
ARSENIC	**4.3** !	**6.5** !	NA	**10.8** !	**6.3** !	**4.2** !
BARIUM	102	123	NA	474	117	95.4
BERYLLIUM	0.01 U	0.22 J	NA	0.21 J	0.26 J	0.11 J
CADMIUM	0.04 U	0.04 U	NA	0.04 U	0.04 U	0.04 U
CALCIUM	6,600 J	14,200	NA	18,900	15,700	9,720
CHROMIUM	21.2 J	66.6	NA	31.2	34.3	30.5
CHROMIUM VI	NA	NA	0.05 U	NA	NA	NA
COBALT	9.2	14.8	NA	18.9	14.1	12.6
COPPER	25.0 J	51.7 J	NA	53.0 J	55.0 J	50.5 J
IRON	16,300 J	**28,800**	NA	**33,100**	**28,200**	**28,600**
LEAD	48.6 J	86.3 *α	NA	17.4	66.1 *α	104 *α
MAGNESIUM	3,660 J	8,220	NA	9,490	6,530	5,750
MANGANESE	1,070 J	486	NA	1,470	474	418
MERCURY	0.21 UJ	0.21	NA	0.16	0.37	0.25
MOLYBDENUM	0.23 UJ	0.39 J	NA	0.13 U	0.20 J	0.28 J
NICKEL	27.0	37.4	NA	41.4	37.2	26.6
POTASSIUM	636 J	1,280 J	NA	1,420 J	1,160 J	1,060 J
SELENIUM	0.44 U	0.51 J	NA	1.0 J	0.52 J	0.41 U
SILVER	0.12 U	0.11 U	NA	0.12 U	0.11 U	0.11 U
SODIUM	65.4 J	42.0 UJ	NA	179 J	44.1 UJ	43.9 UJ
THALLIUM	0.66 U	0.59 U	NA	0.64 U	0.76 J	0.65 J
VANADIUM	32.2 J	65.7 J	NA	58.4 J	65.5 J	68.0 J
ZINC	74.0 J	113 J	NA	106 J	116 J	134 J
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	0.01 U
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	NA	0.01 U
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	NA	0.01 U
1,1-DICHLOROETHANE	NA	NA	NA	NA	NA	0.01 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS010	FNBWSS011	FNBWSS011	FNBWSS012	FNBWSS013	FNBWSS014
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	09/18/1997	09/26/1997	04/09/1998	09/26/1997	09/26/1997	09/26/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1-DICHLOROETHENE	NA	NA	NA	NA	NA	0.01 U
1,2-DICHLOROETHANE	NA	NA	NA	NA	NA	0.01 U
1,2-DICHLOROETHENE (TOTAL)	NA	NA	NA	NA	NA	0.01 U
1,2-DICHLOROPROPANE	NA	NA	NA	NA	NA	0.01 U
2-BUTANONE	NA	NA	NA	NA	NA	0.01 U
2-HEXANONE	NA	NA	NA	NA	NA	0.01 U
4-METHYL-2-PENTANONE	NA	NA	NA	NA	NA	0.01 U
ACETONE	NA	NA	NA	NA	NA	0.01 UJ
BENZENE	NA	NA	NA	NA	NA	0.01 U
BROMODICHLOROMETHANE	NA	NA	NA	NA	NA	0.01 U
BROMOFORM	NA	NA	NA	NA	NA	0.01 U
BROMOMETHANE	NA	NA	NA	NA	NA	0.01 U
CARBON DISULFIDE	NA	NA	NA	NA	NA	0.01 U
CARBON TETRACHLORIDE	NA	NA	NA	NA	NA	0.01 U
CHLOROBENZENE	NA	NA	NA	NA	NA	0.01 U
CHLOROETHANE	NA	NA	NA	NA	NA	0.01 U
CHLOROFORM	NA	NA	NA	NA	NA	0.01 U
CHLOROMETHANE	NA	NA	NA	NA	NA	0.01 U
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	0.01 U
DIBROMOCHLOROMETHANE	NA	NA	NA	NA	NA	0.01 U
ETHYLBENZENE	NA	NA	NA	NA	NA	0.01 U
METHYLENE CHLORIDE	NA	NA	NA	NA	NA	0.01 U
STYRENE	NA	NA	NA	NA	NA	0.01 U
TETRACHLOROETHENE	NA	NA	NA	NA	NA	0.01 U
TOLUENE	NA	NA	NA	NA	NA	0.01 U
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	0.01 U
TRICHLOROETHENE	NA	NA	NA	NA	NA	0.01 U
VINYL CHLORIDE	NA	NA	NA	NA	NA	0.01 U
XYLENE (TOTAL)	NA	NA	NA	NA	NA	0.01 U
TOTAL VOCS	NA	NA	NA	NA	NA	0 U
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA	NA	0.7 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS010**	**FNBWSS011**	**FNBWSS011**	**FNBWSS012**	**FNBWSS013**	**FNBWSS014**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	09/18/1997	09/26/1997	04/09/1998	09/26/1997	09/26/1997	09/26/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROBENZENE	NA	NA	NA	NA	NA	0.3 U
1,3-DICHLOROBENZENE	NA	NA	NA	NA	NA	0.3 U
1,4-DICHLOROBENZENE	NA	NA	NA	NA	NA	0.3 U
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	0.7 U
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	2 U
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	0.7 U
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	0.7 U
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	0.7 U
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	2 U
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	0.7 U
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	0.7 U
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	0.7 U
2-CHLOROPHENOL	NA	NA	NA	NA	NA	0.7 U
2-METHYLNAPHTHALENE	NA	NA	NA	NA	NA	0.7 U
2-METHYLPHENOL	NA	NA	NA	NA	NA	0.7 U
2-NITROANILINE	NA	NA	NA	NA	NA	2 UJ
2-NITROPHENOL	NA	NA	NA	NA	NA	0.7 U
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	0.7 UJ
3-NITROANILINE	NA	NA	NA	NA	NA	2 U
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	2 U
4-BROMOPHENYL-PHENYLETHER	NA	NA	NA	NA	NA	0.7 U
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	0.7 U
4-CHLOROANILINE	NA	NA	NA	NA	NA	0.7 U
4-CHLOROPHENYL-PHENYLETHER	NA	NA	NA	NA	NA	0.7 U
4-METHYLPHENOL	NA	NA	NA	NA	NA	0.7 U
4-NITROANILINE	NA	NA	NA	NA	NA	2 U
4-NITROPHENOL	NA	NA	NA	NA	NA	2 UJ
ACENAPHTHENE	NA	NA	NA	NA	NA	0.7 U
ACENAPHTHYLENE	NA	NA	NA	NA	NA	0.7 U
ANTHRACENE	NA	NA	NA	NA	NA	0.7 U
BENZO(A)ANTHRACENE	NA	NA	NA	NA	NA	0.1 J

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS010**	**FNBWSS011**	**FNBWSS011**	**FNBWSS012**	**FNBWSS013**	**FNBWSS014**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	09/18/1997	09/26/1997	04/09/1998	09/26/1997	09/26/1997	09/26/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)PYRENE	NA	NA	NA	NA	NA	**0.1 J**
BENZO(B)FLUORANTHENE	NA	NA	NA	NA	NA	0.3 J
BENZO(G,H,I)PERYLENE	NA	NA	NA	NA	NA	0.7 U
BENZO(K)FLUORANTHENE	NA	NA	NA	NA	NA	0.2 J
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	0.7 U
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	0.7 U
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	0.3 U
BUTYLBENZYLPHTHALATE	NA	NA	NA	NA	NA	0.7 U
CARBAZOLE	NA	NA	NA	NA	NA	0.7 U
CHRYSENE	NA	NA	NA	NA	NA	0.4 J
DI-N-BUTYLPHTHALATE	NA	NA	NA	NA	NA	0.7 U
DI-N-OCTYLPHTHALATE	NA	NA	NA	NA	NA	0.7 U
DIBENZ(A,H)ANTHRACENE	NA	NA	NA	NA	NA	0.7 U
DIBENZOFURAN	NA	NA	NA	NA	NA	0.7 U
DIETHYLPHTHALATE	NA	NA	NA	NA	NA	0.7 U
DIMETHYLPHTHALATE	NA	NA	NA	NA	NA	0.7 U
FLUORANTHENE	NA	NA	NA	NA	NA	0.2 J
FLUORENE	NA	NA	NA	NA	NA	0.7 U
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	0.7 U
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	0.7 U
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	0.7 U
HEXACHLOROETHANE	NA	NA	NA	NA	NA	0.7 UJ
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	NA	NA	0.7 U
ISOPHORONE	NA	NA	NA	NA	NA	0.7 U
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	0.7 U
N-NITROSODIPHENYLAMINE (1)	NA	NA	NA	NA	NA	0.7 U
NAPHTHALENE	NA	NA	NA	NA	NA	0.7 U
NITROBENZENE	NA	NA	NA	NA	NA	0.7 U
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	2 UJ
PHENANTHRENE	NA	NA	NA	NA	NA	0.7 U
PHENOL	NA	NA	NA	NA	NA	0.7 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS010	FNBWSS011	FNBWSS011	FNBWSS012	FNBWSS013	FNBWSS014
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	09/18/1997	09/26/1997	04/09/1998	09/26/1997	09/26/1997	09/26/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PYRENE	NA	NA	NA	NA	NA	0.2 J
TOTAL SVOCS	NA	NA	NA	NA	NA	2 J
PESTICIDES (mg/kg)						
4,4'-DDD	0.004 U	0.003 U	NA	0.004 U	0.002 J	0.002 J
4,4'-DDE	0.004 U	0.003 U	NA	0.004 U	0.003 U	0.003 U
4,4'-DDT	0.01	0.006 J	NA	0.004 U	0.01 J	0.01 J
ALDRIN	0.002 U	0.002 J	NA	0.002 U	0.002 U	0.002 U
ALPHA-BHC	0.002 U	0.002 U	NA	0.001 J	0.002 U	0.001 J
ALPHA-CHLORDANE	0.002 U	0.002 J	NA	0.002 U	0.002 J	0.003 J
BETA-BHC	0.002 U	0.002 U	NA	0.002 U	0.002 U	0.002 J
DELTA-BHC	0.002 U	0.002 U	NA	0.002 U	0.002 U	0.002 U
DIELDRIN	0.004 U	0.005 J	NA	0.004 U	0.002 J	0.003 J
ENDOSULFAN I	0.002 U	0.002 UJ	NA	0.002 U	0.002 UJ	0.002 UJ
ENDOSULFAN II	0.004 U	0.003 U	NA	0.004 U	0.003 U	0.003 U
ENDOSULFAN SULFATE	0.004 U	0.003 UJ	NA	0.004 U	0.003 UJ	0.003 UJ
ENDRIN	0.004 U	0.003 U	NA	0.004 U	0.003 J	0.003 U
ENDRIN ALDEHYDE	0.003 J	0.003 J	NA	0.004 U	0.004 J	0.006 J
ENDRIN KETONE	0.003 J	0.004 J	NA	0.004 U	0.006 J	0.009 J
GAMMA-BHC (LINDANE)	0.002 U	0.002 U	NA	0.002 U	0.002 U	0.002 U
GAMMA-CHLORDANE	0.002 U	0.002 J	NA	0.002 U	0.002 J	0.003 J
HEPTACHLOR	0.0003 UJ	0.0003 UJ	NA	0.0003 UJ	0.0003 UJ	0.0003 UJ
HEPTACHLOR EPOXIDE	0.0003 UJ	0.0003 UJ	NA	0.0003 U	0.0009 J	0.0003 UJ
METHOXYCHLOR	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U
TOXAPHENE	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U
PCBs (mg/kg)						
AROCLOR-1016	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U
AROCLOR-1221	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U
AROCLOR-1232	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U
AROCLOR-1242	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS010**	**FNBWSS011**	**FNBWSS011**	**FNBWSS012**	**FNBWSS013**	**FNBWSS014**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	09/18/1997	09/26/1997	04/09/1998	09/26/1997	09/26/1997	09/26/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PCBs (mg/kg)						
AROCLOR-1248	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U
AROCLOR-1254	0.02 U	0.02 U	NA	0.02 U	0.02 U	0.02 U
AROCLOR-1260	0.02 U	0.03 J	NA	0.02 U	0.04 J	0.09 J
TOTAL PCBS	0 U	0.03 J	NA	0 U	0.04 J	0.09 J
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	11.0 U	26.0 U	NA	26.0 U	26.0 U	23.0 JY
GASOLINE RANGE	0.51 UJ	0.50 UJ	NA	0.53 UJ	0.51 UJ	0.51 UJ
MOTOR OIL RANGE	350 Y	**440 Y**	NA	150 Y	**540 Y**	**620 Y**
pH						
PH	8.5	8.9	NA	8.7	9.1	7.2
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	9.4	1.9	NA	6.2	2.3	2.0

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS015**	**FNBWSS015**	**FNBWSS016**	**FNBWSS017**	**FNBWSS018**	**FNBWSS019**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	09/26/1997	04/15/1998	09/26/1997	09/26/1997	09/26/1997	09/26/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	5,830	NA	25,400	9,640	10,900	14,100
ANTIMONY	0.47 J	NA	1.7 J	0.98 J	0.76 J	0.91 J
ARSENIC	**3.1** !	NA	0.27 U	**4.7** !	**4.7** !	**3.7** !
BARIUM	68.3	NA	21.6 J	94.8	93.5	70.7
BERYLLIUM	0.13 J	NA	0.01 U	0.19 J	0.27 J	0.13 J
CADMIUM	0.06 J	NA	0.04 U	0.04 U	0.04 U	0.04 U
CALCIUM	5,370	NA	14,000	19,300	23,800	8,630
CHROMIUM	17.2	NA	19.5	25.0	29.9	25.3
CHROMIUM VI	NA	0.06 U	NA	NA	NA	NA
COBALT	7.6	NA	31.8	11.3	11.7	15.5
COPPER	22.7 J	NA	45.5 J	43.9 J	45.4 J	42.5 J
IRON	15,000	NA	**68,200** *	**23,000**	**25,800**	**34,300**
LEAD	208 *α	NA	0.18 U	36.9	47.4	43.8
MAGNESIUM	3,110	NA	15,700	5,770	6,050	7,680
MANGANESE	324	NA	1,080	420	467	623
MERCURY	0.09 J	NA	0.10 J	0.70	0.47	0.24
MOLYBDENUM	0.22 J	NA	0.13 U	0.24 J	0.22 J	0.13 U
NICKEL	18.5	NA	16.5	31.4	32.8	25.3
POTASSIUM	715 J	NA	390 J	811 J	864 J	1,130 J
SELENIUM	0.40 U	NA	0.48 J	0.39 J	0.65 J	0.81 J
SILVER	0.11 U	NA	0.12 U	0.11 U	0.11 U	0.12 U
SODIUM	43.2 UJ	NA	46.7 UJ	41.4 UJ	42.6 R	45.1 UJ
THALLIUM	0.60 U	NA	1.6	0.58 U	0.59 U	0.92 J
VANADIUM	31.6 J	NA	220 J *	53.9 J	54.6 J	92.6 J
ZINC	50.1 J	NA	92.2 J	89.8 J	128 J	91.3 J
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	NA	NA	NA	0.01 U	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	0.01 U	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	0.01 U	NA	NA
1,1-DICHLOROETHANE	NA	NA	NA	0.01 U	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS015**	**FNBWSS015**	**FNBWSS016**	**FNBWSS017**	**FNBWSS018**	**FNBWSS019**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	09/26/1997	04/15/1998	09/26/1997	09/26/1997	09/26/1997	09/26/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1-DICHLOROETHENE	NA	NA	NA	0.01 U	NA	NA
1,2-DICHLOROETHANE	NA	NA	NA	0.01 U	NA	NA
1,2-DICHLOROETHENE (TOTAL)	NA	NA	NA	0.01 U	NA	NA
1,2-DICHLOROPROPANE	NA	NA	NA	0.01 U	NA	NA
2-BUTANONE	NA	NA	NA	0.01 U	NA	NA
2-HEXANONE	NA	NA	NA	0.01 U	NA	NA
4-METHYL-2-PENTANONE	NA	NA	NA	0.01 U	NA	NA
ACETONE	NA	NA	NA	0.01 UJ	NA	NA
BENZENE	NA	NA	NA	0.01 U	NA	NA
BROMODICHLOROMETHANE	NA	NA	NA	0.01 U	NA	NA
BROMOFORM	NA	NA	NA	0.01 U	NA	NA
BROMOMETHANE	NA	NA	NA	0.01 U	NA	NA
CARBON DISULFIDE	NA	NA	NA	0.01 U	NA	NA
CARBON TETRACHLORIDE	NA	NA	NA	0.01 U	NA	NA
CHLOROBENZENE	NA	NA	NA	0.01 U	NA	NA
CHLOROETHANE	NA	NA	NA	0.01 U	NA	NA
CHLOROFORM	NA	NA	NA	0.01 U	NA	NA
CHLOROMETHANE	NA	NA	NA	0.01 U	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	0.01 U	NA	NA
DIBROMOCHLOROMETHANE	NA	NA	NA	0.01 U	NA	NA
ETHYLBENZENE	NA	NA	NA	0.01 U	NA	NA
METHYLENE CHLORIDE	NA	NA	NA	0.01 U	NA	NA
STYRENE	NA	NA	NA	0.01 U	NA	NA
TETRACHLOROETHENE	NA	NA	NA	0.01 U	NA	NA
TOLUENE	NA	NA	NA	0.01 U	NA	NA
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	0.01 U	NA	NA
TRICHLOROETHENE	NA	NA	NA	0.01 U	NA	NA
VINYL CHLORIDE	NA	NA	NA	0.01 U	NA	NA
XYLENE (TOTAL)	NA	NA	NA	0.01 U	NA	NA
TOTAL VOCS	NA	NA	NA	0 U	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	NA	NA	NA	0.7 U	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS015**	**FNBWSS015**	**FNBWSS016**	**FNBWSS017**	**FNBWSS018**	**FNBWSS019**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	09/26/1997	04/15/1998	09/26/1997	09/26/1997	09/26/1997	09/26/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROBENZENE	NA	NA	NA	0.3 U	NA	NA
1,3-DICHLOROBENZENE	NA	NA	NA	0.3 U	NA	NA
1,4-DICHLOROBENZENE	NA	NA	NA	0.3 U	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	0.7 U	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	2 U	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	0.7 U	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	0.7 U	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	0.7 U	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	2 U	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	0.7 U	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	0.7 U	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	0.7 U	NA	NA
2-CHLOROPHENOL	NA	NA	NA	0.7 U	NA	NA
2-METHYLNAPHTHALENE	NA	NA	NA	0.7 U	NA	NA
2-METHYLPHENOL	NA	NA	NA	0.7 U	NA	NA
2-NITROANILINE	NA	NA	NA	2 UJ	NA	NA
2-NITROPHENOL	NA	NA	NA	0.7 U	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	0.7 UJ	NA	NA
3-NITROANILINE	NA	NA	NA	2 U	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	2 U	NA	NA
4-BROMOPHENYL-PHENYLETHER	NA	NA	NA	0.7 U	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	0.7 U	NA	NA
4-CHLOROANILINE	NA	NA	NA	0.7 U	NA	NA
4-CHLOROPHENYL-PHENYLETHER	NA	NA	NA	0.7 U	NA	NA
4-METHYLPHENOL	NA	NA	NA	0.7 U	NA	NA
4-NITROANILINE	NA	NA	NA	2 U	NA	NA
4-NITROPHENOL	NA	NA	NA	2 UJ	NA	NA
ACENAPHTHENE	NA	NA	NA	0.7 U	NA	NA
ACENAPHTHYLENE	NA	NA	NA	0.7 U	NA	NA
ANTHRACENE	NA	NA	NA	0.7 U	NA	NA
BENZO(A)ANTHRACENE	NA	NA	NA	0.7 U	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS015**	**FNBWSS015**	**FNBWSS016**	**FNBWSS017**	**FNBWSS018**	**FNBWSS019**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	09/26/1997	04/15/1998	09/26/1997	09/26/1997	09/26/1997	09/26/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)PYRENE	NA	NA	NA	0.7 U	NA	NA
BENZO(B)FLUORANTHENE	NA	NA	NA	0.7 U	NA	NA
BENZO(G,H,I)PERYLENE	NA	NA	NA	0.7 U	NA	NA
BENZO(K)FLUORANTHENE	NA	NA	NA	0.7 U	NA	NA
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	0.7 U	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	0.7 U	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	0.3 U	NA	NA
BUTYLBENZYLPHTHALATE	NA	NA	NA	0.7 U	NA	NA
CARBAZOLE	NA	NA	NA	0.7 U	NA	NA
CHRYSENE	NA	NA	NA	0.7 U	NA	NA
DI-N-BUTYLPHTHALATE	NA	NA	NA	0.7 U	NA	NA
DI-N-OCTYLPHTHALATE	NA	NA	NA	0.7 U	NA	NA
DIBENZ(A,H)ANTHRACENE	NA	NA	NA	0.7 U	NA	NA
DIBENZOFURAN	NA	NA	NA	0.7 U	NA	NA
DIETHYLPHTHALATE	NA	NA	NA	0.7 U	NA	NA
DIMETHYLPHTHALATE	NA	NA	NA	0.7 U	NA	NA
FLUORANTHENE	NA	NA	NA	0.07 J	NA	NA
FLUORENE	NA	NA	NA	0.7 U	NA	NA
HEXACHLOROBENZENE	NA	NA	NA	0.7 U	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	0.7 U	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	0.7 U	NA	NA
HEXACHLOROETHANE	NA	NA	NA	0.7 UJ	NA	NA
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	0.7 U	NA	NA
ISOPHORONE	NA	NA	NA	0.7 U	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	0.7 U	NA	NA
N-NITROSODIPHENYLAMINE (1)	NA	NA	NA	0.7 U	NA	NA
NAPHTHALENE	NA	NA	NA	0.7 U	NA	NA
NITROBENZENE	NA	NA	NA	0.7 U	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	2 UJ	NA	NA
PHENANTHRENE	NA	NA	NA	0.7 U	NA	NA
PHENOL	NA	NA	NA	0.7 U	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS015	FNBWSS015	FNBWSS016	FNBWSS017	FNBWSS018	FNBWSS019
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	09/26/1997	04/15/1998	09/26/1997	09/26/1997	09/26/1997	09/26/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PYRENE	NA	NA	NA	0.06 J	NA	NA
TOTAL SVOCS	NA	NA	NA	0.1 J	NA	NA
PESTICIDES (mg/kg)						
4,4'-DDD	0.003 U	NA	0.004 U	0.003 U	0.002 J	0.003 U
4,4'-DDE	0.003 U	NA	0.004 U	0.003 U	0.002 J	0.003 U
4,4'-DDT	0.006 J	NA	0.004 U	0.003 J	0.01 J	0.008 J
ALDRIN	0.002 U	NA	0.002 U	0.002 U	0.002 U	0.002 U
ALPHA-BHC	0.002 U	NA	0.002 U	0.002 J	0.001 J	0.002 U
ALPHA-CHLORDANE	0.002 UJ	NA	0.002 U	0.01 J	0.01 J	0.005 J
BETA-BHC	0.002 U	NA	0.002 U	0.002 U	0.002 U	0.002 U
DELTA-BHC	0.002 U	NA	0.002 U	0.002 U	0.002 U	0.002 U
DIELDRIN	0.003 U	NA	0.004 U	0.002 J	0.006 J	0.003 U
ENDOSULFAN I	0.002 UJ	NA	0.002 U	0.002 UJ	0.002 UJ	0.002 UJ
ENDOSULFAN II	0.003 U	NA	0.004 U	0.003 U	0.003 U	0.003 U
ENDOSULFAN SULFATE	0.002 J	NA	0.004 U	0.003 UJ	0.003 J	0.003 J
ENDRIN	0.003 U	NA	0.004 U	0.003 U	0.003 U	0.003 U
ENDRIN ALDEHYDE	0.005 J	NA	0.004 U	0.004 J	0.01 J	0.003 UJ
ENDRIN KETONE	0.005 J	NA	0.004 U	0.006 J	0.003 U	0.005 J
GAMMA-BHC (LINDANE)	0.002 U	NA	0.002 U	0.002 U	0.002 U	0.002 U
GAMMA-CHLORDANE	0.002 UJ	NA	0.002 U	0.01 J	0.02 J	0.005 J
HEPTACHLOR	0.0003 UJ	NA	0.0003 UJ	0.0003 UJ	0.0003 UJ	0.0003 UJ
HEPTACHLOR EPOXIDE	0.0003 UJ	NA	0.0003 U	0.0007 J	0.0004 J	0.0008 J
METHOXYCHLOR	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.02 U
TOXAPHENE	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U
PCBs (mg/kg)						
AROCLOR-1016	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1221	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1232	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1242	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.02 U

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS015**	**FNBWSS015**	**FNBWSS016**	**FNBWSS017**	**FNBWSS018**	**FNBWSS019**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	09/26/1997	04/15/1998	09/26/1997	09/26/1997	09/26/1997	09/26/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PCBs (mg/kg)						
AROCLOR-1248	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1254	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1260	0.02 U	NA	0.02 U	0.06 J	0.07 J	0.02 U
TOTAL PCBS	0 U	NA	0 U	0.06 J	0.07 J	0 U
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	26.0 U	NA	27.0 U	26.0 U	180 Y	26.0 U
GASOLINE RANGE	0.47 UJ	NA	0.54 UJ	0.51 UJ	0.50 UJ	0.52 U
MOTOR OIL RANGE	**600 Y**	NA	68.0 JY	370 Y	**760 Y**	**410 Y**
pH						
PH	7.0	NA	8.1	8.4	9.1	8.1

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS020**	**FNBWSS020**	**FNBWSS021**	**FNBWSS021**	**FNBWSS022**	**FNBWSS023**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/03/1997	04/09/1998	09/18/1997	04/15/1998	09/18/1997	09/18/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	8,990 J	NA	10,400 J	NA	10,600 J	11,200 J
ANTIMONY	1.1 J	NA	0.77 J	NA	0.86 J	1.1 J
ARSENIC	3.8 UJ	NA	**5.3** !	NA	**2.7**	**3.8** !
BARIUM	67.7 J	NA	100	NA	63.3	75.8
BERYLLIUM	0.10 UJ	NA	0.18 J	NA	0.07 J	0.09 J
CADMIUM	0.04 UJ	NA	0.20 J	NA	0.04 U	0.04 U
CALCIUM	13,900 J	NA	11,300 J	NA	13,800 J	6,560 J
CHROMIUM	52.1 J	NA	31.0 J	NA	21.0 J	19.5 J
CHROMIUM VI	NA	0.05 U	NA	0.06 U	NA	NA
COBALT	11.6 J	NA	12.0	NA	10.9	13.1
COPPER	36.5	NA	79.0 J	NA	32.1 J	34.1 J
IRON	**22,100 J**	NA	**23,100 J**	NA	**23,800 J**	**30,600 J**
LEAD	48.0 J	NA	**593 J** *α	NA	29.7 J	34.8 J
MAGNESIUM	7,300	NA	5,970 J	NA	5,910 J	6,290 J
MANGANESE	350 J	NA	405 J	NA	325 J	441 J
MERCURY	0.50	NA	0.48 J	NA	0.44 J	0.20 UJ
MOLYBDENUM	0.50 UJ	NA	0.25 UJ	NA	0.12 U	0.12 U
NICKEL	43.1 J	NA	97.7	NA	25.6	17.7
POTASSIUM	680	NA	1,090 J	NA	809 J	893 J
SELENIUM	0.58	NA	0.44 U	NA	0.39 U	0.41 U
SILVER	0.11 U	NA	0.12 U	NA	0.11 U	0.11 U
SODIUM	41.3 U	NA	47.2 R	NA	41.8 R	44.7 R
THALLIUM	0.58 U	NA	0.66 U	NA	0.58 U	0.62 U
VANADIUM	55.6 J	NA	51.1 J	NA	61.0 J	77.0 J
ZINC	95.6 J	NA	237 J *	NA	84.6 J	83.4 J
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	0.01 U	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	0.01 U	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	0.01 U	NA
1,1-DICHLOROETHANE	NA	NA	NA	NA	0.01 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS020	FNBWSS020	FNBWSS021	FNBWSS021	FNBWSS022	FNBWSS023
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/03/1997	04/09/1998	09/18/1997	04/15/1998	09/18/1997	09/18/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1-DICHLOROETHENE	NA	NA	NA	NA	0.01 U	NA
1,2-DICHLOROETHANE	NA	NA	NA	NA	0.01 U	NA
1,2-DICHLOROETHENE (TOTAL)	NA	NA	NA	NA	0.01 U	NA
1,2-DICHLOROPROPANE	NA	NA	NA	NA	0.01 U	NA
2-BUTANONE	NA	NA	NA	NA	0.01 UJ	NA
2-HEXANONE	NA	NA	NA	NA	0.01 UJ	NA
4-METHYL-2-PENTANONE	NA	NA	NA	NA	0.01 U	NA
ACETONE	NA	NA	NA	NA	0.01 UJ	NA
BENZENE	NA	NA	NA	NA	0.01 U	NA
BROMODICHLOROMETHANE	NA	NA	NA	NA	0.01 U	NA
BROMOFORM	NA	NA	NA	NA	0.01 U	NA
BROMOMETHANE	NA	NA	NA	NA	0.01 U	NA
CARBON DISULFIDE	NA	NA	NA	NA	0.01 U	NA
CARBON TETRACHLORIDE	NA	NA	NA	NA	0.01 U	NA
CHLOROBENZENE	NA	NA	NA	NA	0.01 U	NA
CHLOROETHANE	NA	NA	NA	NA	0.01 U	NA
CHLOROFORM	NA	NA	NA	NA	0.01 U	NA
CHLOROMETHANE	NA	NA	NA	NA	0.01 U	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	0.01 U	NA
DIBROMOCHLOROMETHANE	NA	NA	NA	NA	0.01 U	NA
ETHYLBENZENE	NA	NA	NA	NA	0.01 U	NA
METHYLENE CHLORIDE	NA	NA	NA	NA	0.01 UJ	NA
STYRENE	NA	NA	NA	NA	0.01 U	NA
TETRACHLOROETHENE	NA	NA	NA	NA	0.01 U	NA
TOLUENE	NA	NA	NA	NA	0.01 U	NA
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	0.01 U	NA
TRICHLOROETHENE	NA	NA	NA	NA	0.01 U	NA
VINYL CHLORIDE	NA	NA	NA	NA	0.01 U	NA
XYLENE (TOTAL)	NA	NA	NA	NA	0.01 U	NA
TOTAL VOCS	NA	NA	NA	NA	0 U	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA	0.3 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS020**	**FNBWSS020**	**FNBWSS021**	**FNBWSS021**	**FNBWSS022**	**FNBWSS023**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/03/1997	04/09/1998	09/18/1997	04/15/1998	09/18/1997	09/18/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROBENZENE	NA	NA	NA	NA	0.2 U	NA
1,3-DICHLOROBENZENE	NA	NA	NA	NA	0.2 U	NA
1,4-DICHLOROBENZENE	NA	NA	NA	NA	0.2 U	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	0.3 U	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	0.8 U	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	0.3 U	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	0.3 U	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	0.3 U	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	0.8 U	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	0.3 U	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	0.3 U	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	0.3 U	NA
2-CHLOROPHENOL	NA	NA	NA	NA	0.3 U	NA
2-METHYLNAPHTHALENE	NA	NA	NA	NA	0.3 U	NA
2-METHYLPHENOL	NA	NA	NA	NA	0.3 U	NA
2-NITROANILINE	NA	NA	NA	NA	0.8 UJ	NA
2-NITROPHENOL	NA	NA	NA	NA	0.3 U	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	0.3 U	NA
3-NITROANILINE	NA	NA	NA	NA	0.8 U	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	0.8 U	NA
4-BROMOPHENYL-PHENYLETHER	NA	NA	NA	NA	0.3 U	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	0.3 U	NA
4-CHLOROANILINE	NA	NA	NA	NA	0.3 U	NA
4-CHLOROPHENYL-PHENYLETHER	NA	NA	NA	NA	0.3 U	NA
4-METHYLPHENOL	NA	NA	NA	NA	0.3 U	NA
4-NITROANILINE	NA	NA	NA	NA	0.8 U	NA
4-NITROPHENOL	NA	NA	NA	NA	0.8 UJ	NA
ACENAPHTHENE	NA	NA	NA	NA	0.3 U	NA
ACENAPHTHYLENE	NA	NA	NA	NA	0.3 U	NA
ANTHRACENE	NA	NA	NA	NA	0.3 U	NA
BENZO(A)ANTHRACENE	NA	NA	NA	NA	0.3 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS020**	**FNBWSS020**	**FNBWSS021**	**FNBWSS021**	**FNBWSS022**	**FNBWSS023**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/03/1997	04/09/1998	09/18/1997	04/15/1998	09/18/1997	09/18/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)PYRENE	NA	NA	NA	NA	**0.2 J**	NA
BENZO(B)FLUORANTHENE	NA	NA	NA	NA	0.3 U	NA
BENZO(G,H,I)PERYLENE	NA	NA	NA	NA	0.3 U	NA
BENZO(K)FLUORANTHENE	NA	NA	NA	NA	0.1 J	NA
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	0.3 U	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	0.3 U	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	0.3 UJ	NA
BUTYLBENZYLPHTHALATE	NA	NA	NA	NA	0.3 UJ	NA
CARBAZOLE	NA	NA	NA	NA	0.3 U	NA
CHRYSENE	NA	NA	NA	NA	0.1 J	NA
DI-N-BUTYLPHTHALATE	NA	NA	NA	NA	0.3 UJ	NA
DI-N-OCTYLPHTHALATE	NA	NA	NA	NA	0.3 UJ	NA
DIBENZ(A,H)ANTHRACENE	NA	NA	NA	NA	0.3 U	NA
DIBENZOFURAN	NA	NA	NA	NA	0.3 U	NA
DIETHYLPHTHALATE	NA	NA	NA	NA	0.3 UJ	NA
DIMETHYLPHTHALATE	NA	NA	NA	NA	0.3 U	NA
FLUORANTHENE	NA	NA	NA	NA	0.03 J	NA
FLUORENE	NA	NA	NA	NA	0.3 U	NA
HEXACHLOROBENZENE	NA	NA	NA	NA	0.3 U	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	0.3 U	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	0.3 U	NA
HEXACHLOROETHANE	NA	NA	NA	NA	0.3 U	NA
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	NA	0.3 U	NA
ISOPHORONE	NA	NA	NA	NA	0.3 U	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	0.3 U	NA
N-NITROSODIPHENYLAMINE (1)	NA	NA	NA	NA	0.3 UJ	NA
NAPHTHALENE	NA	NA	NA	NA	0.3 U	NA
NITROBENZENE	NA	NA	NA	NA	0.3 UJ	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	0.8 U	NA
PHENANTHRENE	NA	NA	NA	NA	0.3 U	NA
PHENOL	NA	NA	NA	NA	0.3 U	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS020	FNBWSS020	FNBWSS021	FNBWSS021	FNBWSS022	FNBWSS023
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/03/1997	04/09/1998	09/18/1997	04/15/1998	09/18/1997	09/18/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PYRENE	NA	NA	NA	NA	0.03 J	NA
TOTAL SVOCS	NA	NA	NA	NA	0.4 J	NA
PESTICIDES (mg/kg)						
4,4'-DDD	0.004 U	NA	0.004 U	NA	0.003 U	0.004 U
4,4'-DDE	0.004 U	NA	0.004 U	NA	0.003 U	0.004 U
4,4'-DDT	0.002 J	NA	0.004 U	NA	0.007	0.004 U
ALDRIN	0.002 U	NA	0.002 U	NA	0.002 U	0.002 U
ALPHA-BHC	0.01	NA	0.002 U	NA	0.002 U	0.002 U
ALPHA-CHLORDANE	0.03	NA	0.002 U	NA	0.002 J	0.002 U
BETA-BHC	0.002 U	NA	0.002 U	NA	0.002 U	0.002 U
DELTA-BHC	0.002 UJ	NA	0.002 U	NA	0.002 U	0.002 U
DIELDRIN	0.004 U	NA	0.004 U	NA	0.003 U	0.004 U
ENDOSULFAN I	0.002 U	NA	0.002 U	NA	0.002 U	0.002 U
ENDOSULFAN II	0.004 U	NA	0.004 U	NA	0.003 U	0.004 U
ENDOSULFAN SULFATE	0.002 J	NA	0.004 J	NA	0.002 J	0.004 U
ENDRIN	0.004 U	NA	0.004 U	NA	0.002 J	0.004 U
ENDRIN ALDEHYDE	0.008	NA	0.004 J	NA	0.003 J	0.004 U
ENDRIN KETONE	0.004 UJ	NA	0.003 J	NA	0.004	0.004 U
GAMMA-BHC (LINDANE)	0.003	NA	0.002 U	NA	0.002 U	0.002 U
GAMMA-CHLORDANE	0.03	NA	0.002 U	NA	0.002 J	0.002 U
HEPTACHLOR	0.005 J	NA	0.0003 UJ	NA	0.0003 UJ	0.0003 UJ
HEPTACHLOR EPOXIDE	0.003 J	NA	0.0003 UJ	NA	0.0003 UJ	0.0003 UJ
METHOXYCHLOR	0.02 U	NA	0.007 J	NA	0.02 U	0.02 U
TOXAPHENE	0.09 U	NA	0.09 U	NA	0.09 U	0.09 U
PCBs (mg/kg)						
AROCLOR-1016	0.02 U	NA	0.02 U	NA	0.02 U	0.02 U
AROCLOR-1221	0.02 U	NA	0.02 U	NA	0.02 U	0.02 U
AROCLOR-1232	0.02 U	NA	0.02 U	NA	0.02 U	0.02 U
AROCLOR-1242	0.02 U	NA	0.02 U	NA	0.02 U	0.02 U

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS020**	**FNBWSS020**	**FNBWSS021**	**FNBWSS021**	**FNBWSS022**	**FNBWSS023**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/03/1997	04/09/1998	09/18/1997	04/15/1998	09/18/1997	09/18/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PCBs (mg/kg)						
AROCLOR-1248	0.02 U	NA	0.02 U	NA	0.02 U	0.02 U
AROCLOR-1254	0.02 U	NA	0.02 U	NA	0.02 U	0.02 U
AROCLOR-1260	0.02 U	NA	0.02 U	NA	0.02 U	0.02 U
TOTAL PCBS	0 U	NA	0 U	NA	0 U	0 U
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	11.0 UJ	NA	55.0 U	NA	10.0 U	56.0 U
GASOLINE RANGE	0.50 UJ	NA	0.50 UJ	NA	0.48 UJ	0.51 U
MOTOR OIL RANGE	300 JY	NA	**1,000 Y**	NA	330 Y	**820 Y**
pH						
PH	9.3	NA	8.6	NA	7.1	6.8
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	8.2	NA	9.2	NA	4.5	9.9

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS024	FNBWSS025	FNBWSS026	FNBWSS027	FNBWSS028	FNBWSS029
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	09/18/1997	09/18/1997	10/03/1997	10/03/1997	10/03/1997	04/15/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	11,600 J	12,200 J	8,970 J	12,100 J	12,400 J	NA
ANTIMONY	0.28 R	0.73 J	0.92 J	1.7 J	1.2 J	NA
ARSENIC	**8.0** !	**6.2** !	**4.9 J** !	2.8 UJ	**5.5 J** !	NA
BARIUM	266	105	79.4 J	49.2 J	109 J	NA
BERYLLIUM	0.26 J	0.16 J	0.22 J	0.02 UJ	0.14 J	NA
CADMIUM	0.04 U	0.04 U	0.04 UJ	0.05 UJ	0.04 UJ	NA
CALCIUM	4,370 J	8,310 J	6,510 J	20,100 J	8,910 J	NA
CHROMIUM	23.1 J	30.9 J	31.5 J	21.9 J	44.0 J	NA
CHROMIUM VI	NA	NA	NA	NA	NA	0.06 U
COBALT	13.8	13.2	9.0 J	17.5 J	14.3 J	NA
COPPER	92.8 J	63.1 J	72.0	54.6	63.6	NA
IRON	**26,500 J**	**27,000 J**	20,700 J	**39,600 J**	**30,100 J**	NA
LEAD	11.0 J	67.7 J *α	152 J *α	41.7 J	88.3 J *α	NA
MAGNESIUM	5,290 J	6,220 J	4,030	7,240	7,230	NA
MANGANESE	590 J	438 J	359 J	551 J	497 J	NA
MERCURY	0.04 UJ	1.3 J	0.47	0.41	0.08 U	NA
MOLYBDENUM	0.19 UJ	0.11 U	0.34 UJ	1.2 UJ	0.23 UJ	NA
NICKEL	29.0	30.4	46.2 J	27.8 J	35.2 J	NA
POTASSIUM	1,910 J	1,040 J	719	417 J	1,160	NA
SELENIUM	0.44 J	0.38 U	0.50 J	0.65	1.0	NA
SILVER	0.11 U	0.10 U	0.11 U	0.13 U	0.12 U	NA
SODIUM	501 J	71.2 J	114 J	51.1 U	47.5 U	NA
THALLIUM	0.58 U	0.56 U	0.61 U	0.71 U	0.66 U	NA
VANADIUM	35.5 J	60.8 J	41.5 J	77.9 J	70.2 J	NA
ZINC	65.2 J	164 J	137 J	91.6 J	136 J	NA
PESTICIDES (mg/kg)						
4,4'-DDD	0.004 U	0.004 U	0.004 UJ	0.004 UJ	0.004 UJ	NA
4,4'-DDE	0.004 U	0.004 U	0.004 UJ	0.004 UJ	0.004 UJ	NA
4,4'-DDT	0.004 U	0.005 J	0.005 J	0.005 J	0.004 UJ	NA
ALDRIN	0.002 U	0.002 U	0.002 UJ	0.002 UJ	0.002 UJ	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS024	FNBWSS025	FNBWSS026	FNBWSS027	FNBWSS028	FNBWSS029
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	09/18/1997	09/18/1997	10/03/1997	10/03/1997	10/03/1997	04/15/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PESTICIDES (mg/kg)						
ALPHA-BHC	0.002 U	0.002 U	0.01	0.01	0.01	NA
ALPHA-CHLORDANE	0.002 U	0.01	0.002 J	0.002 J	0.002 UJ	NA
BETA-BHC	0.002 U	0.002 U	0.003 UJ	0.002 UJ	0.003 UJ	NA
DELTA-BHC	0.002 U	0.002 U	0.002 UJ	0.002 UJ	0.002 UJ	NA
DIELDRIN	0.004 U	0.004 U	0.004 UJ	0.004 UJ	0.004 UJ	NA
ENDOSULFAN I	0.002 U	0.002 U	0.002 UJ	0.002 UJ	0.002 UJ	NA
ENDOSULFAN II	0.004 U	0.004 U	0.004 UJ	0.004 UJ	0.004 UJ	NA
ENDOSULFAN SULFATE	0.004 U	0.004 U	0.004 UJ	0.004 UJ	0.004 UJ	NA
ENDRIN	0.004 U	0.004 U	0.004 UJ	0.004 UJ	0.004 UJ	NA
ENDRIN ALDEHYDE	0.004 U	0.004 J	0.004 UJ	0.004 UJ	0.004 UJ	NA
ENDRIN KETONE	0.004 U	0.004 U	0.004 UJ	0.004 UJ	0.004 UJ	NA
GAMMA-BHC (LINDANE)	0.002 U	0.002 U	0.003 J	0.004 J	0.003 J	NA
GAMMA-CHLORDANE	0.002 U	0.01	0.001 J	0.002 J	0.002 UJ	NA
HEPTACHLOR	0.0004 UJ	0.0004 J	0.0003 UJ	0.0004 UJ	0.0003 UJ	NA
HEPTACHLOR EPOXIDE	0.0004 UJ	0.0003 UJ	0.0003 UJ	0.0004 UJ	0.0003 UJ	NA
METHOXYCHLOR	0.02 U	0.02 U	0.02 UJ	0.02 UJ	0.02 UJ	NA
TOXAPHENE	0.1 U	0.09 U	0.1 U	0.1 U	0.1 U	NA
PCBs (mg/kg)						
AROCLOR-1016	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA
AROCLOR-1221	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA
AROCLOR-1232	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA
AROCLOR-1242	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA
AROCLOR-1248	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA
AROCLOR-1254	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA
AROCLOR-1260	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA
TOTAL PCBS	0 U	0 U	0 U	0 U	0 U	NA
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	12.0 U	10.0 U	11.0 U	12.0 U	11.0 U	NA
GASOLINE RANGE	0.53 UJ	0.53 U	0.50 UJ	0.60 UJ	0.50 UJ	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS024**	**FNBWSS025**	**FNBWSS026**	**FNBWSS027**	**FNBWSS028**	**FNBWSS029**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	09/18/1997	09/18/1997	10/03/1997	10/03/1997	10/03/1997	04/15/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PETROLEUM INDICATORS (mg/kg)						
MOTOR OIL RANGE	42.0 Y	230 Y	230 Y	270 Y	370 Y	NA
pH						
PH	8.6	8.7	9.3	8.6	9.0	NA
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	13.6	4.8	12.7	18.6	11.6	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS030**	**FNBWSS030**	**FNBWSS031**	**FNBWSS032**	**FNBWSS033**	**FNBWSS034**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/03/1997	04/15/1998	10/03/1997	10/03/1997	10/03/1997	10/03/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	2,110 J	NA	14,000 J	15,600 J	7,790 J	15,200 J
ANTIMONY	2.3 J	NA	1.2 J	1.0 J	1.0 J	1.2 J
ARSENIC	2.4 UJ	NA	**6.2 J** !	**3.6 J** !	**2.4 J**	0.56 UJ
BARIUM	33.9 J	NA	96.8 J	76.6 J	73.0 J	36.8 J
BERYLLIUM	0.02 UJ	NA	0.21 J	0.08 J	0.10 J	0.01 U
CADMIUM	0.04 UJ	NA	0.04 UJ	0.04 UJ	0.17 J	0.04 UJ
CALCIUM	1,300 J	NA	9,850 J	24,300 J	4,880 J	8,080 J
CHROMIUM	93.4 J	NA	35.7 J	25.9 J	26.0 J	13.2 J
CHROMIUM VI	NA	0.32 UJ	NA	NA	NA	NA
COBALT	4.0 J	NA	13.2 J	15.1 J	8.9 J	19.1 J
COPPER	67.1	NA	83.1 J	37.4 J	33.3 J	30.4 J
IRON	**23,600 J**	NA	**30,800 J**	**32,600 J**	16,300 J	**48,700 J**
LEAD	**323 J** *α	NA	67.9 J *α	42.0 J	49.2 J	5.2 J
MAGNESIUM	1,230	NA	6,500 J	6,770 J	4,770 J	12,000 J
MANGANESE	212 J	NA	433 J	527 J	264 J	569 J
MERCURY	0.43	NA	0.44	0.17	0.49	0.10 J
MOLYBDENUM	1.4 UJ	NA	0.43 UJ	0.12 UJ	0.52 UJ	0.12 UJ
NICKEL	46.4 J	NA	30.3 J	27.1 J	39.8 J	15.4 J
POTASSIUM	242 J	NA	1,190 J	1,000 J	560 J	650 J
SELENIUM	0.56	NA	0.41 J	0.53 J	0.36 U	0.40 U
SILVER	0.16 J	NA	0.11 U	0.11 U	0.14 UJ	0.11 U
SODIUM	62.3 J	NA	42.2 R	43.8 R	39.2 R	42.8 R
THALLIUM	0.59 U	NA	0.59 UJ	0.61 UJ	0.55 U	0.60 U
VANADIUM	11.6 J	NA	69.0 J	87.4 J	35.5 J	122 J
ZINC	276 J *α	NA	152	81.0	107 J	74.5 J
PESTICIDES (mg/kg)						
4,4'-DDD	0.002 J	NA	0.003 J	0.004 U	0.005	0.004 U
4,4'-DDE	0.004 UJ	NA	0.004 U	0.004 U	0.005	0.004 U
4,4'-DDT	0.004 UJ	NA	0.01 J	0.006 J	0.04	0.004 U
ALDRIN	0.002 UJ	NA	0.002 U	0.002 U	0.002 U	0.002 U

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS030	FNBWSS030	FNBWSS031	FNBWSS032	FNBWSS033	FNBWSS034
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/03/1997	04/15/1998	10/03/1997	10/03/1997	10/03/1997	10/03/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PESTICIDES (mg/kg)						
ALPHA-BHC	0.01 J	NA	0.01	0.01	0.009	0.02
ALPHA-CHLORDANE	0.002 UJ	NA	0.004	0.002	0.001 J	0.002 U
BETA-BHC	0.002 UJ	NA	0.004 J	0.003 J	0.003	0.006
DELTA-BHC	0.002 UJ	NA	0.002 J	0.001 J	0.001 J	0.002
DIELDRIN	0.004 UJ	NA	0.006 J	0.004 U	0.004 U	0.004 U
ENDOSULFAN I	0.002 UJ	NA	0.004	0.002 J	0.003	0.002 U
ENDOSULFAN II	0.004 UJ	NA	0.004 UJ	0.004 UJ	0.004 U	0.004 U
ENDOSULFAN SULFATE	0.008 J	NA	0.004 UJ	0.004 UJ	0.004 U	0.004 U
ENDRIN	0.004 UJ	NA	0.004 UJ	0.004 UJ	0.002 J	0.004 U
ENDRIN ALDEHYDE	0.02 J	NA	0.002 J	0.004 UJ	0.02 J	0.004 U
ENDRIN KETONE	0.007 UJ	NA	0.004 UJ	0.004 UJ	0.003 J	0.004 U
GAMMA-BHC (LINDANE)	0.003 J	NA	0.004	0.003	0.003	0.005 J
GAMMA-CHLORDANE	0.002 UJ	NA	0.004	0.002 J	0.001 J	0.002 U
HEPTACHLOR	0.0003 UJ	NA	0.0003 U	0.0003 U	0.0003 U	0.0004 U
HEPTACHLOR EPOXIDE	0.0003 UJ	NA	0.0003 U	0.0003 U	0.0003 U	0.0004 U
METHOXYCHLOR	0.02 UJ	NA	0.02 UJ	0.02 UJ	0.02 U	0.02 U
TOXAPHENE	0.09 UJ	NA	0.1 U	0.09 U	0.09 U	0.1 U
PCBs (mg/kg)						
AROCLOR-1016	0.02 UJ	NA	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1221	0.02 UJ	NA	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1232	0.02 UJ	NA	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1242	0.02 UJ	NA	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1248	0.02 UJ	NA	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1254	0.02 UJ	NA	0.02 U	0.02 U	0.2	0.02 U
AROCLOR-1260	0.02 UJ	NA	0.04	0.03	0.2	0.02 U
TOTAL PCBS	0 U	NA	0.04	0.03	0.3	0 U
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	56.0 U	NA	110 U	11.0 U	11.0 UJ	12.0 U
GASOLINE RANGE	0.60 UJ	NA	0.60 UJ	0.60 UJ	0.50 UJ	0.60 UJ

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS030**	**FNBWSS030**	**FNBWSS031**	**FNBWSS032**	**FNBWSS033**	**FNBWSS034**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/03/1997	04/15/1998	10/03/1997	10/03/1997	10/03/1997	10/03/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PETROLEUM INDICATORS (mg/kg)						
MOTOR OIL RANGE	**980 Y**	NA	**650 Y**	350 Y	130 JY	100 Y
pH						
PH	8.2	NA	8.1	8.3	8.8	7.7
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	10.3	NA	11.3	9.8	5.9	16.6

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS035**	**FNBWSS036**	**FNBWSS037**	**FNBWSS038**	**FNBWSS039**	**FNBWSS040**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/03/1997	10/03/1997	10/03/1997	10/03/1997	10/03/1997	10/06/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	12,500 J	11,100 J	15,300 J	19,500 J	12,200 J	7,720 J
ANTIMONY	1.1 J	0.90 J	1.2 J	1.7 J	0.66 J	0.56 J
ARSENIC	**4.0 J** !	**4.5 J** !	**6.9 J** !	0.77 UJ	**4.7 J** !	**3.8 J** !
BARIUM	61.7 J	73.3 J	131 J	60.2 J	97.0 J	90.0 J
BERYLLIUM	0.09 J	0.19 J	0.19 J	0.01 U	0.19 J	0.16 J
CADMIUM	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ
CALCIUM	8,370 J	8,440 J	15,200 J	8,730 J	10,600 J	12,100 J
CHROMIUM	26.3 J	22.2 J	58.6 J	12.0 J	31.5 J	25.9 J
COBALT	13.2 J	11.4 J	15.3 J	34.8 J	11.5 J	7.7 J
COPPER	46.6 J	31.2 J	62.3 J	31.1 J	34.4 J	40.2 J
IRON	**29,000 J**	**24,000 J**	**30,300 J**	**50,500 J**	**24,300 J**	17,600 J
LEAD	63.8 J *α	32.2 J	92.4 J *α	1.2 J	41.7 J	49.1 J
MAGNESIUM	7,610 J	5,520 J	7,400 J	8,280 J	6,070 J	4,100 J
MANGANESE	362 J	311 J	476 J	882 J	412 J	301 J
MERCURY	0.67	0.28	0.39	0.10 J	0.23	0.61 J
MOLYBDENUM	0.23 UJ	0.32 UJ	0.55 UJ	0.12 UJ	0.33 UJ	0.32 UJ
NICKEL	30.2 J	23.0 J	42.9 J	15.1 J	39.4 J	24.0 J
POTASSIUM	998 J	876 J	1,240 J	564 J	952 J	775
SELENIUM	0.40 U	0.44 U	0.40 U	1.0 J	0.47 J	0.64 J
SILVER	0.11 U	0.12 U	0.11 U	0.11 U	0.13 UJ	0.11 UJ
SODIUM	43.3 R	47.4 R	42.9 R	43.8 R	112 J	194 J
THALLIUM	0.60 U	0.76 J	0.60 U	0.61 U	0.62 U	0.61 U
VANADIUM	75.0 J	61.7 J	72.0 J	170 J	51.1 J	37.3 J
ZINC	95.2 J	78.0 J	123 J	64.6 J	80.5 J	119 J
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	NA	NA	0.01 U	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	0.01 U	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	0.01 U	NA	NA	NA
1,1-DICHLOROETHANE	NA	NA	0.01 U	NA	NA	NA
1,1-DICHLOROETHENE	NA	NA	0.01 U	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS035	FNBWSS036	FNBWSS037	FNBWSS038	FNBWSS039	FNBWSS040
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/03/1997	10/03/1997	10/03/1997	10/03/1997	10/03/1997	10/06/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROETHANE	NA	NA	0.01 U	NA	NA	NA
1,2-DICHLOROETHENE (TOTAL)	NA	NA	0.01 U	NA	NA	NA
1,2-DICHLOROPROPANE	NA	NA	0.01 U	NA	NA	NA
2-BUTANONE	NA	NA	0.01 UJ	NA	NA	NA
2-HEXANONE	NA	NA	0.01 UJ	NA	NA	NA
4-METHYL-2-PENTANONE	NA	NA	0.01 UJ	NA	NA	NA
ACETONE	NA	NA	0.01 UJ	NA	NA	NA
BENZENE	NA	NA	0.01 U	NA	NA	NA
BROMODICHLOROMETHANE	NA	NA	0.01 U	NA	NA	NA
BROMOFORM	NA	NA	0.01 U	NA	NA	NA
BROMOMETHANE	NA	NA	0.01 U	NA	NA	NA
CARBON DISULFIDE	NA	NA	0.01 U	NA	NA	NA
CARBON TETRACHLORIDE	NA	NA	0.01 U	NA	NA	NA
CHLOROBENZENE	NA	NA	0.01 U	NA	NA	NA
CHLOROETHANE	NA	NA	0.01 U	NA	NA	NA
CHLOROFORM	NA	NA	0.01 U	NA	NA	NA
CHLOROMETHANE	NA	NA	0.01 UJ	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	0.01 U	NA	NA	NA
DIBROMOCHLOROMETHANE	NA	NA	0.01 U	NA	NA	NA
ETHYLBENZENE	NA	NA	0.01 U	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	0.01 UJ	NA	NA	NA
STYRENE	NA	NA	0.01 U	NA	NA	NA
TETRACHLOROETHENE	NA	NA	0.01 U	NA	NA	NA
TOLUENE	NA	NA	0.01 U	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	NA	NA	0.01 U	NA	NA	NA
TRICHLOROETHENE	NA	NA	0.01 U	NA	NA	NA
VINYL CHLORIDE	NA	NA	0.01 U	NA	NA	NA
XYLENE (TOTAL)	NA	NA	0.01 U	NA	NA	NA
TOTAL VOCS	NA	NA	0 U	NA	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	NA	NA	0.4 U	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS035**	**FNBWSS036**	**FNBWSS037**	**FNBWSS038**	**FNBWSS039**	**FNBWSS040**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/03/1997	10/03/1997	10/03/1997	10/03/1997	10/03/1997	10/06/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROBENZENE	NA	NA	0.2 U	NA	NA	NA
1,3-DICHLOROBENZENE	NA	NA	0.2 U	NA	NA	NA
1,4-DICHLOROBENZENE	NA	NA	0.2 U	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	0.4 U	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	1 U	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	0.4 U	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	0.4 U	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	0.4 U	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	1 UJ	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	0.4 U	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	0.4 U	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	0.4 U	NA	NA	NA
2-CHLOROPHENOL	NA	NA	0.4 U	NA	NA	NA
2-METHYLNAPHTHALENE	NA	NA	0.4 U	NA	NA	NA
2-METHYLPHENOL	NA	NA	0.4 U	NA	NA	NA
2-NITROANILINE	NA	NA	1 U	NA	NA	NA
2-NITROPHENOL	NA	NA	0.4 U	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	0.4 UJ	NA	NA	NA
3-NITROANILINE	NA	NA	1 U	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	1 U	NA	NA	NA
4-BROMOPHENYL-PHENYLETHER	NA	NA	0.4 U	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	0.4 U	NA	NA	NA
4-CHLOROANILINE	NA	NA	0.4 U	NA	NA	NA
4-CHLOROPHENYL-PHENYLETHER	NA	NA	0.4 U	NA	NA	NA
4-METHYLPHENOL	NA	NA	0.4 U	NA	NA	NA
4-NITROANILINE	NA	NA	1 U	NA	NA	NA
4-NITROPHENOL	NA	NA	1 UJ	NA	NA	NA
ACENAPHTHENE	NA	NA	0.4 U	NA	NA	NA
ACENAPHTHYLENE	NA	NA	0.4 U	NA	NA	NA
ANTHRACENE	NA	NA	0.02 J	NA	NA	NA
BENZO(A)ANTHRACENE	NA	NA	0.08 J	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS035**	**FNBWSS036**	**FNBWSS037**	**FNBWSS038**	**FNBWSS039**	**FNBWSS040**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/03/1997	10/03/1997	10/03/1997	10/03/1997	10/03/1997	10/06/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)PYRENE	NA	NA	**0.1 J**	NA	NA	NA
BENZO(B)FLUORANTHENE	NA	NA	0.2 J	NA	NA	NA
BENZO(G,H,I)PERYLENE	NA	NA	0.4 U	NA	NA	NA
BENZO(K)FLUORANTHENE	NA	NA	0.4 U	NA	NA	NA
BIS(2-CHLOROETHOXY)METHANE	NA	NA	0.4 U	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	0.4 U	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	0.2 UJ	NA	NA	NA
BUTYLBENZYLPHTHALATE	NA	NA	0.4 U	NA	NA	NA
CARBAZOLE	NA	NA	0.4 U	NA	NA	NA
CHRYSENE	NA	NA	0.1 J	NA	NA	NA
DI-N-BUTYLPHTHALATE	NA	NA	0.4 UJ	NA	NA	NA
DI-N-OCTYLPHTHALATE	NA	NA	0.4 U	NA	NA	NA
DIBENZ(A,H)ANTHRACENE	NA	NA	0.4 U	NA	NA	NA
DIBENZOFURAN	NA	NA	0.4 U	NA	NA	NA
DIETHYLPHTHALATE	NA	NA	0.4 U	NA	NA	NA
DIMETHYLPHTHALATE	NA	NA	0.4 U	NA	NA	NA
FLUORANTHENE	NA	NA	0.2 J	NA	NA	NA
FLUORENE	NA	NA	0.4 U	NA	NA	NA
HEXACHLOROBENZENE	NA	NA	0.4 U	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	0.4 U	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	0.4 UJ	NA	NA	NA
HEXACHLOROETHANE	NA	NA	0.4 U	NA	NA	NA
INDENO(1,2,3-CD)PYRENE	NA	NA	0.4 U	NA	NA	NA
ISOPHORONE	NA	NA	0.4 U	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	0.4 U	NA	NA	NA
N-NITROSODIPHENYLAMINE (1)	NA	NA	0.4 U	NA	NA	NA
NAPHTHALENE	NA	NA	0.4 U	NA	NA	NA
NITROBENZENE	NA	NA	0.4 U	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	1 UJ	NA	NA	NA
PHENANTHRENE	NA	NA	0.06 J	NA	NA	NA
PHENOL	NA	NA	0.4 U	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS035	FNBWSS036	FNBWSS037	FNBWSS038	FNBWSS039	FNBWSS040
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/03/1997	10/03/1997	10/03/1997	10/03/1997	10/03/1997	10/06/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PYRENE	NA	NA	0.2 J	NA	NA	NA
TOTAL SVOCS	NA	NA	0.9 J	NA	NA	NA
PESTICIDES (mg/kg)						
4,4'-DDD	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
4,4'-DDE	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
4,4'-DDT	0.004 J	0.004 UJ	0.002 J	0.004 U	0.004 UJ	0.003 J
ALDRIN	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
ALPHA-BHC	0.01	0.01	0.009 J	0.006	0.01	0.002 U
ALPHA-CHLORDANE	0.002 U	0.002 U	0.001 J	0.002 U	0.002 U	0.003
BETA-BHC	0.002 J	0.003 J	0.002 J	0.002	0.002 UJ	0.002 U
DELTA-BHC	0.001 J	0.001 J	0.002 U	0.001 J	0.002 U	0.002 U
DIELDRIN	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
ENDOSULFAN I	0.001 J	0.002 U	0.001 J	0.002 U	0.002 U	0.002 U
ENDOSULFAN II	0.004 UJ	0.004 UJ	0.004 UJ	0.004 U	0.004 UJ	0.004 U
ENDOSULFAN SULFATE	0.004 UJ	0.004 UJ	0.004 UJ	0.004 U	0.004 UJ	0.004 U
ENDRIN	0.004 UJ	0.004 UJ	0.004 UJ	0.004 U	0.004 UJ	0.004 U
ENDRIN ALDEHYDE	0.002 J	0.004 UJ	0.004 UJ	0.004 U	0.004 UJ	0.004 U
ENDRIN KETONE	0.002 J	0.004 UJ	0.004 J	0.004 U	0.004 UJ	0.004 U
GAMMA-BHC (LINDANE)	0.003 J	0.003	0.002 J	0.002	0.004	0.002 U
GAMMA-CHLORDANE	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.003
HEPTACHLOR	0.0003 U	0.0004 U	0.0004 U	0.0003 U	0.0004 U	0.0003 U
HEPTACHLOR EPOXIDE	0.0003 U	0.0004 U	0.0004 U	0.0003 U	0.0004 U	0.0007
METHOXYCHLOR	0.02 UJ	0.02 UJ	0.02 UJ	0.02 U	0.02 UJ	0.02 U
TOXAPHENE	0.09 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
PCBs (mg/kg)						
AROCLOR-1016	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1221	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1232	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1242	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS035**	**FNBWSS036**	**FNBWSS037**	**FNBWSS038**	**FNBWSS039**	**FNBWSS040**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/03/1997	10/03/1997	10/03/1997	10/03/1997	10/03/1997	10/06/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PCBs (mg/kg)						
AROCLOR-1248	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1254	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1260	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
TOTAL PCBS	0 U	0 U	0 U	0 U	0 U	0 U
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	56.0 U	12.0 U	23.0 U	11.0 U	12.0 U	57.0 U
GASOLINE RANGE	0.60 UJ	0.60 UJ	0.50 UJ	0.50 UJ	0.60 UJ	0.50 UJ
MOTOR OIL RANGE	**550 Y**	380 Y	**700 Y**	37.0 U	190 Y	320 Y
pH						
PH	8.6	8.7	8.6	9.2	8.9	9.8
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	10.0	18.9	13.9	11.1	19.6	12.8

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS041**	**FNBWSS041**	**FNBWSS042**	**FNBWSS044**	**FNBWSS045**	**FNBWSS046**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/06/1997	12/09/1998	10/06/1997	10/06/1997	10/07/1997	10/07/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	9,220 J	NA	13,300 J	9,780 J	22,100 J	9,900 J
ANTIMONY	0.60 J	NA	0.31 R	0.71 J	2.1 J	1.0 J
ARSENIC	**2.1 J**	NA	**5.7 J** !	**7.4 J** !	0.24 UJ	**10.2 J** !
BARIUM	48.2 J	NA	132 J	174 J	31.6 J	81.0 J
BERYLLIUM	0.13 J	NA	0.17 J	0.20 J	0.01 UJ	0.20 J
CADMIUM	0.04 UJ	NA	0.04 UJ	0.03 UJ	0.04 UJ	0.04 UJ
CALCIUM	6,510 J	NA	14,300 J	6,170 J	12,400 J	5,440 J
CHROMIUM	24.4 J	NA	29.7 J	31.4 J	23.1 J	28.5 J
COBALT	9.9 J	NA	11.3 J	9.7 J	28.0 J	11.2 J
COPPER	26.0 J	NA	34.7 J	49.9 J	50.1 J	53.9 J
IRON	16,300 J	NA	**23,600 J**	**23,300 J**	**68,600 J** *	**28,700 J**
LEAD	30.5 J	NA	19.7 J	130 J *α	6.2 J	94.3 J *α
MAGNESIUM	4,100 J	NA	6,270 J	4,820 J	12,600 J	5,400 J
MANGANESE	286 J	NA	640 J	398 J	904 J	409 J
MERCURY	0.23 J	NA	0.23 J	0.51 J	0.09 J	0.25 J
MOLYBDENUM	0.14 UJ	NA	0.32 UJ	0.63 UJ	0.11 UJ	0.34 UJ
NICKEL	30.0 J	NA	31.7 J	32.8 J	14.9 J	26.8 J
POTASSIUM	477	NA	1,550	1,960	729	853
SELENIUM	0.43 J	NA	0.43 R	0.69 J	1.5 J	0.70 J
SILVER	0.10 UJ	NA	0.12 UJ	0.09 UJ	0.11 UJ	0.10 UJ
SODIUM	352 J	NA	946	36.4 U	41.1 U	38.5 U
THALLIUM	0.88 J	NA	0.64 U	0.51 U	0.85 J	0.70 J
VANADIUM	46.9 J	NA	41.1 J	43.4 J	186 J	64.9 J
ZINC	57.2 J	NA	71.4 J	151 J	108 J	124 J
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	0.01 U	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	0.01 U	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	0.01 U	NA
1,1-DICHLOROETHANE	NA	NA	NA	NA	0.01 U	NA
1,1-DICHLOROETHENE	NA	NA	NA	NA	0.01 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS041**	**FNBWSS041**	**FNBWSS042**	**FNBWSS044**	**FNBWSS045**	**FNBWSS046**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/06/1997	12/09/1998	10/06/1997	10/06/1997	10/07/1997	10/07/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROETHANE	NA	NA	NA	NA	0.01 U	NA
1,2-DICHLOROETHENE (TOTAL)	NA	NA	NA	NA	0.01 U	NA
1,2-DICHLOROPROPANE	NA	NA	NA	NA	0.01 U	NA
2-BUTANONE	NA	NA	NA	NA	0.01 UJ	NA
2-HEXANONE	NA	NA	NA	NA	0.01 U	NA
4-METHYL-2-PENTANONE	NA	NA	NA	NA	0.01 U	NA
ACETONE	NA	NA	NA	NA	0.01 UJ	NA
BENZENE	NA	NA	NA	NA	0.01 U	NA
BROMODICHLOROMETHANE	NA	NA	NA	NA	0.01 U	NA
BROMOFORM	NA	NA	NA	NA	0.01 U	NA
BROMOMETHANE	NA	NA	NA	NA	0.01 U	NA
CARBON DISULFIDE	NA	NA	NA	NA	0.01 U	NA
CARBON TETRACHLORIDE	NA	NA	NA	NA	0.01 U	NA
CHLOROBENZENE	NA	NA	NA	NA	0.01 U	NA
CHLOROETHANE	NA	NA	NA	NA	0.01 U	NA
CHLOROFORM	NA	NA	NA	NA	0.01 U	NA
CHLOROMETHANE	NA	NA	NA	NA	0.01 U	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	0.01 U	NA
DIBROMOCHLOROMETHANE	NA	NA	NA	NA	0.01 U	NA
ETHYLBENZENE	NA	NA	NA	NA	0.01 U	NA
METHYLENE CHLORIDE	NA	NA	NA	NA	0.01 U	NA
STYRENE	NA	NA	NA	NA	0.01 U	NA
TETRACHLOROETHENE	NA	NA	NA	NA	0.01 U	NA
TOLUENE	NA	NA	NA	NA	0.01 U	NA
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	0.01 U	NA
TRICHLOROETHENE	NA	NA	NA	NA	0.01 U	NA
VINYL CHLORIDE	NA	NA	NA	NA	0.01 U	NA
XYLENE (TOTAL)	NA	NA	NA	NA	0.01 U	NA
TOTAL VOCS	NA	NA	NA	NA	0 U	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	NA	1 U	NA	NA	0.4 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS041**	**FNBWSS041**	**FNBWSS042**	**FNBWSS044**	**FNBWSS045**	**FNBWSS046**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/06/1997	12/09/1998	10/06/1997	10/06/1997	10/07/1997	10/07/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROBENZENE	NA	0.7 U	NA	NA	0.2 U	NA
1,3-DICHLOROBENZENE	NA	0.7 U	NA	NA	0.2 U	NA
1,4-DICHLOROBENZENE	NA	0.7 U	NA	NA	0.2 U	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	1 U	NA	NA	0.4 U	NA
2,4,5-TRICHLOROPHENOL	NA	3 U	NA	NA	0.9 U	NA
2,4,6-TRICHLOROPHENOL	NA	1 U	NA	NA	0.4 U	NA
2,4-DICHLOROPHENOL	NA	1 U	NA	NA	0.4 U	NA
2,4-DIMETHYLPHENOL	NA	1 U	NA	NA	0.4 U	NA
2,4-DINITROPHENOL	NA	3 U	NA	NA	0.9 UJ	NA
2,4-DINITROTOLUENE	NA	1 U	NA	NA	0.4 U	NA
2,6-DINITROTOLUENE	NA	1 U	NA	NA	0.4 U	NA
2-CHLORONAPHTHALENE	NA	1 U	NA	NA	0.4 U	NA
2-CHLOROPHENOL	NA	1 U	NA	NA	0.4 U	NA
2-METHYLNAPHTHALENE	NA	0.2 J	NA	NA	0.4 U	NA
2-METHYLPHENOL	NA	1 U	NA	NA	0.4 U	NA
2-NITROANILINE	NA	3 U	NA	NA	0.9 U	NA
2-NITROPHENOL	NA	1 U	NA	NA	0.4 U	NA
3,3'-DICHLOROBENZIDINE	NA	1 UJ	NA	NA	0.4 UJ	NA
3-NITROANILINE	NA	3 U	NA	NA	0.9 U	NA
4,6-DINITRO-2-METHYLPHENOL	NA	3 U	NA	NA	0.9 U	NA
4-BROMOPHENYL-PHENYLETHER	NA	1 U	NA	NA	0.4 U	NA
4-CHLORO-3-METHYLPHENOL	NA	1 U	NA	NA	0.4 U	NA
4-CHLOROANILINE	NA	1 U	NA	NA	0.4 U	NA
4-CHLOROPHENYL-PHENYLETHER	NA	1 U	NA	NA	0.4 U	NA
4-METHYLPHENOL	NA	1 U	NA	NA	0.4 U	NA
4-NITROANILINE	NA	3 U	NA	NA	0.9 U	NA
4-NITROPHENOL	NA	3 U	NA	NA	0.9 UJ	NA
ACENAPHTHENE	NA	1 U	NA	NA	0.4 U	NA
ACENAPHTHYLENE	NA	1 U	NA	NA	0.4 U	NA
ANTHRACENE	NA	1 U	NA	NA	0.4 U	NA
BENZO(A)ANTHRACENE	NA	1 UJ	NA	NA	0.4 U	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS041**	**FNBWSS041**	**FNBWSS042**	**FNBWSS044**	**FNBWSS045**	**FNBWSS046**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/06/1997	12/09/1998	10/06/1997	10/06/1997	10/07/1997	10/07/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)PYRENE	NA	1 R	NA	NA	0.4 U	NA
BENZO(B)FLUORANTHENE	NA	1 R	NA	NA	0.4 U	NA
BENZO(G,H,I)PERYLENE	NA	1 R	NA	NA	0.4 U	NA
BENZO(K)FLUORANTHENE	NA	1 R	NA	NA	0.4 U	NA
BIS(2-CHLOROETHOXY)METHANE	NA	1 U	NA	NA	0.4 U	NA
BIS(2-CHLOROETHYL)ETHER	NA	1 U	NA	NA	0.4 U	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	0.5 UJ	NA	NA	0.2 U	NA
BUTYLBENZYLPHTHALATE	NA	1 UJ	NA	NA	0.4 U	NA
CARBAZOLE	NA	1 U	NA	NA	0.4 U	NA
CHRYSENE	NA	0.8 J	NA	NA	0.4 U	NA
DI-N-BUTYLPHTHALATE	NA	1 UJ	NA	NA	0.4 U	NA
DI-N-OCTYLPHTHALATE	NA	1 R	NA	NA	0.4 UJ	NA
DIBENZ(A,H)ANTHRACENE	NA	1 R	NA	NA	0.4 U	NA
DIBENZOFURAN	NA	1 U	NA	NA	0.4 U	NA
DIETHYLPHTHALATE	NA	1 U	NA	NA	0.4 U	NA
DIMETHYLPHTHALATE	NA	1 U	NA	NA	0.4 U	NA
FLUORANTHENE	NA	1 U	NA	NA	0.4 U	NA
FLUORENE	NA	0.08 J	NA	NA	0.4 U	NA
HEXACHLOROBENZENE	NA	1 U	NA	NA	0.4 U	NA
HEXACHLOROBUTADIENE	NA	1 U	NA	NA	0.4 UJ	NA
HEXACHLOROCYCLOPENTADIENE	NA	1 UJ	NA	NA	0.4 UJ	NA
HEXACHLOROETHANE	NA	1 U	NA	NA	0.4 U	NA
INDENO(1,2,3-CD)PYRENE	NA	1 R	NA	NA	0.4 U	NA
ISOPHORONE	NA	1 U	NA	NA	0.4 U	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	1 U	NA	NA	0.4 U	NA
N-NITROSODIPHENYLAMINE (1)	NA	1 U	NA	NA	0.4 U	NA
NAPHTHALENE	NA	1 U	NA	NA	0.4 U	NA
NITROBENZENE	NA	1 U	NA	NA	0.4 U	NA
PENTACHLOROPHENOL	NA	3 U	NA	NA	0.9 U	NA
PHENANTHRENE	NA	0.2 J	NA	NA	0.4 U	NA
PHENOL	NA	1 U	NA	NA	0.4 U	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS041	FNBWSS041	FNBWSS042	FNBWSS044	FNBWSS045	FNBWSS046
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/06/1997	12/09/1998	10/06/1997	10/06/1997	10/07/1997	10/07/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PYRENE	NA	0.1 J	NA	NA	0.4 U	NA
TOTAL SVOCS	NA	1 J	NA	NA	0 U	NA
PESTICIDES (mg/kg)						
4,4'-DDD	0.008	NA	0.004 U	0.005	0.004 UJ	0.004 J
4,4'-DDE	0.004 J	NA	0.004 U	0.006	0.004 U	0.003 U
4,4'-DDT	0.009 J	NA	0.004 U	0.02	0.007 J	0.05 J
ALDRIN	0.002 U	NA	0.002 U	0.002 U	0.002 U	0.002 U
ALPHA-BHC	0.002 U	NA	0.002 U	0.002 U	0.002 U	0.002 U
ALPHA-CHLORDANE	0.001 J	NA	0.002 U	0.007	0.002 U	0.003 J
BETA-BHC	0.002 U	NA	0.002 U	0.002 U	0.002 U	0.002 U
DELTA-BHC	0.002 U	NA	0.002 U	0.002 U	0.002 U	0.002 U
DIELDRIN	0.004 U	NA	0.004 U	0.004	0.004 U	0.003 U
ENDOSULFAN I	0.002	NA	0.002 U	0.002 J	0.002 U	0.005 J
ENDOSULFAN II	0.004 UJ	NA	0.004 U	0.004 U	0.004 UJ	0.003 U
ENDOSULFAN SULFATE	0.004 UJ	NA	0.004 U	0.004 U	0.004 UJ	0.003 U
ENDRIN	0.004 UJ	NA	0.004 U	0.004 U	0.004 U	0.002 J
ENDRIN ALDEHYDE	0.004 UJ	NA	0.004 U	0.004 U	0.003 J	0.006 J
ENDRIN KETONE	0.002 J	NA	0.004 U	0.004 U	0.004 UJ	0.006 J
GAMMA-BHC (LINDANE)	0.002 U	NA	0.002 U	0.002 U	0.002 U	0.002 U
GAMMA-CHLORDANE	0.001 J	NA	0.002 U	0.006	0.002 U	0.002 J
HEPTACHLOR	0.0003 U	NA	0.0004 U	0.0003 U	0.0003 U	0.0003 U
HEPTACHLOR EPOXIDE	0.0003 U	NA	0.0004 U	0.0007	0.0003 U	0.0003 U
METHOXYCHLOR	0.02 U	NA	0.02 U	0.02 U	0.02 UJ	0.02 U
TOXAPHENE	0.09 U	NA	0.1 U	0.09 U	0.1 UJ	0.09 U
PCBs (mg/kg)						
AROCLOR-1016	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1221	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1232	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1242	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.02 U

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS041**	**FNBWSS041**	**FNBWSS042**	**FNBWSS044**	**FNBWSS045**	**FNBWSS046**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/06/1997	12/09/1998	10/06/1997	10/06/1997	10/07/1997	10/07/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PCBs (mg/kg)						
AROCLOR-1248	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1254	0.02 U	NA	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1260	0.02 U	NA	0.02 U	0.06	0.07 J	0.1 J
TOTAL PCBS	0 U	NA	0 U	0.06	0.07 J	0.1 J
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	55.0 U	NA	12.0 U	55.0 Y	11.0 U	51.0 U
GASOLINE RANGE	0.60 UJ	NA	0.60 U	0.50 U	0.60 U	2.0 UJ
MOTOR OIL RANGE	**1,500 Y**	NA	40.0 U	230 Y	37.0 U	**440 Y**
TOTAL ORGANIC CARBON (mg/kg)						
TOC	NA	62,000	NA	NA	NA	NA
pH						
PH	7.9	NA	9.1	8.1	8.2	8.0
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	8.8	NA	17.7	5.7	10.5	2.3

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS047**	**FNBWSS048**	**FNBWSS049**	**FNBWSS051**	**FNBWSS052**	**FNBWSS052**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/07/1997	10/07/1997	10/07/1997	10/07/1997	10/07/1997	04/15/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	7,400 J	8,010 J	7,210 J	17,800 J	13,700 J	NA
ANTIMONY	0.67 J	0.50 J	0.39 J	0.29 R	1.2 J	NA
ARSENIC	**3.7 J** !	**2.7 J**	**1.5 J**	**12.5 J** !	**3.4 J** !	NA
BARIUM	49.5 J	53.9 J	53.7 J	167 J	80.2 J	NA
BERYLLIUM	0.19 J	0.06 J	0.11 J	0.41 J	0.02 J	NA
CADMIUM	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	NA
CALCIUM	7,040 J	2,560 J	1,300 J	5,530 J	18,700 J	NA
CHROMIUM	23.2 J	22.0 J	18.0 J	32.8 J	41.5 J	NA
CHROMIUM VI	NA	NA	NA	NA	NA	0.07 U
COBALT	8.2 J	7.2 J	5.1 J	17.9 J	15.8 J	NA
COPPER	21.8 J	18.2 J	7.9 J	55.0 J	38.9 J	NA
IRON	17,800 J	16,600 J	10,800 J	**35,400 J**	**26,200 J**	NA
LEAD	77.5 J *α	25.4 J	4.3 J	17.9 J	79.2 J *α	NA
MAGNESIUM	4,560 J	3,180 J	2,120 J	6,230 J	8,410 J	NA
MANGANESE	353 J	274 J	105 J	524 J	445 J	NA
MERCURY	0.11 J	0.10 U	0.08 U	0.13 J	0.49 J	NA
MOLYBDENUM	0.24 UJ	0.22 UJ	0.18 UJ	0.32 UJ	0.18 UJ	NA
NICKEL	26.3 J	21.8 J	21.1 J	39.3 J	41.6 J	NA
POTASSIUM	624	1,100	1,270	1,700	985	NA
SELENIUM	0.51 J	0.52 J	0.40 R	0.72 J	0.48 J	NA
SILVER	0.10 UJ	0.10 UJ	0.11 UJ	0.11 UJ	0.10 UJ	NA
SODIUM	39.5 U	39.1 U	43.0 U	68.8 J	696	NA
THALLIUM	0.56 J	0.59 J	0.60 U	0.60 U	0.54 U	NA
VANADIUM	42.8 J	40.0 J	23.5 J	50.2 J	72.1 J	NA
ZINC	122 J	42.4 J	24.1 J	95.7 J	101 J	NA
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	NA	NA	0.01 U	NA	0.01 U	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	0.01 U	NA	0.01 U	NA
1,1,2-TRICHLOROETHANE	NA	NA	0.01 U	NA	0.01 U	NA
1,1-DICHLOROETHANE	NA	NA	0.01 U	NA	0.01 U	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS047	FNBWSS048	FNBWSS049	FNBWSS051	FNBWSS052	FNBWSS052
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/07/1997	10/07/1997	10/07/1997	10/07/1997	10/07/1997	04/15/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1-DICHLOROETHENE	NA	NA	0.01 U	NA	0.01 U	NA
1,2-DICHLOROETHANE	NA	NA	0.01 U	NA	0.01 U	NA
1,2-DICHLOROETHENE (TOTAL)	NA	NA	0.01 U	NA	0.01 U	NA
1,2-DICHLOROPROPANE	NA	NA	0.01 U	NA	0.01 U	NA
2-BUTANONE	NA	NA	0.01 UJ	NA	0.01 UJ	NA
2-HEXANONE	NA	NA	0.01 U	NA	0.01 U	NA
4-METHYL-2-PENTANONE	NA	NA	0.01 U	NA	0.01 U	NA
ACETONE	NA	NA	0.01 UJ	NA	0.02 UJ	NA
BENZENE	NA	NA	0.01 U	NA	0.01 U	NA
BROMODICHLOROMETHANE	NA	NA	0.01 U	NA	0.01 U	NA
BROMOFORM	NA	NA	0.01 U	NA	0.01 U	NA
BROMOMETHANE	NA	NA	0.01 U	NA	0.01 U	NA
CARBON DISULFIDE	NA	NA	0.01 U	NA	0.01 U	NA
CARBON TETRACHLORIDE	NA	NA	0.01 U	NA	0.01 U	NA
CHLOROBENZENE	NA	NA	0.01 U	NA	0.01 U	NA
CHLOROETHANE	NA	NA	0.01 U	NA	0.01 U	NA
CHLOROFORM	NA	NA	0.01 U	NA	0.01 U	NA
CHLOROMETHANE	NA	NA	0.01 U	NA	0.01 U	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	0.01 U	NA	0.01 U	NA
DIBROMOCHLOROMETHANE	NA	NA	0.01 U	NA	0.01 U	NA
ETHYLBENZENE	NA	NA	0.01 U	NA	0.01 U	NA
METHYLENE CHLORIDE	NA	NA	0.01 U	NA	0.01 U	NA
STYRENE	NA	NA	0.01 U	NA	0.01 U	NA
TETRACHLOROETHENE	NA	NA	0.01 U	NA	0.01 U	NA
TOLUENE	NA	NA	0.01 U	NA	0.01 U	NA
TRANS-1,3-DICHLOROPROPENE	NA	NA	0.01 U	NA	0.01 U	NA
TRICHLOROETHENE	NA	NA	0.01 U	NA	0.01 U	NA
VINYL CHLORIDE	NA	NA	0.01 U	NA	0.01 U	NA
XYLENE (TOTAL)	NA	NA	0.01 U	NA	0.01 U	NA
TOTAL VOCS	NA	NA	0 U	NA	0 U	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	NA	NA	0.4 U	NA	0.04 J	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS047**	**FNBWSS048**	**FNBWSS049**	**FNBWSS051**	**FNBWSS052**	**FNBWSS052**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/07/1997	10/07/1997	10/07/1997	10/07/1997	10/07/1997	04/15/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROBENZENE	NA	NA	0.2 U	NA	0.2 U	NA
1,3-DICHLOROBENZENE	NA	NA	0.2 U	NA	0.2 U	NA
1,4-DICHLOROBENZENE	NA	NA	0.2 U	NA	0.2 U	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	0.4 U	NA	0.3 U	NA
2,4,5-TRICHLOROPHENOL	NA	NA	0.9 U	NA	0.9 U	NA
2,4,6-TRICHLOROPHENOL	NA	NA	0.4 U	NA	0.3 U	NA
2,4-DICHLOROPHENOL	NA	NA	0.4 U	NA	0.3 U	NA
2,4-DIMETHYLPHENOL	NA	NA	0.4 U	NA	0.3 U	NA
2,4-DINITROPHENOL	NA	NA	0.9 UJ	NA	0.9 UJ	NA
2,4-DINITROTOLUENE	NA	NA	0.4 U	NA	0.3 U	NA
2,6-DINITROTOLUENE	NA	NA	0.4 U	NA	0.3 U	NA
2-CHLORONAPHTHALENE	NA	NA	0.4 U	NA	0.3 U	NA
2-CHLOROPHENOL	NA	NA	0.4 U	NA	0.3 U	NA
2-METHYLNAPHTHALENE	NA	NA	0.4 U	NA	0.3 U	NA
2-METHYLPHENOL	NA	NA	0.4 U	NA	0.3 U	NA
2-NITROANILINE	NA	NA	0.9 U	NA	0.9 U	NA
2-NITROPHENOL	NA	NA	0.4 U	NA	0.3 U	NA
3,3'-DICHLOROBENZIDINE	NA	NA	0.4 UJ	NA	0.3 UJ	NA
3-NITROANILINE	NA	NA	0.9 U	NA	0.9 UJ	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	0.9 U	NA	0.9 UJ	NA
4-BROMOPHENYL-PHENYLETHER	NA	NA	0.4 U	NA	0.3 U	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	0.4 U	NA	0.3 U	NA
4-CHLOROANILINE	NA	NA	0.4 U	NA	0.3 U	NA
4-CHLOROPHENYL-PHENYLETHER	NA	NA	0.4 U	NA	0.3 U	NA
4-METHYLPHENOL	NA	NA	0.4 U	NA	0.3 U	NA
4-NITROANILINE	NA	NA	0.9 U	NA	0.9 UJ	NA
4-NITROPHENOL	NA	NA	0.9 UJ	NA	0.9 UJ	NA
ACENAPHTHENE	NA	NA	0.4 U	NA	0.3 U	NA
ACENAPHTHYLENE	NA	NA	0.4 U	NA	0.3 U	NA
ANTHRACENE	NA	NA	0.4 U	NA	0.3 U	NA
BENZO(A)ANTHRACENE	NA	NA	0.4 U	NA	0.3 U	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS047**	**FNBWSS048**	**FNBWSS049**	**FNBWSS051**	**FNBWSS052**	**FNBWSS052**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/07/1997	10/07/1997	10/07/1997	10/07/1997	10/07/1997	04/15/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)PYRENE	NA	NA	0.4 U	NA	**0.2 J**	NA
BENZO(B)FLUORANTHENE	NA	NA	0.4 U	NA	0.3 U	NA
BENZO(G,H,I)PERYLENE	NA	NA	0.4 U	NA	0.3 U	NA
BENZO(K)FLUORANTHENE	NA	NA	0.4 U	NA	0.3 U	NA
BIS(2-CHLOROETHOXY)METHANE	NA	NA	0.4 U	NA	0.3 U	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	0.4 U	NA	0.3 UJ	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	0.1 U	NA	0.2 UJ	NA
BUTYLBENZYLPHTHALATE	NA	NA	0.4 U	NA	0.3 U	NA
CARBAZOLE	NA	NA	0.4 U	NA	0.3 U	NA
CHRYSENE	NA	NA	0.4 U	NA	0.07 J	NA
DI-N-BUTYLPHTHALATE	NA	NA	0.4 U	NA	0.3 U	NA
DI-N-OCTYLPHTHALATE	NA	NA	0.4 UJ	NA	0.3 U	NA
DIBENZ(A,H)ANTHRACENE	NA	NA	0.4 U	NA	0.3 U	NA
DIBENZOFURAN	NA	NA	0.4 U	NA	0.3 U	NA
DIETHYLPHTHALATE	NA	NA	0.4 U	NA	0.3 U	NA
DIMETHYLPHTHALATE	NA	NA	0.4 U	NA	0.3 U	NA
FLUORANTHENE	NA	NA	0.4 U	NA	0.05 J	NA
FLUORENE	NA	NA	0.4 U	NA	0.3 U	NA
HEXACHLOROBENZENE	NA	NA	0.4 U	NA	0.3 UJ	NA
HEXACHLOROBUTADIENE	NA	NA	0.4 UJ	NA	0.3 UJ	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	0.4 UJ	NA	0.3 UJ	NA
HEXACHLOROETHANE	NA	NA	0.4 U	NA	0.3 U	NA
INDENO(1,2,3-CD)PYRENE	NA	NA	0.4 U	NA	0.3 U	NA
ISOPHORONE	NA	NA	0.4 U	NA	0.3 U	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	0.4 U	NA	0.3 U	NA
N-NITROSODIPHENYLAMINE (1)	NA	NA	0.4 U	NA	0.3 U	NA
NAPHTHALENE	NA	NA	0.4 U	NA	0.3 U	NA
NITROBENZENE	NA	NA	0.4 U	NA	0.3 U	NA
PENTACHLOROPHENOL	NA	NA	0.9 U	NA	0.9 UJ	NA
PHENANTHRENE	NA	NA	0.4 U	NA	0.3 U	NA
PHENOL	NA	NA	0.4 U	NA	0.3 U	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS047	FNBWSS048	FNBWSS049	FNBWSS051	FNBWSS052	FNBWSS052
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/07/1997	10/07/1997	10/07/1997	10/07/1997	10/07/1997	04/15/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PYRENE	NA	NA	0.4 U	NA	0.05 J	NA
TOTAL SVOCS	NA	NA	0 U	NA	0.4 J	NA
PESTICIDES (mg/kg)						
4,4'-DDD	0.002 J	0.003 U	0.004 U	0.004 U	0.003 U	NA
4,4'-DDE	0.004 U	0.003 U	0.01	0.004 U	0.003 U	NA
4,4'-DDT	0.008 J	0.009	0.005	0.002 J	0.002 J	NA
ALDRIN	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	NA
ALPHA-BHC	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	NA
ALPHA-CHLORDANE	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	NA
BETA-BHC	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	NA
DELTA-BHC	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	NA
DIELDRIN	0.004 U	0.003 U	0.004 U	0.004 U	0.003 U	NA
ENDOSULFAN I	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	NA
ENDOSULFAN II	0.004 UJ	0.003 U	0.004 U	0.004 U	0.003 U	NA
ENDOSULFAN SULFATE	0.002 J	0.003 U	0.004 U	0.004 U	0.003 U	NA
ENDRIN	0.004 J	0.003 U	0.004 U	0.004 U	0.003 U	NA
ENDRIN ALDEHYDE	0.005 J	0.003 U	0.004 U	0.004 U	0.003 U	NA
ENDRIN KETONE	0.007 J	0.003 U	0.004 U	0.004 U	0.003 U	NA
GAMMA-BHC (LINDANE)	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	NA
GAMMA-CHLORDANE	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	NA
HEPTACHLOR	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	NA
HEPTACHLOR EPOXIDE	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	NA
METHOXYCHLOR	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA
TOXAPHENE	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA
PCBs (mg/kg)						
AROCLOR-1016	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA
AROCLOR-1221	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA
AROCLOR-1232	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA
AROCLOR-1242	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS047**	**FNBWSS048**	**FNBWSS049**	**FNBWSS051**	**FNBWSS052**	**FNBWSS052**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/07/1997	10/07/1997	10/07/1997	10/07/1997	10/07/1997	04/15/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PCBs (mg/kg)						
AROCLOR-1248	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA
AROCLOR-1254	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA
AROCLOR-1260	0.02 U	0.03	0.02 U	0.03	0.03	NA
TOTAL PCBS	0 U	0.03	0 U	0.03	0.03	NA
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	54.0 U	10.0 U	11.0 U	55.0 U	52.0 U	NA
GASOLINE RANGE	0.50 UJ	0.50 UJ	0.50 U	0.60 UJ	0.50 UJ	NA
MOTOR OIL RANGE	310 Y	96.0 Y	36.0 U	330 Y	320 Y	NA
pH						
PH	10.1	7.9	7.4	8.0	7.7	NA
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	6.9	1.4	8.6	8.6	3.0	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS053**	**FNBWSS057**	**FNBWSS058**	**FNBWSS060**	**FNBWSS060**	**FNBWSS061**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/08/1997	10/08/1997	10/08/1997	10/09/1997	04/15/1998	10/09/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	9,290 J	11,200 J	15,800 J	11,600 J	NA	4,880 J
ANTIMONY	0.35 J	1.2 J	0.57 J	0.76 J	NA	0.85 J
ARSENIC	**7.7 J** !	**4.5 J** !	**6.3 J** !	**8.6 J** !	NA	**2.1 J**
BARIUM	85.1 J	127 J	200 J	279 J	NA	50.5 J
BERYLLIUM	0.33 J	0.12 J	0.41 J	0.23 J	NA	0.22 J
CADMIUM	0.04 UJ	0.04 UJ	0.04 UJ	0.16 J	NA	0.04 UJ
CALCIUM	4,140 J	10,700 J	42,100 J	5,890 J	NA	3,920 J
CHROMIUM	21.6 J	39.3 J	35.8 J	51.5 J	NA	16.1 J
CHROMIUM VI	NA	NA	NA	NA	0.07 U	NA
COBALT	7.6 J	12.4 J	11.2 J	11.6 J	NA	5.0 J
COPPER	24.6 J	60.0 J	31.8 J	144 J *	NA	381 J *α
IRON	20,500 J	**26,400 J**	21,900 J	**32,400 J**	NA	13,000 J
LEAD	84.8 J *α	97.7 J *α	29.4 J	168 J *α	NA	106 J *α
MAGNESIUM	3,660 J	6,560 J	3,150 J	5,910 J	NA	2,030 J
MANGANESE	328 J	437 J	353 J	459 J	NA	350 J
MERCURY	0.37 J	0.30 J	0.18 J	9.4 J *	NA	0.71 J
MOLYBDENUM	0.24 UJ	0.25 J	0.16 UJ	1.3 J	NA	0.23 J
NICKEL	23.9 J	35.8 J	36.6 J	47.9 J	NA	19.3 J
POTASSIUM	1,580	958	1,930	1,890	NA	403 J
SELENIUM	0.73 J	0.85 J	0.36 R	1.0 J	NA	0.44 J
SILVER	0.10 UJ	0.11 U	0.10 UJ	0.25 UJ	NA	0.12 U
SODIUM	38.8 U	321 J	39.2 U	693 J	NA	83.5 J
THALLIUM	0.54 U	0.61 U	0.55 U	0.68 U	NA	0.63 U
VANADIUM	32.6 J	60.7 J	47.0 J	44.1 J	NA	18.9 J
ZINC	106 J	157 J	58.4 J	519 J *α	NA	152 J
PESTICIDES (mg/kg)						
4,4'-DDD	0.003 U	0.003 U	0.003 U	0.004 U	NA	0.004 U
4,4'-DDE	0.003 U	0.003 U	0.002 J	0.004 U	NA	0.004 U
4,4'-DDT	0.003 J	0.004 J	0.007	0.004 U	NA	0.004
ALDRIN	0.002 U	0.002 U	0.002 U	0.002 U	NA	0.002 U

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS053	FNBWSS057	FNBWSS058	FNBWSS060	FNBWSS060	FNBWSS061
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/08/1997	10/08/1997	10/08/1997	10/09/1997	04/15/1998	10/09/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PESTICIDES (mg/kg)						
ALPHA-BHC	0.02	0.002 U	0.02	0.003 UJ	NA	0.002 UJ
ALPHA-CHLORDANE	0.002 U	0.001 J	0.002 U	0.002 U	NA	0.002 J
BETA-BHC	0.008	0.002 U	0.006	0.003 UJ	NA	0.002 UJ
DELTA-BHC	0.004	0.002 U	0.003	0.002 U	NA	0.002 U
DIELDRIN	0.003 U	0.003 U	0.003 U	0.004 U	NA	0.004 U
ENDOSULFAN I	0.002 U	0.002 U	0.002 U	0.002 U	NA	0.002 U
ENDOSULFAN II	0.003 U	0.003 U	0.003 U	0.004 U	NA	0.004 U
ENDOSULFAN SULFATE	0.003 U	0.003 U	0.003 U	0.004 U	NA	0.004 U
ENDRIN	0.003 U	0.003 UJ	0.003 U	0.004 U	NA	0.004 U
ENDRIN ALDEHYDE	0.002 J	0.003 U	0.002 J	0.004 U	NA	0.004 U
ENDRIN KETONE	0.003 U	0.003 U	0.003 U	0.004 U	NA	0.004 U
GAMMA-BHC (LINDANE)	0.007	0.002 UJ	0.006	0.002 U	NA	0.002 U
GAMMA-CHLORDANE	0.002 U	0.002 U	0.002 U	0.002 U	NA	0.001 J
HEPTACHLOR	0.0003 U	0.0003 U	0.0003 U	0.0003 U	NA	0.0003 U
HEPTACHLOR EPOXIDE	0.0003 U	0.0003 U	0.0003 U	0.0003 U	NA	0.0003 U
METHOXYCHLOR	0.02 U	0.02 UJ	0.02 U	0.02 U	NA	0.02 U
TOXAPHENE	0.09 U	0.09 U	0.09 U	0.1 U	NA	0.09 U
PCBs (mg/kg)						
AROCLOR-1016	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.02 U
AROCLOR-1221	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.02 U
AROCLOR-1232	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.02 U
AROCLOR-1242	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.02 U
AROCLOR-1248	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.02 U
AROCLOR-1254	0.02 U	0.02 U	0.02 U	0.02 U	NA	0.02 U
AROCLOR-1260	0.04	0.03	0.06	0.02 U	NA	0.02
TOTAL PCBS	0.04	0.03	0.06	0 U	NA	0.02
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	10.0 U	52.0 U	10.0 U	57.0 U	NA	53.0 U
GASOLINE RANGE	0.50 UJ	0.50 UJ	0.60 UJ	0.60 UJ	NA	0.50 UJ

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS053**	**FNBWSS057**	**FNBWSS058**	**FNBWSS060**	**FNBWSS060**	**FNBWSS061**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/08/1997	10/08/1997	10/08/1997	10/09/1997	04/15/1998	10/09/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PETROLEUM INDICATORS (mg/kg)						
MOTOR OIL RANGE	110 Y	**550 Y**	42.0 Y	**640 Y**	NA	**460 Y**
pH						
PH	7.4	8.0	8.2	8.2	NA	5.6
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	2.4	4.5	3.8	12.4	NA	5.5

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS061**	**FNBWSS062**	**FNBWSS063**	**FNBWSS065**	**FNBWSS068**	**FNBWSS070**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	04/09/1998	10/09/1997	10/09/1997	10/09/1997	10/13/1997	10/13/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	NA	14,000 J	4,400 J	10,100 J	13,100	5,170
ANTIMONY	NA	1.2 J	2.4 J	0.64 J	0.27 R	0.29 R
ARSENIC	NA	**3.3 J** !	**3.1 J** !	**6.6 J** !	**6.9** !	**2.8** !
BARIUM	NA	66.2 J	178 J	124 J	143	28.1
BERYLLIUM	NA	0.05 J	0.08 J	0.25 J	0.23 UJ	0.12 UJ
CADMIUM	NA	0.04 UJ	3.8 J	0.05 UJ	0.04 U	0.04 U
CALCIUM	NA	11,600 J	3,170 J	6,980 J	6,370	4,110
CHROMIUM	NA	23.2 J	45.9 J	29.0 J	32.6	22.4
CHROMIUM VI	0.06 U	NA	NA	NA	NA	NA
COBALT	NA	16.7 J	5.0 J	9.6 J	9.8	8.9
COPPER	NA	64.6 J	123 J *	62.5 J	56.5	25.3
IRON	NA	**28,900 J**	10,600 J	**22,200 J**	**26,200**	**22,100**
LEAD	NA	88.6 J *α	**276 J** ***α**	138 J *α	116 *α	49.1
MAGNESIUM	NA	6,700 J	2,160 J	4,690 J	4,960	1,900
MANGANESE	NA	411 J	158 J	371 J	413	595
MERCURY	NA	0.83 J	0.24 J	0.28 J	0.49	0.15
MOLYBDENUM	NA	0.17 J	0.40 J	0.56 J	0.66 UJ	0.65 UJ
NICKEL	NA	31.6 J	23.4 J	32.7 J	36.4	18.0
POTASSIUM	NA	938	478 J	1,540	2,100 J	301 J
SELENIUM	NA	0.82 J	0.42 UJ	0.62 J	0.75	1.0
SILVER	NA	0.12 U	0.40 UJ	0.12 U	0.10 U	0.11 U
SODIUM	NA	275 J	94.5 J	92.0 J	40.4 U	113 J
THALLIUM	NA	0.66 U	0.63 U	0.67 U	0.56 UJ	0.61 UJ
VANADIUM	NA	78.9 J	20.8 J	42.3 J	41.2	31.7
ZINC	NA	95.7 J	667 J *α	208 J	186	63.0
PESTICIDES (mg/kg)						
4,4'-DDD	NA	0.004	0.004 U	0.004 UJ	0.004 UJ	0.004 U
4,4'-DDE	NA	0.004 U	0.004 U	0.006 J	0.004 UJ	0.004 U
4,4'-DDT	NA	0.03	0.006	0.01 J	0.007 J	0.004 U
ALDRIN	NA	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS061	FNBWSS062	FNBWSS063	FNBWSS065	FNBWSS068	FNBWSS070
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	04/09/1998	10/09/1997	10/09/1997	10/09/1997	10/13/1997	10/13/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PESTICIDES (mg/kg)						
ALPHA-BHC	NA	0.004 UJ	0.006 UJ	0.003 UJ	0.002 U	0.002 U
ALPHA-CHLORDANE	NA	0.002 U	0.001 J	0.02 J	0.002 U	0.002 U
BETA-BHC	NA	0.002 UJ	0.003 UJ	0.002 UJ	0.002 U	0.002 U
DELTA-BHC	NA	0.002 U	0.002 UJ	0.002 U	0.002 U	0.002 U
DIELDRIN	NA	0.004 U	0.004 U	0.004 UJ	0.004 UJ	0.004 U
ENDOSULFAN I	NA	0.002 U	0.002 U	0.002 UJ	0.002 UJ	0.002 U
ENDOSULFAN II	NA	0.004 U	0.004 U	0.004 UJ	0.004 UJ	0.004 U
ENDOSULFAN SULFATE	NA	0.004 U	0.004 U	0.004 UJ	0.004 UJ	0.004 U
ENDRIN	NA	0.004 U	0.004 U	0.004 UJ	0.004 UJ	0.004 U
ENDRIN ALDEHYDE	NA	0.004 U	0.004 U	0.002 J	0.004 UJ	0.004 U
ENDRIN KETONE	NA	0.004 U	0.004 U	0.004 UJ	0.002 J	0.004 U
GAMMA-BHC (LINDANE)	NA	0.002 U	0.002 UJ	0.002 U	0.002 U	0.002 U
GAMMA-CHLORDANE	NA	0.002 U	0.002 U	0.02 J	0.002 UJ	0.002 U
HEPTACHLOR	NA	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U
HEPTACHLOR EPOXIDE	NA	0.0003 U	0.0003 U	0.002	0.0003 U	0.0003 U
METHOXYCHLOR	NA	0.02 U	0.02 U	0.02 UJ	0.02 UJ	0.02 U
TOXAPHENE	NA	0.09 U	0.09 U	0.1 U	0.09 U	0.09 U
PCBs (mg/kg)						
AROCLOR-1016	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1221	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1232	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1242	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1248	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1254	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
AROCLOR-1260	NA	0.02 U	0.04	0.04	0.02 U	0.01 J
TOTAL PCBS	NA	0 U	0.04	0.04	0 U	0.01 J
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	NA	56.0 U	53.0 U	56.0 U	54.0 U	11.0 U
GASOLINE RANGE	NA	0.60 UJ	0.50 UJ	0.60 UJ	0.50 UJ	0.50 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS061**	**FNBWSS062**	**FNBWSS063**	**FNBWSS065**	**FNBWSS068**	**FNBWSS070**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	04/09/1998	10/09/1997	10/09/1997	10/09/1997	10/13/1997	10/13/1997
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PETROLEUM INDICATORS (mg/kg)						
MOTOR OIL RANGE	NA	**410 Y**	300 Y	**620 Y**	**1,000 Y**	84.0 Y
pH						
PH	NA	7.4	7.5	7.4	7.7	7.9
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	NA	10.5	6.1	11.0	7.5	6.2

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS072	FNBWSS073	FNBWSS073	FNBWSS076 [s]	FNBWSS091	FNBWSS092
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/13/1997	10/13/1997	04/15/1998	04/03/1998	09/17/1998	09/17/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
METALS (mg/kg)						
ALUMINUM	1,940	16,800	NA	NA	NA	NA
ANTIMONY	0.30 R	2.6 J	NA	5.4 J	NA	NA
ARSENIC	**0.47 J**	**7.3 J** !	NA	NA	NA	NA
BARIUM	13.0 J	109	NA	NA	NA	NA
BERYLLIUM	0.09 UJ	1.6 *α	NA	NA	NA	NA
CADMIUM	0.10 UJ	0.05 U	NA	10.0 U	NA	NA
CALCIUM	228 J	8,530	NA	34,600	NA	NA
CHROMIUM	3.1	438 *α	NA	99.2	NA	NA
CHROMIUM VI	NA	NA	0.58 UJ	NA	NA	NA
COBALT	0.60 UJ	7.2	NA	10.0 U	NA	NA
COPPER	1.6 J	20.1 J	NA	68.7	NA	NA
IRON	1,460	13,900	NA	**51,500**	NA	NA
LEAD	2.4	50.7 J	NA	34.9	NA	NA
MAGNESIUM	327 J	7,630	NA	NA	NA	NA
MANGANESE	28.5	204	NA	845	NA	NA
MERCURY	0.09 J	0.12	NA	NA	NA	NA
MOLYBDENUM	0.12 UJ	1.5 UJ	NA	NA	NA	NA
NICKEL	1.9 J	12.2 J	NA	43.5	NA	NA
POTASSIUM	358 J	1,620	NA	13,400	NA	NA
SELENIUM	0.41 U	0.50 U	NA	NA	NA	NA
SILVER	0.11 U	0.14 UJ	NA	0.80 J	NA	NA
SODIUM	44.4 U	1,850	NA	NA	NA	NA
THALLIUM	0.62 UJ	0.51 U	NA	NA	NA	NA
TIN	NA	NA	NA	8.4 J	NA	NA
TITANIUM	NA	NA	NA	4,910	NA	NA
VANADIUM	3.0 J	10.6	NA	159	NA	NA
ZINC	7.8	1,980 *α	NA	141	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA	0.4 U	0.4 U
1,2-DICHLOROBENZENE	NA	NA	NA	NA	0.2 U	0.2 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS072	FNBWSS073	FNBWSS073	FNBWSS076 [s]	FNBWSS091	FNBWSS092
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/13/1997	10/13/1997	04/15/1998	04/03/1998	09/17/1998	09/17/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,3-DICHLOROBENZENE	NA	NA	NA	NA	0.2 U	0.2 U
1,4-DICHLOROBENZENE	NA	NA	NA	NA	0.2 U	0.2 U
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	0.4 UJ	0.4 UJ
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	0.9 U	0.9 U
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	0.4 U	0.4 U
2,4-DICHLOROPHENOL	NA	NA	NA	NA	0.4 U	0.4 U
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	0.4 U	0.4 U
2,4-DINITROPHENOL	NA	NA	NA	NA	0.9 U	0.9 U
2,4-DINITROTOLUENE	NA	NA	NA	NA	0.4 U	0.4 U
2,6-DINITROTOLUENE	NA	NA	NA	NA	0.4 U	0.4 U
2-CHLORONAPHTHALENE	NA	NA	NA	NA	0.4 U	0.4 U
2-CHLOROPHENOL	NA	NA	NA	NA	0.4 U	0.4 U
2-METHYLNAPHTHALENE	NA	NA	NA	NA	0.4 U	0.4 U
2-METHYLPHENOL	NA	NA	NA	NA	0.4 U	0.4 U
2-NITROANILINE	NA	NA	NA	NA	0.9 UJ	0.9 UJ
2-NITROPHENOL	NA	NA	NA	NA	0.4 U	0.4 U
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	0.4 U	0.4 UJ
3-NITROANILINE	NA	NA	NA	NA	0.9 U	0.9 U
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	0.9 U	0.9 U
4-BROMOPHENYL-PHENYLETHER	NA	NA	NA	NA	0.4 U	0.4 U
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	0.4 U	0.4 U
4-CHLOROANILINE	NA	NA	NA	NA	0.4 U	0.4 U
4-CHLOROPHENYL-PHENYLETHER	NA	NA	NA	NA	0.4 U	0.4 U
4-METHYLPHENOL	NA	NA	NA	NA	0.4 U	0.4 U
4-NITROANILINE	NA	NA	NA	NA	0.9 U	0.9 U
4-NITROPHENOL	NA	NA	NA	NA	0.9 UJ	0.9 UJ
ACENAPHTHENE	NA	NA	NA	NA	0.4 U	0.4 U
ACENAPHTHYLENE	NA	NA	NA	NA	0.4 U	0.4 U
ANTHRACENE	NA	NA	NA	NA	0.4 U	0.4 U
BENZO(A)ANTHRACENE	NA	NA	NA	NA	0.4 U	0.4 UJ
BENZO(A)PYRENE	NA	NA	NA	NA	0.4 R	0.4 R

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS072	FNBWSS073	FNBWSS073	FNBWSS076 [s]	FNBWSS091	FNBWSS092
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/13/1997	10/13/1997	04/15/1998	04/03/1998	09/17/1998	09/17/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(B)FLUORANTHENE	NA	NA	NA	NA	0.4 R	0.4 R
BENZO(G,H,I)PERYLENE	NA	NA	NA	NA	0.4 R	0.4 R
BENZO(K)FLUORANTHENE	NA	NA	NA	NA	0.4 R	0.4 R
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	0.4 U	0.4 U
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	0.4 U	0.4 U
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	0.2 UJ	0.2 UJ
BUTYLBENZYLPHTHALATE	NA	NA	NA	NA	0.4 U	0.4 UJ
CARBAZOLE	NA	NA	NA	NA	0.4 U	0.4 U
CHRYSENE	NA	NA	NA	NA	0.05 J	0.4 UJ
DI-N-BUTYLPHTHALATE	NA	NA	NA	NA	0.4 U	0.4 U
DI-N-OCTYLPHTHALATE	NA	NA	NA	NA	0.4 R	0.4 R
DIBENZ(A,H)ANTHRACENE	NA	NA	NA	NA	0.4 R	0.4 R
DIBENZOFURAN	NA	NA	NA	NA	0.4 U	0.4 U
DIETHYLPHTHALATE	NA	NA	NA	NA	0.4 UJ	0.4 U
DIMETHYLPHTHALATE	NA	NA	NA	NA	0.4 U	0.4 U
FLUORANTHENE	NA	NA	NA	NA	0.03 J	0.4 U
FLUORENE	NA	NA	NA	NA	0.4 U	0.4 U
HEXACHLOROBENZENE	NA	NA	NA	NA	0.4 U	0.4 U
HEXACHLOROBUTADIENE	NA	NA	NA	NA	0.4 U	0.4 U
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	0.4 UJ	0.4 U
HEXACHLOROETHANE	NA	NA	NA	NA	0.4 UJ	0.4 UJ
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	NA	0.4 R	0.4 R
ISOPHORONE	NA	NA	NA	NA	0.4 U	0.4 U
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	0.4 UJ	0.4 UJ
N-NITROSODIPHENYLAMINE (1)	NA	NA	NA	NA	0.4 U	0.4 U
NAPHTHALENE	NA	NA	NA	NA	0.4 U	0.4 U
NITROBENZENE	NA	NA	NA	NA	0.4 UJ	0.4 UJ
PENTACHLOROPHENOL	NA	NA	NA	NA	0.9 U	0.9 U
PHENANTHRENE	NA	NA	NA	NA	0.4 U	0.4 U
PHENOL	NA	NA	NA	NA	0.4 U	0.4 U
PYRENE	NA	NA	NA	NA	0.07 J	0.4 UJ

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS072	FNBWSS073	FNBWSS073	FNBWSS076 [s]	FNBWSS091	FNBWSS092
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/13/1997	10/13/1997	04/15/1998	04/03/1998	09/17/1998	09/17/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
TOTAL SVOCS	NA	NA	NA	NA	0.2 J	0 U
PESTICIDES (mg/kg)						
4,4'-DDD	0.003 U	0.002 J	NA	NA	NA	NA
4,4'-DDE	0.003 U	0.006 J	NA	NA	NA	NA
4,4'-DDT	0.003 U	0.04 J	NA	NA	NA	NA
ALDRIN	0.002 U	0.002 U	NA	NA	NA	NA
ALPHA-BHC	0.002 U	0.002 U	NA	NA	NA	NA
ALPHA-CHLORDANE	0.002 U	0.001 J	NA	NA	NA	NA
BETA-BHC	0.002 U	0.002 U	NA	NA	NA	NA
DELTA-BHC	0.002 U	0.002 U	NA	NA	NA	NA
DIELDRIN	0.003 U	0.004 U	NA	NA	NA	NA
ENDOSULFAN I	0.002 U	0.002 U	NA	NA	NA	NA
ENDOSULFAN II	0.003 U	0.004 U	NA	NA	NA	NA
ENDOSULFAN SULFATE	0.003 U	0.004 U	NA	NA	NA	NA
ENDRIN	0.003 U	0.004 U	NA	NA	NA	NA
ENDRIN ALDEHYDE	0.003 U	0.004 U	NA	NA	NA	NA
ENDRIN KETONE	0.003 U	0.003 U	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.002 U	0.002 U	NA	NA	NA	NA
GAMMA-CHLORDANE	0.002 U	0.002 U	NA	NA	NA	NA
HEPTACHLOR	0.0003 U	0.0004 U	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	0.0003 U	0.0004 U	NA	NA	NA	NA
METHOXYCHLOR	0.02 U	0.01 U	NA	NA	NA	NA
TOXAPHENE	0.09 U	0.1 U	NA	NA	NA	NA
PCBs (mg/kg)						
AROCLOR-1016	0.02 U	0.02 U	NA	NA	NA	NA
AROCLOR-1221	0.02 U	0.02 U	NA	NA	NA	NA
AROCLOR-1232	0.02 U	0.02 U	NA	NA	NA	NA
AROCLOR-1242	0.02 U	0.02 U	NA	NA	NA	NA
AROCLOR-1248	0.02 U	0.02 U	NA	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS072**	**FNBWSS073**	**FNBWSS073**	**FNBWSS076** [s]	**FNBWSS091**	**FNBWSS092**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5
Sample Date	10/13/1997	10/13/1997	04/15/1998	04/03/1998	09/17/1998	09/17/1998
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PCBs (mg/kg)						
AROCLOR-1254	0.02 U	0.02 U	NA	NA	NA	NA
AROCLOR-1260	0.02 U	0.06 J	NA	NA	NA	NA
TOTAL PCBS	0 U	0.06 J	NA	NA	NA	NA
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	10.0 U	13.0 U	NA	140 Y	20.0 U	10.0 U
GASOLINE RANGE	0.50 U	0.60 UJ	NA	NA	NA	NA
MOTOR OIL RANGE	34.0 U	62.0 Y	NA	**2,700 Y**	**480 Y**	320 Y
pH						
PH	7.0	8.6	NA	NA	NA	NA
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	4.0	23.2	NA	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS093**	**FNBWSS094**	**PC0423**	**PC0424**	**PC0425**	**PC8660**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.0
Sample Date	09/01/1998	09/17/1998	07/02/1997	07/02/1997	07/02/1997	08/02/1999
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	0.3 U	0.4 U	NA	NA	NA	NA
1,2-DICHLOROBENZENE	0.2 U	0.2 U	NA	NA	NA	NA
1,3-DICHLOROBENZENE	0.2 U	0.2 U	NA	NA	NA	NA
1,4-DICHLOROBENZENE	0.2 U	0.2 U	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	0.3 U	0.4 UJ	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	0.8 U	0.9 U	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	0.3 U	0.4 U	NA	NA	NA	NA
2,4-DICHLOROPHENOL	0.3 U	0.4 U	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	0.3 UJ	0.4 U	NA	NA	NA	NA
2,4-DINITROPHENOL	0.8 UJ	0.9 U	NA	NA	NA	NA
2,4-DINITROTOLUENE	0.3 U	0.4 U	NA	NA	NA	NA
2,6-DINITROTOLUENE	0.3 U	0.4 U	NA	NA	NA	NA
2-CHLORONAPHTHALENE	0.3 U	0.4 U	NA	NA	NA	NA
2-CHLOROPHENOL	0.3 U	0.4 U	NA	NA	NA	NA
2-METHYLNAPHTHALENE	0.3 U	0.4 U	NA	NA	NA	NA
2-METHYLPHENOL	0.3 U	0.4 U	NA	NA	NA	NA
2-NITROANILINE	0.8 U	0.9 UJ	NA	NA	NA	NA
2-NITROPHENOL	0.3 U	0.4 U	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	0.3 U	0.4 U	NA	NA	NA	NA
3-NITROANILINE	0.8 U	0.9 U	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	0.8 U	0.9 U	NA	NA	NA	NA
4-BROMOPHENYL-PHENYLETHER	0.3 U	0.4 U	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	0.3 U	0.4 U	NA	NA	NA	NA
4-CHLOROANILINE	0.3 U	0.4 U	NA	NA	NA	NA
4-CHLOROPHENYL-PHENYLETHER	0.3 U	0.4 U	NA	NA	NA	NA
4-METHYLPHENOL	0.3 U	0.4 U	NA	NA	NA	NA
4-NITROANILINE	0.8 U	0.9 U	NA	NA	NA	NA
4-NITROPHENOL	0.8 U	0.9 UJ	NA	NA	NA	NA
ACENAPHTHENE	0.3 U	0.4 U	NA	NA	NA	NA
ACENAPHTHYLENE	0.3 U	0.4 U	NA	NA	NA	NA
ANTHRACENE	0.3 U	0.4 U	NA	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSS093	FNBWSS094	PC0423	PC0424	PC0425	PC8660
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.0
Sample Date	09/01/1998	09/17/1998	07/02/1997	07/02/1997	07/02/1997	08/02/1999
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)ANTHRACENE	0.3 U	0.4 U	NA	NA	NA	NA
BENZO(A)PYRENE	0.3 UJ	0.4 R	NA	NA	NA	NA
BENZO(B)FLUORANTHENE	0.3 UJ	0.4 R	NA	NA	NA	NA
BENZO(G,H,I)PERYLENE	0.3 UJ	0.4 R	NA	NA	NA	NA
BENZO(K)FLUORANTHENE	0.3 UJ	0.4 R	NA	NA	NA	NA
BIS(2-CHLOROETHOXY)METHANE	0.3 U	0.4 U	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	0.3 U	0.4 U	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	0.1 UJ	0.2 UJ	NA	NA	NA	NA
BUTYLBENZYLPHTHALATE	0.3 U	0.4 U	NA	NA	NA	NA
CARBAZOLE	0.3 U	0.4 U	NA	NA	NA	NA
CHRYSENE	0.03 J	0.4 U	NA	NA	NA	NA
DI-N-BUTYLPHTHALATE	0.3 U	0.4 U	NA	NA	NA	NA
DI-N-OCTYLPHTHALATE	0.3 UJ	0.4 R	NA	NA	NA	NA
DIBENZ(A,H)ANTHRACENE	0.3 UJ	0.4 R	NA	NA	NA	NA
DIBENZOFURAN	0.3 U	0.4 U	NA	NA	NA	NA
DIETHYLPHTHALATE	0.3 UJ	0.4 U	NA	NA	NA	NA
DIMETHYLPHTHALATE	0.3 U	0.4 U	NA	NA	NA	NA
FLUORANTHENE	0.3 U	0.4 U	NA	NA	NA	NA
FLUORENE	0.3 U	0.4 U	NA	NA	NA	NA
HEXACHLOROBENZENE	0.3 U	0.4 U	NA	NA	NA	NA
HEXACHLOROBUTADIENE	0.3 U	0.4 U	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	0.3 UJ	0.4 U	NA	NA	NA	NA
HEXACHLOROETHANE	0.3 U	0.4 UJ	NA	NA	NA	NA
INDENO(1,2,3-CD)PYRENE	0.3 UJ	0.4 R	NA	NA	NA	NA
ISOPHORONE	0.3 U	0.4 U	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	0.3 U	0.4 UJ	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE (1)	0.3 U	0.4 U	NA	NA	NA	NA
NAPHTHALENE	0.3 U	0.4 U	NA	NA	NA	NA
NITROBENZENE	0.3 U	0.4 UJ	NA	NA	NA	NA
PENTACHLOROPHENOL	0.8 R	0.9 U	NA	NA	NA	NA
PHENANTHRENE	0.3 U	0.4 U	NA	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSS093**	**FNBWSS094**	**PC0423**	**PC0424**	**PC0425**	**PC8660**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	0.0 - 0.0
Sample Date	09/01/1998	09/17/1998	07/02/1997	07/02/1997	07/02/1997	08/02/1999
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PHENOL	0.3 U	0.4 U	NA	NA	NA	NA
PYRENE	0.02 J	0.4 U	NA	NA	NA	NA
TOTAL SVOCS	0.05 J	0 U	NA	NA	NA	NA
PCBs (mg/kg)						
AROCLOR-1016	NA	NA	0.01 U	0.01 UJ	0.07 U	0.02 U
AROCLOR-1221	NA	NA	0.03 U	0.03 UJ	0.1 U	0.02 U
AROCLOR-1232	NA	NA	0.01 U	0.01 UJ	0.07 U	0.02 U
AROCLOR-1242	NA	NA	0.01 U	0.01 UJ	0.07 U	0.02 U
AROCLOR-1248	NA	NA	0.01 U	0.01 UJ	0.07 U	0.02 U
AROCLOR-1254	NA	NA	0.01 U	0.01 UJ	0.07 U	0.02 U
AROCLOR-1260	NA	NA	0.01 J	0.03 J	0.2 J	0.2
TOTAL PCBS	NA	NA	0.01 J	0.03 J	0.2 J	0.2
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	10.0 U	100 U	NA	NA	NA	NA
MOTOR OIL RANGE	**660 Y**	**990 Y**	NA	NA	NA	NA
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	2.0	NA	2.0	2.0	0	6.7

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	PC8661	PC8662	PC8664	FNBWSD003	FNBWSD001	FNBWSD002
Sample Depth (feet bgs)	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.5	1.0 - 1.5	1.0 - 1.5
Sample Date	08/02/1999	08/02/1999	08/16/1999	10/08/1997	10/08/1997	10/08/1997
Matrix	SOIL	SOIL	SOIL	RESIDUE	SEDIMENT	SEDIMENT
METALS (mg/kg)						
ALUMINUM	NA	NA	NA	8,780 J	8,700 J	31,300 J
ANTIMONY	NA	NA	NA	1.1 J	0.35 R	0.65 J
ARSENIC	NA	NA	NA	**5.9 J** !	**8.4 J** !	**12.2 J** !
BARIUM	NA	NA	NA	135 J	106 J	70.5 J
BERYLLIUM	NA	NA	NA	0.23 J	0.40 J	0.68 J
CADMIUM	NA	NA	NA	0.30 J	0.05 UJ	0.07 UJ
CALCIUM	NA	NA	NA	14,200 J	1,220 J	1,740 J
CHROMIUM	NA	NA	NA	31.1 J	18.1 J	73.3 J
COBALT	NA	NA	NA	10.8 J	7.7 J	12.5 J
COPPER	NA	NA	NA	105 J	22.8 J	48.8 J
IRON	NA	NA	NA	**31,600 J**	19,700 J	**38,600 J**
LEAD	NA	NA	NA	**1,380 J** *!α	8.1 J	16.4 J
MAGNESIUM	NA	NA	NA	4,120 J	3,330 J	6,410 J
MANGANESE	NA	NA	NA	344 J	127 J	210 J
MERCURY	NA	NA	NA	0.19 J	0.12 R	0.42 J
MOLYBDENUM	NA	NA	NA	0.77 J	0.46 J	0.47 J
NICKEL	NA	NA	NA	59.8 J	18.8 J	47.9 J
POTASSIUM	NA	NA	NA	1,120	1,800	2,560
SELENIUM	NA	NA	NA	0.90 J	0.72 J	0.91 J
SILVER	NA	NA	NA	0.11 U	0.13 U	0.18 U
SODIUM	NA	NA	NA	249 J	2,770 J	5,690 J
THALLIUM	NA	NA	NA	0.61 U	0.72 U	0.97 U
VANADIUM	NA	NA	NA	56.8 J	34.1 J	92.8 J
ZINC	NA	NA	NA	393 J *α	47.6 J	64.9 J
PESTICIDES (mg/kg)						
4,4'-DDD	NA	NA	NA	0.002 J	0.004 U	0.005 U
4,4'-DDE	NA	NA	NA	0.005	0.004 U	0.005 U
4,4'-DDT	NA	NA	NA	0.02 J	0.004 U	0.005 U
ALDRIN	NA	NA	NA	0.002 U	0.002 U	0.003 U
ALPHA-BHC	NA	NA	NA	0.002 U	0.007 UJ	0.003 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**PC8661**	**PC8662**	**PC8664**	**FNBWSD003**	**FNBWSD001**	**FNBWSD002**
Sample Depth (feet bgs)	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.5	1.0 - 1.5	1.0 - 1.5
Sample Date	08/02/1999	08/02/1999	08/16/1999	10/08/1997	10/08/1997	10/08/1997
Matrix	SOIL	SOIL	SOIL	RESIDUE	SEDIMENT	SEDIMENT
PESTICIDES (mg/kg)						
ALPHA-CHLORDANE	NA	NA	NA	0.003	0.002 U	0.003 U
BETA-BHC	NA	NA	NA	0.002 U	0.005 UJ	0.003 U
DELTA-BHC	NA	NA	NA	0.002 U	0.002 U	0.003 U
DIELDRIN	NA	NA	NA	0.003 U	0.004 U	0.005 U
ENDOSULFAN I	NA	NA	NA	0.003	0.002 U	0.003 U
ENDOSULFAN II	NA	NA	NA	0.003 J	0.004 U	0.005 U
ENDOSULFAN SULFATE	NA	NA	NA	0.002 J	0.004 U	0.005 U
ENDRIN	NA	NA	NA	0.003 J	0.004 U	0.005 U
ENDRIN ALDEHYDE	NA	NA	NA	0.02	0.004 U	0.005 U
ENDRIN KETONE	NA	NA	NA	0.003 J	0.004 U	0.005 U
GAMMA-BHC (LINDANE)	NA	NA	NA	0.002 UJ	0.002 UJ	0.003 UJ
GAMMA-CHLORDANE	NA	NA	NA	0.003	0.002 U	0.003 U
HEPTACHLOR	NA	NA	NA	0.0003 U	0.0004 UJ	0.0005 U
HEPTACHLOR EPOXIDE	NA	NA	NA	0.0006	0.0004 UJ	0.0005 U
METHOXYCHLOR	NA	NA	NA	0.008 J	0.02 U	0.03 U
TOXAPHENE	NA	NA	NA	0.09 U	0.1 U	0.1 U
PCBs (mg/kg)						
AROCLOR-1016	0.02 UJ	0.02 U	0.02 U	0.02 U	0.02 U	0.03 U
AROCLOR-1221	0.02 UJ	0.02 U	0.02 U	0.02 U	0.02 U	0.03 U
AROCLOR-1232	0.02 UJ	0.02 U	0.02 U	0.02 U	0.02 U	0.03 U
AROCLOR-1242	0.02 UJ	0.02 U	0.02 U	0.02 U	0.02 U	0.03 U
AROCLOR-1248	0.02 UJ	0.02 U	0.02 U	0.02 U	0.02 U	0.03 U
AROCLOR-1254	0.02 UJ	0.02 U	0.02 U	0.02 U	0.02 U	0.03 U
AROCLOR-1260	0.05 J	0.6	0.2 J	0.3	0.02 U	0.03 U
TOTAL PCBS	0.05 J	0.6	0.2 J	0.3	0 U	0 U
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	NA	NA	NA	52.0 U	13.0 U	16.0 U
GASOLINE RANGE	NA	NA	NA	0.50 UJ	0.60 UJ	0.70 UJ
MOTOR OIL RANGE	NA	NA	NA	**1,100 Y**	42.0 U	54.0 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**PC8661**	**PC8662**	**PC8664**	**FNBWSD003**	**FNBWSD001**	**FNBWSD002**
Sample Depth (feet bgs)	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.5	1.0 - 1.5	1.0 - 1.5
Sample Date	08/02/1999	08/02/1999	08/16/1999	10/08/1997	10/08/1997	10/08/1997
Matrix	SOIL	SOIL	SOIL	RESIDUE	SEDIMENT	SEDIMENT
pH						
PH	NA	NA	NA	8.4	8.4	7.6
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	7.0	14.1	27.1	4.5	20.9	39.3

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD004**	**FNBWSD005**	**FNBWSD006**	**FNBWSD007**	**FNBWSD008**	**FNBWSD009**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5
Sample Date	10/08/1997	10/08/1997	10/08/1997	10/08/1997	10/09/1997	10/09/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
METALS (mg/kg)						
ALUMINUM	32,600 J	30,800 J	28,300 J	30,900 J	28,700 J	39,600 J *
ANTIMONY	1.1 J	1.2 J	0.85 J	1.3 J	0.84 J	1.1 J
ARSENIC	**13.9 J** !	**11.3 J** !	**17.8 J** !	**14.7 J** !	**12.8** !	**16.1** !
BARIUM	92.4 J	63.3 J	43.8 J	50.7 J	51.4 J	74.0 J
BERYLLIUM	0.66 J	0.46 J	0.57 J	0.57 J	0.59 J	0.68 J
CADMIUM	0.08 UJ	0.08 UJ	0.09 UJ	0.11 UJ	0.08 U	0.09 U
CALCIUM	3,020 J	3,140 J	2,800 J	2,950 J	3,150 J	3,210 J
CHROMIUM	105 J	100 J	94.1 J	99.2 J	86.6 J	102 J
COBALT	17.8 J	21.0 J	22.2 J	19.0 J	19.9 J	19.0 J
COPPER	86.2 J	85.0 J	68.8 J	77.0 J	76.1 J	80.5 J
IRON	**43,200 J**	**42,400 J**	**36,400 J**	**38,700 J**	**40,800 J**	**39,800 J**
LEAD	39.6 J	120 J *α	56.1 J	61.9 J *α	71.0 J *α	54.3 J
MAGNESIUM	14,300 J	13,600 J	13,100 J	12,800 J	12,800 J	12,200 J
MANGANESE	277 J	497 J	266 J	270 J	310 J	328 J
MERCURY	1.0 J	0.61 J	0.43 J	0.42 J	0.28 J	0.74 J
MOLYBDENUM	0.42 J	0.29 J	2.0 J	2.3 J	0.93 UJ	1.2 UJ
NICKEL	101 J	101 J	103 J	106 J	97.0 J	91.1 J
POTASSIUM	4,590	3,890	3,870	4,290	3,960	4,520
SELENIUM	1.2 J	1.4 J	1.4 J	1.7 J	1.2 J	1.2 J
SILVER	0.22 U	0.33 UJ	0.24 U	0.29 U	0.24 UJ	0.26 UJ
SODIUM	8,080 J	7,300 J	10,900 J	12,000 J	8,260	10,400
THALLIUM	1.2 U	1.2 U	1.3 U	1.6 U	1.2 U	1.3 U
VANADIUM	99.6 J	86.4 J	87.1 J	90.5 J	85.0 J	113 J
ZINC	155 J	158 J	138 J	144 J	164 J	165 J
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	NA	0.02 U	0.02 U	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	0.02 U	0.02 U	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	0.02 U	0.02 U	NA	NA	NA
1,1-DICHLOROETHANE	NA	0.02 U	0.02 U	NA	NA	NA
1,1-DICHLOROETHENE	NA	0.02 U	0.02 U	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSD004	FNBWSD005	FNBWSD006	FNBWSD007	FNBWSD008	FNBWSD009
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5
Sample Date	10/08/1997	10/08/1997	10/08/1997	10/08/1997	10/09/1997	10/09/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROETHANE	NA	0.02 U	0.02 U	NA	NA	NA
1,2-DICHLOROETHENE (TOTAL)	NA	0.02 U	0.02 U	NA	NA	NA
1,2-DICHLOROPROPANE	NA	0.02 U	0.02 U	NA	NA	NA
2-BUTANONE	NA	0.02 UJ	0.02 UJ	NA	NA	NA
2-HEXANONE	NA	0.02 U	0.02 U	NA	NA	NA
4-METHYL-2-PENTANONE	NA	0.02 U	0.02 U	NA	NA	NA
ACETONE	NA	0.1 UJ	0.07 UJ	NA	NA	NA
BENZENE	NA	0.02 U	0.02 U	NA	NA	NA
BROMODICHLOROMETHANE	NA	0.02 U	0.02 U	NA	NA	NA
BROMOFORM	NA	0.02 U	0.02 U	NA	NA	NA
BROMOMETHANE	NA	0.02 U	0.02 U	NA	NA	NA
CARBON DISULFIDE	NA	0.006 J	0.005 J	NA	NA	NA
CARBON TETRACHLORIDE	NA	0.02 U	0.02 U	NA	NA	NA
CHLOROBENZENE	NA	0.02 U	0.02 U	NA	NA	NA
CHLOROETHANE	NA	0.02 U	0.02 U	NA	NA	NA
CHLOROFORM	NA	0.02 U	0.02 U	NA	NA	NA
CHLOROMETHANE	NA	0.02 U	0.02 U	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	0.02 U	0.02 U	NA	NA	NA
DIBROMOCHLOROMETHANE	NA	0.02 U	0.02 U	NA	NA	NA
ETHYLBENZENE	NA	0.02 U	0.02 U	NA	NA	NA
METHYLENE CHLORIDE	NA	0.02 U	0.02 U	NA	NA	NA
STYRENE	NA	0.02 U	0.02 U	NA	NA	NA
TETRACHLOROETHENE	NA	0.02 U	0.02 U	NA	NA	NA
TOLUENE	NA	0.02 U	0.02 U	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	NA	0.02 U	0.02 U	NA	NA	NA
TRICHLOROETHENE	NA	0.02 U	0.02 U	NA	NA	NA
VINYL CHLORIDE	NA	0.02 U	0.02 U	NA	NA	NA
XYLENE (TOTAL)	NA	0.02 U	0.02 U	NA	NA	NA
TOTAL VOCS	NA	0.006 J	0.005 J	NA	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	NA	0.7 U	0.8 U	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD004**	**FNBWSD005**	**FNBWSD006**	**FNBWSD007**	**FNBWSD008**	**FNBWSD009**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5
Sample Date	10/08/1997	10/08/1997	10/08/1997	10/08/1997	10/09/1997	10/09/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROBENZENE	NA	0.3 U	0.4 U	NA	NA	NA
1,3-DICHLOROBENZENE	NA	0.3 U	0.4 U	NA	NA	NA
1,4-DICHLOROBENZENE	NA	0.3 U	0.4 U	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	0.7 U	0.8 U	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	2 U	2 U	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	0.7 U	0.8 U	NA	NA	NA
2,4-DICHLOROPHENOL	NA	0.7 U	0.8 U	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	0.7 U	0.8 U	NA	NA	NA
2,4-DINITROPHENOL	NA	2 UJ	2 UJ	NA	NA	NA
2,4-DINITROTOLUENE	NA	0.7 U	0.8 U	NA	NA	NA
2,6-DINITROTOLUENE	NA	0.7 U	0.8 U	NA	NA	NA
2-CHLORONAPHTHALENE	NA	0.7 U	0.8 U	NA	NA	NA
2-CHLOROPHENOL	NA	0.7 U	0.8 U	NA	NA	NA
2-METHYLNAPHTHALENE	NA	0.7 U	0.8 U	NA	NA	NA
2-METHYLPHENOL	NA	0.7 U	0.8 U	NA	NA	NA
2-NITROANILINE	NA	2 U	2 U	NA	NA	NA
2-NITROPHENOL	NA	0.7 U	0.8 U	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	0.7 UJ	0.8 UJ	NA	NA	NA
3-NITROANILINE	NA	2 U	2 U	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	2 U	2 U	NA	NA	NA
4-BROMOPHENYL-PHENYLETHER	NA	0.7 U	0.8 U	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	0.7 U	0.8 U	NA	NA	NA
4-CHLOROANILINE	NA	0.7 U	0.8 U	NA	NA	NA
4-CHLOROPHENYL-PHENYLETHER	NA	0.7 U	0.8 U	NA	NA	NA
4-METHYLPHENOL	NA	0.7 U	0.8 U	NA	NA	NA
4-NITROANILINE	NA	2 U	2 U	NA	NA	NA
4-NITROPHENOL	NA	2 UJ	2 UJ	NA	NA	NA
ACENAPHTHENE	NA	0.7 U	0.8 U	NA	NA	NA
ACENAPHTHYLENE	NA	0.7 U	0.8 U	NA	NA	NA
ANTHRACENE	NA	0.7 U	0.8 U	NA	NA	NA
BENZO(A)ANTHRACENE	NA	0.7 U	0.8 U	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD004**	**FNBWSD005**	**FNBWSD006**	**FNBWSD007**	**FNBWSD008**	**FNBWSD009**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5
Sample Date	10/08/1997	10/08/1997	10/08/1997	10/08/1997	10/09/1997	10/09/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)PYRENE	NA	0.7 U	0.8 U	NA	NA	NA
BENZO(B)FLUORANTHENE	NA	0.7 U	0.8 U	NA	NA	NA
BENZO(G,H,I)PERYLENE	NA	0.7 U	0.8 U	NA	NA	NA
BENZO(K)FLUORANTHENE	NA	0.7 U	0.8 U	NA	NA	NA
BIS(2-CHLOROETHOXY)METHANE	NA	0.7 U	0.8 U	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	0.7 U	0.8 U	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	0.3 U	0.3 UJ	NA	NA	NA
BUTYLBENZYLPHTHALATE	NA	0.7 U	0.8 U	NA	NA	NA
CARBAZOLE	NA	0.7 U	0.8 U	NA	NA	NA
CHRYSENE	NA	0.7 U	0.8 U	NA	NA	NA
DI-N-BUTYLPHTHALATE	NA	0.7 U	0.8 U	NA	NA	NA
DI-N-OCTYLPHTHALATE	NA	0.7 UJ	0.8 UJ	NA	NA	NA
DIBENZ(A,H)ANTHRACENE	NA	0.7 U	0.8 U	NA	NA	NA
DIBENZOFURAN	NA	0.7 U	0.8 U	NA	NA	NA
DIETHYLPHTHALATE	NA	0.7 U	0.8 U	NA	NA	NA
DIMETHYLPHTHALATE	NA	0.7 U	0.8 U	NA	NA	NA
FLUORANTHENE	NA	0.7 U	0.8 U	NA	NA	NA
FLUORENE	NA	0.7 U	0.8 U	NA	NA	NA
HEXACHLOROBENZENE	NA	0.7 U	0.8 U	NA	NA	NA
HEXACHLOROBUTADIENE	NA	0.7 UJ	0.8 UJ	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	0.7 UJ	0.8 UJ	NA	NA	NA
HEXACHLOROETHANE	NA	0.7 U	0.8 U	NA	NA	NA
INDENO(1,2,3-CD)PYRENE	NA	0.7 U	0.8 U	NA	NA	NA
ISOPHORONE	NA	0.7 U	0.8 U	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	0.7 U	0.8 U	NA	NA	NA
N-NITROSODIPHENYLAMINE (1)	NA	0.7 U	0.8 U	NA	NA	NA
NAPHTHALENE	NA	0.7 U	0.8 U	NA	NA	NA
NITROBENZENE	NA	0.7 U	0.8 U	NA	NA	NA
PENTACHLOROPHENOL	NA	2 U	2 U	NA	NA	NA
PHENANTHRENE	NA	0.7 U	0.8 U	NA	NA	NA
PHENOL	NA	0.7 U	0.8 U	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD004**	**FNBWSD005**	**FNBWSD006**	**FNBWSD007**	**FNBWSD008**	**FNBWSD009**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5
Sample Date	10/08/1997	10/08/1997	10/08/1997	10/08/1997	10/09/1997	10/09/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PYRENE	NA	0.09 J	0.8 U	NA	NA	NA
TOTAL SVOCS	NA	0.09 J	0 U	NA	NA	NA
PESTICIDES (mg/kg)						
4,4'-DDD	0.007 U	0.007 U	0.008 U	0.009 U	0.008 U	0.008 U
4,4'-DDE	0.007 U	0.007 U	0.008 U	0.009 U	0.008 U	0.008 U
4,4'-DDT	0.007 U	0.007 U	0.008 U	0.009 U	0.008 U	0.008 U
ALDRIN	0.004 U	0.004 U	0.004 U	0.005 U	0.004 U	0.004 U
ALPHA-BHC	0.004 U	0.004 U	0.004 U	0.005 U	0.008 UJ	0.008 UJ
ALPHA-CHLORDANE	0.004 U	0.004 U	0.004 U	0.005 U	0.004 U	0.004 U
BETA-BHC	0.004 U	0.004 U	0.004 U	0.005 U	0.004 UJ	0.004 UJ
DELTA-BHC	0.004 U	0.004 U	0.004 U	0.005 U	0.004 U	0.004 U
DIELDRIN	0.007 U	0.007 U	0.008 U	0.009 U	0.008 U	0.008 U
ENDOSULFAN I	0.004 U	0.004 U	0.004 U	0.005 U	0.004 U	0.004 U
ENDOSULFAN II	0.007 U	0.007 U	0.008 U	0.009 U	0.008 U	0.008 U
ENDOSULFAN SULFATE	0.007 U	0.007 U	0.008 U	0.009 U	0.008 U	0.008 U
ENDRIN	0.007 U	0.007 U	0.008 U	0.009 U	0.008 U	0.008 U
ENDRIN ALDEHYDE	0.007 U	0.007 U	0.008 U	0.009 U	0.008 U	0.008 U
ENDRIN KETONE	0.007 U	0.007 U	0.008 U	0.009 U	0.008 U	0.008 U
GAMMA-BHC (LINDANE)	0.004 UJ	0.004 UJ	0.004 UJ	0.005 UJ	0.004 UJ	0.004 U
GAMMA-CHLORDANE	0.004 U	0.004 U	0.004 U	0.005 U	0.004 U	0.004 U
HEPTACHLOR	0.0006 U	0.0006 U	0.0007 U	0.0009 U	0.0007 U	0.0007 U
HEPTACHLOR EPOXIDE	0.0006 U	0.0006 U	0.0007 U	0.0009 U	0.0007 U	0.0007 U
METHOXYCHLOR	0.04 U	0.04 U	0.04 U	0.05 U	0.04 U	0.04 U
TOXAPHENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
PCBs (mg/kg)						
AROCLOR-1016	0.03 U	0.03 U	0.04 U	0.05 U	0.04 U	0.04 U
AROCLOR-1221	0.03 U	0.03 U	0.04 U	0.05 U	0.04 U	0.04 U
AROCLOR-1232	0.03 U	0.03 U	0.04 U	0.05 U	0.04 U	0.04 U
AROCLOR-1242	0.03 U	0.03 U	0.04 U	0.05 U	0.04 U	0.04 U

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD004**	**FNBWSD005**	**FNBWSD006**	**FNBWSD007**	**FNBWSD008**	**FNBWSD009**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5
Sample Date	10/08/1997	10/08/1997	10/08/1997	10/08/1997	10/09/1997	10/09/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
PCBs (mg/kg)						
AROCLOR-1248	0.03 U	0.03 U	0.04 U	0.05 U	0.04 U	0.04 U
AROCLOR-1254	0.03 U	0.03 U	0.04 U	0.05 U	0.04 U	0.04 U
AROCLOR-1260	0.03 U	0.03 U	0.04 U	0.05 U	0.03 J	0.04 U
TOTAL PCBS	0 U	0 U	0 U	0 U	0.03 J	0 U
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	21.0 U	21.0 U	23.0 U	28.0 U	23.0 U	39.0 J
GASOLINE RANGE	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	**620 Y**
MOTOR OIL RANGE	69.0 U	110 Y	77.0 U	94.0 U	200 Y	**530 J**
pH						
PH	8.0	7.1	6.9	7.4	7.3	8.1
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	52.1	53.2	57.0	65.3	57.4	58.8

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD010**	**FNBWSD011**	**FNBWSD011 [s]**	**FNBWSD011**	**FNBWSD012**	**FNBWSD012**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 2.0
Sample Date	10/09/1997	10/09/1997	09/08/1998	09/08/1998	10/09/1997	04/22/1998
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
METALS (mg/kg)						
ALUMINUM	33,800 J	35,100 J *	NA	NA	15,800 J	NA
ANTIMONY	1.0 J	1.2 J	NA	NA	7.7 J	NA
ARSENIC	**18.8** !	**15.7** !	NA	NA	**12.5** !	NA
BARIUM	58.7 J	86.3 J	NA	NA	151 J	NA
BERYLLIUM	0.72 J	0.46 J	NA	NA	0.18 J	NA
CADMIUM	0.07 U	0.06 U	NA	NA	7.0 *α	NA
CALCIUM	2,620 J	2,250 J	NA	NA	5,440 J	NA
CHROMIUM	90.4 J	92.9 J	NA	NA	294 J *α	NA
CHROMIUM VI	NA	NA	NA	NA	NA	0.07 U
COBALT	17.5 J	11.0 J	NA	NA	13.2 J	NA
COPPER	66.8 J	62.1 J	NA	NA	247 J *α	NA
IRON	**31,800 J**	**40,500 J**	NA	NA	**31,100 J**	NA
LEAD	29.4 J	26.8 J	NA	NA	**275 J** *α	NA
MAGNESIUM	10,600 J	9,350 J	NA	NA	5,600 J	NA
MANGANESE	209 J	189 J	NA	NA	618 J	NA
MERCURY	0.77 J	0.15 J	NA	NA	0.26 J	NA
MOLYBDENUM	1.2 UJ	0.86 UJ	NA	NA	1.1 UJ	NA
NICKEL	88.9 J	62.6 J	NA	NA	79.7 J	NA
POTASSIUM	3,570	3,550	NA	NA	2,160	NA
SELENIUM	1.2 J	1.4 J	NA	NA	0.85 J	NA
SILVER	0.24 UJ	0.24 UJ	NA	NA	1.1 UJ	NA
SODIUM	8,510	5,800	NA	NA	5,900	NA
THALLIUM	1.0 U	0.89 U	NA	NA	0.91 U	NA
VANADIUM	104 J	108 J	NA	NA	52.2 J	NA
ZINC	100 J	89.8 J	NA	NA	1,850 J *α	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	NA	NA	0.6 UJ	0.6 UJ	NA	NA
1,2-DICHLOROBENZENE	NA	NA	0.3 U	0.3 UJ	NA	NA
1,3-DICHLOROBENZENE	NA	NA	0.3 U	0.3 UJ	NA	NA
1,4-DICHLOROBENZENE	NA	NA	0.3 UJ	0.3 UJ	NA	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD010**	**FNBWSD011**	**FNBWSD011 [s]**	**FNBWSD011**	**FNBWSD012**	**FNBWSD012**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 2.0
Sample Date	10/09/1997	10/09/1997	09/08/1998	09/08/1998	10/09/1997	04/22/1998
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	0.6 U	0.6 UJ	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	2 U	2 UJ	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	0.6 U	0.6 UJ	NA	NA
2,4-DICHLOROPHENOL	NA	NA	0.6 U	0.6 UJ	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	0.6 U	0.6 UJ	NA	NA
2,4-DINITROPHENOL	NA	NA	2 UJ	2 UJ	NA	NA
2,4-DINITROTOLUENE	NA	NA	0.6 U	0.6 UJ	NA	NA
2,6-DINITROTOLUENE	NA	NA	0.6 U	0.6 UJ	NA	NA
2-CHLORONAPHTHALENE	NA	NA	0.6 U	0.6 UJ	NA	NA
2-CHLOROPHENOL	NA	NA	0.6 U	0.6 UJ	NA	NA
2-METHYLNAPHTHALENE	NA	NA	0.6 U	0.6 UJ	NA	NA
2-METHYLPHENOL	NA	NA	0.6 U	0.6 UJ	NA	NA
2-NITROANILINE	NA	NA	2 U	2 UJ	NA	NA
2-NITROPHENOL	NA	NA	0.6 U	0.6 UJ	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	0.6 U	0.6 UJ	NA	NA
3-NITROANILINE	NA	NA	2 U	2 UJ	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	2 U	2 UJ	NA	NA
4-BROMOPHENYL-PHENYLETHER	NA	NA	0.6 U	0.6 UJ	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	0.6 U	0.6 UJ	NA	NA
4-CHLOROANILINE	NA	NA	0.6 U	0.6 UJ	NA	NA
4-CHLOROPHENYL-PHENYLETHER	NA	NA	0.6 U	0.6 UJ	NA	NA
4-METHYLPHENOL	NA	NA	0.6 U	0.6 UJ	NA	NA
4-NITROANILINE	NA	NA	2 U	2 UJ	NA	NA
4-NITROPHENOL	NA	NA	2 UJ	2 UJ	NA	NA
ACENAPHTHENE	NA	NA	0.6 U	0.6 UJ	NA	NA
ACENAPHTHYLENE	NA	NA	0.6 U	0.6 UJ	NA	NA
ANTHRACENE	NA	NA	0.6 U	0.6 UJ	NA	NA
BENZO(A)ANTHRACENE	NA	NA	0.6 U	0.6 UJ	NA	NA
BENZO(A)PYRENE	NA	NA	0.6 U	0.6 UJ	NA	NA
BENZO(B)FLUORANTHENE	NA	NA	0.6 U	0.6 UJ	NA	NA
BENZO(G,H,I)PERYLENE	NA	NA	0.6 U	0.6 UJ	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSD010	FNBWSD011	FNBWSD011 [s]	FNBWSD011	FNBWSD012	FNBWSD012
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 2.0
Sample Date	10/09/1997	10/09/1997	09/08/1998	09/08/1998	10/09/1997	04/22/1998
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(K)FLUORANTHENE	NA	NA	0.6 UJ	0.6 UJ	NA	NA
BIS(2-CHLOROETHOXY)METHANE	NA	NA	0.6 U	0.6 UJ	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	0.6 U	0.6 UJ	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	0.2 UJ	0.2 UJ	NA	NA
BUTYLBENZYLPHTHALATE	NA	NA	0.6 U	0.6 UJ	NA	NA
CARBAZOLE	NA	NA	0.6 U	0.6 UJ	NA	NA
CHRYSENE	NA	NA	0.6 U	0.6 UJ	NA	NA
DI-N-BUTYLPHTHALATE	NA	NA	0.6 U	0.6 UJ	NA	NA
DI-N-OCTYLPHTHALATE	NA	NA	0.6 U	0.6 UJ	NA	NA
DIBENZ(A,H)ANTHRACENE	NA	NA	0.6 U	0.6 UJ	NA	NA
DIBENZOFURAN	NA	NA	0.6 U	0.6 UJ	NA	NA
DIETHYLPHTHALATE	NA	NA	0.6 U	0.6 UJ	NA	NA
DIMETHYLPHTHALATE	NA	NA	0.6 U	0.6 UJ	NA	NA
FLUORANTHENE	NA	NA	0.6 U	0.6 UJ	NA	NA
FLUORENE	NA	NA	0.6 U	0.6 UJ	NA	NA
HEXACHLOROBENZENE	NA	NA	0.6 U	0.6 UJ	NA	NA
HEXACHLOROBUTADIENE	NA	NA	0.6 U	0.6 UJ	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	0.6 U	0.6 UJ	NA	NA
HEXACHLOROETHANE	NA	NA	0.6 U	0.6 UJ	NA	NA
INDENO(1,2,3-CD)PYRENE	NA	NA	0.6 U	0.6 UJ	NA	NA
ISOPHORONE	NA	NA	0.6 U	0.6 UJ	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	0.6 U	0.6 UJ	NA	NA
N-NITROSODIPHENYLAMINE (1)	NA	NA	0.6 U	0.6 UJ	NA	NA
NAPHTHALENE	NA	NA	0.6 U	0.6 UJ	NA	NA
NITROBENZENE	NA	NA	0.6 U	0.6 UJ	NA	NA
PENTACHLOROPHENOL	NA	NA	2 U	2 UJ	NA	NA
PHENANTHRENE	NA	NA	0.6 U	0.6 UJ	NA	NA
PHENOL	NA	NA	0.6 U	0.6 UJ	NA	NA
PYRENE	NA	NA	0.6 U	0.6 UJ	NA	NA
TOTAL SVOCS	NA	NA	0 U	0 U	NA	NA
PESTICIDES (mg/kg)						
4,4'-DDD	0.006 U	0.005 U	NA	NA	0.006 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSD010	FNBWSD011	FNBWSD011 [s]	FNBWSD011	FNBWSD012	FNBWSD012
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 2.0
Sample Date	10/09/1997	10/09/1997	09/08/1998	09/08/1998	10/09/1997	04/22/1998
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
PESTICIDES (mg/kg)						
4,4'-DDE	0.006 U	0.005 U	NA	NA	0.006 U	NA
4,4'-DDT	0.006 U	0.005 U	NA	NA	0.007	NA
ALDRIN	0.003 U	0.003 U	NA	NA	0.003 U	NA
ALPHA-BHC	0.007 UJ	0.006 UJ	NA	NA	0.005 UJ	NA
ALPHA-CHLORDANE	0.003 U	0.003 U	NA	NA	0.003 U	NA
BETA-BHC	0.003 UJ	0.003 UJ	NA	NA	0.003 UJ	NA
DELTA-BHC	0.003 U	0.003 U	NA	NA	0.003 U	NA
DIELDRIN	0.006 U	0.005 U	NA	NA	0.006 U	NA
ENDOSULFAN I	0.003 U	0.003 U	NA	NA	0.003 U	NA
ENDOSULFAN II	0.006 U	0.005 U	NA	NA	0.006 U	NA
ENDOSULFAN SULFATE	0.006 U	0.005 U	NA	NA	0.006 U	NA
ENDRIN	0.006 U	0.005 U	NA	NA	0.006 U	NA
ENDRIN ALDEHYDE	0.006 U	0.005 U	NA	NA	0.006 U	NA
ENDRIN KETONE	0.006 U	0.005 U	NA	NA	0.006 U	NA
GAMMA-BHC (LINDANE)	0.003 UJ	0.003 UJ	NA	NA	0.003 U	NA
GAMMA-CHLORDANE	0.003 U	0.003 U	NA	NA	0.003 U	NA
HEPTACHLOR	0.0006 U	0.0005 U	NA	NA	0.0005 U	NA
HEPTACHLOR EPOXIDE	0.0006 U	0.0005 U	NA	NA	0.0005 U	NA
METHOXYCHLOR	0.03 U	0.03 U	NA	NA	0.03 U	NA
TOXAPHENE	0.2 U	0.1 U	NA	NA	0.2 U	NA
PCBs (mg/kg)						
AROCLOR-1016	0.03 U	0.03 U	NA	NA	0.03 U	NA
AROCLOR-1221	0.03 U	0.03 U	NA	NA	0.03 U	NA
AROCLOR-1232	0.03 U	0.03 U	NA	NA	0.03 U	NA
AROCLOR-1242	0.03 U	0.03 U	NA	NA	0.03 U	NA
AROCLOR-1248	0.03 U	0.03 U	NA	NA	0.03 U	NA
AROCLOR-1254	0.03 U	0.03 U	NA	NA	0.03 U	NA
AROCLOR-1260	0.03 U	0.03 U	NA	NA	0.06	NA
TOTAL PCBS	0 U	0 U	NA	NA	0.06	NA
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	19.0 U	16.0 U	2.0 U	2.0 U	18.0 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD010**	**FNBWSD011**	**FNBWSD011 [s]**	**FNBWSD011**	**FNBWSD012**	**FNBWSD012**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 2.0
Sample Date	10/09/1997	10/09/1997	09/08/1998	09/08/1998	10/09/1997	04/22/1998
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
PETROLEUM INDICATORS (mg/kg)						
GASOLINE RANGE	2.0 Y	0.70 U	NA	NA	0.90 U	NA
MOTOR OIL RANGE	63.0 U	53.0 U	59.0 Y	49.0 Y	280 Y	NA
pH						
PH	6.8	7.2	NA	NA	8.0	NA
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	48.3	38.5	51.0	50.0	42.7	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD012**	**FNBWSD012**	**FNBWSD013**	**FNBWSD014**	**FNBWSD015**	**FNBWSD016**
Sample Depth (feet bgs)	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5
Sample Date	04/22/1998	04/22/1998	10/09/1997	10/10/1997	10/10/1997	10/10/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
METALS (mg/kg)						
ALUMINUM	24,500	26,300	31,900 J	31,400 J	28,700 J	4,200 J
ANTIMONY	2.1 UJ	2.3 UJ	0.64 R	0.68 J	0.63 J	0.34 R
ARSENIC	**13.3** !	**19.4** !	**35.2** !	**17.0** !	**21.3** !	**13.9** !
BARIUM	113 J	211 J	48.1 J	59.9 J	70.4 J	134 J
BERYLLIUM	0.35 J	0.37 J	0.60 J	0.54 J	0.36 J	0.07 UJ
CADMIUM	0.10 U	0.09 U	0.09 UJ	0.06 U	0.07 U	0.05 U
CALCIUM	4,480	3,070	2,860 J	2,160 J	3,780 J	461 J
CHROMIUM	81.7	90.1	101 J	85.1 J	82.1 J	12.3 J
COBALT	17.0	17.5	34.8 J	20.0 J	19.7 J	3.1 J
COPPER	90.3	175 *α	72.3 J	56.2 J	75.8 J	18.1 J
IRON	**34,100**	**37,400**	**47,300 J**	**41,200 J**	**37,600 J**	**25,600 J**
LEAD	169 *α	**875** ***α**	61.7 J *α	23.2 J	46.8 J	**277 J** ***α**
MAGNESIUM	7,800	7,720	13,400 J	8,750 J	10,700 J	1,280 J
MANGANESE	666	665	285 J	617 J	795 J	96.8 J
MERCURY	0.50	0.48	0.38 J	0.48 J	1.2 J	0.59 J
MOLYBDENUM	0.76 J	1.0 J	3.8	0.77 UJ	0.28 UJ	0.88 UJ
NICKEL	63.2	66.4	127 J	77.2 J	80.9 J	9.1 J
POTASSIUM	3,470	3,570	4,290	3,080	3,470	845
SELENIUM	0.98 UJ	0.93 UJ	1.2 J	0.92 J	1.2 J	0.81 J
SILVER	0.41 U	0.39 U	0.25 UJ	0.16 U	0.20 UJ	0.13 U
SODIUM	4,500	4,670	10,800	5,570	6,740	753
THALLIUM	1.8 U	1.7 U	1.3 U	0.86 U	1.0 U	0.71 U
VANADIUM	76.4	78.7	92.0 J	98.8 J	88.0 J	18.1 J
ZINC	230	283 *α	179 J	129 J	177 J	107 J
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	0.02 U	0.02 U	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	0.02 U	0.02 U	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	0.02 U	0.02 U	NA	NA	NA	NA
1,1-DICHLOROETHANE	0.02 U	0.02 U	NA	NA	NA	NA
1,1-DICHLOROETHENE	0.02 U	0.02 U	NA	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD012**	**FNBWSD012**	**FNBWSD013**	**FNBWSD014**	**FNBWSD015**	**FNBWSD016**
Sample Depth (feet bgs)	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5
Sample Date	04/22/1998	04/22/1998	10/09/1997	10/10/1997	10/10/1997	10/10/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROETHANE	0.02 U	0.02 U	NA	NA	NA	NA
1,2-DICHLOROETHENE (TOTAL)	0.02 U	0.02 U	NA	NA	NA	NA
1,2-DICHLOROPROPANE	0.02 U	0.02 U	NA	NA	NA	NA
2-BUTANONE	0.02 U	0.02 U	NA	NA	NA	NA
2-HEXANONE	0.02 U	0.02 U	NA	NA	NA	NA
4-METHYL-2-PENTANONE	0.02 U	0.02 U	NA	NA	NA	NA
ACETONE	0.02 UJ	0.04 UJ	NA	NA	NA	NA
BENZENE	0.02 U	0.02 U	NA	NA	NA	NA
BROMODICHLOROMETHANE	0.02 U	0.02 U	NA	NA	NA	NA
BROMOFORM	0.02 UJ	0.02 UJ	NA	NA	NA	NA
BROMOMETHANE	0.02 U	0.02 U	NA	NA	NA	NA
CARBON DISULFIDE	0.02 U	0.02 U	NA	NA	NA	NA
CARBON TETRACHLORIDE	0.02 U	0.02 U	NA	NA	NA	NA
CHLOROBENZENE	0.02 U	0.02 U	NA	NA	NA	NA
CHLOROETHANE	0.02 UJ	0.02 UJ	NA	NA	NA	NA
CHLOROFORM	0.02 U	0.02 U	NA	NA	NA	NA
CHLOROMETHANE	0.02 U	0.02 U	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	0.02 U	0.02 U	NA	NA	NA	NA
DIBROMOCHLOROMETHANE	0.02 U	0.02 U	NA	NA	NA	NA
ETHYLBENZENE	0.02 U	0.02 U	NA	NA	NA	NA
METHYLENE CHLORIDE	0.02 U	0.02 U	NA	NA	NA	NA
STYRENE	0.02 U	0.02 U	NA	NA	NA	NA
TETRACHLOROETHENE	0.02 U	0.02 U	NA	NA	NA	NA
TOLUENE	0.02 U	0.004 J	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	0.02 U	0.02 U	NA	NA	NA	NA
TRICHLOROETHENE	0.02 U	0.02 U	NA	NA	NA	NA
VINYL CHLORIDE	0.02 U	0.02 U	NA	NA	NA	NA
XYLENE (TOTAL)	0.02 U	0.02 U	NA	NA	NA	NA
TOTAL VOCS	0 U	0.004 J	NA	NA	NA	NA
PESTICIDES (mg/kg)						
4,4'-DDD	NA	NA	0.008 U	0.006 U	0.006 U	0.004 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD012**	**FNBWSD012**	**FNBWSD013**	**FNBWSD014**	**FNBWSD015**	**FNBWSD016**
Sample Depth (feet bgs)	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5
Sample Date	04/22/1998	04/22/1998	10/09/1997	10/10/1997	10/10/1997	10/10/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
PESTICIDES (mg/kg)						
4,4'-DDE	NA	NA	0.008 U	0.006 U	0.006 U	0.004 U
4,4'-DDT	NA	NA	0.008 U	0.006 U	0.006 U	0.004 U
ALDRIN	NA	NA	0.004 U	0.003 U	0.003 U	0.002 U
ALPHA-BHC	NA	NA	0.01 UJ	0.007 UJ	0.007 UJ	0.005 UJ
ALPHA-CHLORDANE	NA	NA	0.004 U	0.003 U	0.003 U	0.002 U
BETA-BHC	NA	NA	0.004 UJ	0.003 UJ	0.003 UJ	0.002 UJ
DELTA-BHC	NA	NA	0.004 U	0.003 U	0.003 U	0.002 U
DIELDRIN	NA	NA	0.008 U	0.006 U	0.006 U	0.004 U
ENDOSULFAN I	NA	NA	0.004 U	0.003 U	0.003 U	0.002 U
ENDOSULFAN II	NA	NA	0.008 U	0.006 U	0.006 U	0.004 U
ENDOSULFAN SULFATE	NA	NA	0.008 U	0.006 U	0.006 U	0.004 U
ENDRIN	NA	NA	0.008 U	0.006 U	0.006 U	0.004 U
ENDRIN ALDEHYDE	NA	NA	0.008 U	0.006 U	0.006 U	0.004 U
ENDRIN KETONE	NA	NA	0.008 U	0.006 U	0.006 U	0.004 U
GAMMA-BHC (LINDANE)	NA	NA	0.004 UJ	0.003 UJ	0.003 UJ	0.002 UJ
GAMMA-CHLORDANE	NA	NA	0.004 U	0.003 U	0.003 U	0.002 U
HEPTACHLOR	NA	NA	0.0007 U	0.0005 U	0.0005 U	0.0004 U
HEPTACHLOR EPOXIDE	NA	NA	0.0007 U	0.0005 U	0.0005 U	0.0004 U
METHOXYCHLOR	NA	NA	0.04 U	0.03 U	0.03 U	0.02 U
TOXAPHENE	0.08 U	0.08 U	0.2 U	0.1 U	0.2 U	0.1 U
LOW-LEVEL PESTICIDES (mg/kg)						
2,4'-DDD	0.0008 J	0.0003 J	NA	NA	NA	NA
2,4'-DDE	0.0002 U	0.0002 U	NA	NA	NA	NA
2,4'-DDT	0.0004 J	0.0009 J	NA	NA	NA	NA
4,4'-DDD	0.0009 J	0.0006 J	NA	NA	NA	NA
4,4'-DDE	0.0006	0.0003 J	NA	NA	NA	NA
4,4'-DDT	0.0004 J	0.0003 J	NA	NA	NA	NA
ALDRIN	0.0002 U	0.0002 U	NA	NA	NA	NA
ALPHA-BHC	0.0002 U	0.0002 U	NA	NA	NA	NA
ALPHA-CHLORDANE	0.005 J	0.004 J	NA	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSD012	FNBWSD012	FNBWSD013	FNBWSD014	FNBWSD015	FNBWSD016
Sample Depth (feet bgs)	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5
Sample Date	04/22/1998	04/22/1998	10/09/1997	10/10/1997	10/10/1997	10/10/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
LOW-LEVEL PESTICIDES (mg/kg)						
BETA-BHC	0.0002 U	0.0002 U	NA	NA	NA	NA
CIS-NONACHLOR	0.001 J	0.0009 J	NA	NA	NA	NA
DELTA-BHC	0.0003 J	0.0002 UJ	NA	NA	NA	NA
DIELDRIN	0.0004 J	0.0002 U	NA	NA	NA	NA
ENDOSULFAN I	0.0002 U	0.0002 U	NA	NA	NA	NA
ENDOSULFAN II	0.0002 U	0.0002 U	NA	NA	NA	NA
ENDOSULFAN SULFATE	0.0002 UJ	0.0002 U	NA	NA	NA	NA
ENDRIN	0.0002 UJ	0.0002 U	NA	NA	NA	NA
ENDRIN ALDEHYDE	0.0002 U	0.0002 U	NA	NA	NA	NA
ENDRIN KETONE	0.0002 U	0.0002 U	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.0002 U	0.0002 U	NA	NA	NA	NA
GAMMA-CHLORDANE	0.005	0.004	NA	NA	NA	NA
HEPTACHLOR	0.0002 U	0.0002 U	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	0.0002 U	0.0002 U	NA	NA	NA	NA
HEXACHLOROBENZENE	0.0003 U	0.0003 U	NA	NA	NA	NA
METHOXYCHLOR	0.0005 U	0.0005 U	NA	NA	NA	NA
MIREX	0.0002 U	0.0002 U	NA	NA	NA	NA
OXYCHLORDANE	0.0002	0.0002 U	NA	NA	NA	NA
TRANS-NONACHLOR	0.004 J	0.004 J	NA	NA	NA	NA
PCBs (mg/kg)						
AROCLOR-1016	0.03 U	0.03 U	0.04 U	0.03 U	0.03 U	0.02 U
AROCLOR-1221	0.05 U	0.05 U	0.04 U	0.03 U	0.03 U	0.02 U
AROCLOR-1232	0.03 U	0.03 U	0.04 U	0.03 U	0.03 U	0.02 U
AROCLOR-1242	0.03 U	0.03 U	0.04 U	0.03 U	0.03 U	0.02 U
AROCLOR-1248	0.03 U	0.03 U	0.04 U	0.03 U	0.03 U	0.02 U
AROCLOR-1254	0.03 U	0.03 U	0.04 U	0.03 U	0.03 U	0.02 U
AROCLOR-1260	0.03	0.02 J	0.02 J	0.03 U	0.03 U	0.02 U
TOTAL PCBS	0.03	0.02 J	0.02 J	0 U	0 U	0 U
LOW-LEVEL PCBs (mg/kg)						
PCB-101	0.0004 J	0.0004 J	NA	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD012**	**FNBWSD012**	**FNBWSD013**	**FNBWSD014**	**FNBWSD015**	**FNBWSD016**
Sample Depth (feet bgs)	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5
Sample Date	04/22/1998	04/22/1998	10/09/1997	10/10/1997	10/10/1997	10/10/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
LOW-LEVEL PCBs (mg/kg)						
PCB-105	0.0002 U	0.0002 U	NA	NA	NA	NA
PCB-114	0.0002 U	0.0002 U	NA	NA	NA	NA
PCB-118	0.0002 U	0.0003 J	NA	NA	NA	NA
PCB-123	0.0002 U	0.0002 U	NA	NA	NA	NA
PCB-126	0.0002 U	0.0002 U	NA	NA	NA	NA
PCB-128	0.0002 U	0.0002 U	NA	NA	NA	NA
PCB-138	0.0005	0.0006 J	NA	NA	NA	NA
PCB-153	0.001 J	0.001 J	NA	NA	NA	NA
PCB-156	0.0002 U	0.0002 U	NA	NA	NA	NA
PCB-157	0.0002 U	0.0002 U	NA	NA	NA	NA
PCB-167	0.0002 U	0.0002 U	NA	NA	NA	NA
PCB-169	0.0002 U	0.0002 U	NA	NA	NA	NA
PCB-170	0.0004 J	0.0006 J	NA	NA	NA	NA
PCB-18	0.0003 U	0.0003 U	NA	NA	NA	NA
PCB-180	0.001	0.001	NA	NA	NA	NA
PCB-187	0.0008	0.0008	NA	NA	NA	NA
PCB-189	0.0002 U	0.0002 U	NA	NA	NA	NA
PCB-195	0.0002 U	0.0002	NA	NA	NA	NA
PCB-206	0.0002 U	0.0002 U	NA	NA	NA	NA
PCB-209	0.0002 U	0.002	NA	NA	NA	NA
PCB-28	0.0002 U	0.0002 U	NA	NA	NA	NA
PCB-44	0.0002 U	0.0002 U	NA	NA	NA	NA
PCB-52	0.0002 U	0.0002 U	NA	NA	NA	NA
PCB-66	0.0002 U	0.0002 U	NA	NA	NA	NA
PCB-77	0.0002 U	0.0002 U	NA	NA	NA	NA
PCB-8	0.001 U	0.001 U	NA	NA	NA	NA
TOTAL PCBS	0.008 J	0.01 J	NA	NA	NA	NA
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	NA	NA	24.0 U	17.0 U	18.0 U	12.0 U
GASOLINE RANGE	NA	NA	1.0 Z	0.80 U	0.90 UJ	0.60 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD012**	**FNBWSD012**	**FNBWSD013**	**FNBWSD014**	**FNBWSD015**	**FNBWSD016**
Sample Depth (feet bgs)	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5
Sample Date	04/22/1998	04/22/1998	10/09/1997	10/10/1997	10/10/1997	10/10/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
PETROLEUM INDICATORS (mg/kg)						
MOTOR OIL RANGE	NA	NA	80.0 U	56.0 U	200 Y	40.0 U
pH						
PH	NA	NA	7.8	7.1	8.3	4.6
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	NA	NA	59.1	41.0	44.8	18.3

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD017**	**FNBWSD018**	**FNBWSD018**	**FNBWSD018**	**FNBWSD018**	**FNBWSD019**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 2.0	3.0 - 3.5	5.0 - 6.0	1.0 - 1.5
Sample Date	10/10/1997	10/10/1997	04/21/1998	04/21/1998	04/21/1998	10/10/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
METALS (mg/kg)						
ALUMINUM	8,190 J	14,100 J	NA	12,400	9,450	32,500 J
ANTIMONY	0.34 R	3.2 J	NA	1.9 UJ	2.1 UJ	1.0 J
ARSENIC	**8.9** !	**11.2** !	NA	**2.7 J**	**5.4** !	**13.4** !
BARIUM	133 J	104 J	NA	24.8 J	17.5 J	51.1 J
BERYLLIUM	0.11 UJ	0.14 J	NA	0.67 J	0.71 J	0.60 J
CADMIUM	0.05 U	0.06 U	NA	0.11 U	0.09 U	0.08 U
CALCIUM	984 J	1,490 J	NA	701 J	537 J	3,330 J
CHROMIUM	25.1 J	72.6 J	NA	11.7 J	9.8 J	110 J
CHROMIUM VI	NA	NA	0.10 U	NA	NA	NA
COBALT	3.5 J	15.5 J	NA	5.0 J	3.1 J	20.3 J
COPPER	19.5 J	324 J *α	NA	36.7 J	10.3 J	87.7 J
IRON	11,300 J	**33,900 J**	NA	16,000	12,400	**41,700 J**
LEAD	61.1 J *α	**422 J** ***α**	NA	10.3	5.5	45.9 J
MAGNESIUM	2,760 J	5,620 J	NA	2,400 J	1,850 J	14,600 J
MANGANESE	69.4 J	1,750 J *	NA	284 J	81.6 J	373 J
MERCURY	0.33 J	0.50 J	NA	0.10 U	0.09 U	0.44 J
MOLYBDENUM	0.85 UJ	2.7 J	NA	0.85 UJ	0.44 UJ	2.0 J
NICKEL	16.4 J	60.0 J	NA	14.0 J	9.8 J	**160 J** ***α**
POTASSIUM	1,070	1,900	NA	1,200 J	1,310 J	4,710
SELENIUM	0.47 UJ	1.1 J	NA	1.6 U	1.3 U	1.2 J
SILVER	0.14 UJ	0.16 U	NA	0.47 U	0.38 U	0.30 UJ
SODIUM	1,580	6,160	NA	1,570 J	3,020	10,300
THALLIUM	0.71 U	0.85 U	NA	2.4 U	2.0 U	1.2 U
VANADIUM	31.8 J	58.4 J	NA	70.0 J	41.5 J	101 J
ZINC	42.6 J	257 J *	NA	53.0 J	49.1 J	169 J
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	NA	NA	NA	0.02 U	0.02 U	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	0.02 U	0.02 U	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	0.02 U	0.02 U	NA
1,1-DICHLOROETHANE	NA	NA	NA	0.02 U	0.02 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSD017	FNBWSD018	FNBWSD018	FNBWSD018	FNBWSD018	FNBWSD019
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 2.0	3.0 - 3.5	5.0 - 6.0	1.0 - 1.5
Sample Date	10/10/1997	10/10/1997	04/21/1998	04/21/1998	04/21/1998	10/10/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1-DICHLOROETHENE	NA	NA	NA	0.02 U	0.02 U	NA
1,2-DICHLOROETHANE	NA	NA	NA	0.02 U	0.02 U	NA
1,2-DICHLOROETHENE (TOTAL)	NA	NA	NA	0.02 U	0.02 U	NA
1,2-DICHLOROPROPANE	NA	NA	NA	0.02 U	0.02 U	NA
2-BUTANONE	NA	NA	NA	0.02 U	0.02 U	NA
2-HEXANONE	NA	NA	NA	0.02 U	0.02 U	NA
4-METHYL-2-PENTANONE	NA	NA	NA	0.02 U	0.02 U	NA
ACETONE	NA	NA	NA	0.02 U	0.02 U	NA
BENZENE	NA	NA	NA	0.02 U	0.02 U	NA
BROMODICHLOROMETHANE	NA	NA	NA	0.02 U	0.02 U	NA
BROMOFORM	NA	NA	NA	0.02 UJ	0.02 UJ	NA
BROMOMETHANE	NA	NA	NA	0.02 U	0.02 U	NA
CARBON DISULFIDE	NA	NA	NA	0.02 U	0.02 U	NA
CARBON TETRACHLORIDE	NA	NA	NA	0.02 U	0.02 U	NA
CHLOROBENZENE	NA	NA	NA	0.02 U	0.02 U	NA
CHLOROETHANE	NA	NA	NA	0.02 UJ	0.02 UJ	NA
CHLOROFORM	NA	NA	NA	0.02 U	0.02 U	NA
CHLOROMETHANE	NA	NA	NA	0.02 U	0.02 U	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	0.02 U	0.02 U	NA
DIBROMOCHLOROMETHANE	NA	NA	NA	0.02 U	0.02 U	NA
ETHYLBENZENE	NA	NA	NA	0.02 U	0.02 U	NA
METHYLENE CHLORIDE	NA	NA	NA	0.02 U	0.02 U	NA
STYRENE	NA	NA	NA	0.02 U	0.02 U	NA
TETRACHLOROETHENE	NA	NA	NA	0.02 U	0.02 U	NA
TOLUENE	NA	NA	NA	0.02 U	0.02 U	NA
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	0.02 U	0.02 U	NA
TRICHLOROETHENE	NA	NA	NA	0.02 U	0.02 U	NA
VINYL CHLORIDE	NA	NA	NA	0.02 U	0.02 U	NA
XYLENE (TOTAL)	NA	NA	NA	0.02 U	0.02 U	NA
TOTAL VOCS	NA	NA	NA	0 U	0 U	NA
PESTICIDES (mg/kg)						
4,4'-DDD	0.004 U	0.006 U	NA	NA	NA	0.005 J

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD017**	**FNBWSD018**	**FNBWSD018**	**FNBWSD018**	**FNBWSD018**	**FNBWSD019**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 2.0	3.0 - 3.5	5.0 - 6.0	1.0 - 1.5
Sample Date	10/10/1997	10/10/1997	04/21/1998	04/21/1998	04/21/1998	10/10/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
PESTICIDES (mg/kg)						
4,4'-DDE	0.004 U	0.006 U	NA	NA	NA	0.008 U
4,4'-DDT	0.004 U	0.004 J	NA	NA	NA	0.008 U
ALDRIN	0.002 U	0.003 U	NA	NA	NA	0.004 U
ALPHA-BHC	0.005 UJ	0.003 U	NA	NA	NA	0.004 U
ALPHA-CHLORDANE	0.002 U	0.003 U	NA	NA	NA	0.004 U
BETA-BHC	0.002 UJ	0.003 U	NA	NA	NA	0.004 U
DELTA-BHC	0.002 U	0.003 U	NA	NA	NA	0.004 U
DIELDRIN	0.004 U	0.006 U	NA	NA	NA	0.008 U
ENDOSULFAN I	0.002 U	0.003 U	NA	NA	NA	0.004 U
ENDOSULFAN II	0.004 U	0.006 U	NA	NA	NA	0.008 U
ENDOSULFAN SULFATE	0.004 U	0.006 U	NA	NA	NA	0.008 U
ENDRIN	0.004 U	0.006 U	NA	NA	NA	0.008 U
ENDRIN ALDEHYDE	0.004 U	0.006 U	NA	NA	NA	0.008 U
ENDRIN KETONE	0.004 U	0.006 U	NA	NA	NA	0.008 U
GAMMA-BHC (LINDANE)	0.002 UJ	0.003 U	NA	NA	NA	0.004 U
GAMMA-CHLORDANE	0.002 U	0.003 U	NA	NA	NA	0.004 U
HEPTACHLOR	0.0004 U	0.0005 U	NA	NA	NA	0.0008 U
HEPTACHLOR EPOXIDE	0.0004 U	0.0005 U	NA	NA	NA	0.0008 U
METHOXYCHLOR	0.02 U	0.03 U	NA	NA	NA	0.04 U
TOXAPHENE	0.1 U	0.1 U	NA	0.1 U	0.09 U	0.2 U
LOW-LEVEL PESTICIDES (mg/kg)						
2,4'-DDD	NA	NA	NA	0.0002 U	0.0002 U	NA
2,4'-DDE	NA	NA	NA	0.0002 U	0.0002 U	NA
2,4'-DDT	NA	NA	NA	0.0002 U	0.0002 U	NA
4,4'-DDD	NA	NA	NA	0.0002 U	0.0002 U	NA
4,4'-DDE	NA	NA	NA	0.0002 U	0.0002 U	NA
4,4'-DDT	NA	NA	NA	0.0003 U	0.0003 U	NA
ALDRIN	NA	NA	NA	0.0002 U	0.0002 U	NA
ALPHA-BHC	NA	NA	NA	0.0002 U	0.0002 U	NA
ALPHA-CHLORDANE	NA	NA	NA	0.0002 U	0.0002 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD017**	**FNBWSD018**	**FNBWSD018**	**FNBWSD018**	**FNBWSD018**	**FNBWSD019**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 2.0	3.0 - 3.5	5.0 - 6.0	1.0 - 1.5
Sample Date	10/10/1997	10/10/1997	04/21/1998	04/21/1998	04/21/1998	10/10/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
LOW-LEVEL PESTICIDES (mg/kg)						
BETA-BHC	NA	NA	NA	0.0002 U	0.0002 U	NA
CIS-NONACHLOR	NA	NA	NA	0.0002 U	0.0002 U	NA
DELTA-BHC	NA	NA	NA	0.0002 U	0.0002 U	NA
DIELDRIN	NA	NA	NA	0.0002 U	0.0002 U	NA
ENDOSULFAN I	NA	NA	NA	0.0002 U	0.0002 U	NA
ENDOSULFAN II	NA	NA	NA	0.0002 U	0.0002 U	NA
ENDOSULFAN SULFATE	NA	NA	NA	0.0002 UJ	0.0002 UJ	NA
ENDRIN	NA	NA	NA	0.0002 U	0.0002 U	NA
ENDRIN ALDEHYDE	NA	NA	NA	0.0002 UJ	0.0002 UJ	NA
ENDRIN KETONE	NA	NA	NA	0.0002 U	0.0002 U	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	0.0002 U	0.0002 U	NA
GAMMA-CHLORDANE	NA	NA	NA	0.0002 U	0.0002 U	NA
HEPTACHLOR	NA	NA	NA	0.0002 U	0.0002 U	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	0.0002 U	0.0002 U	NA
HEXACHLOROBENZENE	NA	NA	NA	0.0003 U	0.0003 U	NA
METHOXYCHLOR	NA	NA	NA	0.0006 U	0.0006 U	NA
MIREX	NA	NA	NA	0.0002 U	0.0002 U	NA
OXYCHLORDANE	NA	NA	NA	0.0002 U	0.0002 U	NA
TRANS-NONACHLOR	NA	NA	NA	0.0002 U	0.0002 U	NA
PCBs (mg/kg)						
AROCLOR-1016	0.02 U	0.03 U	NA	0.03 U	0.03 U	0.04 U
AROCLOR-1221	0.02 U	0.03 U	NA	0.06 U	0.06 U	0.04 U
AROCLOR-1232	0.02 U	0.03 U	NA	0.03 U	0.03 U	0.04 U
AROCLOR-1242	0.02 U	0.03 U	NA	0.03 U	0.03 U	0.04 U
AROCLOR-1248	0.02 U	0.03 U	NA	0.03 U	0.03 U	0.04 U
AROCLOR-1254	0.02 U	0.03 U	NA	0.03 U	0.03 U	0.04 U
AROCLOR-1260	0.02 U	0.08	NA	0.03 U	0.03 U	0.03 J
TOTAL PCBS	0 U	0.08	NA	0 U	0 U	0.03 J
LOW-LEVEL PCBs (mg/kg)						
PCB-101	NA	NA	NA	0.0002 U	0.0002 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD017**	**FNBWSD018**	**FNBWSD018**	**FNBWSD018**	**FNBWSD018**	**FNBWSD019**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 2.0	3.0 - 3.5	5.0 - 6.0	1.0 - 1.5
Sample Date	10/10/1997	10/10/1997	04/21/1998	04/21/1998	04/21/1998	10/10/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
LOW-LEVEL PCBs (mg/kg)						
PCB-105	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-114	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-118	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-123	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-126	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-128	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-138	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-153	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-156	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-157	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-167	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-169	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-170	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-18	NA	NA	NA	0.0003 U	0.0003 U	NA
PCB-180	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-187	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-189	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-195	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-206	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-209	NA	NA	NA	0.0004	0.0006	NA
PCB-28	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-44	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-52	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-66	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-77	NA	NA	NA	0.0002 U	0.0002 U	NA
PCB-8	NA	NA	NA	0.001 U	0.001 U	NA
TOTAL PCBS	NA	NA	NA	0.001	0.001	NA
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	12.0 U	17.0 U	NA	NA	NA	26.0 UJ
GASOLINE RANGE	0.60 UJ	0.80 UJ	NA	NA	NA	1.0 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD017**	**FNBWSD018**	**FNBWSD018**	**FNBWSD018**	**FNBWSD018**	**FNBWSD019**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 2.0	3.0 - 3.5	5.0 - 6.0	1.0 - 1.5
Sample Date	10/10/1997	10/10/1997	04/21/1998	04/21/1998	04/21/1998	10/10/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
PETROLEUM INDICATORS (mg/kg)						
MOTOR OIL RANGE	41.0 U	62.0 Y	NA	NA	NA	85.0 UJ
pH						
PH	5.2	6.6	NA	NA	NA	7.7
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	19.7	40.9	NA	48.2	43.8	60.8

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD019**	**FNBWSD019**	**FNBWSD020**	**FNBWSD021**	**FNBWSD022**	**FNBWSD023**
Sample Depth (feet bgs)	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5
Sample Date	09/08/1998	09/08/1998	10/10/1997	10/10/1997	10/10/1997	10/10/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
METALS (mg/kg)						
ALUMINUM	NA	NA	28,500 J	28,600 J	33,000 J	31,400 J
ANTIMONY	NA	NA	0.72 J	0.92 J	0.98 J	0.42 R
ARSENIC	NA	NA	**15.7** !	**14.9** !	**11.4** !	**13.3** !
BARIUM	NA	NA	50.2 J	49.2 J	55.1 J	58.2 J
BERYLLIUM	NA	NA	0.54 J	0.63 J	0.64 J	0.63 J
CADMIUM	NA	NA	0.09 U	0.08 U	0.09 U	0.06 U
CALCIUM	NA	NA	3,330 J	2,950 J	3,280 J	2,900 J
CHROMIUM	NA	NA	94.4 J	87.8 J	98.1 J	102 J
COBALT	NA	NA	20.0 J	25.6 J	20.7 J	17.8 J
COPPER	NA	NA	84.4 J	71.1 J	78.7 J	88.3 J
IRON	NA	NA	**47,800 J**	**41,300 J**	**47,100 J**	**38,600 J**
LEAD	NA	NA	65.8 J *α	44.3 J	35.3 J	66.5 J *α
MAGNESIUM	NA	NA	13,200 J	13,200 J	14,500 J	12,900 J
MANGANESE	NA	NA	299 J	298 J	399 J	303 J
MERCURY	NA	NA	0.86 J	0.26 J	0.32 J	0.71 J
MOLYBDENUM	NA	NA	3.4 J	1.5 UJ	1.7 UJ	0.47 UJ
NICKEL	NA	NA	113 J	106 J	111 J	94.4 J
POTASSIUM	NA	NA	4,070	4,340	4,730	4,130
SELENIUM	NA	NA	1.1 J	1.3 J	0.89 UJ	1.4 J
SILVER	NA	NA	0.41 UJ	0.33 UJ	0.32 UJ	0.28 UJ
SODIUM	NA	NA	12,200	9,890	10,300	7,480
THALLIUM	NA	NA	1.3 U	1.3 U	1.3 U	0.99 J
VANADIUM	NA	NA	89.7 J	88.8 J	93.9 J	93.8 J
ZINC	NA	NA	250 J *	144 J	158 J	193 J
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	NA	NA	0.02 U	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	0.02 U	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	0.02 U	NA	NA	NA
1,1-DICHLOROETHANE	NA	NA	0.02 U	NA	NA	NA
1,1-DICHLOROETHENE	NA	NA	0.02 U	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD019**	**FNBWSD019**	**FNBWSD020**	**FNBWSD021**	**FNBWSD022**	**FNBWSD023**
Sample Depth (feet bgs)	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5
Sample Date	09/08/1998	09/08/1998	10/10/1997	10/10/1997	10/10/1997	10/10/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROETHANE	NA	NA	0.02 U	NA	NA	NA
1,2-DICHLOROETHENE (TOTAL)	NA	NA	0.02 U	NA	NA	NA
1,2-DICHLOROPROPANE	NA	NA	0.02 U	NA	NA	NA
2-BUTANONE	NA	NA	0.02 UJ	NA	NA	NA
2-HEXANONE	NA	NA	0.02 U	NA	NA	NA
4-METHYL-2-PENTANONE	NA	NA	0.02 U	NA	NA	NA
ACETONE	NA	NA	0.03 UJ	NA	NA	NA
BENZENE	NA	NA	0.02 U	NA	NA	NA
BROMODICHLOROMETHANE	NA	NA	0.02 U	NA	NA	NA
BROMOFORM	NA	NA	0.02 U	NA	NA	NA
BROMOMETHANE	NA	NA	0.02 U	NA	NA	NA
CARBON DISULFIDE	NA	NA	0.01 J	NA	NA	NA
CARBON TETRACHLORIDE	NA	NA	0.02 U	NA	NA	NA
CHLOROBENZENE	NA	NA	0.02 U	NA	NA	NA
CHLOROETHANE	NA	NA	0.02 U	NA	NA	NA
CHLOROFORM	NA	NA	0.02 U	NA	NA	NA
CHLOROMETHANE	NA	NA	0.02 U	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	0.02 U	NA	NA	NA
DIBROMOCHLOROMETHANE	NA	NA	0.02 U	NA	NA	NA
ETHYLBENZENE	NA	NA	0.02 U	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	0.02 U	NA	NA	NA
STYRENE	NA	NA	0.02 U	NA	NA	NA
TETRACHLOROETHENE	NA	NA	0.02 U	NA	NA	NA
TOLUENE	NA	NA	0.02 U	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	NA	NA	0.02 U	NA	NA	NA
TRICHLOROETHENE	NA	NA	0.002 J	NA	NA	NA
VINYL CHLORIDE	NA	NA	0.02 U	NA	NA	NA
XYLENE (TOTAL)	NA	NA	0.02 U	NA	NA	NA
TOTAL VOCS	NA	NA	0.01 J	NA	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	0.4 R	0.4 U	0.9 U	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD019**	**FNBWSD019**	**FNBWSD020**	**FNBWSD021**	**FNBWSD022**	**FNBWSD023**
Sample Depth (feet bgs)	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5
Sample Date	09/08/1998	09/08/1998	10/10/1997	10/10/1997	10/10/1997	10/10/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROBENZENE	0.2 R	0.2 U	0.4 U	NA	NA	NA
1,3-DICHLOROBENZENE	0.2 R	0.2 U	0.4 U	NA	NA	NA
1,4-DICHLOROBENZENE	0.2 R	0.2 U	0.4 U	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	0.4 R	0.4 U	0.9 U	NA	NA	NA
2,4,5-TRICHLOROPHENOL	0.9 U	0.9 U	2 U	NA	NA	NA
2,4,6-TRICHLOROPHENOL	0.4 U	0.4 U	0.9 U	NA	NA	NA
2,4-DICHLOROPHENOL	0.4 U	0.4 U	0.9 U	NA	NA	NA
2,4-DIMETHYLPHENOL	0.4 U	0.4 U	0.9 U	NA	NA	NA
2,4-DINITROPHENOL	0.9 UJ	0.9 UJ	2 U	NA	NA	NA
2,4-DINITROTOLUENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
2,6-DINITROTOLUENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
2-CHLORONAPHTHALENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
2-CHLOROPHENOL	0.4 U	0.4 U	0.9 U	NA	NA	NA
2-METHYLNAPHTHALENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
2-METHYLPHENOL	0.4 U	0.4 U	0.9 U	NA	NA	NA
2-NITROANILINE	0.9 R	0.9 U	2 U	NA	NA	NA
2-NITROPHENOL	0.4 U	0.4 U	0.9 U	NA	NA	NA
3,3'-DICHLOROBENZIDINE	0.4 R	0.4 U	0.9 U	NA	NA	NA
3-NITROANILINE	0.9 R	0.9 U	2 U	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	0.9 U	0.9 U	2 U	NA	NA	NA
4-BROMOPHENYL-PHENYLETHER	0.4 R	0.4 U	0.9 U	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	0.4 U	0.4 U	0.9 U	NA	NA	NA
4-CHLOROANILINE	0.4 R	0.4 U	0.9 U	NA	NA	NA
4-CHLOROPHENYL-PHENYLETHER	0.4 R	0.4 U	0.9 U	NA	NA	NA
4-METHYLPHENOL	0.4 U	0.4 U	0.9 U	NA	NA	NA
4-NITROANILINE	0.9 R	0.9 U	2 U	NA	NA	NA
4-NITROPHENOL	0.9 UJ	0.9 UJ	2 UJ	NA	NA	NA
ACENAPHTHENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
ACENAPHTHYLENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
ANTHRACENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
BENZO(A)ANTHRACENE	0.4 R	0.4 U	0.9 U	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD019**	**FNBWSD019**	**FNBWSD020**	**FNBWSD021**	**FNBWSD022**	**FNBWSD023**
Sample Depth (feet bgs)	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5
Sample Date	09/08/1998	09/08/1998	10/10/1997	10/10/1997	10/10/1997	10/10/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)PYRENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
BENZO(B)FLUORANTHENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
BENZO(G,H,I)PERYLENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
BENZO(K)FLUORANTHENE	0.4 R	0.4 UJ	0.9 U	NA	NA	NA
BIS(2-CHLOROETHOXY)METHANE	0.4 R	0.4 U	0.9 U	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	0.4 R	0.4 U	0.9 U	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	0.1 UJ	0.1 UJ	0.4 U	NA	NA	NA
BUTYLBENZYLPHTHALATE	0.4 R	0.4 U	0.9 U	NA	NA	NA
CARBAZOLE	0.4 R	0.4 U	0.9 U	NA	NA	NA
CHRYSENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
DI-N-BUTYLPHTHALATE	0.4 R	0.4 U	0.9 U	NA	NA	NA
DI-N-OCTYLPHTHALATE	0.4 R	0.4 U	0.9 U	NA	NA	NA
DIBENZ(A,H)ANTHRACENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
DIBENZOFURAN	0.4 R	0.4 U	0.9 U	NA	NA	NA
DIETHYLPHTHALATE	0.4 R	0.4 U	0.9 U	NA	NA	NA
DIMETHYLPHTHALATE	0.4 R	0.4 U	0.9 U	NA	NA	NA
FLUORANTHENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
FLUORENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
HEXACHLOROBENZENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
HEXACHLOROBUTADIENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
HEXACHLOROETHANE	0.4 R	0.4 U	0.9 U	NA	NA	NA
INDENO(1,2,3-CD)PYRENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
ISOPHORONE	0.4 R	0.4 U	0.9 U	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	0.4 R	0.4 U	0.9 U	NA	NA	NA
N-NITROSODIPHENYLAMINE (1)	0.4 R	0.4 U	0.9 U	NA	NA	NA
NAPHTHALENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
NITROBENZENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
PENTACHLOROPHENOL	0.9 U	0.9 U	2 U	NA	NA	NA
PHENANTHRENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
PHENOL	0.4 U	0.4 U	0.9 U	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD019**	**FNBWSD019**	**FNBWSD020**	**FNBWSD021**	**FNBWSD022**	**FNBWSD023**
Sample Depth (feet bgs)	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5
Sample Date	09/08/1998	09/08/1998	10/10/1997	10/10/1997	10/10/1997	10/10/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PYRENE	0.4 R	0.4 U	0.9 U	NA	NA	NA
TOTAL SVOCS	0 U	0 U	0 U	NA	NA	NA
PESTICIDES (mg/kg)						
4,4'-DDD	NA	NA	0.009 U	0.008 U	0.01 U	0.006 U
4,4'-DDE	NA	NA	0.009 U	0.008 U	0.01 U	0.006 U
4,4'-DDT	NA	NA	0.009 U	0.008 U	0.01 U	0.006 U
ALDRIN	NA	NA	0.005 U	0.004 U	0.005 U	0.003 U
ALPHA-BHC	NA	NA	0.005 U	0.004 U	0.005 U	0.003 U
ALPHA-CHLORDANE	NA	NA	0.005 U	0.004 U	0.005 U	0.003 U
BETA-BHC	NA	NA	0.005 U	0.004 U	0.005 U	0.003 U
DELTA-BHC	NA	NA	0.005 U	0.004 U	0.005 U	0.003 U
DIELDRIN	NA	NA	0.009 U	0.008 U	0.01 U	0.006 U
ENDOSULFAN I	NA	NA	0.005 U	0.004 U	0.005 U	0.003 U
ENDOSULFAN II	NA	NA	0.009 U	0.008 U	0.01 U	0.006 U
ENDOSULFAN SULFATE	NA	NA	0.009 U	0.008 U	0.01 U	0.006 U
ENDRIN	NA	NA	0.009 U	0.008 U	0.01 U	0.006 U
ENDRIN ALDEHYDE	NA	NA	0.009 U	0.008 U	0.01 U	0.006 U
ENDRIN KETONE	NA	NA	0.009 U	0.008 U	0.01 U	0.006 U
GAMMA-BHC (LINDANE)	NA	NA	0.005 U	0.004 U	0.005 U	0.003 U
GAMMA-CHLORDANE	NA	NA	0.005 U	0.004 U	0.005 U	0.003 U
HEPTACHLOR	NA	NA	0.0008 U	0.0007 U	0.0009 U	0.0006 U
HEPTACHLOR EPOXIDE	NA	NA	0.0008 U	0.0007 U	0.0009 U	0.0006 U
METHOXYCHLOR	NA	NA	0.05 U	0.04 U	0.05 U	0.03 U
TOXAPHENE	NA	NA	0.2 U	0.2 U	0.3 U	0.2 U
PCBs (mg/kg)						
AROCLOR-1016	NA	NA	0.04 U	0.04 U	0.05 U	0.03 U
AROCLOR-1221	NA	NA	0.04 U	0.04 U	0.05 U	0.03 U
AROCLOR-1232	NA	NA	0.04 U	0.04 U	0.05 U	0.03 U
AROCLOR-1242	NA	NA	0.04 U	0.04 U	0.05 U	0.03 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD019**	**FNBWSD019**	**FNBWSD020**	**FNBWSD021**	**FNBWSD022**	**FNBWSD023**
Sample Depth (feet bgs)	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5	1.0 - 1.5
Sample Date	09/08/1998	09/08/1998	10/10/1997	10/10/1997	10/10/1997	10/10/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
PCBs (mg/kg)						
AROCLOR-1248	NA	NA	0.04 U	0.04 U	0.05 U	0.03 U
AROCLOR-1254	NA	NA	0.04 U	0.04 U	0.05 U	0.03 U
AROCLOR-1260	NA	NA	0.05	0.04 U	0.05 U	0.02 J
TOTAL PCBS	NA	NA	0.05	0 U	0 U	0.02 J
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	1.3 U	1.3 U	28.0 U	23.0 U	29.0 U	19.0 U
GASOLINE RANGE	NA	NA	0.50 UJ	1.0 UJ	1.0 UJ	0.90 UJ
MOTOR OIL RANGE	21.0 Y	26.0 Y	160 Y	120 Y	130 Y	94.0 Y
pH						
PH	NA	NA	7.2	7.9	8.1	7.9
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	21.0	22.0	63.7	57.2	65.8	48.4

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD024**	**FNBWSD024**	**FNBWSD024**	**FNBWSD024**	**FNBWSD025**	**FNBWSD026**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 2.0	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5
Sample Date	10/10/1997	04/27/1998	04/27/1998	04/27/1998	10/13/1997	10/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
METALS (mg/kg)						
ALUMINUM	22,500 J	NA	23,600	29,400	9,510	34,400
ANTIMONY	0.59 J	NA	4.0 UJ	5.8 UJ	0.47 R	0.79 UJ
ARSENIC	**16.7** !	NA	2.4 UJ	0.81 U	**1.1 J**	**32.3** !
BARIUM	39.9 J	NA	26.5 J	25.3 J	15.3 J	50.3
BERYLLIUM	0.40 J	NA	0.02 U	0.02 U	0.83	0.53 J
CADMIUM	0.08 UJ	NA	0.06 U	0.07 U	0.07 U	0.09 U
CALCIUM	2,280 J	NA	6,230	8,890	553 J	3,080
CHROMIUM	72.2 J	NA	22.0	22.7	7.6	105
CHROMIUM VI	NA	0.10 U	NA	NA	NA	NA
COBALT	15.6 J	NA	31.0	34.8	3.5 J	29.6
COPPER	60.6 J	NA	75.5	63.6	9.1	86.2
IRON	**37,000 J**	NA	**68,900** *	**74,700** *	12,600	**39,000**
LEAD	41.1 J	NA	108 *α	5.1	7.5	60.3 *α
MAGNESIUM	9,250 J	NA	13,000	15,600	2,060	13,400
MANGANESE	325 J	NA	328	545	99.7	237
MERCURY	0.73 J	NA	0.21	0.12 J	0.14 J	0.93
MOLYBDENUM	2.7 J	NA	0.32 U	0.33 U	0.20 UJ	1.6 J
NICKEL	72.9 J	NA	23.4	19.4	10.8	127
POTASSIUM	3,160	NA	3,950	4,260	1,130 J	4,340 J
SELENIUM	1.3 J	NA	0.66 UJ	0.68 UJ	0.65 U	1.9
SILVER	0.23 UJ	NA	0.28 U	0.28 U	0.18 U	0.24 U
SODIUM	8,460	NA	5,380	5,250	4,870 J	9,530 J
THALLIUM	1.2 U	NA	1.2 U	1.2 U	0.98 UJ	1.3 UJ
VANADIUM	74.3 J	NA	195 *	265 *α	50.2	100
ZINC	129 J	NA	205	109	40.6	191
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	0.03 U	NA	0.02 U	0.01 U	NA	NA
1,1,2,2-TETRACHLOROETHANE	0.03 U	NA	0.02 U	0.01 U	NA	NA
1,1,2-TRICHLOROETHANE	0.03 U	NA	0.02 U	0.01 U	NA	NA
1,1-DICHLOROETHANE	0.03 U	NA	0.02 U	0.01 U	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	FNBWSD024	FNBWSD024	FNBWSD024	FNBWSD024	FNBWSD025	FNBWSD026
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 2.0	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5
Sample Date	10/10/1997	04/27/1998	04/27/1998	04/27/1998	10/13/1997	10/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1-DICHLOROETHENE	0.03 U	NA	0.02 U	0.01 U	NA	NA
1,2-DICHLOROETHANE	0.03 U	NA	0.02 U	0.01 U	NA	NA
1,2-DICHLOROETHENE (TOTAL)	0.03 U	NA	0.02 U	0.01 U	NA	NA
1,2-DICHLOROPROPANE	0.03 U	NA	0.02 U	0.01 U	NA	NA
2-BUTANONE	0.03 UJ	NA	0.02 U	0.01 U	NA	NA
2-HEXANONE	0.03 U	NA	0.02 U	0.01 U	NA	NA
4-METHYL-2-PENTANONE	0.03 U	NA	0.02 U	0.01 U	NA	NA
ACETONE	0.03 UJ	NA	0.02 UJ	0.01 UJ	NA	NA
BENZENE	0.03 U	NA	0.02 U	0.01 U	NA	NA
BROMODICHLOROMETHANE	0.03 U	NA	0.02 U	0.01 U	NA	NA
BROMOFORM	0.03 U	NA	0.02 U	0.01 U	NA	NA
BROMOMETHANE	0.03 U	NA	0.02 U	0.01 U	NA	NA
CARBON DISULFIDE	0.02 J	NA	0.02 U	0.01 U	NA	NA
CARBON TETRACHLORIDE	0.03 U	NA	0.02 U	0.01 U	NA	NA
CHLOROBENZENE	0.03 U	NA	0.02 U	0.01 U	NA	NA
CHLOROETHANE	0.03 U	NA	0.02 UJ	0.01 UJ	NA	NA
CHLOROFORM	0.03 U	NA	0.02 U	0.01 U	NA	NA
CHLOROMETHANE	0.03 U	NA	0.02 UJ	0.01 UJ	NA	NA
CIS-1,3-DICHLOROPROPENE	0.03 U	NA	0.02 U	0.01 U	NA	NA
DIBROMOCHLOROMETHANE	0.03 U	NA	0.02 U	0.01 U	NA	NA
ETHYLBENZENE	0.03 U	NA	0.02 U	0.01 U	NA	NA
METHYLENE CHLORIDE	0.03 U	NA	0.02 U	0.01 U	NA	NA
STYRENE	0.03 U	NA	0.02 U	0.01 U	NA	NA
TETRACHLOROETHENE	0.03 U	NA	0.02 U	0.01 U	NA	NA
TOLUENE	0.03 U	NA	0.02 U	0.01 U	NA	NA
TRANS-1,3-DICHLOROPROPENE	0.03 U	NA	0.02 U	0.01 U	NA	NA
TRICHLOROETHENE	0.03 U	NA	0.02 U	0.01 U	NA	NA
VINYL CHLORIDE	0.03 U	NA	0.02 UJ	0.01 UJ	NA	NA
XYLENE (TOTAL)	0.03 U	NA	0.02 U	0.01 U	NA	NA
TOTAL VOCS	0.02 J	NA	0 U	0 U	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	0.8 U	NA	NA	NA	NA	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD024**	**FNBWSD024**	**FNBWSD024**	**FNBWSD024**	**FNBWSD025**	**FNBWSD026**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 2.0	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5
Sample Date	10/10/1997	04/27/1998	04/27/1998	04/27/1998	10/13/1997	10/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROBENZENE	0.4 U	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	0.4 U	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	0.4 U	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	0.8 U	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	2 U	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	0.8 U	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	0.8 U	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	0.8 U	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	2 UJ	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	0.8 U	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	0.8 U	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	0.8 U	NA	NA	NA	NA	NA
2-CHLOROPHENOL	0.8 U	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	0.8 U	NA	NA	NA	NA	NA
2-METHYLPHENOL	0.8 U	NA	NA	NA	NA	NA
2-NITROANILINE	2 U	NA	NA	NA	NA	NA
2-NITROPHENOL	0.8 U	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	0.8 U	NA	NA	NA	NA	NA
3-NITROANILINE	2 U	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	2 U	NA	NA	NA	NA	NA
4-BROMOPHENYL-PHENYLETHER	0.8 U	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	0.8 U	NA	NA	NA	NA	NA
4-CHLOROANILINE	0.8 U	NA	NA	NA	NA	NA
4-CHLOROPHENYL-PHENYLETHER	0.8 U	NA	NA	NA	NA	NA
4-METHYLPHENOL	0.8 U	NA	NA	NA	NA	NA
4-NITROANILINE	2 U	NA	NA	NA	NA	NA
4-NITROPHENOL	2 U	NA	NA	NA	NA	NA
ACENAPHTHENE	0.8 U	NA	NA	NA	NA	NA
ACENAPHTHYLENE	0.8 U	NA	NA	NA	NA	NA
ANTHRACENE	0.8 U	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	0.8 U	NA	NA	NA	NA	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD024**	**FNBWSD024**	**FNBWSD024**	**FNBWSD024**	**FNBWSD025**	**FNBWSD026**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 2.0	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5
Sample Date	10/10/1997	04/27/1998	04/27/1998	04/27/1998	10/13/1997	10/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
BENZO(A)PYRENE	0.8 U	NA	NA	NA	NA	NA
BENZO(B)FLUORANTHENE	0.8 U	NA	NA	NA	NA	NA
BENZO(G,H,I)PERYLENE	0.8 U	NA	NA	NA	NA	NA
BENZO(K)FLUORANTHENE	0.8 U	NA	NA	NA	NA	NA
BIS(2-CHLOROETHOXY)METHANE	0.8 U	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	0.8 U	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	0.3 U	NA	NA	NA	NA	NA
BUTYLBENZYLPHTHALATE	0.8 U	NA	NA	NA	NA	NA
CARBAZOLE	0.8 U	NA	NA	NA	NA	NA
CHRYSENE	0.8 U	NA	NA	NA	NA	NA
DI-N-BUTYLPHTHALATE	0.8 U	NA	NA	NA	NA	NA
DI-N-OCTYLPHTHALATE	0.8 U	NA	NA	NA	NA	NA
DIBENZ(A,H)ANTHRACENE	0.8 U	NA	NA	NA	NA	NA
DIBENZOFURAN	0.8 U	NA	NA	NA	NA	NA
DIETHYLPHTHALATE	0.8 U	NA	NA	NA	NA	NA
DIMETHYLPHTHALATE	0.8 U	NA	NA	NA	NA	NA
FLUORANTHENE	0.8 U	NA	NA	NA	NA	NA
FLUORENE	0.8 U	NA	NA	NA	NA	NA
HEXACHLOROBENZENE	0.8 U	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	0.8 U	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	0.8 U	NA	NA	NA	NA	NA
HEXACHLOROETHANE	0.8 U	NA	NA	NA	NA	NA
INDENO(1,2,3-CD)PYRENE	0.8 U	NA	NA	NA	NA	NA
ISOPHORONE	0.8 U	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	0.8 U	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE (1)	0.8 U	NA	NA	NA	NA	NA
NAPHTHALENE	0.8 U	NA	NA	NA	NA	NA
NITROBENZENE	0.8 U	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	2 U	NA	NA	NA	NA	NA
PHENANTHRENE	0.8 U	NA	NA	NA	NA	NA
PHENOL	0.8 U	NA	NA	NA	NA	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD024**	**FNBWSD024**	**FNBWSD024**	**FNBWSD024**	**FNBWSD025**	**FNBWSD026**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 2.0	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5
Sample Date	10/10/1997	04/27/1998	04/27/1998	04/27/1998	10/13/1997	10/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
PYRENE	0.8 U	NA	NA	NA	NA	NA
TOTAL SVOCS	0 U	NA	NA	NA	NA	NA
PESTICIDES (mg/kg)						
4,4'-DDD	0.008 UJ	NA	NA	NA	0.005 U	0.004 J
4,4'-DDE	0.008 UJ	NA	NA	NA	0.005 U	0.007 U
4,4'-DDT	0.008 UJ	NA	NA	NA	0.005 U	0.007 U
ALDRIN	0.004 UJ	NA	NA	NA	0.003 U	0.004 U
ALPHA-BHC	0.004 UJ	NA	NA	NA	0.003 U	0.004 U
ALPHA-CHLORDANE	0.004 UJ	NA	NA	NA	0.003 U	0.004 U
BETA-BHC	0.004 UJ	NA	NA	NA	0.003 U	0.004 U
DELTA-BHC	0.004 UJ	NA	NA	NA	0.003 U	0.004 U
DIELDRIN	0.008 UJ	NA	NA	NA	0.005 U	0.007 U
ENDOSULFAN I	0.004 UJ	NA	NA	NA	0.003 U	0.004 U
ENDOSULFAN II	0.008 UJ	NA	NA	NA	0.005 U	0.007 U
ENDOSULFAN SULFATE	0.008 UJ	NA	NA	NA	0.005 U	0.007 U
ENDRIN	0.008 UJ	NA	NA	NA	0.005 U	0.007 U
ENDRIN ALDEHYDE	0.008 UJ	NA	NA	NA	0.005 U	0.007 U
ENDRIN KETONE	0.008 UJ	NA	NA	NA	0.005 U	0.007 U
GAMMA-BHC (LINDANE)	0.004 UJ	NA	NA	NA	0.003 U	0.004 U
GAMMA-CHLORDANE	0.004 UJ	NA	NA	NA	0.003 U	0.004 U
HEPTACHLOR	0.0007 UJ	NA	NA	NA	0.0005 U	0.0007 U
HEPTACHLOR EPOXIDE	0.0007 UJ	NA	NA	NA	0.0005 U	0.0007 U
METHOXYCHLOR	0.04 UJ	NA	NA	NA	0.03 U	0.04 U
TOXAPHENE	0.2 UJ	NA	NA	NA	0.1 U	0.2 U
PCBs (mg/kg)						
2,4'-DDD	NA	NA	0.0001 U	0.0001 U	NA	NA
2,4'-DDE	NA	NA	0.0001 U	0.0001 U	NA	NA
2,4'-DDT	NA	NA	0.0001 U	0.0001 U	NA	NA
4,4'-DDD	NA	NA	0.0001 U	0.0001 U	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD024**	**FNBWSD024**	**FNBWSD024**	**FNBWSD024**	**FNBWSD025**	**FNBWSD026**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 2.0	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5
Sample Date	10/10/1997	04/27/1998	04/27/1998	04/27/1998	10/13/1997	10/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
PCBs (mg/kg)						
4,4'-DDE	NA	NA	0.0001 U	0.0001 U	NA	NA
4,4'-DDT	NA	NA	0.0002 U	0.0002 U	NA	NA
ALDRIN	NA	NA	0.0001 U	0.0001 U	NA	NA
ALPHA-BHC	NA	NA	0.0001 U	0.0001 U	NA	NA
ALPHA-CHLORDANE	NA	NA	0.0001 U	0.0001 U	NA	NA
AROCLOR-1016	0.04 UJ	NA	NA	NA	0.03 U	0.04 U
AROCLOR-1221	0.04 UJ	NA	NA	NA	0.03 U	0.04 U
AROCLOR-1232	0.04 UJ	NA	NA	NA	0.03 U	0.04 U
AROCLOR-1242	0.04 UJ	NA	NA	NA	0.03 U	0.04 U
AROCLOR-1248	0.04 UJ	NA	NA	NA	0.03 U	0.04 U
AROCLOR-1254	0.04 UJ	NA	NA	NA	0.03 U	0.04 U
AROCLOR-1260	0.04 UJ	NA	NA	NA	0.03 U	0.04 U
BETA-BHC	NA	NA	0.0001 U	0.0001 U	NA	NA
CIS-NONACHLOR	NA	NA	0.0001 U	0.0001 U	NA	NA
DELTA-BHC	NA	NA	0.0001 UJ	0.0001 UJ	NA	NA
DIELDRIN	NA	NA	0.0001 U	0.0001 U	NA	NA
ENDOSULFAN I	NA	NA	0.0001 U	0.0001 U	NA	NA
ENDOSULFAN II	NA	NA	0.0001 U	0.0001 U	NA	NA
ENDOSULFAN SULFATE	NA	NA	0.0001 UJ	0.0001 UJ	NA	NA
ENDRIN	NA	NA	0.0001 U	0.0001 U	NA	NA
ENDRIN ALDEHYDE	NA	NA	0.0001 U	0.0001 U	NA	NA
ENDRIN KETONE	NA	NA	0.0001 U	0.0001 U	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	0.0001 U	0.0001 U	NA	NA
GAMMA-CHLORDANE	NA	NA	0.0001 U	0.0001 U	NA	NA
HEPTACHLOR	NA	NA	0.0001 U	0.0001 U	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	0.0001 U	0.0001 U	NA	NA
HEXACHLOROBENZENE	NA	NA	0.0002 U	0.0002 U	NA	NA
METHOXYCHLOR	NA	NA	0.0009	0.0004 U	NA	NA
MIREX	NA	NA	0.0001 U	0.0001 U	NA	NA
OXYCHLORDANE	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-101	NA	NA	0.0001 U	0.0001 U	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD024**	**FNBWSD024**	**FNBWSD024**	**FNBWSD024**	**FNBWSD025**	**FNBWSD026**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 2.0	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5
Sample Date	10/10/1997	04/27/1998	04/27/1998	04/27/1998	10/13/1997	10/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
PCBs (mg/kg)						
PCB-105	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-114	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-118	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-123	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-126	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-128	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-138	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-153	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-156	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-157	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-167	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-169	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-170	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-18	NA	NA	0.0002 U	0.0002 U	NA	NA
PCB-180	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-187	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-189	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-195	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-206	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-209	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-28	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-44	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-52	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-66	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-77	NA	NA	0.0001 U	0.0001 U	NA	NA
PCB-8	NA	NA	0.001 U	0.001 U	NA	NA
TOXAPHENE	NA	NA	0.07 U	0.07 U	NA	NA
TRANS-NONACHLOR	NA	NA	0.0001 U	0.0001 U	NA	NA
TOTAL PCBS	0 U	NA	0 U	0 U	0 U	0 U
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	110 U	NA	13.0 U	14.0 U	16.0 U	22.0 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD024**	**FNBWSD024**	**FNBWSD024**	**FNBWSD024**	**FNBWSD025**	**FNBWSD026**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 2.0	3.0 - 4.0	5.0 - 6.0	1.0 - 1.5	1.0 - 1.5
Sample Date	10/10/1997	04/27/1998	04/27/1998	04/27/1998	10/13/1997	10/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
PETROLEUM INDICATORS (mg/kg)						
GASOLINE RANGE	1.0 UJ	NA	NA	NA	0.70 U	1.0 U
MOTOR OIL RANGE	**1,100 Y**	NA	65.0 U	68.0 U	54.0 U	73.0 U
pH						
PH	7.4	NA	NA	NA	7.1	7.9
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	55.6	NA	NA	NA	39.4	55.1

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD027**	**FNBWSD028**	**FNBWSD029**	**FNBWSD029**	**FNBWSD029**	**FR08o**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 2.0	1.0 - 2.0	4.0 - 5.0	0.0 - 0.5
Sample Date	10/13/1997	10/13/1997	04/21/1998	12/16/1998	12/16/1998	06/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
METALS (mg/kg)						
ALUMINUM	27,300	35,600 *	NA	NA	NA	23,100 J
ANTIMONY	2.3 J	0.60 R	NA	NA	NA	1.2 J
ARSENIC	**1.5**	**8.8** !	NA	NA	NA	**11.0** !
BARIUM	28.5	58.8	NA	NA	NA	54.5 J
BERYLLIUM	0.01 U	0.51 J	NA	NA	NA	0.25 UJ
CADMIUM	0.05 U	0.08 U	NA	NA	NA	0.11 UJ
CALCIUM	9,070	3,320	NA	NA	NA	4,510 J
CHROMIUM	25.4	96.0	NA	NA	NA	79.7 J
COBALT	34.7	17.0	NA	NA	NA	19.9 J
COPPER	49.7	75.3	NA	NA	NA	60.9 J
IRON	**66,500** *	**40,200**	NA	NA	NA	**39,000 J**
LEAD	16.5	59.3 *α	NA	NA	NA	23.8 J
MAGNESIUM	12,900	13,500	NA	NA	NA	13,400 J
MANGANESE	942	368	NA	NA	NA	569 J
MERCURY	0.17	0.52	NA	NA	NA	0.28 J
MOLYBDENUM	0.14 UJ	0.59 J	NA	NA	NA	0.39 UJ
NICKEL	21.8	104	NA	NA	NA	92.8 J
POTASSIUM	4,390 J	4,390 J	NA	NA	NA	4,090 J
SELENIUM	2.1	1.7	NA	NA	NA	1.0 UJ
SILVER	0.13 U	0.23 U	NA	NA	NA	0.73 R
SODIUM	3,500 J	10,300 J	NA	NA	NA	11,000
THALLIUM	1.3 J	1.2 UJ	NA	NA	NA	1.4 UJ
TIN	NA	NA	NA	NA	NA	5.0 J
VANADIUM	226 *α	88.7	NA	NA	NA	75.2 J
ZINC	93.1	142	NA	NA	NA	122 J
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1,1-TRICHLOROETHANE	NA	NA	NA	0.03 U	0.02 U	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	0.03 U	0.02 U	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	0.03 U	0.02 U	NA
1,1-DICHLOROETHANE	NA	NA	NA	0.03 U	0.02 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD027**	**FNBWSD028**	**FNBWSD029**	**FNBWSD029**	**FNBWSD029**	**FR08o**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 2.0	1.0 - 2.0	4.0 - 5.0	0.0 - 0.5
Sample Date	10/13/1997	10/13/1997	04/21/1998	12/16/1998	12/16/1998	06/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
VOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,1-DICHLOROETHENE	NA	NA	NA	0.03 U	0.02 U	NA
1,2-DICHLOROETHANE	NA	NA	NA	0.03 U	0.02 U	NA
1,2-DICHLOROETHENE (TOTAL)	NA	NA	NA	0.03 U	0.02 U	NA
1,2-DICHLOROPROPANE	NA	NA	NA	0.03 U	0.02 U	NA
2-BUTANONE	NA	NA	NA	0.03 UJ	0.02 UJ	NA
2-HEXANONE	NA	NA	NA	0.03 UJ	0.02 UJ	NA
4-METHYL-2-PENTANONE	NA	NA	NA	0.03 U	0.02 U	NA
ACETONE	NA	NA	NA	0.03 UJ	0.02 UJ	NA
BENZENE	NA	NA	NA	0.03 U	0.02 U	NA
BROMODICHLOROMETHANE	NA	NA	NA	0.03 U	0.02 U	NA
BROMOFORM	NA	NA	NA	0.03 U	0.02 U	NA
BROMOMETHANE	NA	NA	NA	0.03 U	0.02 U	NA
CARBON DISULFIDE	NA	NA	NA	0.03 U	0.02 U	NA
CARBON TETRACHLORIDE	NA	NA	NA	0.03 U	0.02 U	NA
CHLOROBENZENE	NA	NA	NA	0.03 U	0.02 U	NA
CHLOROETHANE	NA	NA	NA	0.03 U	0.02 U	NA
CHLOROFORM	NA	NA	NA	0.03 U	0.02 U	NA
CHLOROMETHANE	NA	NA	NA	0.03 U	0.02 U	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	0.03 U	0.02 U	NA
DIBROMOCHLOROMETHANE	NA	NA	NA	0.03 U	0.02 U	NA
ETHYLBENZENE	NA	NA	NA	0.03 U	0.02 U	NA
METHYLENE CHLORIDE	NA	NA	NA	0.03 U	0.02 U	NA
STYRENE	NA	NA	NA	0.03 U	0.02 U	NA
TETRACHLOROETHENE	NA	NA	NA	0.03 U	0.02 U	NA
TOLUENE	NA	NA	NA	0.03 U	0.02 U	NA
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	0.03 U	0.02 U	NA
TRICHLOROETHENE	NA	NA	NA	0.03 U	0.02 U	NA
VINYL CHLORIDE	NA	NA	NA	0.03 U	0.02 U	NA
XYLENE (TOTAL)	NA	NA	NA	0.03 U	0.02 U	NA
TOTAL VOCS	NA	NA	NA	0 U	0 U	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2,4-TRICHLOROBENZENE	NA	NA	NA	0.9 U	0.8 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD027**	**FNBWSD028**	**FNBWSD029**	**FNBWSD029**	**FNBWSD029**	**FR08o**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 2.0	1.0 - 2.0	4.0 - 5.0	0.0 - 0.5
Sample Date	10/13/1997	10/13/1997	04/21/1998	12/16/1998	12/16/1998	06/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1,2-DICHLOROBENZENE	NA	NA	NA	0.4 U	0.4 U	NA
1,3-DICHLOROBENZENE	NA	NA	NA	0.4 U	0.4 U	NA
1,4-DICHLOROBENZENE	NA	NA	NA	0.4 U	0.4 U	NA
1-METHYLNAPHTHALENE	NA	NA	NA	NA	NA	0.01 J
1-METHYLPHENANTHRENE	NA	NA	NA	NA	NA	0.01
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	0.9 U	0.8 U	NA
2,3,5-TRIMETHYLNAPHTHALENE	NA	NA	NA	NA	NA	0.004 J
2,4,5-TRICHLOROPHENOL	NA	NA	NA	2 U	2 U	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	0.9 U	0.8 U	NA
2,4-DICHLOROPHENOL	NA	NA	NA	0.9 U	0.8 U	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	0.9 U	0.8 U	NA
2,4-DINITROPHENOL	NA	NA	NA	2 U	2 U	NA
2,4-DINITROTOLUENE	NA	NA	NA	0.9 U	0.8 U	NA
2,6-DIMETHYLNAPHTHALENE	NA	NA	NA	NA	NA	0.007 J
2,6-DINITROTOLUENE	NA	NA	NA	0.9 U	0.8 U	NA
2-CHLORONAPHTHALENE	NA	NA	NA	0.9 U	0.8 U	NA
2-CHLOROPHENOL	NA	NA	NA	0.9 U	0.8 U	NA
2-METHYLNAPHTHALENE	NA	NA	NA	0.9 U	0.8 U	0.02 J
2-METHYLPHENOL	NA	NA	NA	0.9 U	0.8 U	NA
2-NITROANILINE	NA	NA	NA	2 U	2 U	NA
2-NITROPHENOL	NA	NA	NA	0.9 U	0.8 U	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	0.9 U	0.8 R	NA
3-NITROANILINE	NA	NA	NA	2 U	2 U	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	2 U	2 UJ	NA
4-BROMOPHENYL-PHENYLETHER	NA	NA	NA	0.9 U	0.8 UJ	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	0.9 U	0.8 U	NA
4-CHLOROANILINE	NA	NA	NA	0.9 U	0.8 U	NA
4-CHLOROPHENYL-PHENYLETHER	NA	NA	NA	0.9 U	0.8 U	NA
4-METHYLPHENOL	NA	NA	NA	0.9 U	0.8 U	NA
4-NITROANILINE	NA	NA	NA	2 U	2 UJ	NA
4-NITROPHENOL	NA	NA	NA	2 U	2 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD027**	**FNBWSD028**	**FNBWSD029**	**FNBWSD029**	**FNBWSD029**	**FR08o**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 2.0	1.0 - 2.0	4.0 - 5.0	0.0 - 0.5
Sample Date	10/13/1997	10/13/1997	04/21/1998	12/16/1998	12/16/1998	06/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
ACENAPHTHENE	NA	NA	NA	0.9 U	0.8 U	0.006 J
ACENAPHTHYLENE	NA	NA	NA	0.9 U	0.8 U	0.003 J
ANTHRACENE	NA	NA	NA	0.9 U	0.05 J	0.02
BENZO(A)ANTHRACENE	NA	NA	NA	0.9 U	0.07 J	0.08
BENZO(A)PYRENE	NA	NA	NA	0.9 UJ	0.8 R	**0.1**
BENZO(B)FLUORANTHENE	NA	NA	NA	0.9 UJ	0.8 R	0.3 J
BENZO(E)PYRENE	NA	NA	NA	NA	NA	0.1
BENZO(G,H,I)PERYLENE	NA	NA	NA	0.9 UJ	0.8 R	0.1
BENZO(K)FLUORANTHENE	NA	NA	NA	0.9 UJ	0.8 R	0.006 U
BIPHENYL	NA	NA	NA	NA	NA	0.006 J
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	0.9 U	0.8 U	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	0.9 U	0.8 U	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	0.3 U	0.6 UJ	NA
BUTYLBENZYLPHTHALATE	NA	NA	NA	0.9 U	0.8 R	NA
CARBAZOLE	NA	NA	NA	0.9 U	0.8 UJ	NA
CHRYSENE	NA	NA	NA	0.9 U	0.09 J	0.1
DI-N-BUTYLPHTHALATE	NA	NA	NA	0.9 U	0.8 UJ	NA
DI-N-OCTYLPHTHALATE	NA	NA	NA	0.9 UJ	0.8 R	NA
DIBENZ(A,H)ANTHRACENE	NA	NA	NA	0.9 UJ	0.8 R	0.03
DIBENZOFURAN	NA	NA	NA	0.9 U	0.8 U	NA
DIBENZOTHIOPHENE	NA	NA	NA	NA	NA	0.006 U
DIETHYLPHTHALATE	NA	NA	NA	0.9 U	0.8 U	NA
DIMETHYLPHTHALATE	NA	NA	NA	0.9 U	0.8 U	NA
FLUORANTHENE	NA	NA	NA	0.9 U	0.2 J	0.2
FLUORENE	NA	NA	NA	0.9 U	0.8 U	0.02 J
HEXACHLOROBENZENE	NA	NA	NA	0.9 U	0.8 UJ	NA
HEXACHLOROBUTADIENE	NA	NA	NA	0.9 U	0.8 U	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	0.9 UJ	0.8 UJ	NA
HEXACHLOROETHANE	NA	NA	NA	0.9 U	0.8 U	NA
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	0.9 UJ	0.8 R	0.1
ISOPHORONE	NA	NA	NA	0.9 U	0.8 U	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD027**	**FNBWSD028**	**FNBWSD029**	**FNBWSD029**	**FNBWSD029**	**FR08o**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 2.0	1.0 - 2.0	4.0 - 5.0	0.0 - 0.5
Sample Date	10/13/1997	10/13/1997	04/21/1998	12/16/1998	12/16/1998	06/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	0.9 U	0.8 U	NA
N-NITROSODIPHENYLAMINE (1)	NA	NA	NA	0.9 U	0.8 UJ	NA
NAPHTHALENE	NA	NA	NA	0.9 U	0.8 U	0.03 J
NITROBENZENE	NA	NA	NA	0.9 U	0.8 U	NA
PENTACHLOROPHENOL	NA	NA	NA	2 U	2 UJ	NA
PERYLENE	NA	NA	NA	NA	NA	0.08
PHENANTHRENE	NA	NA	NA	0.9 U	0.07 J	0.06
PHENOL	NA	NA	NA	0.9 U	0.8 U	NA
PYRENE	NA	NA	NA	0.9 U	0.3 J	0.2
TOTAL SVOCS	NA	NA	NA	0 U	0.8 J	2 J
PESTICIDES (mg/kg)						
4,4'-DDD	0.004 U	0.008 U	NA	NA	NA	NA
4,4'-DDE	0.004 U	0.008 U	NA	NA	NA	NA
4,4'-DDT	0.004 U	0.008 U	NA	NA	NA	NA
ALDRIN	0.002 U	0.004 U	NA	NA	NA	NA
ALPHA-BHC	0.002 U	0.004 U	NA	NA	NA	NA
ALPHA-CHLORDANE	0.002 U	0.004 U	NA	NA	NA	NA
BETA-BHC	0.002 U	0.004 U	NA	NA	NA	NA
DELTA-BHC	0.002 U	0.004 U	NA	NA	NA	NA
DIELDRIN	0.004 U	0.008 U	NA	NA	NA	NA
ENDOSULFAN I	0.002 U	0.004 U	NA	NA	NA	NA
ENDOSULFAN II	0.004 U	0.008 U	NA	NA	NA	NA
ENDOSULFAN SULFATE	0.004 U	0.008 U	NA	NA	NA	NA
ENDRIN	0.004 U	0.008 U	NA	NA	NA	NA
ENDRIN ALDEHYDE	0.004 U	0.008 U	NA	NA	NA	NA
ENDRIN KETONE	0.004 U	0.008 U	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.002 U	0.004 U	NA	NA	NA	NA
GAMMA-CHLORDANE	0.002 U	0.004 U	NA	NA	NA	NA
HEPTACHLOR	0.0004 U	0.0007 U	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	0.0004 U	0.0007 U	NA	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD027**	**FNBWSD028**	**FNBWSD029**	**FNBWSD029**	**FNBWSD029**	**FR08o**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 2.0	1.0 - 2.0	4.0 - 5.0	0.0 - 0.5
Sample Date	10/13/1997	10/13/1997	04/21/1998	12/16/1998	12/16/1998	06/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
PESTICIDES (mg/kg)						
METHOXYCHLOR	0.02 U	0.04 U	NA	NA	NA	NA
TOXAPHENE	0.1 U	0.2 U	NA	NA	NA	NA
LOW-LEVEL PESTICIDES (mg/kg)						
2,4'-DDD	NA	NA	NA	NA	NA	0.0006 J
2,4'-DDE	NA	NA	NA	NA	NA	0.0003 U
2,4'-DDT	NA	NA	NA	NA	NA	0.0003 U
4,4'-DDD	NA	NA	NA	NA	NA	0.002
4,4'-DDE	NA	NA	NA	NA	NA	0.003
4,4'-DDT	NA	NA	NA	NA	NA	0.0004 J
ALDRIN	NA	NA	NA	NA	NA	0.0003 U
ALPHA-BHC	NA	NA	NA	NA	NA	0.0003 U
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	0.0003 U
BETA-BHC	NA	NA	NA	NA	NA	0.0003 U
CIS-NONACHLOR	NA	NA	NA	NA	NA	0.0003 U
DELTA-BHC	NA	NA	NA	NA	NA	0.0003 UJ
DIELDRIN	NA	NA	NA	NA	NA	0.0003 U
ENDOSULFAN I	NA	NA	NA	NA	NA	0.0003 U
ENDOSULFAN II	NA	NA	NA	NA	NA	0.0003 U
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	0.0003 U
ENDRIN	NA	NA	NA	NA	NA	0.0003 U
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	0.0003 UJ
ENDRIN KETONE	NA	NA	NA	NA	NA	0.0003 U
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	0.0003 U
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	0.0003 U
HEPTACHLOR	NA	NA	NA	NA	NA	0.0003 UJ
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	0.0003 U
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	0.0005 U
METHOXYCHLOR	NA	NA	NA	NA	NA	0.001
MIREX	NA	NA	NA	NA	NA	0.0003 U
OXYCHLORDANE	NA	NA	NA	NA	NA	0.0003 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD027**	**FNBWSD028**	**FNBWSD029**	**FNBWSD029**	**FNBWSD029**	**FR08o**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 2.0	1.0 - 2.0	4.0 - 5.0	0.0 - 0.5
Sample Date	10/13/1997	10/13/1997	04/21/1998	12/16/1998	12/16/1998	06/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
LOW-LEVEL PESTICIDES (mg/kg)						
TOXAPHENE	NA	NA	NA	NA	NA	0.1 U
TRANS-NONACHLOR	NA	NA	NA	NA	NA	0.0003 U
PCBs (mg/kg)						
2,4'-DDD	NA	NA	0.004 U	NA	NA	NA
2,4'-DDE	NA	NA	0.004 U	NA	NA	NA
2,4'-DDT	NA	NA	0.004 U	NA	NA	NA
4,4'-DDD	NA	NA	0.004 U	NA	NA	NA
4,4'-DDE	NA	NA	0.004 U	NA	NA	NA
4,4'-DDT	NA	NA	0.007 U	NA	NA	NA
ALDRIN	NA	NA	0.004 U	NA	NA	NA
ALPHA-BHC	NA	NA	0.004 U	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	0.004 U	NA	NA	NA
AROCLOR-1016	0.02 U	0.04 U	NA	NA	NA	NA
AROCLOR-1221	0.02 U	0.04 U	NA	NA	NA	NA
AROCLOR-1232	0.02 U	0.04 U	NA	NA	NA	NA
AROCLOR-1242	0.02 U	0.04 U	NA	NA	NA	NA
AROCLOR-1248	0.02 U	0.04 U	NA	NA	NA	NA
AROCLOR-1254	0.02 U	0.04 U	NA	NA	NA	NA
AROCLOR-1260	0.02 U	0.04 U	NA	NA	NA	NA
BETA-BHC	NA	NA	0.004 U	NA	NA	NA
CIS-NONACHLOR	NA	NA	0.004 U	NA	NA	NA
DELTA-BHC	NA	NA	0.004 U	NA	NA	NA
DIELDRIN	NA	NA	0.004 U	NA	NA	NA
ENDOSULFAN I	NA	NA	0.004 U	NA	NA	NA
ENDOSULFAN II	NA	NA	0.004 U	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	0.004 UJ	NA	NA	NA
ENDRIN	NA	NA	0.004 U	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	0.004 UJ	NA	NA	NA
ENDRIN KETONE	NA	NA	0.004 U	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	0.004 U	NA	NA	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD027**	**FNBWSD028**	**FNBWSD029**	**FNBWSD029**	**FNBWSD029**	**FR08o**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 2.0	1.0 - 2.0	4.0 - 5.0	0.0 - 0.5
Sample Date	10/13/1997	10/13/1997	04/21/1998	12/16/1998	12/16/1998	06/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
PCBs (mg/kg)						
GAMMA-CHLORDANE	NA	NA	0.004 U	NA	NA	NA
HEPTACHLOR	NA	NA	0.004 U	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	0.004 U	NA	NA	NA
HEXACHLOROBENZENE	NA	NA	0.008 U	NA	NA	NA
METHOXYCHLOR	NA	NA	0.02 U	NA	NA	NA
MIREX	NA	NA	0.004 U	NA	NA	NA
OXYCHLORDANE	NA	NA	0.004 U	NA	NA	NA
PCB-101	NA	NA	0.005	NA	NA	NA
PCB-105	NA	NA	0.004 U	NA	NA	NA
PCB-114	NA	NA	0.004 U	NA	NA	NA
PCB-118	NA	NA	0.004 U	NA	NA	NA
PCB-123	NA	NA	0.004 U	NA	NA	NA
PCB-126	NA	NA	0.004 U	NA	NA	NA
PCB-128	NA	NA	0.004 U	NA	NA	NA
PCB-138	NA	NA	0.04	NA	NA	NA
PCB-153	NA	NA	0.05	NA	NA	NA
PCB-156	NA	NA	0.004 U	NA	NA	NA
PCB-157	NA	NA	0.1	NA	NA	NA
PCB-167	NA	NA	0.004 U	NA	NA	NA
PCB-169	NA	NA	0.004 U	NA	NA	NA
PCB-170	NA	NA	0.05 J	NA	NA	NA
PCB-18	NA	NA	0.008 U	NA	NA	NA
PCB-180	NA	NA	0.1	NA	NA	NA
PCB-187	NA	NA	0.04	NA	NA	NA
PCB-189	NA	NA	0.004 U	NA	NA	NA
PCB-195	NA	NA	0.007 J	NA	NA	NA
PCB-206	NA	NA	0.004 U	NA	NA	NA
PCB-209	NA	NA	0.004 U	NA	NA	NA
PCB-28	NA	NA	0.004 U	NA	NA	NA
PCB-44	NA	NA	0.004 U	NA	NA	NA
PCB-52	NA	NA	0.004 U	NA	NA	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD027**	**FNBWSD028**	**FNBWSD029**	**FNBWSD029**	**FNBWSD029**	**FR08o**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 2.0	1.0 - 2.0	4.0 - 5.0	0.0 - 0.5
Sample Date	10/13/1997	10/13/1997	04/21/1998	12/16/1998	12/16/1998	06/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
PCBs (mg/kg)						
PCB-66	NA	NA	0.004 U	NA	NA	NA
PCB-77	NA	NA	0.004 U	NA	NA	NA
PCB-8	NA	NA	0.03 U	NA	NA	NA
TOXAPHENE	NA	NA	2 U	NA	NA	NA
TRANS-NONACHLOR	NA	NA	0.004 U	NA	NA	NA
TOTAL PCBS	0 U	0 U	0.6 J	NA	NA	NA
LOW-LEVEL PCBs (mg/kg)						
PCB-101	NA	NA	NA	NA	NA	0.0003 U
PCB-105	NA	NA	NA	NA	NA	0.0003 U
PCB-114	NA	NA	NA	NA	NA	0.0003 U
PCB-118	NA	NA	NA	NA	NA	0.0003 UJ
PCB-123	NA	NA	NA	NA	NA	0.0003 UJ
PCB-126	NA	NA	NA	NA	NA	0.0003 U
PCB-128	NA	NA	NA	NA	NA	0.0003 UJ
PCB-138	NA	NA	NA	NA	NA	0.0008 J
PCB-153	NA	NA	NA	NA	NA	0.0004
PCB-156	NA	NA	NA	NA	NA	0.0003 UJ
PCB-157	NA	NA	NA	NA	NA	0.0003 U
PCB-167	NA	NA	NA	NA	NA	0.0003 UJ
PCB-169	NA	NA	NA	NA	NA	0.0003 U
PCB-170	NA	NA	NA	NA	NA	0.0003 U
PCB-18	NA	NA	NA	NA	NA	0.0005 U
PCB-180	NA	NA	NA	NA	NA	0.0004
PCB-187	NA	NA	NA	NA	NA	0.0003 U
PCB-189	NA	NA	NA	NA	NA	0.0003 U
PCB-195	NA	NA	NA	NA	NA	0.0003 U
PCB-206	NA	NA	NA	NA	NA	0.0003 U
PCB-209	NA	NA	NA	NA	NA	0.0003 U
PCB-28	NA	NA	NA	NA	NA	0.0003 UJ
PCB-44	NA	NA	NA	NA	NA	0.0003 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD027**	**FNBWSD028**	**FNBWSD029**	**FNBWSD029**	**FNBWSD029**	**FR08o**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 2.0	1.0 - 2.0	4.0 - 5.0	0.0 - 0.5
Sample Date	10/13/1997	10/13/1997	04/21/1998	12/16/1998	12/16/1998	06/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
LOW-LEVEL PCBs (mg/kg)						
PCB-52	NA	NA	NA	NA	NA	0.0003 UJ
PCB-66	NA	NA	NA	NA	NA	0.0003 U
PCB-77	NA	NA	NA	NA	NA	0.0003 U
PCB-8	NA	NA	NA	NA	NA	0.002 U
TOTAL PCBS	NA	NA	NA	NA	NA	0.003 J
ORGANOTINS (mg/kg)						
DIBUTYLTIN	NA	NA	NA	NA	NA	0.004 U
MONOBUTYLTIN	NA	NA	NA	NA	NA	0.003 UJ
TETRABUTYLTIN	NA	NA	NA	NA	NA	0.005 U
TRIBUTYLTIN	NA	NA	NA	NA	NA	0.004 U
TOTAL ORGANOTINS	NA	NA	NA	NA	NA	0 U
1,3,5-TRINITROBENZENE	NA	NA	NA	NA	NA	0.1 U
1,3-DINITROBENZENE	NA	NA	NA	NA	NA	0.1 U
2,4,6-TRINITROTOLUENE	NA	NA	NA	NA	NA	0.1 UJ
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	0.1 U
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	0.1 U
2-NITROTOLUENE	NA	NA	NA	NA	NA	0.1 U
3-NITROTOLUENE	NA	NA	NA	NA	NA	0.1 U
4-NITROTOLUENE	NA	NA	NA	NA	NA	0.1 U
HMX	NA	NA	NA	NA	NA	0.1 U
NITROBENZENE	NA	NA	NA	NA	NA	0.1 U
RDX	NA	NA	NA	NA	NA	0.1 U
TETRYL	NA	NA	NA	NA	NA	0.1 UJ
TOTAL EXPLOSIVE	NA	NA	NA	NA	NA	0 U
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	13.0 U	23.0 U	NA	26.0 U	23.0 U	29.0 U
GASOLINE RANGE	0.60 U	1.0 UJ	NA	1.0 UJ	13.0 YJ	2.0 U

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWSD027**	**FNBWSD028**	**FNBWSD029**	**FNBWSD029**	**FNBWSD029**	**FR08o**
Sample Depth (feet bgs)	1.0 - 1.5	1.0 - 1.5	1.0 - 2.0	1.0 - 2.0	4.0 - 5.0	0.0 - 0.5
Sample Date	10/13/1997	10/13/1997	04/21/1998	12/16/1998	12/16/1998	06/13/1997
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
PETROLEUM INDICATORS (mg/kg)						
MOTOR OIL RANGE	43.0 U	76.0 U	NA	290 Y	260 Y	240
TOTAL ORGANIC CARBON (mg/kg)						
TOC	NA	NA	NA	14,000	13,000	10,000 J
pH						
PH	7.8	8.4	NA	NA	NA	7.3 J
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	23.3	57.1	56.2	NA	NA	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FR10o**	**NB12i**	**PC0421**	**PC0422**	**PC4051**	**PC4052**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
Sample Date	06/13/1997	06/30/1997	07/02/1997	07/02/1997	05/13/1998	05/13/1998
Matrix	SEDIMENT	SEDIMENT	CONCRETE	CONCRETE	CONCRETE	CONCRETE
METALS (mg/kg)						
ALUMINUM	27,200 J	34,800	NA	NA	NA	NA
ANTIMONY	1.0 UJ	1.5 UJ	NA	NA	NA	NA
ARSENIC	**13.3** !	**12.2** !	NA	NA	NA	NA
BARIUM	60.1 J	75.2	NA	NA	NA	NA
BERYLLIUM	0.29 UJ	0.29 J	NA	NA	NA	NA
CADMIUM	0.45 J	0.08 U	NA	NA	NA	NA
CALCIUM	3,280 J	3,800	NA	NA	NA	NA
CHROMIUM	88.2 J	103	NA	NA	NA	NA
COBALT	18.9 J	23.0	NA	NA	NA	NA
COPPER	75.0 J	70.2	NA	NA	NA	NA
IRON	**40,500 J**	**47,800**	NA	NA	NA	NA
LEAD	66.0 J *α	25.7 J	NA	NA	NA	NA
MAGNESIUM	12,400 J	15,500	NA	NA	NA	NA
MANGANESE	469 J	643	NA	NA	NA	NA
MERCURY	0.34	0.33	NA	NA	NA	NA
MOLYBDENUM	0.26 UJ	0.26 UJ	NA	NA	NA	NA
NICKEL	85.5 J	111	NA	NA	NA	NA
POTASSIUM	4,110 J	4,410 J	NA	NA	NA	NA
SELENIUM	0.69 UJ	0.58 R	NA	NA	NA	NA
SILVER	0.49 R	0.49 U	NA	NA	NA	NA
SODIUM	8,210	9,470	NA	NA	NA	NA
THALLIUM	1.0 J	0.75 U	NA	NA	NA	NA
TIN	5.0 J	3.9 J	NA	NA	NA	NA
VANADIUM	79.6 J	93.3	NA	NA	NA	NA
ZINC	184 J	140	NA	NA	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
1-METHYLNAPHTHALENE	0.009 J	0.01 J	NA	NA	NA	NA
1-METHYLPHENANTHRENE	0.008 U	0.02 U	NA	NA	NA	NA
2,3,5-TRIMETHYLNAPHTHALENE	0.005 J	0.02 U	NA	NA	NA	NA
2,6-DIMETHYLNAPHTHALENE	0.006 J	0.02 U	NA	NA	NA	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FR10o**	**NB12i**	**PC0421**	**PC0422**	**PC4051**	**PC4052**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
Sample Date	06/13/1997	06/30/1997	07/02/1997	07/02/1997	05/13/1998	05/13/1998
Matrix	SEDIMENT	SEDIMENT	CONCRETE	CONCRETE	CONCRETE	CONCRETE
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)						
2-METHYLNAPHTHALENE	0.02 J	0.01 J	NA	NA	NA	NA
ACENAPHTHENE	0.004 J	0.02 U	NA	NA	NA	NA
ACENAPHTHYLENE	0.003 J	0.02 U	NA	NA	NA	NA
ANTHRACENE	0.02	0.01 J	NA	NA	NA	NA
BENZO(A)ANTHRACENE	0.06	0.03	NA	NA	NA	NA
BENZO(A)PYRENE	**0.1**	**0.06**	NA	NA	NA	NA
BENZO(B)FLUORANTHENE	0.2 J	0.02 U	NA	NA	NA	NA
BENZO(E)PYRENE	0.1	0.05	NA	NA	NA	NA
BENZO(G,H,I)PERYLENE	0.1	0.08	NA	NA	NA	NA
BENZO(K)FLUORANTHENE	0.008 U	0.06 J	NA	NA	NA	NA
BIPHENYL	0.003 J	0.02 UJ	NA	NA	NA	NA
CHRYSENE	0.09	0.04	NA	NA	NA	NA
DIBENZ(A,H)ANTHRACENE	0.04	0.02 U	NA	NA	NA	NA
DIBENZOTHIOPHENE	0.008 U	0.02 U	NA	NA	NA	NA
FLUORANTHENE	0.2	0.09 J	NA	NA	NA	NA
FLUORENE	0.007 J	0.009 J	NA	NA	NA	NA
INDENO(1,2,3-CD)PYRENE	0.1	0.04	NA	NA	NA	NA
NAPHTHALENE	0.02 J	0.06 J	NA	NA	NA	NA
PERYLENE	0.1	0.07	NA	NA	NA	NA
PHENANTHRENE	0.05	0.05	NA	NA	NA	NA
PYRENE	0.2	0.1	NA	NA	NA	NA
TOTAL SVOCS	2 J	0.7 J	NA	NA	NA	NA
LOW-LEVEL PESTICIDES (mg/kg)						
2,4'-DDD	0.01	0.001	NA	NA	NA	NA
2,4'-DDE	0.001 U	0.0002 U	NA	NA	NA	NA
2,4'-DDT	0.001 U	0.0002 U	NA	NA	NA	NA
4,4'-DDD	0.02	0.002	NA	NA	NA	NA
4,4'-DDE	0.008	0.003	NA	NA	NA	NA
4,4'-DDT	0.02	0.0007	NA	NA	NA	NA
ALDRIN	0.001 U	0.0002 U	NA	NA	NA	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FR10o**	**NB12i**	**PC0421**	**PC0422**	**PC4051**	**PC4052**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
Sample Date	06/13/1997	06/30/1997	07/02/1997	07/02/1997	05/13/1998	05/13/1998
Matrix	SEDIMENT	SEDIMENT	CONCRETE	CONCRETE	CONCRETE	CONCRETE
LOW-LEVEL PESTICIDES (mg/kg)						
ALPHA-BHC	0.001 U	0.0002 U	NA	NA	NA	NA
ALPHA-CHLORDANE	0.002	0.0005	NA	NA	NA	NA
BETA-BHC	0.001 U	0.0002 U	NA	NA	NA	NA
CIS-NONACHLOR	0.001 U	0.0002 U	NA	NA	NA	NA
DELTA-BHC	0.001 UJ	0.0002 R	NA	NA	NA	NA
DIELDRIN	0.001 U	0.0006	NA	NA	NA	NA
ENDOSULFAN I	0.001 U	0.0002 U	NA	NA	NA	NA
ENDOSULFAN II	0.001 U	0.0002 U	NA	NA	NA	NA
ENDOSULFAN SULFATE	0.001 U	0.0002 U	NA	NA	NA	NA
ENDRIN	0.001 U	0.0002 U	NA	NA	NA	NA
ENDRIN ALDEHYDE	0.001 U	0.0002 U	NA	NA	NA	NA
ENDRIN KETONE	0.001 U	0.0002 U	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.001 U	0.0002 U	NA	NA	NA	NA
GAMMA-CHLORDANE	0.002	0.0003	NA	NA	NA	NA
HEPTACHLOR	0.001 U	0.0002 U	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	0.001 U	0.0002 U	NA	NA	NA	NA
HEXACHLOROBENZENE	0.002 U	0.0004 U	NA	NA	NA	NA
METHOXYCHLOR	0.004 U	0.0007 U	NA	NA	NA	NA
MIREX	0.001 U	0.0002 U	NA	NA	NA	NA
OXYCHLORDANE	0.001 U	0.0002 U	NA	NA	NA	NA
TOXAPHENE	0.6 U	0.1 U	NA	NA	NA	NA
TRANS-NONACHLOR	0.001 U	0.0002 U	NA	NA	NA	NA
PCBs (mg/kg)						
AROCLOR-1016	NA	NA	0.01 UJ	0.07 U	0.7 U	1 U
AROCLOR-1221	NA	NA	0.03 UJ	0.1 U	2 U	3 U
AROCLOR-1232	NA	NA	0.01 UJ	0.07 U	0.7 U	1 U
AROCLOR-1242	NA	NA	0.01 UJ	0.07 U	0.7 U	1 U
AROCLOR-1248	NA	NA	0.01 UJ	0.07 U	0.7 U	1 U
AROCLOR-1254	NA	NA	0.01 UJ	0.06 J	0.7 U	1 U
AROCLOR-1260	NA	NA	0.01 UJ	0.07 UJ	**2**	**8**

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FR10o**	**NB12i**	**PC0421**	**PC0422**	**PC4051**	**PC4052**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
Sample Date	06/13/1997	06/30/1997	07/02/1997	07/02/1997	05/13/1998	05/13/1998
Matrix	SEDIMENT	SEDIMENT	CONCRETE	CONCRETE	CONCRETE	CONCRETE
PCBs (mg/kg)						
TOTAL PCBS	NA	NA	0 U	0.06 J	**2**	**8**
LOW-LEVEL PCBs (mg/kg)						
PCB-101	0.005	0.0002	NA	NA	NA	NA
PCB-105	0.001 U	0.0002 U	NA	NA	NA	NA
PCB-114	0.002	0.0002 U	NA	NA	NA	NA
PCB-118	0.001 U	0.0003	NA	NA	NA	NA
PCB-123	0.001 U	0.0002 U	NA	NA	NA	NA
PCB-126	0.001 U	0.0002 U	NA	NA	NA	NA
PCB-128	0.001 U	0.0004	NA	NA	NA	NA
PCB-138	0.03	0.0006	NA	NA	NA	NA
PCB-153	0.02	0.0006	NA	NA	NA	NA
PCB-156	0.001 U	0.0002 U	NA	NA	NA	NA
PCB-157	0.001 U	0.0002 U	NA	NA	NA	NA
PCB-167	0.001 U	0.0002 U	NA	NA	NA	NA
PCB-169	0.001 U	0.0002 U	NA	NA	NA	NA
PCB-170	0.01	0.0002 U	NA	NA	NA	NA
PCB-18	0.002 U	0.0004 U	NA	NA	NA	NA
PCB-180	0.02	0.0009	NA	NA	NA	NA
PCB-187	0.01	0.0003	NA	NA	NA	NA
PCB-189	0.001 U	0.0002 U	NA	NA	NA	NA
PCB-195	0.004	0.0002 U	NA	NA	NA	NA
PCB-206	0.002	0.0002 U	NA	NA	NA	NA
PCB-209	0.001 U	0.0002 U	NA	NA	NA	NA
PCB-28	0.001 U	0.0002 U	NA	NA	NA	NA
PCB-44	0.001 U	0.0002 U	NA	NA	NA	NA
PCB-52	0.001 U	0.0002 U	NA	NA	NA	NA
PCB-66	0.001 U	0.0002	NA	NA	NA	NA
PCB-77	0.001 U	0.0002 U	NA	NA	NA	NA
PCB-8	0.008 U	0.002 U	NA	NA	NA	NA
TOTAL PCBS	0.2	0.007	NA	NA	NA	NA

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TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FR10o**	**NB12i**	**PC0421**	**PC0422**	**PC4051**	**PC4052**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
Sample Date	06/13/1997	06/30/1997	07/02/1997	07/02/1997	05/13/1998	05/13/1998
Matrix	SEDIMENT	SEDIMENT	CONCRETE	CONCRETE	CONCRETE	CONCRETE
ORGANOTINS (mg/kg)						
DIBUTYLTIN	0.003 U	0.003 U	NA	NA	NA	NA
MONOBUTYLTIN	0.002 UJ	0.002 UJ	NA	NA	NA	NA
TETRABUTYLTIN	0.004 U	0.004 U	NA	NA	NA	NA
TRIBUTYLTIN	0.003 U	0.003 U	NA	NA	NA	NA
TOTAL ORGANOTINS	0 U	0 U	NA	NA	NA	NA
1,3,5-TRINITROBENZENE	0.1 U	NA	NA	NA	NA	NA
1,3-DINITROBENZENE	0.1 U	NA	NA	NA	NA	NA
2,4,6-TRINITROTOLUENE	0.1 UJ	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	0.1 U	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	0.1 U	NA	NA	NA	NA	NA
2-NITROTOLUENE	0.1 U	NA	NA	NA	NA	NA
3-NITROTOLUENE	0.1 U	NA	NA	NA	NA	NA
4-NITROTOLUENE	0.1 U	NA	NA	NA	NA	NA
HMX	0.1 U	NA	NA	NA	NA	NA
NITROBENZENE	0.1 U	NA	NA	NA	NA	NA
RDX	0.1 U	NA	NA	NA	NA	NA
TETRYL	0.1 UJ	NA	NA	NA	NA	NA
TOTAL EXPLOSIVE	0 U	NA	NA	NA	NA	NA
PETROLEUM INDICATORS (mg/kg)						
DIESEL RANGE	23.0 U	22.0 U	NA	NA	NA	NA
GASOLINE RANGE	1.0 U	1.0 UJ	NA	NA	NA	NA
MOTOR OIL RANGE	**510**	170 Y	NA	NA	NA	NA
TOTAL ORGANIC CARBON (mg/kg)						
TOC	9,300 J	11,000	NA	NA	NA	NA
pH						
PH	7.5 J	7.3 J	NA	NA	NA	NA

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FR10o**	**NB12i**	**PC0421**	**PC0422**	**PC4051**	**PC4052**
Sample Depth (feet bgs)	0.0 - 0.5	0.0 - 0.5	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
Sample Date	06/13/1997	06/30/1997	07/02/1997	07/02/1997	05/13/1998	05/13/1998
Matrix	SEDIMENT	SEDIMENT	CONCRETE	CONCRETE	CONCRETE	CONCRETE
PERCENT MOISTURE (percent)						
PERCENT MOISTURE	NA	NA	2.0	0	10.0	3.0

Notes to table on page G-212

TABLE G-1 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR NONAQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Notes: U = Not detected at given detection limit J = Estimated value NA = Not analyzed
R = Rejected result, laboratory did not satisfy quality assurance/quality control requirements for accuracy.
Y = Chromatogram indicates the presence of petroleum fuel.
Inorganic results less than 10 are reported to two significant figures, and results greater than 10 are reported to three significant figures.
Organic results less than 10 are reported to one significant figure, and results greater than 10 are reported to two significant figures.
TPH results less than 10 are reported to two significant figure, and results greater than 10 are reported to three significant figures.
* = Detected metals or PAHs concentration greater than the ambient concentration (95th percentile).
Concentrations shown in bold type are greater than the comparison criteria, composed of alternative criteria for lead, PCBs, TPH, and EPA preliminary remediation goals (PRG) for residential use (EPA 1998).
! = Detected concentrations greater than EPA preliminary remediation goals (PRG) for industrial use (EPA 1998).
$^{\alpha}$= Detected metals or PAHs concentration greater than the ambient concentration (99th percentile) (TtEMI 1999b and TtEMI 1998c).
Diesel range includes hydrocarbons quantified as diesel and diesel-range unknowns.
Gasoline range includes hydrocarbons quantified as gasoline and gasoline-range unknowns.
Motor oil range includes hydrocarbons quantified as motor oil and motor-oil-range unknowns.
s - The sample was split for analysis by both on- and off-site laboratories. When both laboratories analyzed the sample for the sample constituent, the average of the two results is shown; if the constituent was not detected in one of the two analyses, only the detected result is shown.

TABLE G-2

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB001**	**FNBWGB001**	**FNBWGB004**	**FNBWGB004**	**FNBWGB005**	**FNBWGB005**
Sample Date	09/18/1998	09/21/1998	09/18/1998	09/21/1998	09/01/1998	09/02/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
LOW-LEVEL VOLATILE ORGANIC COMPOUNDS (ug/L)						
1,1,1-TRICHLOROETHANE	2 U	NA	3 U	NA	NA	2 U
1,1,2,2-TETRACHLOROETHANE	2 U	NA	3 U	NA	NA	2 U
1,1,2-TRICHLOROETHANE	2 U	NA	3 U	NA	NA	2 U
1,1-DICHLOROETHANE	2 U	NA	3 U	NA	NA	2 UJ
1,1-DICHLOROETHENE	2 U	NA	3 U	NA	NA	2 U
1,2-DICHLOROETHANE	0.5 U	NA	0.8 U	NA	NA	0.5 U
1,2-DICHLOROPROPANE	2 U	NA	3 U	NA	NA	2 U
2-BUTANONE	7 UJ	NA	14 UJ	NA	NA	2 U
2-HEXANONE	2 U	NA	3 U	NA	NA	2 U
4-METHYL-2-PENTANONE	0.8 J	NA	3 U	NA	NA	2 U
ACETONE	69	NA	94	NA	NA	25
BENZENE	0.5 UJ	NA	0.8 U	NA	NA	0.5 U
BROMODICHLOROMETHANE	2 U	NA	3 U	NA	NA	2 U
BROMOFORM	2 U	NA	3 U	NA	NA	2 U
BROMOMETHANE	2 U	NA	3 U	NA	NA	2 U
CARBON DISULFIDE	2 UJ	NA	3 UJ	NA	NA	2 U
CARBON TETRACHLORIDE	0.5 U	NA	0.8 U	NA	NA	0.5 U
CHLOROBENZENE	2 U	NA	3 U	NA	NA	2 U
CHLOROETHANE	2 U	NA	3 U	NA	NA	2 U
CHLOROFORM	2 U	NA	3 U	NA	NA	2 U
CHLOROMETHANE	2 U	NA	3 U	NA	NA	2 U
CIS-1,2-DICHLOROETHENE	2 U	NA	3 U	NA	NA	2 U
CIS-1,3-DICHLOROPROPENE	0.5 U	NA	0.8 U	NA	NA	0.5 U
DIBROMOCHLOROMETHANE	2 U	NA	3 U	NA	NA	2 U
ETHYLBENZENE	0.3 J	NA	3 U	NA	NA	2 U
METHYLENE CHLORIDE	2 U	NA	3 U	NA	NA	2 U
STYRENE	2 U	NA	3 U	NA	NA	2 U
TETRACHLOROETHENE	2 U	NA	3 U	NA	NA	2 U
TOLUENE	0.4 J	NA	0.3 J	NA	NA	2 U
TRANS-1,2-DICHLOROETHENE	2 U	NA	3 U	NA	NA	2 U
TRANS-1,3-DICHLOROPROPENE	0.5 U	NA	0.8 U	NA	NA	0.5 U

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TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB001**	**FNBWGB001**	**FNBWGB004**	**FNBWGB004**	**FNBWGB005**	**FNBWGB005**
Sample Date	09/18/1998	09/21/1998	09/18/1998	09/21/1998	09/01/1998	09/02/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
LOW-LEVEL VOLATILE ORGANIC COMPOUNDS (ug/L)						
TRICHLOROETHENE	2 U	NA	3 U	NA	NA	2 U
VINYL CHLORIDE	0.5 U	NA	0.8 U	NA	NA	0.5 U
XYLENE (TOTAL)	2 UJ	NA	3 UJ	NA	NA	2 U
TOTAL LOW-LEVEL VOCS	71 J	NA	94 J	NA	NA	25
SEMIVOLATILE ORGANIC COMPOUNDS (ug/L)						
1,2,4-TRICHLOROBENZENE	11 U	NA	10 U	NA	12 U	NA
1,2-DICHLOROBENZENE	6 U	NA	5 U	NA	6 U	NA
1,3-DICHLOROBENZENE	0.9 J	NA	0.6 J	NA	6 U	NA
1,4-DICHLOROBENZENE	6 U	NA	5 U	NA	6 U	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	11 U	NA	10 U	NA	12 U	NA
2,4,5-TRICHLOROPHENOL	28 U	NA	26 U	NA	12 U	NA
2,4,6-TRICHLOROPHENOL	11 U	NA	10 U	NA	12 U	NA
2,4-DICHLOROPHENOL	2 J	NA	1 J	NA	12 U	NA
2,4-DIMETHYLPHENOL	11 U	NA	10 U	NA	12 U	NA
2,4-DINITROPHENOL	28 U	NA	26 U	NA	12 UJ	NA
2,4-DINITROTOLUENE	11 U	NA	10 U	NA	12 UJ	NA
2,6-DINITROTOLUENE	11 U	NA	10 U	NA	12 U	NA
2-CHLORONAPHTHALENE	11 U	NA	10 U	NA	12 U	NA
2-CHLOROPHENOL	11 U	NA	10 U	NA	12 U	NA
2-METHYLNAPHTHALENE	11 U	NA	10 U	NA	12 U	NA
2-METHYLPHENOL	11 U	NA	10 U	NA	12 U	NA
2-NITROANILINE	28 U	NA	26 U	NA	12 U	NA
2-NITROPHENOL	11 U	NA	10 U	NA	12 U	NA
3,3'-DICHLOROBENZIDINE	11 U	NA	10 U	NA	12 U	NA
3-NITROANILINE	28 U	NA	26 U	NA	12 U	NA
4,6-DINITRO-2-METHYLPHENOL	28 U	NA	26 U	NA	12 UJ	NA
4-BROMOPHENYL-PHENYLETHER	11 U	NA	10 U	NA	12 U	NA
4-CHLORO-3-METHYLPHENOL	11 UJ	NA	10 UJ	NA	12 U	NA
4-CHLOROANILINE	11 U	NA	10 U	NA	12 U	NA
4-CHLOROPHENYL-PHENYLETHER	11 U	NA	10 U	NA	12 U	NA

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TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB001**	**FNBWGB001**	**FNBWGB004**	**FNBWGB004**	**FNBWGB005**	**FNBWGB005**
Sample Date	09/18/1998	09/21/1998	09/18/1998	09/21/1998	09/01/1998	09/02/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
SEMIVOLATILE ORGANIC COMPOUNDS (ug/L)						
4-METHYLPHENOL	11 UJ	NA	10 UJ	NA	12 U	NA
4-NITROANILINE	28 U	NA	26 U	NA	12 UJ	NA
4-NITROPHENOL	28 U	NA	26 U	NA	12 UJ	NA
ACENAPHTHENE	11 U	NA	10 U	NA	12 U	NA
ACENAPHTHYLENE	11 U	NA	10 U	NA	12 U	NA
ANTHRACENE	11 U	NA	10 U	NA	12 U	NA
BENZO(A)ANTHRACENE	11 U	NA	10 U	NA	12 U	NA
BENZO(A)PYRENE	11 U	NA	10 U	NA	12 UJ	NA
BENZO(B)FLUORANTHENE	11 U	NA	10 U	NA	12 UJ	NA
BENZO(G,H,I)PERYLENE	11 UJ	NA	10 UJ	NA	12 UJ	NA
BENZO(K)FLUORANTHENE	11 U	NA	10 U	NA	12 UJ	NA
BIS(2-CHLOROETHOXY)METHANE	11 U	NA	10 U	NA	12 U	NA
BIS(2-CHLOROETHYL)ETHER	11 U	NA	10 U	NA	12 U	NA
BIS(2-ETHYLHEXYL)PHTHALATE	4 UJ	NA	4 UJ	NA	5 UJ	NA
BUTYLBENZYLPHTHALATE	11 UJ	NA	10 UJ	NA	12 U	NA
CARBAZOLE	11 U	NA	10 U	NA	12 U	NA
CHRYSENE	11 U	NA	10 U	NA	12 U	NA
DI-N-BUTYLPHTHALATE	11 U	NA	10 U	NA	12 U	NA
DI-N-OCTYLPHTHALATE	11 UJ	NA	10 UJ	NA	12 UJ	NA
DIBENZ(A,H)ANTHRACENE	11 U	NA	10 U	NA	12 UJ	NA
DIBENZOFURAN	11 U	NA	10 U	NA	12 U	NA
DIETHYLPHTHALATE	11 U	NA	10 U	NA	12 U	NA
DIMETHYLPHTHALATE	11 U	NA	10 U	NA	12 U	NA
FLUORANTHENE	11 U	NA	10 U	NA	12 U	NA
FLUORENE	11 U	NA	10 U	NA	12 U	NA
HEXACHLOROBENZENE	11 U	NA	10 U	NA	12 U	NA
HEXACHLOROBUTADIENE	11 U	NA	10 U	NA	12 U	NA
HEXACHLOROCYCLOPENTADIENE	11 U	NA	10 U	NA	12 U	NA
HEXACHLOROETHANE	11 U	NA	10 U	NA	12 U	NA
INDENO(1,2,3-CD)PYRENE	11 U	NA	10 U	NA	12 UJ	NA
ISOPHORONE	11 U	NA	10 U	NA	12 U	NA

Notes to table on page G-233

TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB001**	**FNBWGB001**	**FNBWGB004**	**FNBWGB004**	**FNBWGB005**	**FNBWGB005**
Sample Date	09/18/1998	09/21/1998	09/18/1998	09/21/1998	09/01/1998	09/02/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
SEMIVOLATILE ORGANIC COMPOUNDS (ug/L)						
N-NITROSO-DI-N-PROPYLAMINE	11 U	NA	10 U	NA	12 U	NA
N-NITROSODIPHENYLAMINE (1)	11 U	NA	10 U	NA	12 U	NA
NAPHTHALENE	11 U	NA	10 U	NA	12 U	NA
NITROBENZENE	11 U	NA	10 U	NA	12 U	NA
PENTACHLOROPHENOL	28 U	NA	26 U	NA	12 UJ	NA
PHENANTHRENE	11 U	NA	10 U	NA	12 U	NA
PHENOL	11 U	NA	2 J	NA	12 U	NA
PYRENE	11 UJ	NA	10 UJ	NA	12 UJ	NA
TOTAL SVOCS	3 J	NA	4 J	NA	0 U	NA
PETROLEUM INDICATORS (mg/L)						
DIESEL RANGE	NA	0.10 U	NA	0.10 U	0.10 U	NA
GASOLINE RANGE	0.05 U	NA	0.05 U	NA	NA	0.05 U
MOTOR OIL RANGE	NA	0.60 U	NA	1.0 Y	0.60 U	NA
TPH-DR/MR	NA	0 U	NA	1.0 Y	0 U	NA
TPH-GR	0 U	NA	0 U	NA	NA	0 U

Notes to table on page G-233

TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB007**	**FNBWGB007**	**FNBWGB011**	**FNBWGB012**	**FNBWGB012**	**FNBWGB015**
Sample Date	12/10/1998	12/11/1998	09/22/1998	09/21/1998	09/22/1998	12/10/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
LOW-LEVEL VOLATILE ORGANIC COMPOUNDS (ug/L)						
1,1,1-TRICHLOROETHANE	2 U	NA	2 U	2 U	NA	2 U
1,1,2,2-TETRACHLOROETHANE	2 U	NA	2 U	2 U	NA	2 U
1,1,2-TRICHLOROETHANE	2 U	NA	2 U	2 U	NA	2 U
1,1-DICHLOROETHANE	2 U	NA	2 U	2 U	NA	2 U
1,1-DICHLOROETHENE	2 U	NA	2 U	2 U	NA	2 U
1,2-DICHLOROETHANE	0.5 U	NA	0.5 U	0.5 U	NA	0.5 U
1,2-DICHLOROPROPANE	2 U	NA	2 U	2 U	NA	2 U
2-BUTANONE	4 UJ	NA	4 UJ	15	NA	2 U
2-HEXANONE	2 U	NA	2 U	2 U	NA	2 U
4-METHYL-2-PENTANONE	2 U	NA	2 U	2 U	NA	2 U
ACETONE	46	NA	63	96	NA	41
BENZENE	0.5 U	NA	0.5 U	0.5 U	NA	0.5 U
BROMODICHLOROMETHANE	2 U	NA	2 U	2 U	NA	2 U
BROMOFORM	2 U	NA	2 U	2 U	NA	2 U
BROMOMETHANE	2 U	NA	2 U	2 U	NA	2 U
CARBON DISULFIDE	2 U	NA	2 UJ	2 UJ	NA	2 U
CARBON TETRACHLORIDE	0.5 U	NA	0.5 U	0.5 U	NA	0.5 U
CHLOROBENZENE	2 U	NA	2 U	2 U	NA	2 U
CHLOROETHANE	2 UJ	NA	2 U	2 U	NA	2 UJ
CHLOROFORM	2 U	NA	2 U	2 U	NA	2 U
CHLOROMETHANE	2 U	NA	2 U	2 U	NA	2 U
CIS-1,2-DICHLOROETHENE	2 U	NA	2 U	2 U	NA	2 U
CIS-1,3-DICHLOROPROPENE	0.5 U	NA	0.5 U	0.5 U	NA	0.5 U
DIBROMOCHLOROMETHANE	2 U	NA	2 U	2 U	NA	2 U
ETHYLBENZENE	2 U	NA	2 U	2 U	NA	2 U
METHYLENE CHLORIDE	2 U	NA	2 U	2 U	NA	2 U
STYRENE	2 U	NA	2 U	2 U	NA	2 U
TETRACHLOROETHENE	2 U	NA	2 U	2 U	NA	2 U
TOLUENE	2 U	NA	0.2 J	0.3 J	NA	2 U
TRANS-1,2-DICHLOROETHENE	2 U	NA	2 U	2 U	NA	2 U
TRANS-1,3-DICHLOROPROPENE	0.5 U	NA	0.5 U	0.5 U	NA	0.5 U

Notes to table on page G-233

TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB007**	**FNBWGB007**	**FNBWGB011**	**FNBWGB012**	**FNBWGB012**	**FNBWGB015**
Sample Date	12/10/1998	12/11/1998	09/22/1998	09/21/1998	09/22/1998	12/10/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
LOW-LEVEL VOLATILE ORGANIC COMPOUNDS (ug/L)						
TRICHLOROETHENE	2 U	NA	2 U	2 U	NA	2 U
VINYL CHLORIDE	0.5 U	NA	0.5 U	0.5 U	NA	0.5 U
XYLENE (TOTAL)	2 U	NA	2 U	2 U	NA	2 U
TOTAL LOW-LEVEL VOCS	46	NA	63 J	110 J	NA	41
SEMIVOLATILE ORGANIC COMPOUNDS (ug/L)						
1,2,4-TRICHLOROBENZENE	NA	10 U	11 U	NA	12 U	NA
1,2-DICHLOROBENZENE	NA	5 U	6 U	NA	6 U	NA
1,3-DICHLOROBENZENE	NA	5 U	6 U	NA	6 U	NA
1,4-DICHLOROBENZENE	NA	5 U	6 U	NA	6 U	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	10 UJ	11 U	NA	12 U	NA
2,4,5-TRICHLOROPHENOL	NA	10 U	28 U	NA	30 U	NA
2,4,6-TRICHLOROPHENOL	NA	10 U	11 U	NA	12 U	NA
2,4-DICHLOROPHENOL	NA	10 U	2 J	NA	1 J	NA
2,4-DIMETHYLPHENOL	NA	10 UJ	11 U	NA	12 U	NA
2,4-DINITROPHENOL	NA	10 U	28 U	NA	30 U	NA
2,4-DINITROTOLUENE	NA	10 U	11 U	NA	12 U	NA
2,6-DINITROTOLUENE	NA	10 U	11 U	NA	12 U	NA
2-CHLORONAPHTHALENE	NA	10 U	11 U	NA	12 U	NA
2-CHLOROPHENOL	NA	10 U	11 U	NA	12 U	NA
2-METHYLNAPHTHALENE	NA	10 U	11 U	NA	12 U	NA
2-METHYLPHENOL	NA	10 U	11 U	NA	12 U	NA
2-NITROANILINE	NA	10 U	28 U	NA	30 U	NA
2-NITROPHENOL	NA	10 U	11 U	NA	12 U	NA
3,3'-DICHLOROBENZIDINE	NA	10 U	11 U	NA	12 U	NA
3-NITROANILINE	NA	10 U	28 U	NA	30 U	NA
4,6-DINITRO-2-METHYLPHENOL	NA	10 U	28 U	NA	30 U	NA
4-BROMOPHENYL-PHENYLETHER	NA	10 U	11 U	NA	12 U	NA
4-CHLORO-3-METHYLPHENOL	NA	10 U	11 U	NA	12 U	NA
4-CHLOROANILINE	NA	10 U	11 U	NA	12 U	NA
4-CHLOROPHENYL-PHENYLETHER	NA	10 U	11 U	NA	12 U	NA

Notes to table on page G-233

TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB007**	**FNBWGB007**	**FNBWGB011**	**FNBWGB012**	**FNBWGB012**	**FNBWGB015**
Sample Date	12/10/1998	12/11/1998	09/22/1998	09/21/1998	09/22/1998	12/10/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
SEMIVOLATILE ORGANIC COMPOUNDS (ug/L)						
4-METHYLPHENOL	NA	10 U	11 U	NA	12 U	NA
4-NITROANILINE	NA	10 U	28 U	NA	30 U	NA
4-NITROPHENOL	NA	10 U	28 U	NA	30 U	NA
ACENAPHTHENE	NA	10 U	11 U	NA	12 U	NA
ACENAPHTHYLENE	NA	10 U	11 U	NA	12 U	NA
ANTHRACENE	NA	10 U	11 U	NA	12 U	NA
BENZO(A)ANTHRACENE	NA	10 U	11 U	NA	12 U	NA
BENZO(A)PYRENE	NA	10 U	11 U	NA	12 U	NA
BENZO(B)FLUORANTHENE	NA	10 U	11 U	NA	12 U	NA
BENZO(G,H,I)PERYLENE	NA	10 U	11 U	NA	12 U	NA
BENZO(K)FLUORANTHENE	NA	10 U	11 U	NA	12 U	NA
BIS(2-CHLOROETHOXY)METHANE	NA	10 UJ	11 U	NA	12 U	NA
BIS(2-CHLOROETHYL)ETHER	NA	10 U	11 U	NA	12 U	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	5 UJ	13 UJ	NA	5 UJ	NA
BUTYLBENZYLPHTHALATE	NA	10 U	11 U	NA	12 U	NA
CARBAZOLE	NA	10 U	11 U	NA	12 U	NA
CHRYSENE	NA	10 U	11 U	NA	12 U	NA
DI-N-BUTYLPHTHALATE	NA	10 U	11 U	NA	12 U	NA
DI-N-OCTYLPHTHALATE	NA	10 U	11 U	NA	12 U	NA
DIBENZ(A,H)ANTHRACENE	NA	10 U	11 U	NA	12 U	NA
DIBENZOFURAN	NA	10 U	11 U	NA	12 U	NA
DIETHYLPHTHALATE	NA	10 U	11 U	NA	12 U	NA
DIMETHYLPHTHALATE	NA	10 U	11 U	NA	12 U	NA
FLUORANTHENE	NA	10 U	11 U	NA	12 U	NA
FLUORENE	NA	10 U	11 U	NA	12 U	NA
HEXACHLOROBENZENE	NA	10 U	11 U	NA	12 U	NA
HEXACHLOROBUTADIENE	NA	10 U	11 U	NA	12 U	NA
HEXACHLOROCYCLOPENTADIENE	NA	10 U	11 U	NA	12 U	NA
HEXACHLOROETHANE	NA	10 U	11 U	NA	12 U	NA
INDENO(1,2,3-CD)PYRENE	NA	10 U	11 U	NA	12 U	NA
ISOPHORONE	NA	10 U	11 U	NA	12 U	NA

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TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB007**	**FNBWGB007**	**FNBWGB011**	**FNBWGB012**	**FNBWGB012**	**FNBWGB015**
Sample Date	12/10/1998	12/11/1998	09/22/1998	09/21/1998	09/22/1998	12/10/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
SEMIVOLATILE ORGANIC COMPOUNDS (ug/L)						
N-NITROSO-DI-N-PROPYLAMINE	NA	10 U	11 U	NA	12 U	NA
N-NITROSODIPHENYLAMINE (1)	NA	10 U	11 U	NA	12 U	NA
NAPHTHALENE	NA	10 U	11 U	NA	12 U	NA
NITROBENZENE	NA	10 U	11 U	NA	12 U	NA
PENTACHLOROPHENOL	NA	10 UJ	28 U	NA	30 U	NA
PHENANTHRENE	NA	10 U	11 U	NA	12 U	NA
PHENOL	NA	10 U	11 U	NA	2 J	NA
PYRENE	NA	10 U	11 U	NA	12 U	NA
TOTAL SVOCS	NA	0 U	2 J	NA	3 J	NA
PETROLEUM INDICATORS (mg/L)						
DIESEL RANGE	0.20 Y	NA	0.10 U	NA	0.10 U	0.20 YJ
GASOLINE RANGE	0.05 U	NA	0.05 U	0.05 U	NA	0.05 U
MOTOR OIL RANGE	0.70 Y	NA	0.50 U	NA	0.60 U	0.70 YJ
TPH-DR/MR	0.90 Y	NA	NA	NA	0 U	0.90 YJ
TPH-GR	0 U	NA	0 U	0 U	NA	0 U

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TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB015**	**FNBWGB016**	**FNBWGB016**	**FNBWGB016**	**FNBWGB017**	**FNBWGB017**
Sample Date	12/11/1998	09/02/1998	09/04/1998	12/10/1998	09/01/1998	09/02/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
LOW-LEVEL VOLATILE ORGANIC COMPOUNDS (ug/L)						
1,1,1-TRICHLOROETHANE	NA	2 U	NA	NA	2 U	NA
1,1,2,2-TETRACHLOROETHANE	NA	2 U	NA	NA	2 U	NA
1,1,2-TRICHLOROETHANE	NA	2 U	NA	NA	2 U	NA
1,1-DICHLOROETHANE	NA	2 UJ	NA	NA	2 U	NA
1,1-DICHLOROETHENE	NA	2 U	NA	NA	2 U	NA
1,2-DICHLOROETHANE	NA	0.5 U	NA	NA	0.5 U	NA
1,2-DICHLOROPROPANE	NA	2 U	NA	NA	2 U	NA
2-BUTANONE	NA	8 UJ	NA	NA	10 UJ	NA
2-HEXANONE	NA	2 U	NA	NA	2 U	NA
4-METHYL-2-PENTANONE	NA	2 U	NA	NA	2 U	NA
ACETONE	NA	120	NA	NA	81	NA
BENZENE	NA	0.5 U	NA	NA	0.5 U	NA
BROMODICHLOROMETHANE	NA	2 U	NA	NA	2 U	NA
BROMOFORM	NA	2 U	NA	NA	2 U	NA
BROMOMETHANE	NA	2 U	NA	NA	2 U	NA
CARBON DISULFIDE	NA	2 U	NA	NA	2 U	NA
CARBON TETRACHLORIDE	NA	0.5 U	NA	NA	0.5 U	NA
CHLOROBENZENE	NA	2 U	NA	NA	2 U	NA
CHLOROETHANE	NA	2 U	NA	NA	2 U	NA
CHLOROFORM	NA	2 U	NA	NA	2 U	NA
CHLOROMETHANE	NA	2 U	NA	NA	2 U	NA
CIS-1,2-DICHLOROETHENE	NA	2 U	NA	NA	2 U	NA
CIS-1,3-DICHLOROPROPENE	NA	0.5 U	NA	NA	0.5 U	NA
DIBROMOCHLOROMETHANE	NA	2 U	NA	NA	2 U	NA
ETHYLBENZENE	NA	0.5 J	NA	NA	0.7 J	NA
METHYLENE CHLORIDE	NA	2 U	NA	NA	2 U	NA
STYRENE	NA	2 U	NA	NA	2 U	NA
TETRACHLOROETHENE	NA	2 U	NA	NA	2 U	NA
TOLUENE	NA	0.8 J	NA	NA	1 J	NA
TRANS-1,2-DICHLOROETHENE	NA	2 U	NA	NA	2 U	NA
TRANS-1,3-DICHLOROPROPENE	NA	0.5 U	NA	NA	0.5 U	NA

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TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB015**	**FNBWGB016**	**FNBWGB016**	**FNBWGB016**	**FNBWGB017**	**FNBWGB017**
Sample Date	12/11/1998	09/02/1998	09/04/1998	12/10/1998	09/01/1998	09/02/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
LOW-LEVEL VOLATILE ORGANIC COMPOUNDS (ug/L)						
TRICHLOROETHENE	NA	2 U	NA	NA	2 U	NA
VINYL CHLORIDE	NA	0.5 U	NA	NA	0.5 U	NA
XYLENE (TOTAL)	NA	3	NA	NA	4	NA
TOTAL LOW-LEVEL VOCS	NA	120 J	NA	NA	87 J	NA
SEMIVOLATILE ORGANIC COMPOUNDS (ug/L)						
1,2,4-TRICHLOROBENZENE	10 U	NA	100 U	NA	NA	11 U
1,2-DICHLOROBENZENE	5 U	NA	50 U	NA	NA	6 U
1,3-DICHLOROBENZENE	5 U	NA	50 U	NA	NA	6 U
1,4-DICHLOROBENZENE	5 U	NA	50 U	NA	NA	6 U
2,2'-OXYBIS(1-CHLOROPROPANE)	10 UJ	NA	100 U	NA	NA	11 U
2,4,5-TRICHLOROPHENOL	10 U	NA	100 U	NA	NA	11 U
2,4,6-TRICHLOROPHENOL	10 U	NA	100 U	NA	NA	11 U
2,4-DICHLOROPHENOL	10 U	NA	100 U	NA	NA	11 U
2,4-DIMETHYLPHENOL	10 UJ	NA	100 U	NA	NA	11 U
2,4-DINITROPHENOL	10 U	NA	100 UJ	NA	NA	11 UJ
2,4-DINITROTOLUENE	10 U	NA	100 U	NA	NA	11 U
2,6-DINITROTOLUENE	10 U	NA	100 U	NA	NA	11 U
2-CHLORONAPHTHALENE	10 U	NA	100 U	NA	NA	11 U
2-CHLOROPHENOL	10 U	NA	100 U	NA	NA	11 U
2-METHYLNAPHTHALENE	10 U	NA	100 U	NA	NA	11 U
2-METHYLPHENOL	10 U	NA	100 U	NA	NA	11 U
2-NITROANILINE	10 U	NA	100 U	NA	NA	11 U
2-NITROPHENOL	10 U	NA	100 U	NA	NA	11 U
3,3'-DICHLOROBENZIDINE	10 U	NA	100 U	NA	NA	11 U
3-NITROANILINE	10 U	NA	100 U	NA	NA	11 U
4,6-DINITRO-2-METHYLPHENOL	10 U	NA	100 U	NA	NA	11 U
4-BROMOPHENYL-PHENYLETHER	10 U	NA	100 U	NA	NA	11 U
4-CHLORO-3-METHYLPHENOL	10 U	NA	100 U	NA	NA	11 U
4-CHLOROANILINE	10 U	NA	100 U	NA	NA	11 U
4-CHLOROPHENYL-PHENYLETHER	10 U	NA	100 U	NA	NA	11 U

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TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB015**	**FNBWGB016**	**FNBWGB016**	**FNBWGB016**	**FNBWGB017**	**FNBWGB017**
Sample Date	12/11/1998	09/02/1998	09/04/1998	12/10/1998	09/01/1998	09/02/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
SEMIVOLATILE ORGANIC COMPOUNDS (ug/L)						
4-METHYLPHENOL	10 U	NA	100 U	NA	NA	11 U
4-NITROANILINE	10 U	NA	100 U	NA	NA	11 U
4-NITROPHENOL	10 U	NA	100 UJ	NA	NA	11 UJ
ACENAPHTHENE	10 U	NA	100 U	NA	NA	11 U
ACENAPHTHYLENE	10 U	NA	100 U	NA	NA	11 U
ANTHRACENE	10 U	NA	100 U	NA	NA	11 U
BENZO(A)ANTHRACENE	10 U	NA	100 U	NA	NA	11 U
BENZO(A)PYRENE	10 U	NA	100 U	NA	NA	11 U
BENZO(B)FLUORANTHENE	10 U	NA	100 UJ	NA	NA	11 UJ
BENZO(G,H,I)PERYLENE	10 U	NA	100 U	NA	NA	11 U
BENZO(K)FLUORANTHENE	10 U	NA	100 U	NA	NA	11 U
BIS(2-CHLOROETHOXY)METHANE	10 UJ	NA	100 U	NA	NA	11 U
BIS(2-CHLOROETHYL)ETHER	10 U	NA	100 U	NA	NA	11 U
BIS(2-ETHYLHEXYL)PHTHALATE	28	NA	40 UJ	NA	NA	4 UJ
BUTYLBENZYLPHTHALATE	10 U	NA	100 U	NA	NA	11 U
CARBAZOLE	10 U	NA	100 U	NA	NA	11 U
CHRYSENE	10 U	NA	100 U	NA	NA	11 U
DI-N-BUTYLPHTHALATE	10 U	NA	100 U	NA	NA	11 U
DI-N-OCTYLPHTHALATE	10 U	NA	100 U	NA	NA	11 U
DIBENZ(A,H)ANTHRACENE	10 U	NA	100 U	NA	NA	11 U
DIBENZOFURAN	10 U	NA	100 U	NA	NA	11 U
DIETHYLPHTHALATE	10 U	NA	100 U	NA	NA	11 U
DIMETHYLPHTHALATE	10 U	NA	100 U	NA	NA	11 U
FLUORANTHENE	10 U	NA	100 U	NA	NA	11 U
FLUORENE	10 U	NA	100 U	NA	NA	11 U
HEXACHLOROBENZENE	10 U	NA	100 U	NA	NA	11 U
HEXACHLOROBUTADIENE	10 U	NA	100 U	NA	NA	11 U
HEXACHLOROCYCLOPENTADIENE	10 U	NA	100 U	NA	NA	11 U
HEXACHLOROETHANE	10 U	NA	100 U	NA	NA	11 U
INDENO(1,2,3-CD)PYRENE	10 U	NA	100 U	NA	NA	11 U
ISOPHORONE	10 U	NA	100 U	NA	NA	11 U

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TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB015**	**FNBWGB016**	**FNBWGB016**	**FNBWGB016**	**FNBWGB017**	**FNBWGB017**
Sample Date	12/11/1998	09/02/1998	09/04/1998	12/10/1998	09/01/1998	09/02/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
SEMIVOLATILE ORGANIC COMPOUNDS (ug/L)						
N-NITROSO-DI-N-PROPYLAMINE	10 U	NA	100 U	NA	NA	11 U
N-NITROSODIPHENYLAMINE (1)	10 U	NA	100 U	NA	NA	11 U
NAPHTHALENE	10 U	NA	100 U	NA	NA	11 U
NITROBENZENE	10 U	NA	100 U	NA	NA	11 U
PENTACHLOROPHENOL	10 UJ	NA	100 U	NA	NA	11 U
PHENANTHRENE	10 U	NA	100 U	NA	NA	11 U
PHENOL	10 U	NA	100 U	NA	NA	11 U
PYRENE	10 U	NA	100 U	NA	NA	11 U
TOTAL SVOCS	28	NA	0 U	NA	NA	0 U
PETROLEUM INDICATORS (mg/L)						
DIESEL RANGE	NA	NA	NA	0.10 U	NA	0.10 U
GASOLINE RANGE	NA	0.05 U	NA	0.05 U	0.05 U	NA
MOTOR OIL RANGE	NA	NA	NA	2.0 Y	NA	0.50 U
TPH-DR/MR	NA	NA	NA	**2.0 Y** α	NA	0 U
TPH-GR	NA	0 U	NA	0 U	0 U	NA

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TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB018**	**FNBWGB018**	**FNBWGB019**	**FNBWGB020**	**FNBWGB023**	**FNBWGB024**
Sample Date	09/01/1998	09/02/1998	09/18/1998	09/22/1998	08/31/1998	09/21/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
LOW-LEVEL VOLATILE ORGANIC COMPOUNDS (ug/L)						
1,1,1-TRICHLOROETHANE	2 U	NA	2 U	2 U	2 U	2 U
1,1,2,2-TETRACHLOROETHANE	2 U	NA	2 U	2 U	2 U	2 U
1,1,2-TRICHLOROETHANE	2 U	NA	2 U	2 U	2 U	2 U
1,1-DICHLOROETHANE	2 U	NA	2 U	2 U	2 U	2 U
1,1-DICHLOROETHENE	2 U	NA	2 U	2 U	2 U	2 U
1,2-DICHLOROETHANE	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROPROPANE	2 U	NA	2 U	2 U	2 U	2 U
2-BUTANONE	2 U	NA	2 U	5 UJ	2 U	2 U
2-HEXANONE	2 U	NA	2 U	2 U	2 U	2 U
4-METHYL-2-PENTANONE	2 U	NA	2 U	2 U	2 U	2 U
ACETONE	14	NA	8 UJ	120	7 UJ	84
BENZENE	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
BROMODICHLOROMETHANE	2 U	NA	2 U	2 U	2 U	2 U
BROMOFORM	2 U	NA	2 U	2 U	2 U	2 U
BROMOMETHANE	2 U	NA	2 U	2 U	2 U	2 U
CARBON DISULFIDE	2 U	NA	2 U	2 U	2 U	2 U
CARBON TETRACHLORIDE	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROBENZENE	2 U	NA	2 U	2 U	2 U	2 U
CHLOROETHANE	2 U	NA	2 U	2 U	2 U	2 U
CHLOROFORM	2 U	NA	2 U	2 U	2 U	2 U
CHLOROMETHANE	2 U	NA	2 U	2 U	2 U	2 U
CIS-1,2-DICHLOROETHENE	2 U	NA	2 U	2 U	2 U	2 U
CIS-1,3-DICHLOROPROPENE	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
DIBROMOCHLOROMETHANE	2 U	NA	2 U	2 U	2 U	2 U
ETHYLBENZENE	2 U	NA	2 U	2 U	2 U	2 U
METHYLENE CHLORIDE	2 U	NA	2 U	2 U	2 U	2 U
STYRENE	2 U	NA	2 U	2 U	2 U	2 U
TETRACHLOROETHENE	2 U	NA	2 U	2 U	2 U	2 U
TOLUENE	2 U	NA	0.3 J	2 U	2 U	2 U
TRANS-1,2-DICHLOROETHENE	2 U	NA	2 U	2 U	2 U	2 U
TRANS-1,3-DICHLOROPROPENE	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U

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TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB018**	**FNBWGB018**	**FNBWGB019**	**FNBWGB020**	**FNBWGB023**	**FNBWGB024**
Sample Date	09/01/1998	09/02/1998	09/18/1998	09/22/1998	08/31/1998	09/21/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
LOW-LEVEL VOLATILE ORGANIC COMPOUNDS (ug/L)						
TRICHLOROETHENE	2 U	NA	2 U	2 U	2 U	2 U
VINYL CHLORIDE	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
XYLENE (TOTAL)	1 J	NA	2 U	2 U	2 U	2 U
TOTAL LOW-LEVEL VOCS	15 J	NA	0.3 J	120	0 U	84
SEMIVOLATILE ORGANIC COMPOUNDS (ug/L)						
1,2,4-TRICHLOROBENZENE	NA	29 U	12 U	11 U	11 U	12 U
1,2-DICHLOROBENZENE	NA	14 U	6 U	6 U	6 U	6 U
1,3-DICHLOROBENZENE	NA	14 U	6 U	6 U	6 U	6 U
1,4-DICHLOROBENZENE	NA	14 U	6 U	6 U	6 U	6 U
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	29 U	12 U	11 U	11 U	12 U
2,4,5-TRICHLOROPHENOL	NA	29 U	29 U	29 U	29 U	29 U
2,4,6-TRICHLOROPHENOL	NA	29 U	12 U	11 U	11 U	12 U
2,4-DICHLOROPHENOL	NA	29 U	12 U	11 U	11 U	12 U
2,4-DIMETHYLPHENOL	NA	29 U	12 U	11 U	11 U	12 U
2,4-DINITROPHENOL	NA	29 U	29 U	29 U	29 U	29 U
2,4-DINITROTOLUENE	NA	29 U	12 U	11 U	11 U	12 U
2,6-DINITROTOLUENE	NA	29 U	12 U	11 U	11 U	12 U
2-CHLORONAPHTHALENE	NA	29 U	12 U	11 U	11 U	12 U
2-CHLOROPHENOL	NA	29 U	12 U	11 U	11 U	12 U
2-METHYLNAPHTHALENE	NA	29 U	12 U	11 U	11 U	12 U
2-METHYLPHENOL	NA	29 U	12 U	11 U	11 U	12 U
2-NITROANILINE	NA	29 U	29 U	29 U	29 U	29 U
2-NITROPHENOL	NA	29 U	12 U	11 U	11 U	12 U
3,3'-DICHLOROBENZIDINE	NA	4,800 U	12 U	11 U	11 U	12 U
3-NITROANILINE	NA	29 U	29 U	29 U	29 U	29 U
4,6-DINITRO-2-METHYLPHENOL	NA	29 U	29 U	29 U	29 U	29 U
4-BROMOPHENYL-PHENYLETHER	NA	29 U	12 U	11 U	11 U	12 U
4-CHLORO-3-METHYLPHENOL	NA	29 U	12 UJ	11 U	11 U	12 U
4-CHLOROANILINE	NA	29 U	12 U	11 U	11 U	12 U
4-CHLOROPHENYL-PHENYLETHER	NA	29 U	12 U	11 U	11 U	12 U

Notes to table on page G-233

TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB018**	**FNBWGB018**	**FNBWGB019**	**FNBWGB020**	**FNBWGB023**	**FNBWGB024**
Sample Date	09/01/1998	09/02/1998	09/18/1998	09/22/1998	08/31/1998	09/21/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
SEMIVOLATILE ORGANIC COMPOUNDS (ug/L)						
4-METHYLPHENOL	NA	6 J	12 UJ	11 U	11 U	1 J
4-NITROANILINE	NA	29 U	29 U	29 U	29 U	29 U
4-NITROPHENOL	NA	29 U	29 U	29 U	29 U	29 U
ACENAPHTHENE	NA	29 U	2 J	11 U	11 U	12 U
ACENAPHTHYLENE	NA	29 U	12 U	11 U	11 U	12 U
ANTHRACENE	NA	29 U	12 U	11 U	11 U	12 U
BENZO(A)ANTHRACENE	NA	4,800 U	12 U	11 U	11 U	12 U
BENZO(A)PYRENE	NA	29 U	12 U	11 U	11 U	12 U
BENZO(B)FLUORANTHENE	NA	2 J	12 U	11 U	11 U	12 U
BENZO(G,H,I)PERYLENE	NA	29 U	12 UJ	11 U	11 U	12 U
BENZO(K)FLUORANTHENE	NA	29 U	12 U	11 U	11 U	12 U
BIS(2-CHLOROETHOXY)METHANE	NA	29 U	12 U	11 U	11 U	12 U
BIS(2-CHLOROETHYL)ETHER	NA	29 U	12 U	11 U	11 U	12 U
BIS(2-ETHYLHEXYL)PHTHALATE	NA	5 UJ	5 UJ	4 U	4 U	5 U
BUTYLBENZYLPHTHALATE	NA	4,800 U	12 UJ	11 U	11 U	12 UJ
CARBAZOLE	NA	2 J	12 U	11 U	11 U	12 U
CHRYSENE	NA	4,800 U	12 U	11 U	11 U	12 U
DI-N-BUTYLPHTHALATE	NA	29 UJ	12 U	11 U	11 U	12 U
DI-N-OCTYLPHTHALATE	NA	29 UJ	12 UJ	11 U	11 UJ	12 U
DIBENZ(A,H)ANTHRACENE	NA	29 U	12 U	11 U	11 U	12 U
DIBENZOFURAN	NA	29 U	12 U	11 U	11 U	12 U
DIETHYLPHTHALATE	NA	29 UJ	12 U	11 U	11 U	12 U
DIMETHYLPHTHALATE	NA	29 U	12 U	11 U	11 U	12 U
FLUORANTHENE	NA	4 J	12 U	11 U	11 U	12 U
FLUORENE	NA	29 U	12 U	11 U	11 U	12 U
HEXACHLOROBENZENE	NA	29 U	12 U	11 U	11 U	12 U
HEXACHLOROBUTADIENE	NA	29 U	12 U	11 U	11 U	12 U
HEXACHLOROCYCLOPENTADIENE	NA	29 UJ	12 U	11 U	11 U	12 U
HEXACHLOROETHANE	NA	29 U	12 U	11 U	11 U	12 U
INDENO(1,2,3-CD)PYRENE	NA	29 U	12 U	11 U	11 U	12 U
ISOPHORONE	NA	29 U	12 U	11 U	11 U	12 U

Notes to table on page G-233

TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB018**	**FNBWGB018**	**FNBWGB019**	**FNBWGB020**	**FNBWGB023**	**FNBWGB024**
Sample Date	09/01/1998	09/02/1998	09/18/1998	09/22/1998	08/31/1998	09/21/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
SEMIVOLATILE ORGANIC COMPOUNDS (ug/L)						
N-NITROSO-DI-N-PROPYLAMINE	NA	29 U	12 U	11 U	11 U	12 U
N-NITROSODIPHENYLAMINE (1)	NA	19 J	12 U	11 U	11 U	12 U
NAPHTHALENE	NA	29 U	2 J	11 U	11 U	12 U
NITROBENZENE	NA	29 U	12 U	11 U	11 U	12 U
PENTACHLOROPHENOL	NA	29 U	29 U	29 U	29 U	29 U
PHENANTHRENE	NA	2 J	1 J	11 U	11 U	12 U
PHENOL	NA	29 U	12 U	11 U	11 U	12 U
PYRENE	NA	11 J	12 UJ	11 U	11 U	12 U
TOTAL SVOCS	NA	46 J	5 J	0 U	0 U	1 J
PETROLEUM INDICATORS (mg/L)						
DIESEL RANGE	NA	0.60 Y	0.10 U	0.10 U	0.10 U	0.10 U
GASOLINE RANGE	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U
MOTOR OIL RANGE	NA	0.50 U	0.50 U	0.60 U	0.60 U	0.60 U
TPH-DR/MR	NA	0.60 Y	NA	NA	NA	NA
TPH-GR	0 U	NA	0 U	0 U	0 U	0 U

Notes to table on page G-233

TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB025**	**FNBWGB025**	**FNBWGB030**	**FNBWGB031**	**FNBWGB031**	**FNBWSD029**
Sample Date	09/18/1998	09/21/1998	12/11/1998	12/11/1998	12/14/1998	12/16/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
LOW-LEVEL VOLATILE ORGANIC COMPOUNDS (ug/L)						
1,1,1-TRICHLOROETHANE	2 U	NA	2 U	2 U	NA	2 U
1,1,2,2-TETRACHLOROETHANE	2 U	NA	2 U	2 U	NA	2 U
1,1,2-TRICHLOROETHANE	2 U	NA	2 U	2 U	NA	2 U
1,1-DICHLOROETHANE	2 U	NA	2 U	2 U	NA	2 U
1,1-DICHLOROETHENE	2 U	NA	2 U	2 U	NA	2 U
1,2-DICHLOROETHANE	0.7 J	NA	0.5 U	0.5 U	NA	0.5 U
1,2-DICHLOROPROPANE	2 U	NA	2 U	2 U	NA	2 U
2-BUTANONE	15 U	NA	8 UJ	2 U	NA	110
2-HEXANONE	2 U	NA	2 U	2 U	NA	2 U
4-METHYL-2-PENTANONE	2 U	NA	2 U	2 U	NA	2 U
ACETONE	180	NA	110	63	NA	18 J
BENZENE	0.5 U	NA	0.5 U	0.5 U	NA	0.5 U
BROMODICHLOROMETHANE	2 U	NA	2 U	2 U	NA	2 U
BROMOFORM	2 U	NA	2 U	2 U	NA	2 U
BROMOMETHANE	2 U	NA	2 U	2 U	NA	2 U
CARBON DISULFIDE	2 UJ	NA	2 U	2 U	NA	2 U
CARBON TETRACHLORIDE	0.5 U	NA	0.5 U	0.5 U	NA	0.5 U
CHLOROBENZENE	2 U	NA	2 U	2 U	NA	2 U
CHLOROETHANE	2 U	NA	2 UJ	2 UJ	NA	2 U
CHLOROFORM	2 U	NA	2 U	2 U	NA	2 U
CHLOROMETHANE	0.7 J	NA	2 U	2 U	NA	2 U
CIS-1,2-DICHLOROETHENE	2 U	NA	2 U	2 U	NA	2 U
CIS-1,3-DICHLOROPROPENE	0.5 U	NA	0.5 U	0.5 U	NA	0.5 U
DIBROMOCHLOROMETHANE	2 U	NA	2 U	2 U	NA	2 U
ETHYLBENZENE	2 U	NA	2 U	2 U	NA	2 U
METHYLENE CHLORIDE	15 U	NA	2 U	2 U	NA	2 U
STYRENE	2 U	NA	2 U	2 U	NA	2 U
TETRACHLOROETHENE	2 U	NA	2 U	2 U	NA	2 U
TOLUENE	2 U	NA	2 U	2 U	NA	2 U
TRANS-1,2-DICHLOROETHENE	2 U	NA	2 U	2 U	NA	2 U
TRANS-1,3-DICHLOROPROPENE	0.5 U	NA	0.5 U	0.5 U	NA	0.5 U

Notes to table on page G-233

TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB025**	**FNBWGB025**	**FNBWGB030**	**FNBWGB031**	**FNBWGB031**	**FNBWSD029**
Sample Date	09/18/1998	09/21/1998	12/11/1998	12/11/1998	12/14/1998	12/16/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
LOW-LEVEL VOLATILE ORGANIC COMPOUNDS (ug/L)						
TRICHLOROETHENE	2 U	NA	2 U	2 U	NA	2 U
VINYL CHLORIDE	0.5 U	NA	0.5 U	0.5 U	NA	0.5 U
XYLENE (TOTAL)	2 U	NA	0.8 J	2 U	NA	2 U
TOTAL LOW-LEVEL VOCS	180 J	NA	110 J	63	NA	130 J
SEMIVOLATILE ORGANIC COMPOUNDS (ug/L)						
1,2,4-TRICHLOROBENZENE	10 UJ	NA	11 U	13 U	NA	13 U
1,2-DICHLOROBENZENE	5 UJ	NA	5 U	6 U	NA	6 U
1,3-DICHLOROBENZENE	0.6 J	NA	5 U	6 U	NA	6 U
1,4-DICHLOROBENZENE	5 UJ	NA	5 U	6 U	NA	6 U
2,2'-OXYBIS(1-CHLOROPROPANE)	10 UJ	NA	11 UJ	13 UJ	NA	13 U
2,4,5-TRICHLOROPHENOL	10 UJ	NA	11 U	13 U	NA	13 U
2,4,6-TRICHLOROPHENOL	10 UJ	NA	11 U	13 U	NA	13 U
2,4-DICHLOROPHENOL	1 J	NA	11 U	13 U	NA	13 U
2,4-DIMETHYLPHENOL	10 UJ	NA	11 UJ	13 UJ	NA	13 U
2,4-DINITROPHENOL	10 UJ	NA	11 U	13 U	NA	13 U
2,4-DINITROTOLUENE	10 UJ	NA	11 U	13 U	NA	13 U
2,6-DINITROTOLUENE	10 UJ	NA	11 U	13 U	NA	13 U
2-CHLORONAPHTHALENE	10 UJ	NA	11 U	13 U	NA	13 U
2-CHLOROPHENOL	10 UJ	NA	11 U	13 U	NA	13 U
2-METHYLNAPHTHALENE	10 UJ	NA	11 U	13 U	NA	13 U
2-METHYLPHENOL	10 UJ	NA	11 U	13 U	NA	13 U
2-NITROANILINE	10 UJ	NA	11 U	13 U	NA	13 U
2-NITROPHENOL	10 UJ	NA	11 U	13 U	NA	13 U
3,3'-DICHLOROBENZIDINE	10 UJ	NA	11 U	13 U	NA	13 U
3-NITROANILINE	10 UJ	NA	11 U	13 U	NA	13 U
4,6-DINITRO-2-METHYLPHENOL	10 UJ	NA	11 U	13 U	NA	13 U
4-BROMOPHENYL-PHENYLETHER	10 UJ	NA	11 U	13 U	NA	13 U
4-CHLORO-3-METHYLPHENOL	10 UJ	NA	11 U	13 U	NA	13 U
4-CHLOROANILINE	10 UJ	NA	11 U	13 U	NA	13 U
4-CHLOROPHENYL-PHENYLETHER	10 UJ	NA	11 U	13 U	NA	13 U

Notes to table on page G-233

TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB025**	**FNBWGB025**	**FNBWGB030**	**FNBWGB031**	**FNBWGB031**	**FNBWSD029**
Sample Date	09/18/1998	09/21/1998	12/11/1998	12/11/1998	12/14/1998	12/16/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
SEMIVOLATILE ORGANIC COMPOUNDS (ug/L)						
4-METHYLPHENOL	10 UJ	NA	11 U	13 U	NA	3 J
4-NITROANILINE	10 UJ	NA	11 U	13 U	NA	13 U
4-NITROPHENOL	10 UJ	NA	11 U	13 U	NA	13 U
ACENAPHTHENE	10 UJ	NA	11 U	13 U	NA	13 U
ACENAPHTHYLENE	10 UJ	NA	11 U	13 U	NA	13 U
ANTHRACENE	10 UJ	NA	11 U	13 U	NA	13 U
BENZO(A)ANTHRACENE	10 UJ	NA	11 U	13 U	NA	13 U
BENZO(A)PYRENE	10 UJ	NA	11 UJ	13 U	NA	13 U
BENZO(B)FLUORANTHENE	10 UJ	NA	11 UJ	13 U	NA	13 U
BENZO(G,H,I)PERYLENE	10 UJ	NA	11 UJ	13 U	NA	13 U
BENZO(K)FLUORANTHENE	10 UJ	NA	11 UJ	13 U	NA	13 U
BIS(2-CHLOROETHOXY)METHANE	10 UJ	NA	11 UJ	13 UJ	NA	13 U
BIS(2-CHLOROETHYL)ETHER	10 UJ	NA	11 U	13 U	NA	13 U
BIS(2-ETHYLHEXYL)PHTHALATE	4 UJ	NA	4 UJ	5 U	NA	5 UJ
BUTYLBENZYLPHTHALATE	10 UJ	NA	11 U	13 U	NA	13 U
CARBAZOLE	10 UJ	NA	11 U	13 U	NA	13 U
CHRYSENE	10 UJ	NA	11 U	13 U	NA	13 U
DI-N-BUTYLPHTHALATE	10 UJ	NA	11 U	13 U	NA	13 U
DI-N-OCTYLPHTHALATE	10 UJ	NA	11 UJ	13 U	NA	13 UJ
DIBENZ(A,H)ANTHRACENE	10 UJ	NA	11 UJ	13 U	NA	13 U
DIBENZOFURAN	10 UJ	NA	11 U	13 U	NA	13 U
DIETHYLPHTHALATE	10 UJ	NA	11 U	13 U	NA	13 U
DIMETHYLPHTHALATE	10 UJ	NA	11 U	13 U	NA	13 U
FLUORANTHENE	10 UJ	NA	11 U	13 U	NA	13 U
FLUORENE	10 UJ	NA	11 U	13 U	NA	13 U
HEXACHLOROBENZENE	10 UJ	NA	11 U	13 U	NA	13 U
HEXACHLOROBUTADIENE	10 UJ	NA	11 U	13 U	NA	13 U
HEXACHLOROCYCLOPENTADIENE	10 UJ	NA	11 U	13 U	NA	13 UJ
HEXACHLOROETHANE	10 UJ	NA	11 U	13 U	NA	13 U
INDENO(1,2,3-CD)PYRENE	10 UJ	NA	11 UJ	13 U	NA	13 U
ISOPHORONE	10 UJ	NA	11 U	13 U	NA	13 U

Notes to table on page G-233

TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Sample Location ID	**FNBWGB025**	**FNBWGB025**	**FNBWGB030**	**FNBWGB031**	**FNBWGB031**	**FNBWSD029**
Sample Date	09/18/1998	09/21/1998	12/11/1998	12/11/1998	12/14/1998	12/16/1998
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
SEMIVOLATILE ORGANIC COMPOUNDS (ug/L)						
N-NITROSO-DI-N-PROPYLAMINE	10 UJ	NA	11 U	13 U	NA	13 U
N-NITROSODIPHENYLAMINE (1)	10 UJ	NA	11 U	13 U	NA	13 U
NAPHTHALENE	10 UJ	NA	11 U	13 U	NA	13 U
NITROBENZENE	10 UJ	NA	11 U	13 U	NA	13 U
PENTACHLOROPHENOL	10 UJ	NA	11 UJ	13 UJ	NA	13 U
PHENANTHRENE	10 UJ	NA	11 U	13 U	NA	13 U
PHENOL	10 UJ	NA	11 U	13 U	NA	13 U
PYRENE	10 UJ	NA	11 U	13 U	NA	13 U
TOTAL SVOCS	2 J	NA	0 U	0 U	NA	3 J
PETROLEUM INDICATORS (mg/L)						
DIESEL RANGE	NA	0.10 U	0.30 Y	NA	0.10 U	0.09 UJ
GASOLINE RANGE	0.05 U	NA	0.05 U	0.05 U	NA	0.05 UJ
MOTOR OIL RANGE	NA	0.60 U	0.50 U	NA	0.50 U	0.50 U
TPH-DR/MR	NA	0 U	0.30 Y	NA	0 U	NA
TPH-GR	0 U	NA	0 U	0 U	NA	0 U

Notes to table on page G-233

TABLE G-2 (Continued)

FORMER NORTH BUILDING WAYS AREA COMPLETE ANALYTICAL RESULTS FOR AQUEOUS SAMPLES
INVESTIGATION AREA A2
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

Notes: U = Not detected at given detection limit J = Estimated value NA = Not analyzed
R = Rejected result, laboratory did not satisfy quality assurance/quality control requirements for accuracy.
Y = Chromatogram indicates the presence of petroleum fuel.
Organic results less than 10 are reported to one significant figure, and results greater than 10 are reported to two significant figures.
TPH results less than 10 are reported to two significant figure, and results greater than 10 are reported to three significant figures.
$^{\alpha}$= Concentrations greater than the ecological screening criteria.
Concentrations shown in bold exceed one or more screening values.

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
25	FNBW Area	Table 1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Figure 2-3. Tetra Tech EM Inc. September 22, 2008.

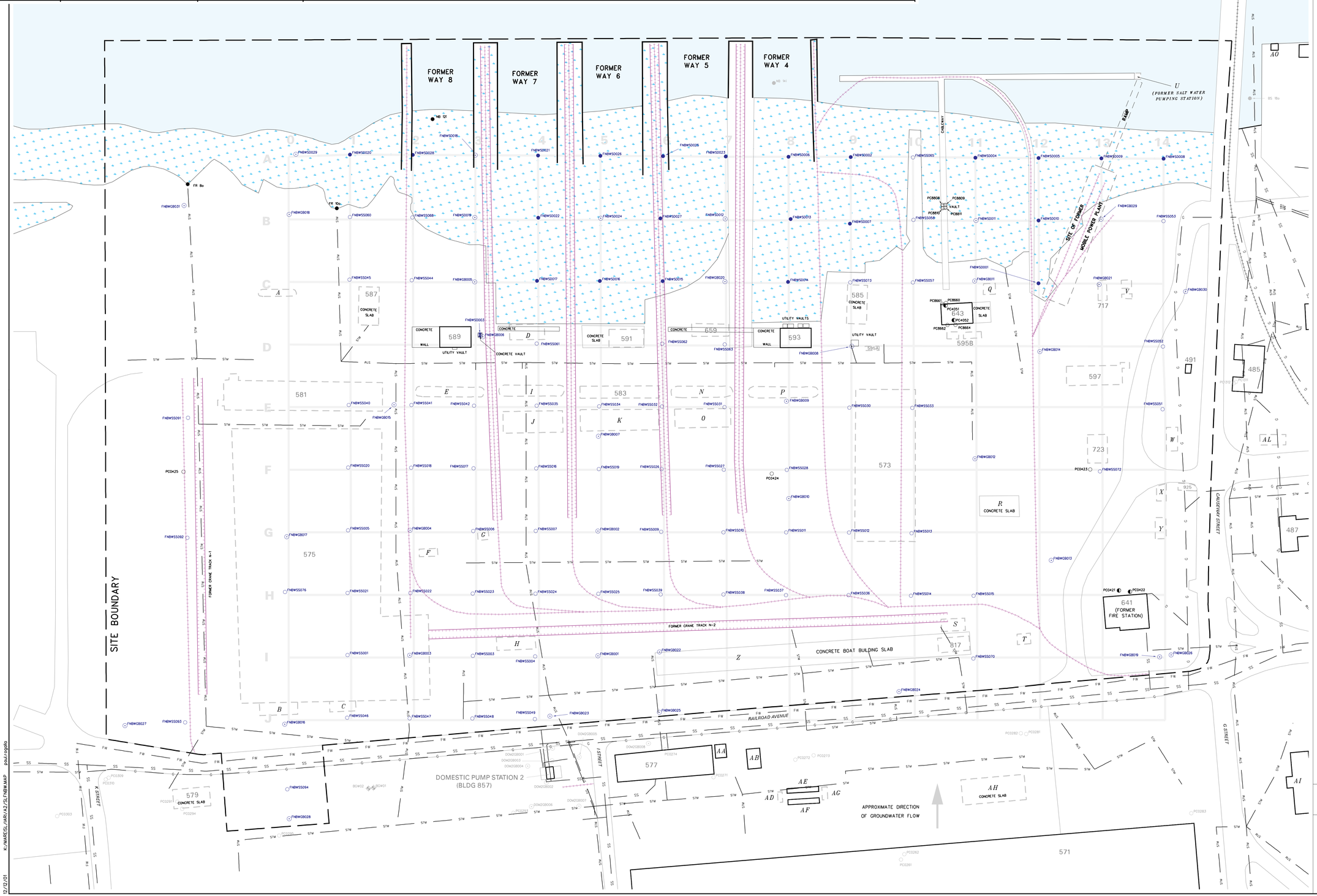

FIGURE 2-3
SAMPLE COLLECTION LOCATIONS
FORMER NORTH BUILDING WAYS AREA

K:/NAVFES/MARI/A2/SI/FNBW.MAP psu/cogdlo
12/12/01

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
26	Concurred with Navy findings	Table 1	Letter Regarding the "Concurrence with the Final Revision 1 of the Investigation Area A2 Former North Building Ways Area Remedial Investigation Report, dated September 22, 2008 Former Mare Island Naval Shipyard, Vallejo, CA." From Paisha Jorgensen, Water Board, to Michael Bloom, Base Realignment and Closure Program Management Office. October 6, 2008.

Letter sent via email

Date: October 6, 2008
File No. 2129.2011 (PJ)

Department of the Navy
BRAC Program Management Office
Attn: Mr. Michael Bloom
1455 Frazee Road, Suite 900
San Diego, CA 92108-4301
michael.s.bloom@navy.mil

Subject: Concurrence with the Final Revision 1 of the *Investigation Area A2 Former North Building Ways Area Remedial Investigation report*, dated September 22, 2008, Former Mare Island Naval Shipyard, Vallejo, California

Dear Mr. Bloom:

Water Board staff reviewed the Final Revision 1 of the Investigation Area A2 Former North Building Ways Area Remedial Investigation report, dated September 22, 2008. Water Board staff concurs with the findings as presented.

Please contact me at (510) 622-2756 or pjorgensen@waterboards.ca.gov if you have any questions.

Sincerely,

Paisha Jorgensen, PG
Engineering Geologist

Distribution:

Department of the Navy
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Environmental Protection Agency
Ms. Carolyn d'Almeida - dAlmeida.Carolyn@epamail.epa.gov

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
27	Data gap assessment	Table 1	Draft PCB Summary Report, Mare Island, Vallejo, California. Section 1.0. Sullivan Consulting Group and Tetra Tech EM Inc. October 2004.

1.0 INTRODUCTION

Under Contract Line Item 0001 of Contract N68711-03-C-5004, the U.S. Department of the Navy (Navy) Naval Facilities Engineering Command, Southwest Division, tasked Sullivan Consulting Group, Inc. (SCG) and its mentor firm Tetra Tech EM Inc. (Tetra Tech), to conduct data gap assessments regarding the presence of polychlorinated biphenyl (PCB) concentrations at selected sites at the former Mare Island Naval Shipyard (Mare Island). The purpose of the assessments was to identify the specific actions that must be conducted at each site to comply with the self-implementing regulations for cleanup of PCB remediation waste, as described in Title 40 of the *Code of Federal Regulations* (40 CFR), Section 761.61. The sites that were selected for the data gap assessments included all those that were retained under direct Navy responsibility following the early transfer of two large portions of Mare Island in 2002.

This report presents the methods and results of the data gap assessments for PCB concerns in the vicinities of 67 buildings (hereinafter, sites) at Mare Island. The goals of the assessments were to evaluate the past PCB investigation and cleanup activities that were conducted at these sites, which historically contained PCB articles (including electrical equipment such as transformers, circuit breakers, and switches). The technical approach used for evaluating previous investigations and cleanups follows the Toxic Substances Control Act (TSCA) requirements at 40 CFR, Section 761, Subpart N, which defines site characterization and verification sampling necessary for a self-implementing cleanup of PCB remediation as described in 40 CFR Section 761.61. The technical approach also involved human health risk assessments (HHRA) and ecological risk assessments (ERA) at a small number of sites where low concentrations of PCBs remain in the soil after conducting remediation activities. Risk assessments at PCB sites are addressed under 40 CFR Section 761.61(c).

Section 2.0 presents the methodology used for the data gap assessments, and Section 3.0 presents the methodology used for the HHRAs and ERAs. These sections are followed by the risk assessment summary (Section 4.0), and the overall data gap assessment summary (Section 5.0). References used to prepare this report are presented in Section 6.0. Appendix A presents the site-specific data gap summary reports for each of the 67 sites, arranged in ascending order by building number. Appendix B presents a generic check list that was developed to conduct the data gap assessments, and Appendix C presents risk assessment tables and calculations.

2.0 DATA GAP ASSESSMENT METHODOLOGY

The methodology for conducting the PCB data gap assessments for each site involved the following three-tiered process:

1. Conduct a review of all available PCB-related documents associated with the site
2. Prepare a data gap assessment check list to identify all information necessary to fully assess the site during a field visit

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
28	Summary	Table 1	Draft PCB Summary Report, Mare Island, Vallejo, California. Appendix A, Buildings 589, 591, 593, 641, 643, 797/GRA51, 799, 825/GRA61, GRA53, GRA55, GRA63, GRA65, and Pier 55. Sullivan Consulting Group and Tetra Tech EM Inc. October 2004.

BUILDING 589 (INVESTIGATION AREA A2) SITE-SPECIFIC DATA GAP SUMMARY ON POLYCHLORINATED BIPHENYLS

This site-specific data gap summary report identifies the previous activities conducted at Building 589 to assess PCBs, and documents the results, conclusions, recommendations, and references from a site-specific PCB data gap assessment. The purpose of this report is to identify whether Building 589 requires any further assessment or abatement activities with respect to PCBs. The methods used to conduct the data gap assessment are presented in Section 2.0 of the "PCB Summary Report, Former Mare Island Shipyard, Vallejo, California", to which this site-specific report is appended.

1.0 SITE DESCRIPTION

Building 589 is located south of "K" Avenue, north of Buildings 593 and 643, and east of Railroad Avenue within the area known as the Former North Building Ways (Figure 1). Ground cover immediately adjacent to Building 589 consists of light vegetation, bare soil, and cracked asphalt formerly used as a parking lot. The building is on fill material and is approximately 6 feet above and 50 feet west of a tidal marsh that borders Mare Island Strait.

Building 589 is a single-story, concrete cinder block and mortar structure consisting of an enclosed 1,550-square-foot roofed section and an uncovered 1,302-square-foot walled area attached to the northwest end of the roofed structure. General building construction information was obtained from the EBS database (SSPORTS 1999) and is presented below.

SITE INFORMATION, BUILDING 589

Descriptive Information		Notes
Building Size	1,550 square feet	NA
Building Construction	Cinder Block and Mortar	Concrete slab
Date of Construction	1942	NA
Exterior Ground Cover	Asphalt and Native Vegetation	Asphalt is in poor condition
Former Building Identification	NA	NA
Former/Current Use	Former Use: Electrical Equipment Storage Current Use: Empty, no current use	NA
Closure Date	NA	PWC reported as current occupant

Notes:
NA Not Available or Applicable
Source: SSPORTS 1999

Figure 1A shows the foundation dimensions, location of manhole covers, floor conduits, and risers. Photographs with vantage points and brief descriptions are also provided on the figure. It is not known whether the manhole located at the northwest corner of Building 643 is associated

with this building (Figure 1B). Building 589 contained one transformer (T-0886) that was removed in 1992 (see table below). Drawings showing the former location of the transformer within Building 589 were not found.

ELECTRICAL EQUIPMENT CONTAINING POLYCHLORINATED BIPHENYLS, BUILDING 589

Equipment Type	Equipment Number	Relative Location	PCBs Identified[a]	Volume (gallons)	Status	Leaks Identified
Transformer[b]	T-0886	Railroad Avenue, Inside	Yes	176	Removed (1992)	No

Notes:

a PCBs identified in transformer fluid.

b Transformer was sampled before removal, replacement, or refilling. The PCB concentrations in the transformer fluid were greater than 500 ppm (SSPORTS 1999).

The site was included in an investigation for potential releases of CERCLA contaminants under the Navy's IRP as part of the Former North Building Ways RI. Both the roofed section and the uncovered walled area of Building 589 show markings of previous assessment and abatement activities associated with removal actions conducted as part of the Navy's radiological program. The entire interior and exterior floor area was marked with a grid pattern from which concrete chip samples were removed and sampled (Navy 1996). The other assessment completed at the site was for PCBs and is described in the following text.

2.0 PREVIOUS POLYCHLORINATED BIPHENYLS ASSESSMENT AND ABATEMENT ACTIVITIES

A PCB assessment survey was conducted by SSPORTS in 1997 (Tetra Tech 2002). During the survey, five concrete chip samples were collected from the floor (see Figure 1). The exact location of each sample point was not identified in documents. Analytical results from the analyses of the five concrete samples indicated that all PCB concentrations were reported as non-detect, with a reporting limit of 1 ppm (see summary table below). PCB abatement activities were not conducted on this site, and no third-party confirmation sampling was conducted (Tetra Tech 2002).

SUMMARY OF PREVIOUS ASSESSMENT SAMPLES, BUILDING 589

AOC	AOC Description	Sample Matrix	Sample ID*	Collected by	Conc (ppm)	DL (ppm)
AOC 1	Concrete slab in northern uncovered portion of the site around conduits and risers	concrete	7076-0158	SSPORTS	ND	1
		concrete	7076-0159	SSPORTS	ND	1
		concrete	7076-0160	SSPORTS	ND	1
		concrete	7076-0161	SSPORTS	ND	1
		concrete	7076-0162	SSPORTS	ND	1

Notes:

AOC Area of concern
Conc Concentration
DL Detection Limit
ID Identification
NA Not Available or Applicable
ppm Part per million

3.0 RESULTS OF DATA GAP ASSESSMENT

From April 22 to 23, 2003, SCG personnel performed a PCB data gap assessment at Building 589. The assessment was designed to identify and document any of the following:

- Locations of electrical equipment, transformers, vaults, conduits, and cabling that may have contained PCBs.
- Evidence of previous PCB sampling conducted by SSPORTS or Tetra Tech.
- Evidence of previous PCB abatement conducted by SSPORTS, such as areas of scabbling.
- Assessment of the adequacy of previous PCB characterization and abatement of the AOCs identified.

All five SSPORTS sample markings were located by SCG during the PCB data gap survey; however, only one such sample marking included a legible sample number. Numerous electrical conduits, risers, and cores with and without cabling were observed. The PCB data gap survey confirmed that transformer T-0886 had been removed, and only cut cable ends remained to indicate the probable location of the transformer.

The floor and portions of the walls making up both the uncovered walled area and the enclosed portion of the building showed where past scabbling had occurred. According to Navy documents (Navy 1996), the scabbling occurred as part of previous radiological abatement work performed in this building. The available historical documents do not indicate whether PCB abatement work was performed.

4.0 DATA SUMMARY

A documented PCB source existed at Building 589, which was historically used to store electrical equipment and radiological material. Only one transformer (T-0886) was housed in the building. PCB transformer T-0866 was installed in 1942 at the time the building was constructed. In 1992, transformers throughout Mare Island were removed. There is no documentation indicating that the transformer leaked. Based on the available information, Building 589 has only one AOC--the concrete slab in the northern uncovered walled area associated with the former PCB transformer T-0866. No evidence of PCB sources or contamination was observed inside the roofed portion of Building 589.

5.0 CONCLUSIONS

The following conclusions are based on existing documentation and observations made during the data gap assessment:

- A single PCB transformer was present in Building 589. This transformer was removed, and no evidence of any PCB leaks from the transformer was identified.
- There is no information to indicate that PCB abatement occurred at this AOC.
- Although five concrete sampling locations from the SSPORTS 1997 assessment were located at the site, only one sample ID was legible during the PCB data gap survey. Therefore, the analytical results could not be correlated with the sampling locations. No other records indicated the sampling locations.
- Laboratory data exists for the five concrete samples. Results were reported as non-detect, with a reporting limit of 1 ppm.
- This AOC is ready for closure.

6.0 RECOMMENDATIONS

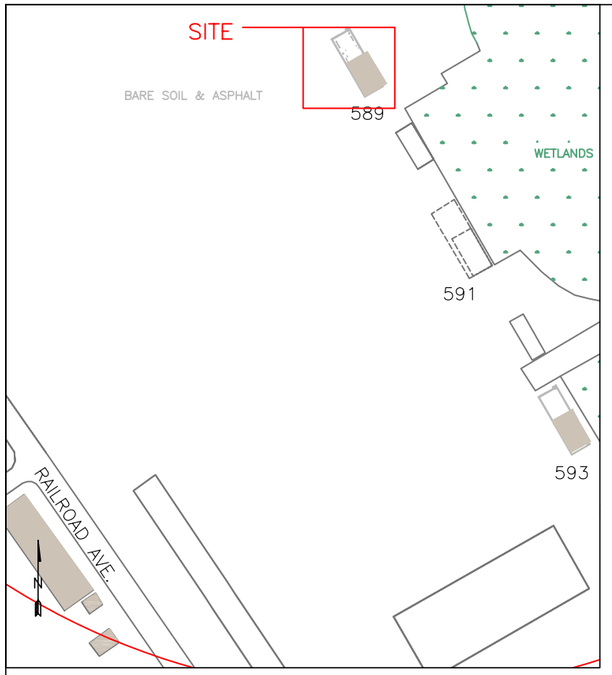
No further assessment is recommended for Building 589.

7.0 REFERENCES

Navy, Radiological Engineering Division. 1996. "Naval Nuclear Propulsion Program, Radiological Final Report for the Decommissioning of Mare Island Naval Shipyard, Survey Methodology and Specifications, Volume II Book 6 of 8, Mare Island Shipyard, Vallejo, California." April 1.

SSPORTS. 1999. "Mare Island Naval Shipyard Environmental Baseline Survey Database." Last updated 1999.

Tetra Tech. 2002. "Internal Draft Polychlorinated Biphenyl Assessment and Abatement Summary Report, Mare Island, California, Volumes I-VII." August.

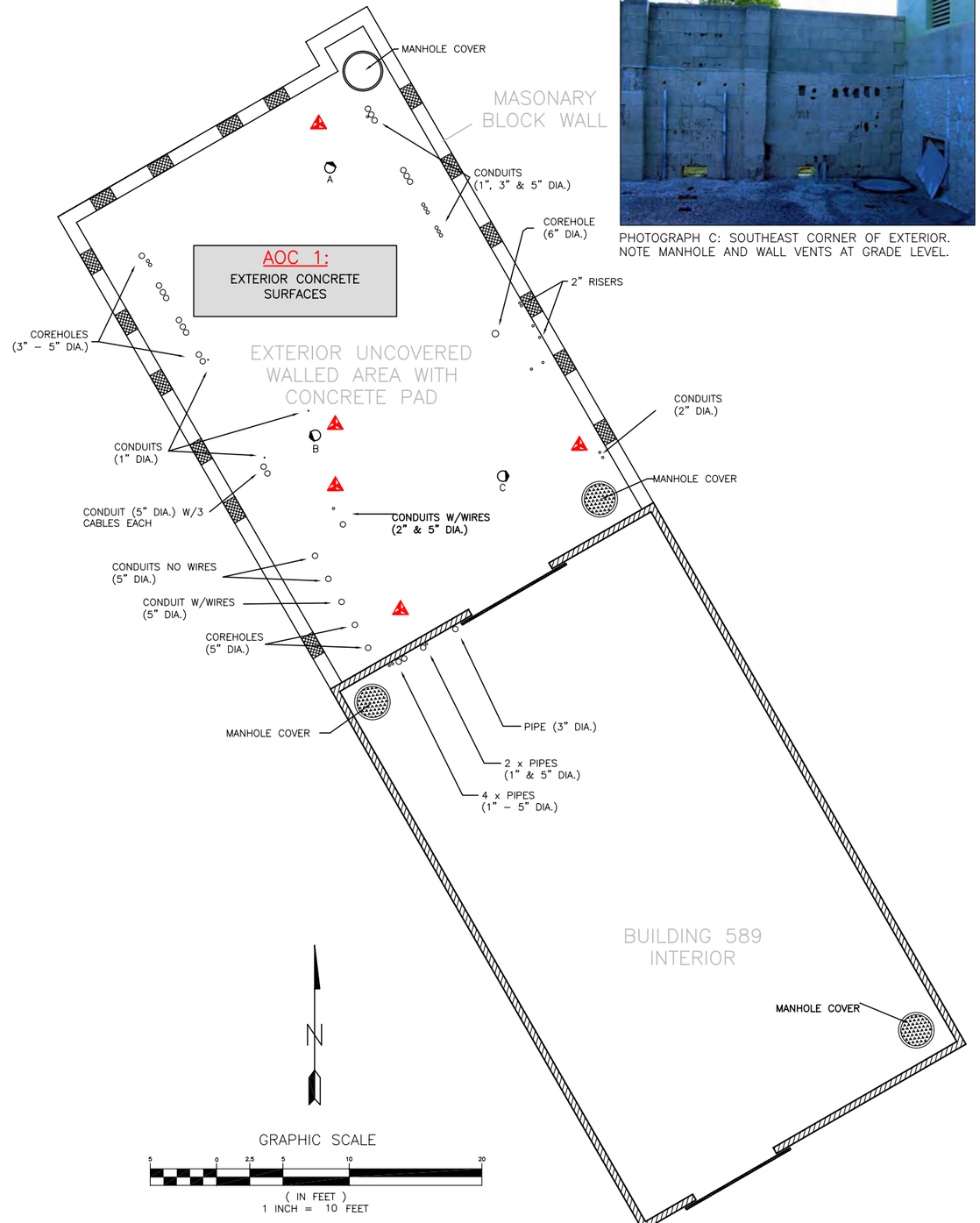


BUILDING 589 VICINITY MAP

SCALE: 1 INCH = 200 FEET

PHOTOGRAPH A: NORTHWEST CORNER OF THE BUILDING.

PHOTOGRAPH B: LOOKING WEST AT RISERS AND EXPOSED CABLING.



SITE PLAN – BUILDING 589

PHOTOGRAPH C: SOUTHEAST CORNER OF EXTERIOR. NOTE MANHOLE AND WALL VENTS AT GRADE LEVEL.

MARE ISLAND AREA MAP

NO SCALE

LEGEND:

- SSPORTS PCB SAMPLE LOCATION AND ID (SAMPLE IDENTIFICATION NOT LEGIBLE)
- PHOTOGRAPH VIEWPOINT
- CONDUITS/COREHOLES WITH APPROXIMATE DIAMETER
- MASONRY BLOCK WALL, ROOF (AND DOOR)
- MASONRY BLOCK EXTERIOR WALL, NO ROOF
- CONCRETE PAD
- WALL DRAIN (FLOOR LEVEL)

NOTES:

1. ONE AOC AT SITE: AOC 1 – TRANSFORMER IN EXTERIOR UNCOVERED CONCRETE AREA NORTH OF BUILDING (EXACT LOCATION UNKNOWN).
2. AOC 1 IS READY FOR CLOSURE. NO FURTHER ASSESSMENT IS RECOMMENDED. THIS SITE IS READY FOR CLOSURE.

DEPARTMENT OF THE NAVY
SOUTHWEST DIVISION
SAN DIEGO, CALIFORNIA

SULLIVAN

SCG PROJECT NO: 110-01
CONTRACT NO. N68711-03-C-5004
AUGUST 2004

FIGURE 1
SITE FIGURES AND FIELD OBSERVATIONS
BUILDING 589

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES 589 FIG 1.DWG V31AUG04

BUILDING 591 (INVESTIGATION AREA A2) SITE-SPECIFIC DATA GAP SUMMARY ON POLYCHLORINATED BIPHENYLS

This site-specific data gap summary report identifies the previous activities conducted at Building 591 to assess PCBs, and documents the results, conclusions, recommendations, and references from a site-specific PCB data gap assessment. The purpose of this report is to identify whether Building 591 requires any further assessment or abatement activities with respect to PCBs. The methods used to conduct the data gap assessment are presented in Section 2.0 of the "PCB Summary Report, Former Mare Island Shipyard, Vallejo, California", to which this site-specific report is appended.

1.0 SITE DESCRIPTION

Former Building 591 was located north of the Mare Island Causeway and Building 593 and south of Building 589 (Figure 1) between Railroad Avenue and Mare Island Strait, in the area known as the Former North Building Ways. Building 591 was demolished in 1989, but the concrete foundation and floor remain. The area immediately adjacent to Building 591 was used as a parking lot and currently consists of sparse vegetation, bare soil, and deteriorating asphalt. A portion of tidal wetland located along Mare Island Strait is 10 feet from the east side of the building foundation. General information on construction of the building was obtained from the EBS database (SSPORTS 1999) and is presented below.

SITE INFORMATION, BUILDING 591

Descriptive Information		Notes
Building Size	2,848 square feet	NA
Building Construction	Only concrete slab remains	NA
Date of Construction	1942 (estimated)	NA
Exterior Ground Cover	Asphalt and native vegetation	Asphalt is in poor condition
Former Building Identification	NA	NA
Former/Current Use	Former Use: Public works storage Current Use: empty, no current use	Demolished
Closure Date	1989	NA

Notes:
NA Not available or not applicable
Source: SSPORTS 1999

Building 591 was not listed as having transformers or other articles that contain PCBs. Subsurface utilities likely existed beneath the interior and exterior of the building, as evidenced by four manhole covers and multiple slab corings. The four manhole covers are not typical storm drain or sewer covers and may cover utility vaults or sumps. Figure 1 illustrates the dimensions of the foundation and the locations of the manhole covers, floor conduits, and risers. Photographs with various vantage points and brief descriptions are also provided on the figure.

2.0 PREVIOUS POLYCHLORINATED BIPHENYLS ASSESSMENT AND ABATEMENT

SSPORTS conducted a PCB assessment survey in 1997 (Tetra Tech 2002). Although no documentation indicates that transformers or PCB equipment were located in Building 591, its general layout is the same as Buildings 589, 593, and 643; these buildings held transformers and articles that contain PCBs. Four exploratory chip samples of concrete were collected from various areas of the building floor. The locations of these samples are shown on Figure 1.

Concentrations of PCBs in all four concrete samples were reported as non-detect with a reporting limit of 1 ppm (see the summary table below). No third-party confirmation samples were collected and no abatement occurred for PCBs at this site (Tetra Tech 2002).

SUMMARY OF PREVIOUS ASSESSMENT SAMPLES, BUILDING 591

AOC	AOC Description	Sample Matrix	Sample ID	Collected by	Conc (ppm)	DL (ppm)
NA	NA	concrete	7076-0154	SSPORTS	ND	1
		concrete	7076-0155	SSPORTS	ND	1
		concrete	7076-0156	SSPORTS	ND	1
		concrete	7076-0157	SSPORTS	ND	1

Notes:

AOC	Area of concern
Conc	Concentration
DL	Detection limit
ID	Identification
NA	Not available or not applicable
ppm	Part per million
SSPORTS	Supervisor of Shipbuilding, Conversion, and Repair

3.0 RESULTS OF DATA GAP ASSESSMENT

SCG conducted a document review and PCB data gap survey as part of the data gap assessment in 2003. The document review was conducted to confirm that past sampling procedures and analytical results meet the current requirements of TSCA and to verify that documentation of analytical results is available. The document review of former assessments conducted at Building 591 confirmed that SSPORTS collected and analyzed four concrete samples for PCBs.

On April 28, 2003, SCG personnel conducted a PCB data gap survey at Building 591. The assessment was designed to identify and document any of the following:

- Locations of electrical equipment, transformers, vaults, conduits, and cabling that may have contained PCBs.
- Evidence of previous PCB sampling conducted by SSPORTS or Tetra Tech.

- Evidence of previous PCB abatement conducted by SSPORTS, such as areas of scabbling.

- Assessment of the adequacy of previous PCB characterization and abatement of the AOCs identified.

Photographs were taken and site features were noted during the PCB data gap survey. Photographs with various vantage points and brief descriptions are also provided on Figure 1. Water was observed in a large vault located beneath the southeastern portion of the foundation (Figure 1). The water was clear and no oil sheen was observed. No significant staining was identified in or around the vault. Analytical results were correlated with sample identification marks observed during the PCB data gap survey.

4.0 DATA SUMMARY

There is no documented information or indications that sources of PCBs existed at Building 591 or that a release of PCBs occurred. Therefore, no AOCs were identified at the site.

5.0 CONCLUSIONS

The following conclusions are based on evaluation of existing documentation and observations during the data gap assessment:

- No records of transformers were indicated in the historical documentation.

- Four concrete samples were collected by SPPORTS and were reported as non-detect with a reporting limit of 1 ppm.

- Documentation of analytical results is available.

- SSPORTS documentation matches sample markings identified in the field.

- No evidence or record of PCB abatement was identified in the field.

- No evidence of spills or significant staining was observed in the field.

- No sources of PCBs were identified, and all analytical results indicate that concentrations of PCBs are within regulatory requirements.

- This site is ready for closure.

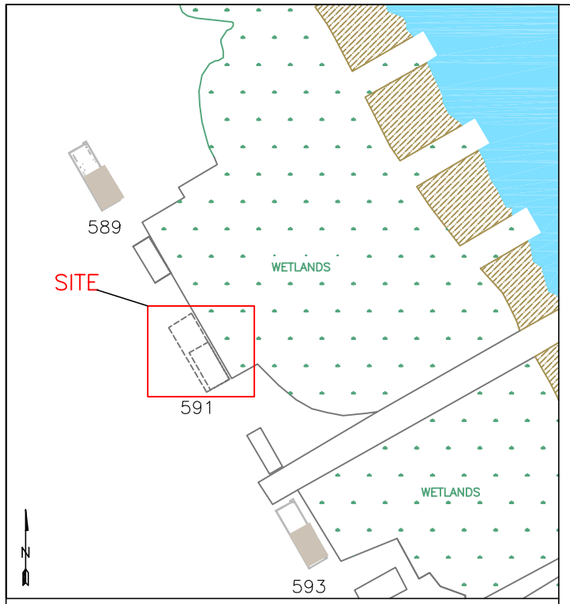
6.0 RECOMMENDATIONS

No further assessment is recommended for Building 591.

7.0 REFERENCES

SSPORTS. 1999. "Mare Island Naval Shipyard Environmental Baseline Survey Database." Last updated 1999.

Tetra Tech. 2002. "Internal Draft Polychlorinated Biphenyl Assessment and Abatement Summary Report, Mare Island, California, Volumes I-VII." August.

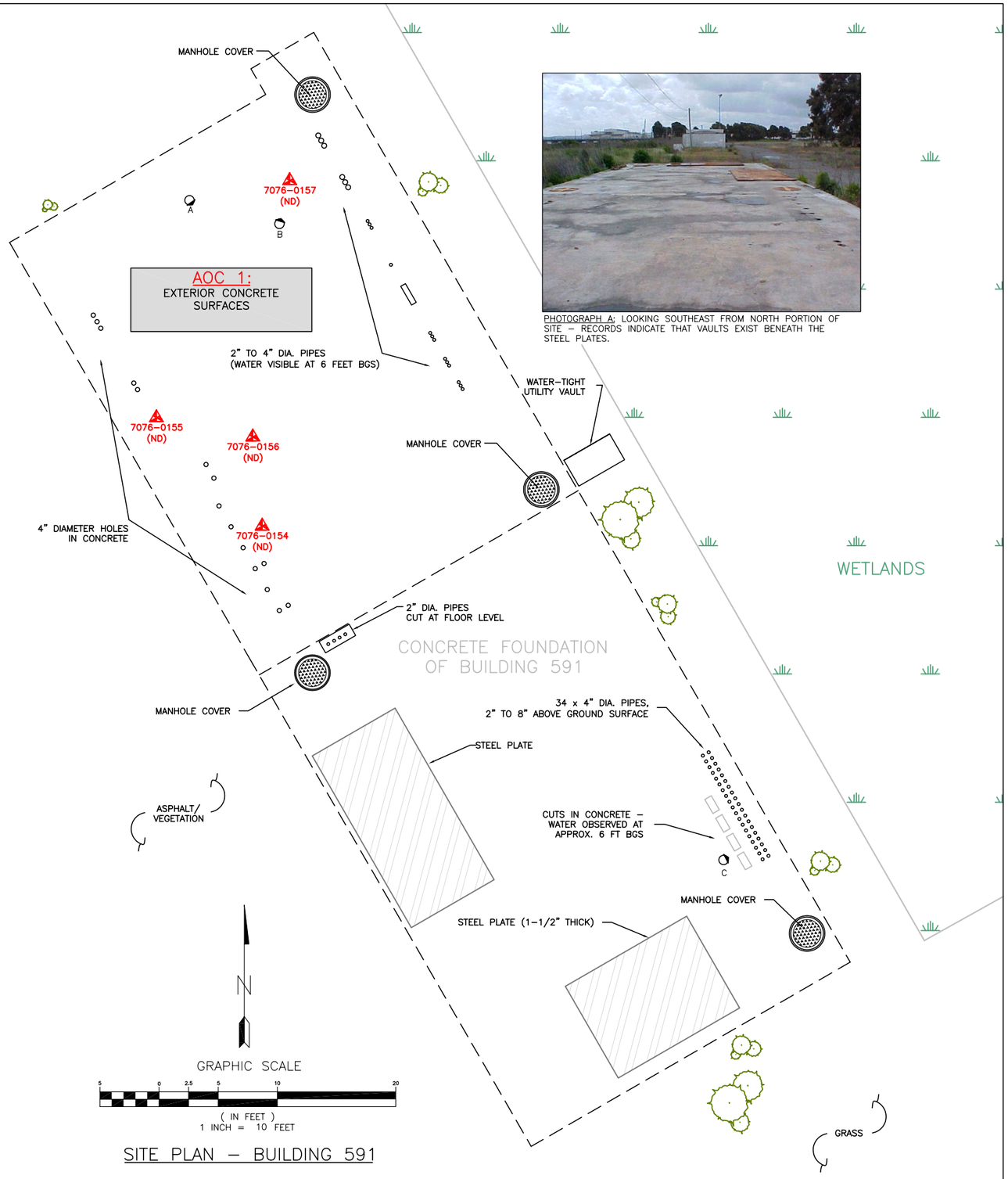


BUILDING 591 VICINITY MAP

SCALE: 1 INCH = 200 FEET

PHOTOGRAPH B; NORTHEAST CORNER OF FOUNDATION. NOTE MANHOLE, SEALED 4" AND 6" DIAMETER RISER HOLES AND FORMER SSPORTS SAMPLE LOCATION.

PHOTOGRAPH C; LOOKING INTO CONCRETE VAULT OPENING. CLEAR WATER FILLS VAULT, WHICH APPEARS TO EXTEND HORIZONTALLY BENEATH THE PAD (NOTE REFLECTIONS FROM 4" HOLES LOCATED IMMEDIATELY EAST). NO SHEEN OR STAINING OBSERVED.



PHOTOGRAPH A; LOOKING SOUTHEAST FROM NORTH PORTION OF SITE – RECORDS INDICATE THAT VAULTS EXIST BENEATH THE STEEL PLATES.

SITE PLAN – BUILDING 591

MARE ISLAND AREA MAP

NO SCALE

LEGEND:

- 7076–0157 (ND) — SSPORTS PCB SAMPLE LOCATION AND ID (PCB CONCENTRATION IN PPM) ND = NON–DETECT)
- C — PHOTO ID AND VANTAGE POINT
- CONDUITS/COREHOLES WITH APPROX. DIAMETER
- FORMER BUILDING OUTLINE, ONLY CONCRETE FLOOR & FOUNDATION REMAIN (CONCRETE – DASHED LINE)
- STEEL PLATE
- SHRUBS/VEGETATION
- WETLANDS

NOTES:

1. NO INDICATION OF POTENTIAL PCB SOURCES, SPILLS, OR STAINING OBSERVED.
2. STEEL PLATES COVER VAULTS TO PREVENT SURFACE RUNOFF FROM ENTERING ACCORDING TO HISTORICAL DOCUMENTS.
3. NO FURTHER ASSESSMENT RECOMMENDED FOR BUILDING 591. THIS SITE IS READY FOR CLOSURE.

DEPARTMENT OF THE NAVY
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SAN DIEGO, CALIFORNIA

SULLIVAN

SCG PROJECT NO: 110-01
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FIGURE 1
SITE FIGURES AND FIELD OBSERVATIONS
BUILDING 591

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES 591.DWG 30SEPT04

BUILDING 593 (INVESTIGATION AREA A2) SITE-SPECIFIC DATA GAP SUMMARY ON POLYCHLORINATED BIPHENYLS

This site-specific data gap summary report identifies the previous activities conducted at Building 593 to assess PCBs, and documents the results, conclusions, recommendations, and references from a site-specific PCB data gap assessment. The purpose of this report is to identify whether Building 593 requires any further assessment or abatement activities with respect to PCBs. The methods used to conduct the data gap assessment are presented in Section 2.0 of the "PCB Summary Report, Former Mare Island Shipyard, Vallejo, California", to which this site-specific report is appended.

1.0 SITE DESCRIPTION

Building 593 is located north of the Mare Island Causeway and Building 643, south of former Building 591 (Figure 1), and east of Railroad Avenue within the area known as the Former North Building Ways. The area immediately adjacent to Building 593 consists of light vegetation, bare soil, and cracked asphalt formerly used as a parking lot. The tidal marsh that borders Mare Island Strait is 10 feet from the east side of the building.

Building 593 is a single-story concrete cinder block and mortar structure consisting of an enclosed 1,550-square-foot roofed section and an uncovered 1,302-square-foot walled area attached to the northwest end of the roofed structure. General building construction information was obtained from the EBS database (SSPORTS 1999) and is presented below.

SITE INFORMATION, BUILDING 593

Descriptive Information		Notes
Building Size	2,848 square feet	NA
Building Construction	Cinder Block and Mortar	Concrete slab
Date of Construction	1942	NA
Exterior Ground Cover	Asphalt and Native Vegetation	Asphalt is in poor condition
Former Building Identification	X72	NA
Former/Current Use	Former Use: Decontamination Facility Current Use: Empty, no current use	NA
Closure Date	02/29/95	NA

Notes:
NA Not Available or Applicable
Source: SSPORTS 1999.

Subsurface utilities exist beneath the interior and exterior building footprint as evidenced by multiple manhole covers and electrical conduit risers. Figure 1 shows the foundation dimensions, locations of manhole covers, floor conduits, and risers. Photographs with vantage points and brief descriptions are also provided on the figure.

Building 593 was listed by the EBR database (SSPORTS 1999) as containing two PCB transformers (T-0628 and T-1204). According to the EBS database, PCB Transformer T-0628 was listed as being located on the "north end," and PCB Transformer T-1204 was listed as "in field." PCB Transformer T-1204 was listed as leaking. The dates of removal are not documented, and no drawings show the former locations of the transformers. In 1992, transformers throughout Mare Island were removed, and although no record of removal exists for these specific transformers, they were likely removed in 1992.

ELECTRICAL EQUIPMENT CONTAINING POLYCHLORINATED BIPHENYLS, BUILDING 593

Equipment Type	Equipment Number	Relative Location	PCBs Identified[a]	Volume (gallons)	Status	Leaks Identified*
Transformer[b]	T-0628	Railroad Avenue, North end	Yes	65	Removed (1992)	No
Transformer[b]	T-1204	Railroad Avenue, In Field	Yes	96	Removed (1992)	Yes

Notes:

* Most transformers identified as having leaked did not release to the environment.

a PCBs identified in transformer fluid.

b Transformer was sampled before removal, replacement, or refilling. The PCB concentrations in the transformer fluid were greater than 500 ppm (SSPORTS 1999).

The site was included as part of the Former North Building Ways RI to investigate potential releases of CERCLA contaminants under the Navy's IRP. Both the roofed section and the uncovered walled area of Building 593 show markings of a previous assessment. The entire interior and exterior floor area was marked with a grid pattern from which concrete chip samples were removed and sampled as part of the Navy's radiological program (Navy 1996). According to the EBS database (SSPORTS 1999), a radiological survey was required and radiological waste was previously stored at the site. Abatement activities were conducted at this site under the radiological program.

2.0 PREVIOUS POLYCHLORINATED BIPHENYLS ASSESSMENT AND ABATEMENT ACTIVITIES

A PCB assessment survey was conducted by SSPORTS in April 1997 (Tetra Tech 1998). During the survey, eight concrete samples were collected in the uncovered area of Building 593 (see summary table below). No published drawing indicating the location of these samples was available. PCBs were reported in one sample at a concentration of 1.7 ppm. PCBs in the remaining seven samples were reported as non-detect, with a reporting limit of 1 ppm. There was no indication that PCB abatement occurred at this site. No third-party confirmation sampling was performed (Tetra Tech 2002).

SUMMARY OF PREVIOUS ASSESSMENT SAMPLES, BUILDING 593

AOC	AOC Description	Sample Matrix	Sample ID	Collected by	Conc (ppm)	DL (ppm)
NA	NA	concrete	7076-0146	SSPORTS	ND	1
		concrete	7076-0147	SSPORTS	1.7	1
		concrete	7076-0148	SSPORTS	ND	1
		concrete	7076-0149	SSPORTS	ND	1
		concrete	7076-0150	SSPORTS	ND	1
		concrete	7076-0151	SSPORTS	ND	1
		concrete	7076-0152	SSPORTS	ND	5
		concrete	7076-0153	SSPORTS	ND	1

Notes:
AOC Area of concern
Conc Concentration
DL Detection Limit
ID Identification
NA Not Available or Applicable
ppm Part per million

Field observations indicated that a complex sampling grid was painted on the interior of Building 593, as well as on the open walled area of the building. The painted grid on the interior is likely a remnant of a radiological survey performed due to the building's former use as a decontamination facility.

3.0 DATA GAP ASSESSMENT SURVEY RESULTS

On April 25, 2003, SCG personnel performed a PCB data gap survey at Building 593. These activities attempted to identify and document any of the following:

- Locations of electrical equipment, transformers, vaults, conduits, and cabling that may have contained PCBs
- Evidence of previous PCB sampling conducted by SSPORTS or Tetra Tech.
- Evidence of previous PCB abatement activities conducted by SSPORTS, such as scabbling.
- Assessment of the adequacy of previous PCB characterization and abatement of the AOCs identified.

A document review of former assessment activities conducted at Building 593 indicated that eight concrete samples were collected and analyzed for PCBs. Eight SSPORTS sampling locations were identified in the northern uncovered portion of the site. The available documents do not indicate whether any PCB abatement work was performed at this building.

4.0 DATA SUMMARY

PCBs were identified at a concentration above 1 ppm in the concrete floor of the uncovered wall area of Building 593. This area represents the one AOC at this site AOC 1 consists of the northern uncovered portion of the building.

5.0 CONCLUSIONS

The following conclusions are based on existing documentation and observations made during the data gap assessment:

- Two PCB transformers, including one known to leak, were documented in historical records.
- No record of PCB abatement was identified, and one SSPORTS sample contained PCBs at a concentration of 1.7 ppm.
- Confirmation sampling was not conducted by Tetra Tech.
- The locations of the former transformers could not be field verified.
- No site map or figure was available to correlate sampling locations with existing laboratory data or abatement activity.
- No evidence has been found of PCB abatement at Building 593.
- One SSPORTS initial sample contained a PCB concentration of 1.7 ppm, and no evidence of abatement was identified.

6.0 RECOMMENDATIONS

Further assessment is recommended for AOC 1. The recommendation is provided below.

AOC 1 (Northern uncovered portion of the building): Three concrete characterization samples should be collected in the northwest corner of the uncovered area to characterize PCB concentrations in the vicinity of the sample with 1.7 ppm PCBs. One additional sample should be collected from the hole at the base of the exterior wall (Photograph B) in the northwest corner of the building.

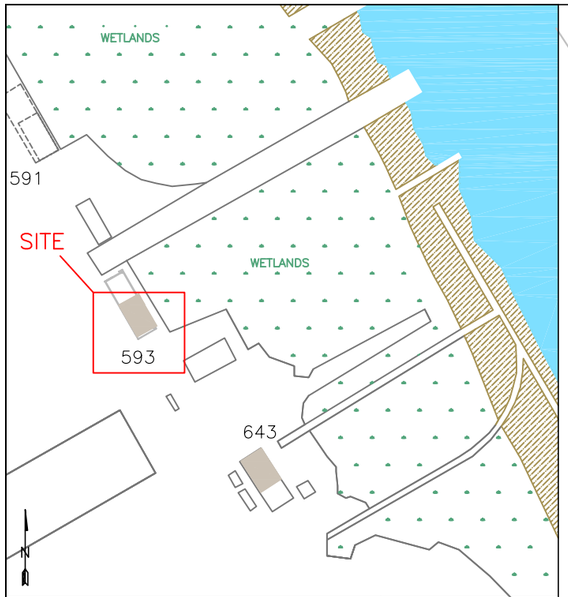
7.0 REFERENCES

Navy, Radiological Engineering Division. 1996. "Naval Nuclear Propulsion Program, Radiological Final Report for the Decommissioning of Mare Island Naval Shipyard, Survey Methodology and Specifications, Volume II Book 6 of 8, Mare Island Shipyard, Vallejo, California." April 1.

SSPORTS. 1999. "Mare Island Naval Shipyard Environmental Baseline Survey Database." Last updated 1999.

Tetra Tech. 1998. "Final Basewide Confirmation Sampling Summary Report, Mare Island."

Tetra Tech. 2002. "Internal Draft Polychlorinated Biphenyl Assessment and Abatement Summary Report, Mare Island, California, Volumes I-VII." August.

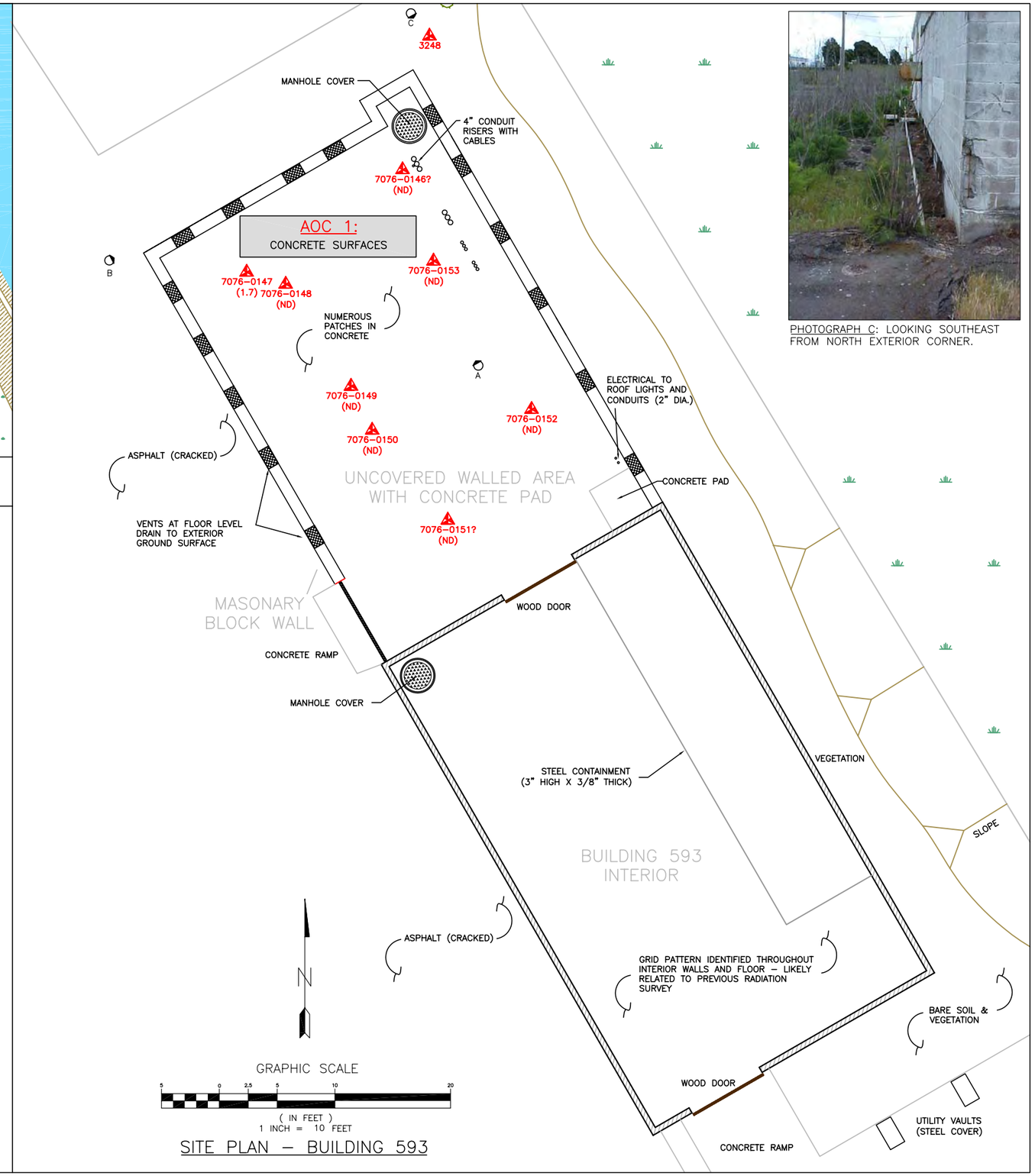


BUILDING 593 VICINITY MAP

SCALE: 1 INCH = 200 FEET

PHOTOGRAPH A: NORTHWEST CORNER OF UNCOVERED SECTION SHOWING CONDUIT RISERS AND MANHOLE COVER. NOTE CORES IN CONCRETE. DARK AREAS DUE TO RAIN.

PHOTOGRAPH B: LOOKING NORTHEAST FROM EXTERIOR NORTHWEST CORNER. NOTE HOLE AT BASE OF WALL. DARK AREAS DUE TO RAIN.



SITE PLAN – BUILDING 593

PHOTOGRAPH C: LOOKING SOUTHEAST FROM NORTH EXTERIOR CORNER.

MARE ISLAND AREA MAP

NO SCALE

LEGEND:

- 7076-0153 (ND) — SSPORTS PCB SAMPLE LOCATION AND ID (PCB CONCENTRATION IN PPM, IF KNOWN; ND = NON-DETECT)
- C — PHOTO ID AND VANTAGE POINT
- CONDUITS/COREHOLES WITH APPROX. DIAMETER
- MASONRY BLOCK WALL, ROOF (AND DOOR)
- MASONRY BLOCK EXTERIOR WALL, NO ROOF
- CONCRETE PAD
- WALL DRAIN (FLOOR LEVEL)

NOTES:

1. AOC 1 – TRANSFORMER IN UNCOVERED CONCRETE AREA NORTH OF BUILDING.
2. THIS SITE IS NOT READY FOR CLOSURE.

DEPARTMENT OF THE NAVY
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SAN DIEGO, CALIFORNIA

SULLIVAN

SCG PROJECT NO: 110-01
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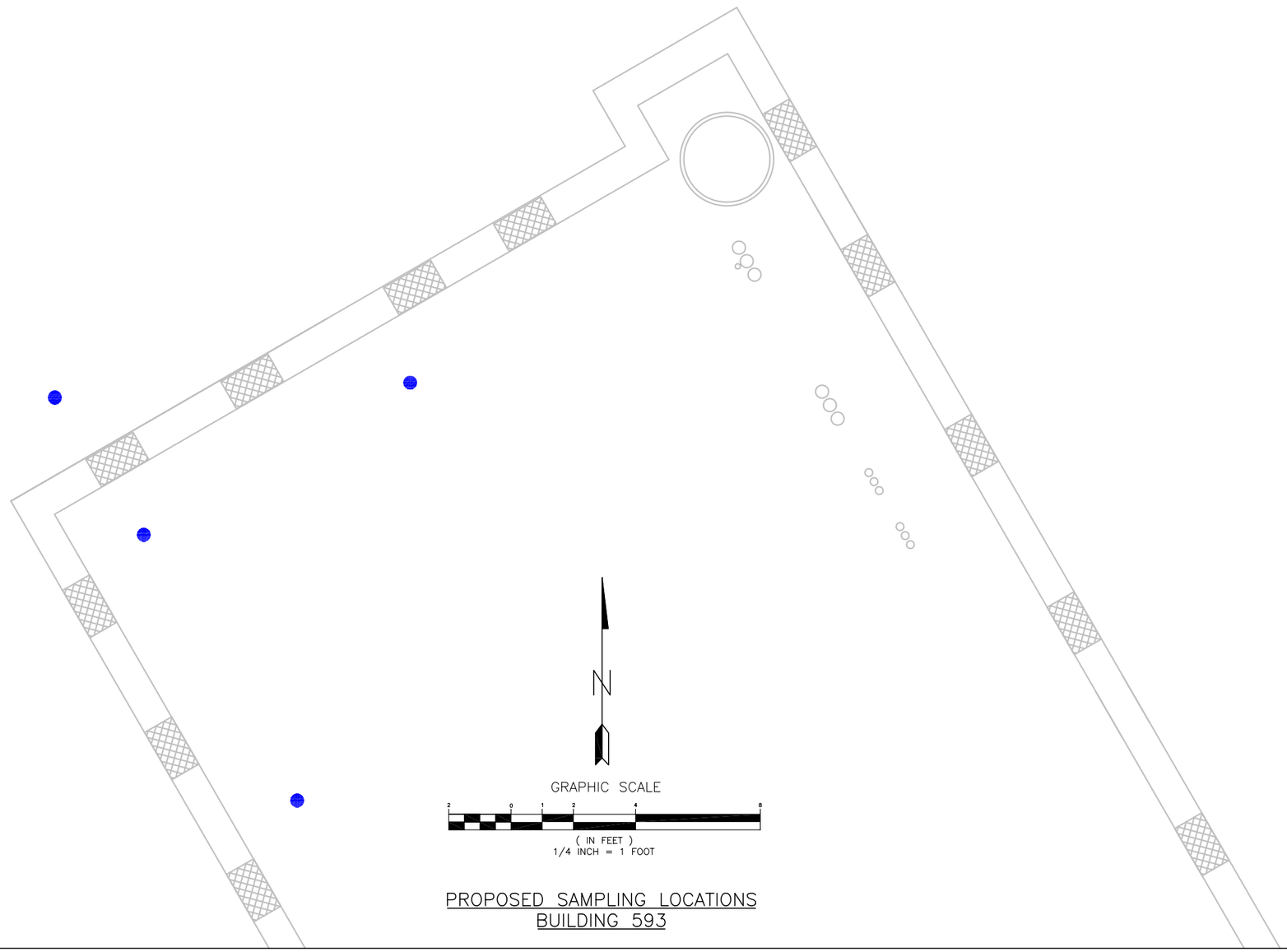
FIGURE 1
SITE FIGURES AND FIELD OBSERVATIONS
BUILDING 593

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES 593.DWG V12AUG04



PROPOSED SAMPLING LOCATIONS
BUILDING 593

MARE ISLAND AREA MAP

NO SCALE

LEGEND:

● PROPOSED SAMPLE LOCATION

NOTES:

1. AOC 1 – TRANSFORMER IN UNCOVERED CONCRETE AREA NORTH OF BUILDING.
2. THIS SITE IS NOT READY FOR CLOSURE.

DEPARTMENT OF THE NAVY
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FIGURE 2
PROPOSED SAMPLING LOCATIONS
BUILDING 593

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES 593.DWG V30SEP04

BUILDING 641 (INVESTIGATION AREA A2) SITE-SPECIFIC DATA GAP SUMMARY ON POLYCHLORINATED BIPHENYLS

This site-specific data gap summary report identifies the previous activities conducted at Building 641 to assess PCBs, and documents the results, conclusions, recommendations, and references from a site-specific PCB data gap assessment. The purpose of this report is to identify whether Building 641 requires any further assessment or abatement activities with respect to PCBs. The methods used to conduct the data gap assessment are presented in Section 2.0 of the "PCB Summary Report, Former Mare Island Shipyard, Vallejo, California", to which this site-specific report is appended.

1.0 SITE DESCRIPTION

Building 641 is located northeast of the intersection Railroad Avenue and Causeway Road (Figure 1). Ground cover immediately surrounding Building 641 consists of asphalt, concrete, and light vegetation. The building is located 800 feet southwest of Mare Island Strait.

Building 641 is a 5,284-square-foot building that was formerly used as a submarine repair base and a fire station. General information on construction of the building was obtained from the EBS database (SSPORTS 1999) and from SSPORTS (1996) and is presented below.

SITE INFORMATION, BUILDING 641

Descriptive Information		Notes
Building Size	5,284 square feet	NA
Building Construction	Wood frame	Concrete floor
Date of Construction	1941	NA
Exterior Ground Cover	Asphalt, concrete, and light vegetation	NA
Former Building Identification	North Fire Station	NA
Former/Current Use	Former Use: Submarine repair support and fire station Current Use: empty, no current use	NA
Closure Date	1995	NA

Notes:
NA Not available or not applicable
Sources: SSPORTS 1996 and 1999

Transformers, electrical equipment, and subsurface utilities exist on the exterior of Building 641 northeast (to the rear) of the building. Two non-PCB transformers (T-710 and T-715) remain in this fenced area. The transformers contained low concentrations of PCBs (less than 50 ppm), according to the EBS database (SSPORTS 1999). See the table below for information on PCB-containing electrical equipment. Figure 1 depicts the layout of the exterior transformer area. Photographs with various vantage points and brief descriptions are also provided on the figure.

ELECTRICAL EQUIPMENT POTENTIALLY CONTAINING POLYCHLORINATED BIPHENYLS, BUILDING 641

Equipment Type	Equipment Number	Relative Location	PCBs Identified	Volume (gallons)	Status	Leaks Identified[a]
Transformer	T-710	Outside	Yes	20	Active	No
Transformer	T-715	Outside	Yes	20	Active	No

Notes:
PCB Polychlorinated biphenyl
Source: SSPORTS 1999

The site was included in an investigation for potential releases of CERCLA contaminants under the Navy's IRP as part of the remedial investigation for the Former North Building Ways.

2.0 PREVIOUS POLYCHLORINATED BIPHENYLS ASSESSMENT AND ABATEMENT

SSPORTS conducted an initial PCB assessment survey in 1996 (SSPORTS 1996). During the assessment, 13 swipe and four concrete samples were collected. The exact locations of these samples were not published. The concrete samples were analyzed for PCBs and the results were reported as non-detect with a reporting limit of 1 ppm. The swipe samples were analyzed for PCBs and the results were reported as non-detect with a reporting limit of 1 µg/swipe and 5µg/swipe (see the summary table below).

Tetra Tech collected two confirmation samples in 1997. Analytical results for samples PC0421 and PC0422 were below 1 ppm. No abatement was required for PCBs at this site. The analytical results from previous assessments are summarized in the table below.

SUMMARY OF PREVIOUS ASSESSMENT SAMPLES, BUILDING 641

Location	Sample Matrix	Sample ID	Collected by	Conc (µg/swipe)	DL (µg/swipe)
Interior	swipe	5286-0046	SSPORTS	ND	5 µg/swipe
Interior	swipe	5286-0047	SSPORTS	ND	5 µg/swipe
Interior	swipe	5291-0118	SSPORTS	ND	5 µg/swipe
Interior	swipe	5291-0119	SSPORTS	ND	5 µg/swipe
Interior	swipe	5291-0120	SSPORTS	ND	5 µg/swipe
Interior	swipe	5291-0121	SSPORTS	ND	5 µg/swipe
Interior	swipe	6094-0208	SSPORTS	ND	1 µg/swipe
Interior	swipe	6094-0209	SSPORTS	ND	1 µg/swipe
Interior	swipe	6094-0210	SSPORTS	ND	1 µg/swipe
Interior	swipe	6094-0211	SSPORTS	ND	1 µg/swipe
Interior	swipe	6094-0212	SSPORTS	ND	1 µg/swipe
Interior	swipe	6094-0213	SSPORTS	ND	1 µg/swipe
Top of T-0710	swipe	6094-0214	SSPORTS	ND	1µg/swipe
Concrete Pad	concrete	7076-0136	SSPORTS	ND	1ppm
Unknown	concrete	7076-0137	SSPORTS	ND	1ppm
Unknown	concrete	7076-0138	SSPORTS	ND	1ppm
Unknown	concrete	7076-0139	SSPORTS	ND	1ppm
Transformer Pad	concrete	PC0421	Tetra Tech	ND	0.067ppm
Concrete Pad	concrete	PC0422	Tetra Tech	0.06 ppm	0.067ppm

Notes:

Conc	Concentration	ND	Non-detect
DL	Detection limit	ppm	Part per million
ID	Identification	SSPORTS	Supervisor of Shipbuilding, Conversion, and Repair
µg	Microgram	Tetra Tech	Tetra Tech EM Inc.
NA	Not available or not applicable		

3.0 RESULTS OF DATA GAP ASSESSMENT

On April 29, 2003, SCG personnel conducted a data gap assessment at Building 641. The assessment was designed to identify and document any of the following:

- Locations of electrical equipment, transformers, vaults, conduits, and cabling that may have contained PCBs.
- Evidence of previous PCB sampling conducted by SSPORTS or Tetra Tech.
- Evidence of previous PCB abatement conducted by SSPORTS, such as areas of scabbling.
- Assessment of the adequacy of previous PCB characterization and abatement of the AOCs identified.

The data gap site assessment verified the locations of transformers T-0710 and T-0715, one SSPORTS concrete sample point, and both Tetra Tech confirmation samples. No evidence of PCB abatement at Building 641 was observed.

4.0 DATA SUMMARY

Building 641 was originally constructed to provide support services for the submarine repair base in 1941, and was subsequently used as a fire station. Building 641 remained in constant use until it was closed in 1995 (Tetra Tech 2002). Although PCB-containing equipment has been identified in the vicinity of Building 641 (T-0715 and T-0710), no leaks are documented.

There is one AOC at this site. AOC 1 consists of the concrete surface near the transformers.

5.0 CONCLUSIONS

The following conclusions are based on evaluation of existing documentation and observations during the data gap assessment:

- Transformers T-0710 and T-0715 are documented as having contained low concentrations of PCBs, but are not documented as leaking.
- The vault located underneath the transformer pad has not been assessed, but is not suspected of containing PCBs based on existing analytical results.
- AOC 1 is ready for closure.

6.0 RECOMMENDATIONS

No further assessment is recommended for Building 641.

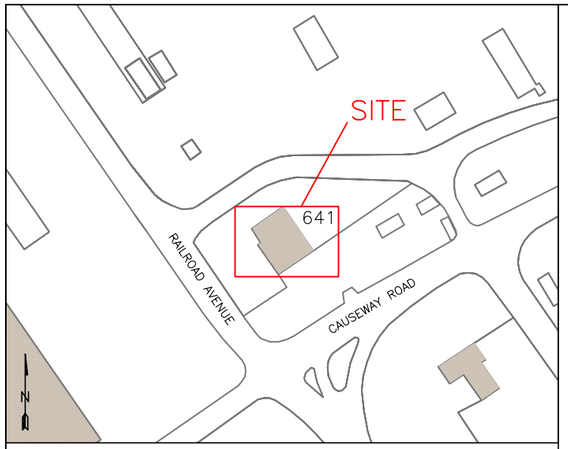
7.0 REFERENCES

SSPORTS. 1996. "PCB Assessment for Property Leasing Conditions of Parcel 01-N Property." April 25.

SSPORTS. 1999. "Mare Island Naval Shipyard Environmental Baseline Survey Report." Last updated 1999.

Tetra Tech. 1998. "Final Basewide Confirmation Sampling Summary Report, Mare Island."

Tetra Tech. 2002. "Internal Draft Polychlorinated Biphenyl Assessment and Abatement Summary Report, Mare Island, California, Volumes I-VII." August.



BUILDING 641 VICINITY MAP

SCALE: 1 INCH = 200 FEET

PHOTOGRAPH A: BUILDING 641 LOOKING EAST.

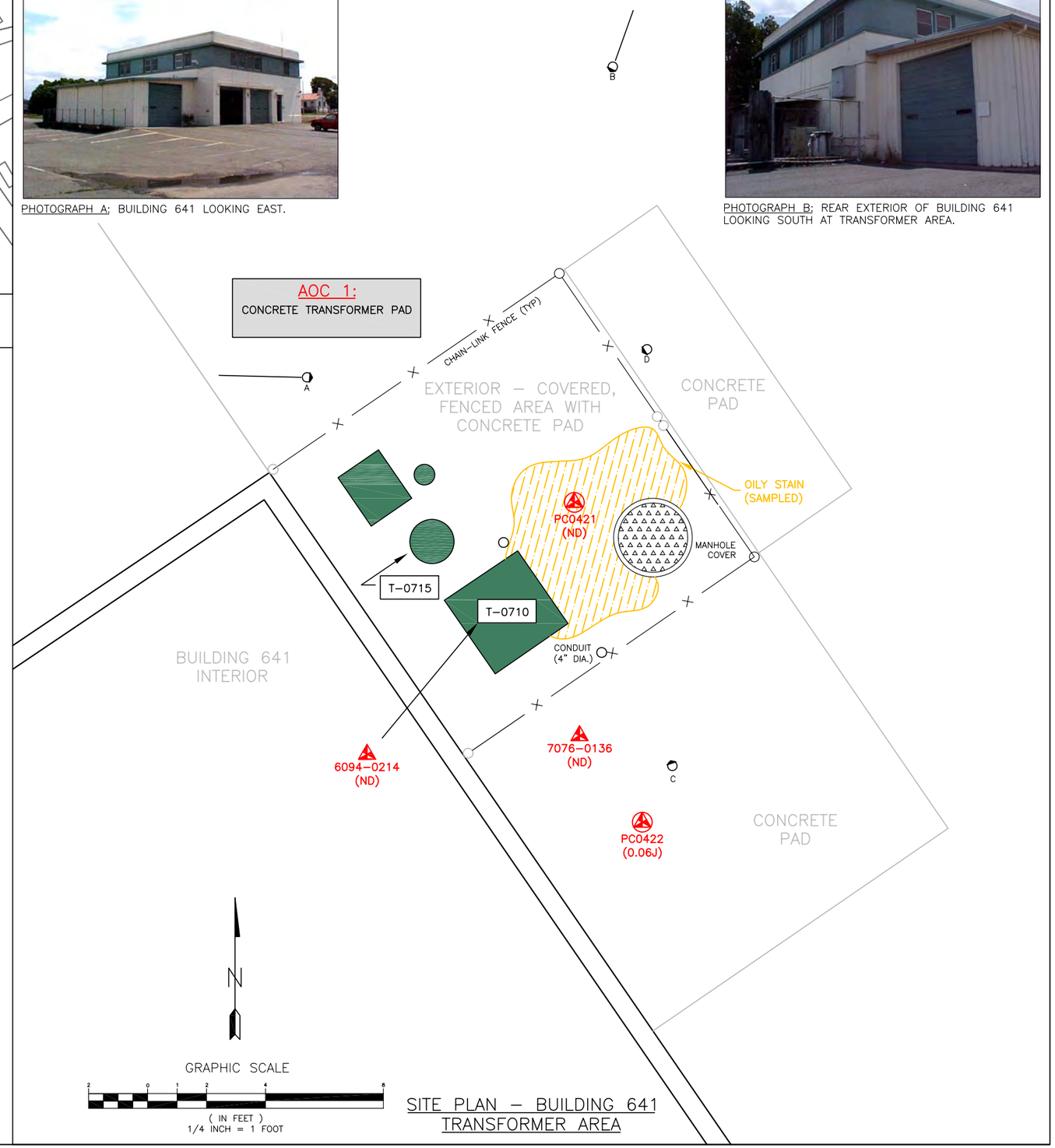
PHOTOGRAPH B: REAR EXTERIOR OF BUILDING 641 LOOKING SOUTH AT TRANSFORMER AREA.

MARE ISLAND AREA MAP

NO SCALE

PHOTOGRAPH C: TRANSFORMER T–0715, OILY STAIN, AND MANHOLE COVER LEADING TO VAULT (LOOKING NORTH).

PHOTOGRAPH D: SOUTHEAST PORTION OF WALLED SUBSTATION.



SITE PLAN – BUILDING 641 TRANSFORMER AREA

LEGEND:

- 7076–0136 (ND) — SSPORTS PCB SAMPLE LOCATION AND ID (PCB CONCENTRATION IN PPM IF KNOWN; ND = NON–DETECT OR <5 µg/SWIPE)
- PC0422 (0.06J) — TETRA TECH CONFIRMATION SAMPLE LOCATION AND IDENTIFICATION (RESULTS IN PPM)
- PHOTO ID AND VANTAGE POINT (LINE INDICATES VANTAGE POINT OFF FIGURE IN DIRECTION OF LINE).
- CONDUITS/COREHOLES WITH APPROX. DIAMETER
- MANHOLE COVER
- CONCRETE WALL
- CONCRETE PAD
- OILY STAIN
- CHAINLINK FENCE

NOTES:

1. ONE AOC AT SITE: AOC 1 – CONCRETE TRANSFORMER PAD.
2. TRANSFORMERS CONTAIN LOW CONCENTRATIONS OF PCBs – NO LEAKS REPORTED.
3. AOC 1 IS READY FOR CLOSURE. NO FURTHER ASSESSMENT RECOMMENDED. THIS SITE IS READY FOR CLOSURE.

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FIGURE 1
SITE FIGURES AND FIELD OBSERVATIONS
BUILDING 641

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES 641_FIG 1.DWG 12AUG04

BUILDING 643 (INVESTIGATION AREA A2) SITE-SPECIFIC DATA GAP SUMMARY ON POLYCHLORINATED BIPHENYLS

This site-specific data gap summary report identifies the previous activities conducted at Building 643 to assess PCBs, and documents the results, conclusions, recommendations, and references from a site-specific PCB data gap assessment. The purpose of this report is to identify whether Building 643 requires any further assessment or abatement activities with respect to PCBs. The methods used to conduct the data gap assessment are presented in Section 2.0 of the "PCB Summary Report, Former Mare Island Shipyard, Vallejo, California", to which this site-specific report is appended.

1.0 SITE DESCRIPTION

Building 643 is located southeast of Building 593 (Figure 1), north of the Mare Island Causeway, and east of Railroad Avenue within the area known as the Former North Building Ways. The area immediately adjacent to Building 643 consists of light vegetation, bare soil, and cracked asphalt formerly used as a parking lot. The tidal marsh that borders Mare Island Strait is 10 feet from the east side of the building.

Building 643 occupies approximately 1,914 square feet and consists of a concrete pad and partially walled section on the north. The structure does not have a roof; it was built in 1942 and was used as an electrical substation. General building construction information was obtained from the EBS database (SSPORTS 1999a) and is presented below.

SITE INFORMATION, BUILDING 643

Descriptive Information		Notes
Building Size	1,914 square feet	Source: EBS database
Building Construction	Walled and unwalled concrete platform; no roof	NA
Date of Construction	1942	NA
Exterior Ground Cover	Asphalt, concrete, lightly vegetated soil	NA
Former Building Identification	NA	NA
Former/Current Use	Former Use: Electrical substation and storage of old wire reels	NA
	Current Use: Empty, no current use	
Closure Date	Not specified	NA

Notes:
NA Not available or not applicable
Source: SSPORTS 1999a

Subsurface electrical utilities exist in vaults and conduits beneath the site. Figure 1 shows the location of Building 643 relative to equipment, conduits, and sample locations. Photographs with vantage points and brief descriptions are also provided on the figure.

PCB-containing electrical equipment and transformers were formerly located at Building 643. However, information other than the number of the transformers and circuit breakers associated with Building 643 was not listed in available documentation. Four circuit breakers that typically contain PCB-contaminated dashpots were removed from Building 643 in 1997. The site was included in an investigation for potential releases of CERCLA contaminants under the Navy's IRP as part of the Former North Building Ways RI.

2.0 PREVIOUS POLYCHLORINATED BIPHENYLS ASSESSMENT AND ABATEMENT ACTIVITIES

Assessment and abatement activities were conducted by SSPORTS, Weston, and Tetra Tech inside and outside of Building 643 (Tetra Tech 1998 and 2002, and Weston 2001). The abatement activities performed by SSPORTS initially included two scabbling events of the concrete floor within the building. The first scabbling was performed in 1997 and the second scabbling was completed in 1998. The following paragraphs describe these activities by location.

Within Building 643

SSPORTS scabbled an initial 10-foot by 10-foot area of PCB-contaminated concrete in the northeast corner of the building (TWD 97-1493) (SSPORTS 1997a). The initial area was scabbled to a depth of 1 inch. Based on the results of post-abatement sampling (see summary table below), a 4-foot by 4-foot area was scabbled to a depth of 2 inches within the previously scabbled area (SSPORTS 1997b). Final post-abatement sampling was conducted (SSPORTS 1999b).

As reported in TWD 99-1500-12 (SSPORTS 1999c), encapsulation of the interior concrete where elevated PCB concentrations were detected during confirmatory sampling was conducted within Building 643. Only one layer of encapsulation was applied, and TSCA requires two encapsulation layers, each of differing color as per 40 CFR 761.30(p). The TWD did specify that the sealed surface should be inspected quarterly to observe wear, and that the sealer should be reapplied when it has worn to the point where the natural concrete color becomes visible.

Outside Building 643

SSPORTS conducted initial assessment sampling of the soil and asphalt around Building 643 in 1997. SSPORTS personnel collected 18 screening samples from soil around the perimeter of Building 643, of which 17 samples were collected around drain openings in the walls of the building. One sample was collected from soil directly below the elevated entrance to the building.

Based on these analytical results, the Navy directed SSPORTS to conduct soil and asphalt removal at the locations where PCBs were detected at elevated concentrations. In 1999, SSPORTS conducted soil removal activities adjacent to the foundation southeast of the western

corner of Building 643 as well as southeast and southwest of the northern corner of the building (Figure 1B). Analytical results of the post-excavation samples collected by SSPORTS are not available.

Due to elevated PCB concentrations in some of the soil samples, SSPORTS personnel conducted sampling of the asphalt paving around Building 643. Asphalt samples were collected adjacent to areas where elevated PCB concentrations were previously detected in soil above 10 ppm. SSPORTS samples 9-1061 and 9-1062 were reportedly collected from the asphalt adjacent to samples 9-0945 and 9-0948 (the only two soil samples where PCB's were detected above 10 ppm), respectively. The exact locations of the samples were not documented in TWD 97-1493. PCB's were detected at sample location 9-1061 at 5.7 ppm. Although the asphalt was designated for removal, the documentation does not verify removal of the asphalt at these locations.

In June 2000, Weston collected samples from selected floor conduits within Building 643 and vaults that connect with the conduits. Seven concrete samples from floor penetrations, three swipe samples of floor penetrations, two aqueous samples from manholes, and two sediment samples from manholes were collected and submitted for PCB analysis.

In 1998, Tetra Tech identified three PCB assessment areas in and around Building 643, including the interior concrete, the exterior soil, and a concrete electrical conduit raceway leading from Building 643 to Mare Island Strait. Tetra Tech collected 10 PCB confirmation samples from these assessment areas in May 1998, August 1999, and March 2001.

SUMMARY OF PREVIOUS ASSESSMENT SAMPLES, BUILDING 643

Location	Sample Matrix[b]	Sample ID	Collected by	Conc (ppm)	DL (ppm)
Building floor	concrete	7076-0140	SSPORTS	37	10
Building floor	sealant	7076-0141	SSPORTS	280,000	50,000
Building floor	concrete	7076-0142	SSPORTS	1.7	1
Building floor	concrete	7076-0143	SSPORTS	2.9	1
Building floor	concrete	7076-0144	SSPORTS	2.3	1
Building floor	concrete	7076-0145	SSPORTS	2.2	1
Building floor	concrete	7335-0136	SSPORTS	23	10
Building floor	concrete	7335-0137	SSPORTS	2.4	1
Building floor	concrete	7335-0138	SSPORTS	1.2	1
Building floor	concrete	7335-0139	SSPORTS	1.9	1
Building floor	concrete	8070-0019	SSPORTS	ND	1
Building floor	concrete	8070-0020	SSPORTS	ND	1
Building floor	concrete	8070-0021	SSPORTS	ND	1
Building floor	wax-like residue	8070-0022	SSPORTS	5.9	1
Surrounding area	soil	9-0939	SSPORTS	ND	1
Surrounding area	soil	9-0940	SSPORTS	ND	1

SUMMARY OF PREVIOUS ASSESSMENT SAMPLES, BUILDING 643 (CONT'D)

Location	Sample Matrix[b]	Sample ID	Collected by	Conc (ppm)	DL (ppm)
Surrounding area	soil	9-0941	SSPORTS	1	1
Surrounding area	soil	9-0942	SSPORTS	ND	1
Surrounding area	soil	9-0943	SSPORTS	2	1
Surrounding area	soil	9-0944	SSPORTS	1	1
Surrounding area	soil	9-0945	SSPORTS	42	1
Surrounding area	soil	9-0946	SSPORTS	1.1	1
Surrounding area	soil	9-0947	SSPORTS	1	1
Surrounding area	soil	9-0948	SSPORTS	12.8	1
Surrounding area	soil	9-0949	SSPORTS	4.7	1
Surrounding area	soil	9-0950	SSPORTS	ND	1
Surrounding area	soil	9-0951	SSPORTS	ND	1
Surrounding area	soil	9-0952	SSPORTS	1	1
Surrounding area	soil	9-0953	SSPORTS	ND	1
Surrounding area	soil	9-0954	SSPORTS	ND	1
Surrounding area	soil	9-0955	SSPORTS	ND	1
Surrounding area	soil	9-0956	SSPORTS	ND	1
Surrounding area	asphalt	9-1061	SSPORTS	5.7	1
Surrounding area	asphalt	9-1062	SSPORTS	ND	1
Floor penetration[a]	sediment	W-00-81	Weston	ND	Unknown
Floor penetration[a]	water	W-00-82	Weston	ND	Unknown
Floor penetration[a]	sediment	W-00-83	Weston	17	Unknown
Floor penetration[a]	water	W-00-84	Weston	ND	Unknown
Floor penetration[a]	concrete	W-00-85	Weston	12	Unknown
Floor penetration[a]	concrete	W-00-86	Weston	10	Unknown
Floor penetration[a]	concrete	W-00-87	Weston	11	Unknown
Floor penetration[a]	concrete	W-00-88	Weston	19	Unknown
Floor penetration[a]	concrete	W-00-89	Weston	9,500	Unknown
Floor penetration[a]	concrete	W-00-90	Weston	ND	Unknown
Floor penetration[a]	concrete	W-00-91	Weston	30	Unknown
Floor penetration[a]	concrete swipe	W-00-92	Weston	28 ppm*	Unknown
Floor penetration[a]	concrete swipe	W-00-93	Weston	24 ppm*	Unknown
Floor penetration[a]	concrete swipe	W-00-94	Weston	44 ppm*	Unknown
Location 1	interior concrete floor	PC-4051	Tetra Tech	2	0.067
Location 1	interior concrete floor	PC-4052	Tetra Tech	8	0.067
Location 2	external soil	PC-8660	Tetra Tech	0.2	0.067
Location 2	external soil	PC-8661	Tetra Tech	0.05	0.067
Location 2	external soil	PC-8662	Tetra Tech	0.6	0.067

SUMMARY OF PREVIOUS ASSESSMENT SAMPLES, BUILDING 643 (CONT'D)

Location	Sample Matrix[b]	Sample ID	Collected by	Conc (ppm)	DL (ppm)
Location 2	external soil	PC-8664	Tetra Tech	0.2	0.067
Location 3	vault residue	PC-8808	Tetra Tech	0.1	0.067
Location 3	vault residue	PC-8809	Tetra Tech	0.09	0.067
Location 3	vault residue	PC-8810	Tetra Tech	0.1	0.067
Location 3	vault residue	PC-8811	Tetra Tech	0.04	0.067

Notes:

a Electrical conduit penetrations through the floor.

b SSPORTS (2001) reported that swipe/solid samples were collected as swipe samples, but were analyzed as a solid sample. Results were reported in ppm. The analytical reports are not available, therefore the DL is unknown.

Conc Concentration

DL Detection limit

ID Identification

ND Non-detect

ppm Part per million

3.0 RESULTS OF DATA GAP ASSESSMENT

On April 28, 2003, SCG personnel performed a PCB data gap assessment at Building 643. The assessment was designed to identify and document any of the following:

- Locations of electrical equipment, transformers, vaults, conduits, and cabling that may have contained PCBs.
- Evidence of previous PCB sampling conducted by SSPORTS or Tetra Tech.
- Evidence of previous PCB abatement activities conducted by SSPORTS, such as areas of scabbling.
- Assessment of the adequacy of previous PCB characterization and abatement of the AOCs identified.

Evidence of previous abatement and sampling was field verified. The two SSPORTS sample locations (9-1061 and 9-1062) reported to be adjacent to soil sample locations 9-0945 and 9-0948 were not verified in the field. Only Weston and SSPORTS initial assessment samples in the interior were not located. Locations of previous transformers could not be identified. The interior surface likely contained electrical equipment as numerous conduits penetrating the concrete floor were observed during the data gap survey.

4.0 DATA SUMMARY

Building history indicates that Building 643 was formerly used as a substation. Electrical transformers and circuit breakers known or suspected to have contained PCBs are documented at Building 643.

PCB releases from these items have impacted the concrete floor, subsurface vaults and conduits, and exterior soil/asphalt. Water from precipitation or site use has transported PCBs through cracks, seams, or conduits in the concrete slab, or screened vertical openings in the outer perimeter wall. Potential exposure pathways include dermal contact and inhalation during site demolition. See Figure 2 for a generalized conceptual site model.

There are two AOCs at Building 643. AOC 1 consists of the porous interior concrete floor. AOC 2 consists of the soil and asphalt surrounding Building 643.

The statistical analysis was conducted using the ProUCL (Version 3.0) software (Singh, Singh and Maichle, 2004). The maximum PCB concentration detected in soil and external soil matrix at and around Building 643 was 1.0 mg/kg. The average PCB concentration in soil was estimated to be 0.53 mg/kg and the 95%UCL selected by the ProUCL program was 0.83 mg/kg.

5.0 SCREENING-LEVEL RISK EVALUATION RESULTS

Using the 95%UCL PCB concentration in soil (0.83 mg/kg) as the exposure point concentration for onsite workers at Building 643, the total incremental cancer risk for construction workers exposed to soil is estimated to be 2E-07. Incremental cancer risk for future industrial/commercial workers exposed to PCB impacted soils is estimated to be 2E-06. Both of these values are within the acceptable risk management range of 1E-04 to 1E-06 established by the EPA.

The hazard quotient (HQ) for the gray fox (representative receptor for mammals at the site) was estimated to be 4E-03. The HQ for the northern harrier (representative receptor for birds) was estimated to be 7E-03. Both HQs are below 1.0 mg/kg which indicates that the presence of PCB-impacted soils at Building 643 do not pose a risk to ecological receptors that may frequent the site either currently or in the future.

6.0 CONCLUSIONS

The following conclusions are based on evaluation of existing documentation and observations made during the data gap assessment:

- Known PCB sources have contaminated concrete, vault residue, and soil in and around Building 643.
- Encapsulation of the interior concrete surface is incomplete.
- Incremental cancer risk estimated to result from worker exposure to PCB-impacted soils were estimated to be within the acceptable risk management range established by the EPA.

- An ecological risk evaluation conducted for Building 643 indicated that the presence of PCB-impacted soils do not pose a risk to ecological receptors at the site.

- Insufficient decontamination of the building was conducted.

- The two AOCs are not ready for closure.

7.0 RECOMMENDATIONS

Further abatement and assessment is recommended. Recommendations are provided by AOC below:

AOC 1 (Interior Concrete Surfaces): Demolition of interior concrete surfaces is recommended followed by verification sampling.

AOC 2 (Exterior Soil and Asphalt): Additional sampling of the soil and asphalt surrounding Building 643 should be conducted to verify adequate abatement and further characterize potential impacts in the vicinity of the excavations. Soil samples should be collected from locations designated on Figure 2 within and adjacent to the excavation areas. This would result in an additional seven soil samples collected from the exterior of Building 643.

8.0 REFERENCES

SSPORTS. 1997a. "PCB Decontamination Technical Work Document 97-1493." November 12.

SSPORTS. 1997b. "PCB Decontamination Technical Work Document 97-1493, Rev. A." November 12.

SSPORTS. 1999a. "Mare Island Naval Shipyard Environmental Baseline Survey Database." Last updated 1999.

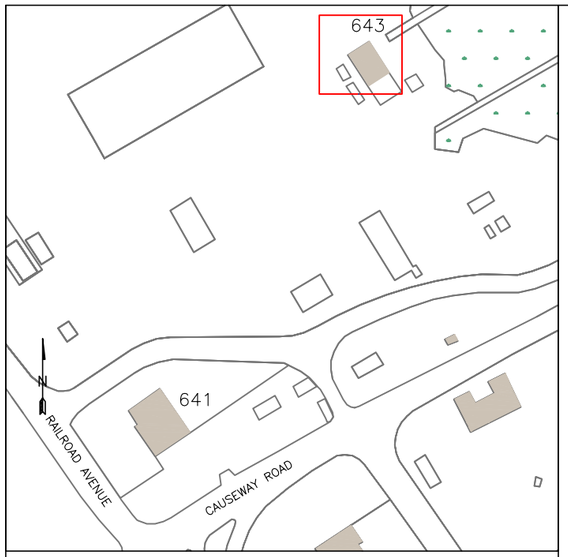
SSPORTS. 1999b. "PCB Decontamination Technical Work Document 99-1581." July 2.

SSPORTS. 1999c. "PCB Encapsulation Technical Work Document 99-1500-12, PCB Encapsulation of Transformer Sites." August 2.

Tetra Tech. 1998. "Final Basewide Confirmation Sampling Summary Report, Mare Island."

Tetra Tech. 2002. "Internal Draft Polychlorinated Biphenyl Assessment and Abatement Summary Report, Mare Island, California, Volumes I-VII." August.

Weston. 2001. "Engineering Technical Report, Building 643 PCB Sampling Effort." January 9.

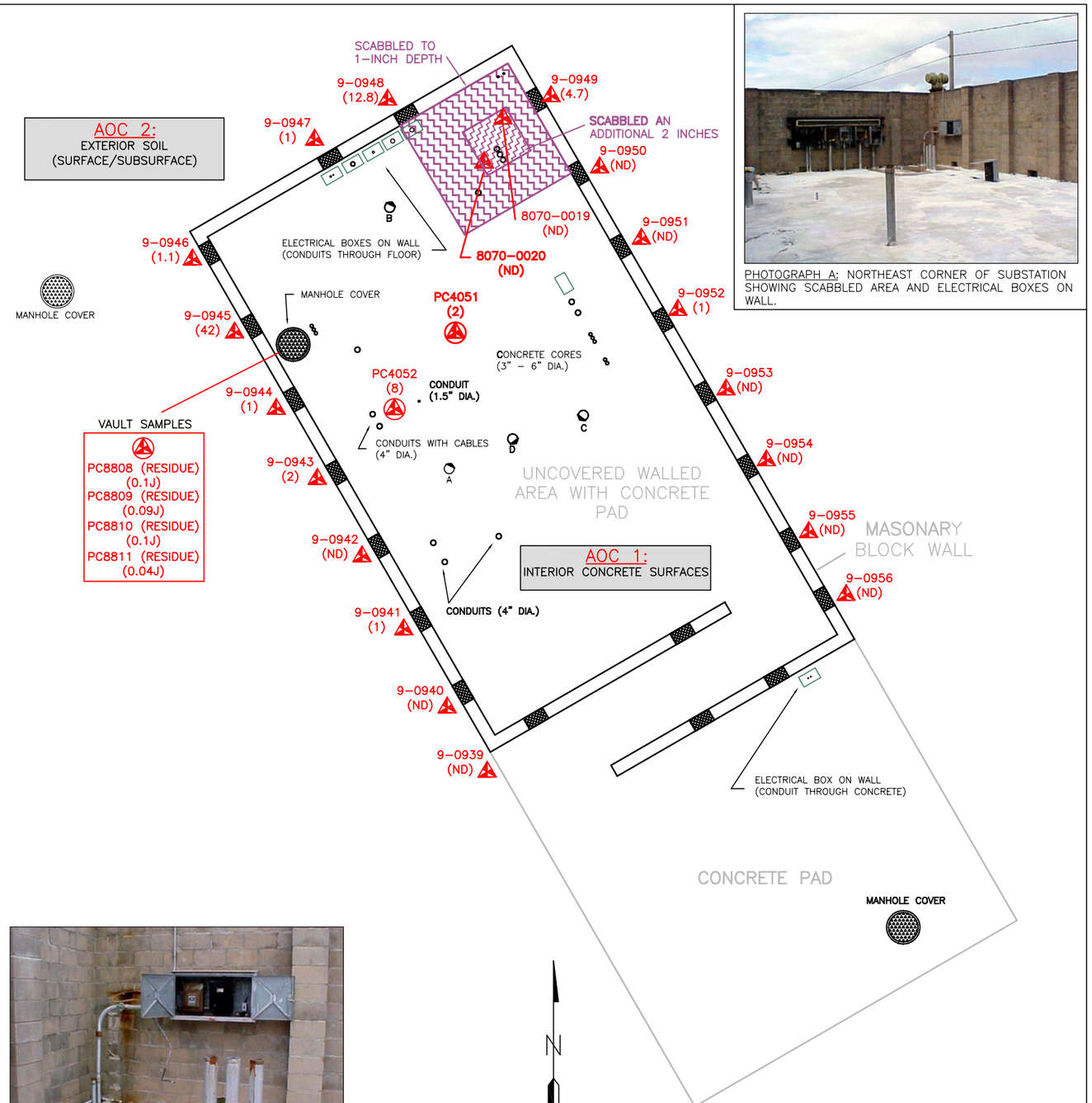


BUILDING 643 VICINITY MAP

SCALE: 1 INCH = 200 FEET

PHOTOGRAPH C: SOUTHWEST CORNER OF SUBSTATION.

PHOTOGRAPH D: SOUTHEAST PORTION OF WALLED SUBSTATION.



SITE PLAN – BUILDING 643

PHOTOGRAPH B: CLOSE UP OF SCABBLED AREA (NORTHEAST CORNER).

PHOTOGRAPH A: NORTHEAST CORNER OF SUBSTATION SHOWING SCABBLED AREA AND ELECTRICAL BOXES ON WALL.

MARE ISLAND AREA MAP

NO SCALE

LEGEND:

- 8070-0020 (ND) — SSPORTS PCB SAMPLE LOCATION AND ID (PCB CONCENTRATION IN PPM, IF KNOWN; ND = NON-DETECT)
- PC9008 (2) — TETRA TECH CONFIRMATION SAMPLE LOCATION AND IDENTIFICATION (RESULTS IN PPM)
- F — PHOTO ID AND VANTAGE POINT
- CONDUITS/COREHOLES WITH APPROX. DIAMETER
- MANHOLE COVER
- MASONRY BLOCK WALL – NO ROOF
- CONCRETE PAD
- WALL DRAIN (FLOOR LEVEL)
- SCABBLED CONCRETE

NOTES:

1. ADDITIONAL PCB ASSESSMENT AND ABATEMENT LOCATIONS ILLUSTRATED ON FIGURE 1B.
2. TWO AOCs AT SITE: AOC 1 – INTERIOR CONCRETE SURFACES; AOC 2 – EXTERIOR SOIL (SURFACE AND SUBSURFACE).
3. FOUR TETRA TECH SOIL CONFIRMATION SAMPLES IN AOC 2. LOCATIONS COULD NOT BE FIELD VERIFIED. WESTON COLLECTED 14 CONCRETE, WIPE, WATER, AND SEDIMENT SAMPLES THAT COULD NOT BE FIELD VERIFIED.
4. THIS SITE IS NOT READY FOR CLOSURE.

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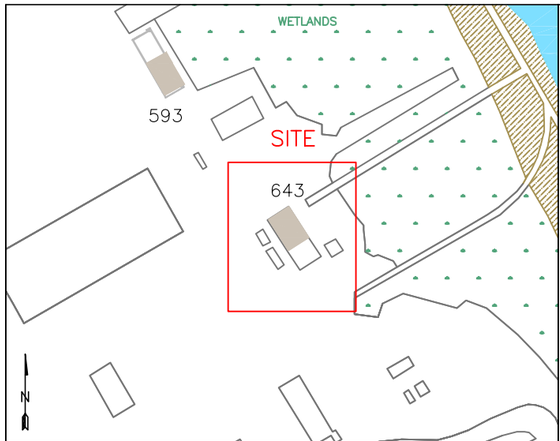
FIGURE 1A
SITE FIGURES AND FIELD OBSERVATIONS
BUILDING 643

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES 643_FIG 1.DWG V30SEP104

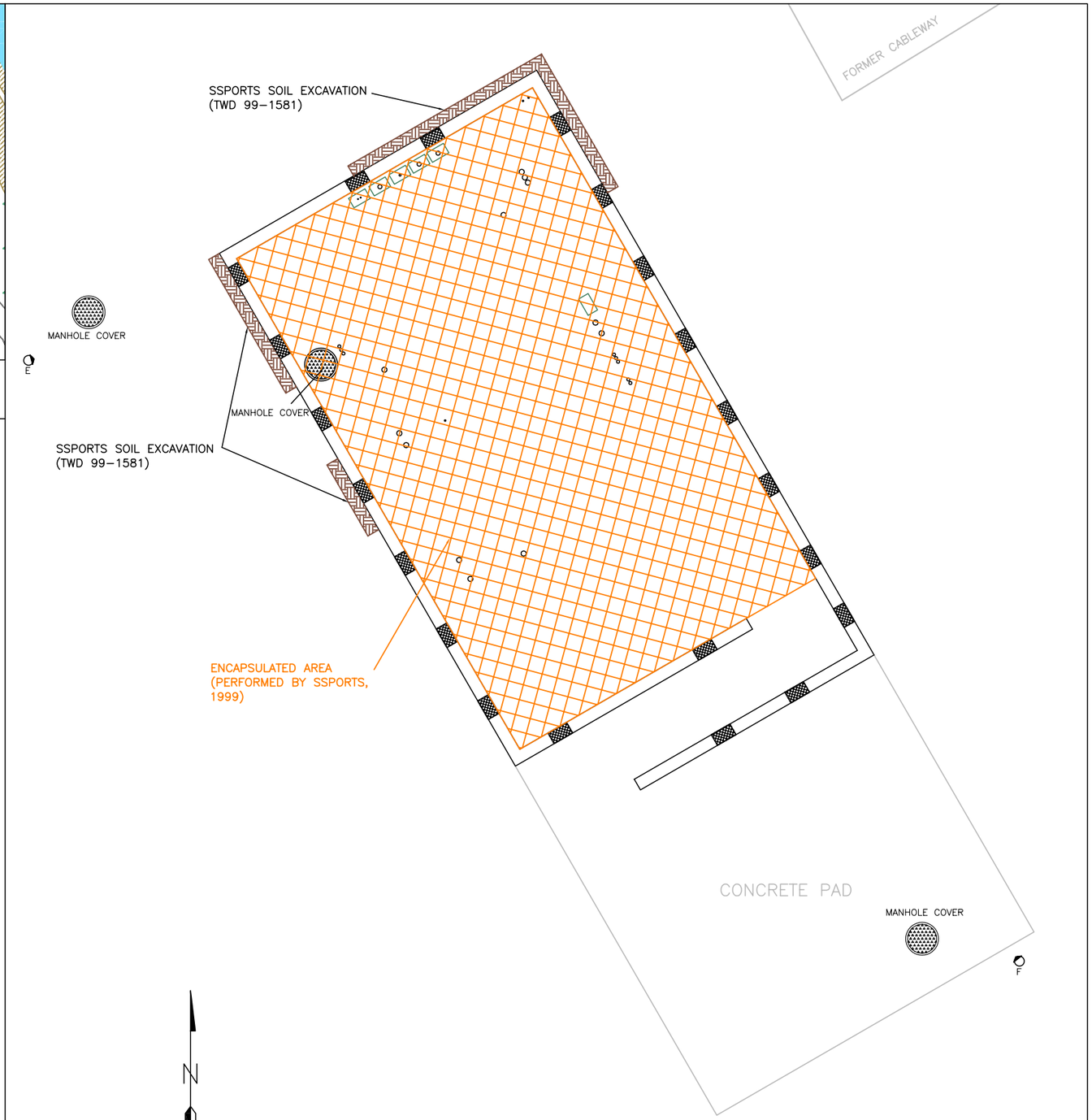


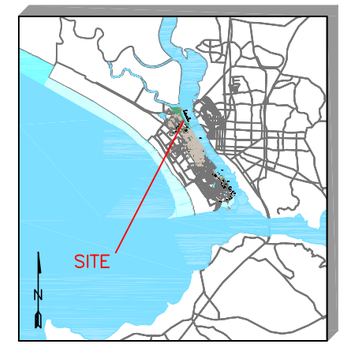
BUILDING 643 VICINITY MAP

SCALE: 1 INCH = 200 FEET

PHOTOGRAPH E: NORTHWEST CORNER OF EXTERIOR, NOTE SAMPLE MARKINGS ON WALL AND MANHOLE COVER IN FOREGROUND (IT IS UNKNOWN IF THE MANHOLE IS ASSOCIATED WITH BUILDING 643).

PHOTOGRAPH F: CONCRETE PAD ON SOUTH SIDE OF BUILDING (LOOKING NORTH). NOTE MANHOLE COVER IN FOREGROUND.





MARE ISLAND AREA MAP

NO SCALE

LEGEND:

- PHOTO ID AND VANTAGE POINT
- MASONARY BLOCK WALL – NO ROOF
- CONCRETE PAD
- WALL DRAIN (FLOOR LEVEL)
- AREA EXCAVATED BY SSPORTS
- AREA ENCAPSULATED BY SSPORTS
- ELECTRICAL BOX (NON-OPERATIONAL)

N

GRAPHIC SCALE

5 0 2.5 5 10 20

(IN FEET)
1 INCH = 10 FEET

ABATEMENT AREAS – BUILDING 643

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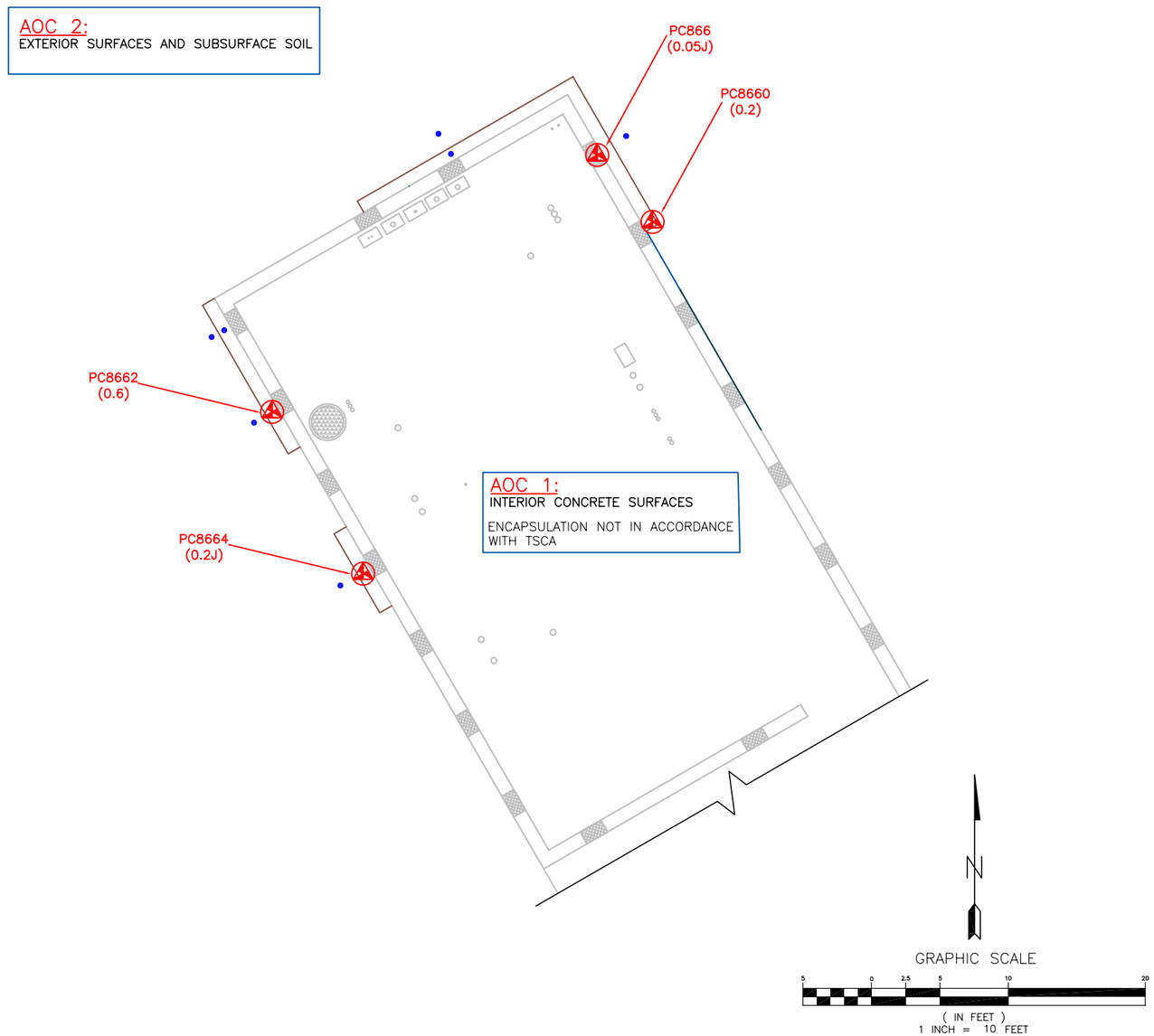
FIGURE 1B
SITE FIGURES AND FIELD OBSERVATIONS
BUILDING 643

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES 643_FIG 1.DWG V31AUG04



PROPOSED SAMPLING LOCATIONS
BUILDING 643

MARE ISLAND AREA MAP

NO SCALE

LEGEND:

TETRA TECH SAMPLE LOCATIONS

PROPOSED SAMPLING LOCATION

NOTES:

1. TWO AOCs AT SITE: AOC 1 – INTERIOR CONCRETE SURFACES; AOC 2 – EXTERIOR SOIL (SURFACE AND SUBSURFACE).
2. THIS SITE IS NOT READY FOR CLOSURE.

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FIGURE 2
PROPOSED SAMPLING LOCATIONS
BUILDING 643

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES 643_FIG 2.DWG V31AUG04

BUILDING 797/GRA 51(INVESTIGATION AREA A2) SITE-SPECIFIC DATA GAP SUMMARY ON POLYCHLORINATED BIPHENYLS

This site-specific data gap summary report identifies the previous activities conducted at Building 797 and former GRA 51 to assess PCBs, and documents the results, conclusions, recommendations, and references from a site-specific PCB data gap assessment. The purpose of this report is to identify whether Building 797 and former GRA 51 requires any further assessment or abatement activities with respect to PCBs. The methods used to conduct the data gap assessment are presented in Section 2.0 of the "PCB Summary Report, Former Mare Island Shipyard, Vallejo, California", to which this site-specific report is appended.

1.0 SITE DESCRIPTION

Building 797 is located at the north corner of Pier 55 (Figure 1A). GRA 51 and the concrete equipment pad were located adjacent to the southeast side of Building 797. This concrete pad occupies an area of approximately 115 square feet. Building 797 occupies approximately 2,137 square feet and has four concrete walls, a concrete floor, and a roof. The building was constructed in 1941 and was used as a boiler/salt water pump house, as well as an electrical distribution center. Information regarding building construction and use was obtained from the EBS database (SSPORTS 1999) and field observations and is presented below.

SITE INFORMATION, BUILDING 797/GRA 51

Descriptive Information		Notes
Building Size	2,137 square feet	NA
Building Construction	Reinforced concrete	Concrete floor (Building 797)
Date of Construction	1941	No construction date for GRA 51
Exterior Ground Cover	Concrete pier surface	NA
Former Building Identification	NA	NA
Former/Current Use	Former Use: Pump house and electrical distribution center	NA
	Current Use: Empty, no current use	
Closure Date	Unknown, but Pier 55 was listed as closed on 10/17/95	NA

Notes:
NA Not Available or Applicable
Source: SSPORTS 1999

A subsurface vault formerly connected to GRA 51 is located beneath the manhole cover shown on Figure 1B. Steel conduits (2-inch and 4-inch diameter) connected to the vault extend through the pier in the location of former GRA 51. Figure 1B also illustrates the location of GRA 51 relative to the edge of the pier, Building 797, conduits, and sampling locations. Photographs with vantage points and brief descriptions are also provided on the figure.

The EBS database (SSPORTS 1999) lists 10 PCB-containing transformers as being associated with Building 797. The EBS database (SSPORTS 1999) further sites the locations of these transformers as "Pier 55, outside" or "Pier 55, on pier." Therefore, the exact location of each of these transformers is unknown. Transformers T-0512, T-0514, and T-0516 are reported in the EBS database (SSPORTS 1999) as active transformers and were part of the Load Control Center associated with GRA-55. Only eight transformers are believed to have been associated with 797/GRA-51, the seven PCB-containing transformers and transformer T-1219, which is reported to be dry. Rocker arm GRA-51 was reportedly located along the southern wall of the building (Figure 1B). SCG personnel observed conduits inside Building 797, but were unable to determine whether the conduits were associated with a PCB-containing transformer. No transformers are currently installed inside Building 797. The table below provides information gathered from the EBS database (SSPORTS 1999) on PCB-containing transformers and rocker arms.

ELECTRICAL EQUIPMENT POTENTIALLY CONTAINING POLYCHLORINATED BIPHENYLS, BUILDING 797/GRA 51

Equipment Type	Equipment Number	Relative Location	PCBs Identified	Volume (gallons)	Status	Leaks Identified*
Grounded Rocker Arm	GRA-51	Adjoining Building 797	<1 ppm	10	Removed ("Active" according to EBS database)	Not specified
Transformer	T-0565	Pier 55, on pier	Yes	65	Removed (01/96)	Yes
Transformer	T-0567	Pier 55, on pier	Yes	65	Removed (01/96)	Yes
Transformer	T-0568	Pier 55, on pier	Yes	65	Removed (01/96)	Yes
Transformer	T-0572	Pier 55, on pier	Yes	65	Removed 10/88)	Yes
Transformer	T-1104	Pier 55, outside	Yes	185	Removed (01/95)	Yes
Transformer	T-1103	Pier 55, outside	Yes	185	Removed (01/95)	Yes
Transformer	T-1102	Pier 55, outside	Yes	185	Removed (01/95)	Yes
Transformer	T-1219	Q Street; Pier 55	No	Dry	Unknown	NA

Notes:
* Most transformers identified as having leaked did not release to the environment.
NA Not applicable
Source SSPORTS 1999

2.0 PREVIOUS POLYCHLORINATED BIPHENYLS ASSESSMENT AND ABATEMENT ACTIVITIES

A PCB assessment survey of the area outside Building 797 and GRA 51 was conducted by SSPORTS in 1996 and 1997 (SSPORTS 1996 and Tetra Tech 1998 and 2002). SSPORTS collected interior swipe samples of insulation and equipment, and concrete samples from the floor. Exterior samples of the concrete equipment pad supporting GRA 51 and three transformers (unknown designations) were collected in addition to one sample of loose soil in the area around GRA 51 (see summary table below for analytical results).

TWD 97-1401, dated February 7, 1997, indicated that PCB-contaminated electrical cables in a fire pump switchboard inside Building 797 were removed. Analytical results for cable samples collected by SSPORTS indicated that the cable contained PCBs at concentrations ranging up to 58.4 ppm. As indicated in TWD 97-1401, resampling was not required following removal of the cable.

In August 1998, Tetra Tech collected samples from the subsurface vault. Three concrete samples were collected from the concrete surface. The analytical results for these three samples indicate PCB concentrations ranging from non-detect to 0.4 ppm, with a detection limit of 0.67 ppm. In August 1998, samples were collected from the subsurface vault. Samples PC0371, PC0372, and PC0373 were verified in the field. Analytical results are presented in the table below for all previous assessment samples.

SUMMARY OF PREVIOUS ASSESSMENT SAMPLES, BUILDING 797/GRA 51

Location	Sample Matrix	Sample ID	Collected by	Conc (ppm)*	DL (ppm)
B797	NA	6232-0238	SSPORTS	NA	NA
B797	NA	6232-0239	SSPORTS	NA	NA
B797	NA	6232-0240	SSPORTS	NA	NA
B797	NA	6232-0241	SSPORTS	NA	NA
B797	NA	6232-0242	SSPORTS	NA	NA
B797	NA	6232-0243	SSPORTS	NA	NA
B797	insulation	6232-0246	SSPORTS	58.4	10
B797	insulation	6232-0247	SSPORTS	17.6	1
B797	insulation	6232-0248	SSPORTS	ND	10
B797	insulation	6232-0249	SSPORTS	17	1
GRA 51	concrete	6102-0075	SSPORTS	31.1	5
GRA 51	concrete	6102-0076	SSPORTS	11.7	1
GRA 51	concrete	6102-0077	SSPORTS	1	1
GRA 51	oil	6102-0078	SSPORTS	NA	NA
GRA 51	swipe	6122-0019	SSPORTS	ND	5 µg/swipe
GRA 51	swipe	6122-0020	SSPORTS	ND	5 µg/swipe

SUMMARY OF PREVIOUS ASSESSMENT SAMPLES, BUILDING 797/GRA 51 (CONTINUED)

Location	Sample Matrix	Sample ID	Collected by	Conc (ppm)*	DL (ppm)
GRA 51	swipe	6122-0021	SSPORTS	10 µg/swipe	5 µg/swipe
GRA 51	insulation	6127-0253	SSPORTS	1.2	1
GRA 51	insulation	6127-0254	SSPORTS	7	1
GRA 51	insulation	6127-0255	SSPORTS	3.5	1
GRA 51	insulation	6127-0256	SSPORTS	38	1
GRA 51	insulation	6127-0257	SSPORTS	6.4	1
GRA 51	insulation	6127-0258	SSPORTS	3.4	1
GRA 51	soil	6127-0259	SSPORTS	52	20
GRA 51	concrete	6127-0260	SSPORTS	4.2	1
GRA 51	NA	6172-0035	SSPORTS	NA	NA
GRA 51	concrete	6262-0086	SSPORTS	NA	NA
GRA 51	concrete	6262-0087	SSPORTS	NA	NA
GRA 51	concrete	6262-0088	SSPORTS	1	1
GRA 51	concrete	6262-0089	SSPORTS	31.1	5
GRA 51	concrete	6262-0090	SSPORTS	11.7	1
GRA 51 pad footprint	concrete	PC0371	Tetra Tech	ND	0.67
GRA 51 pad footprint	concrete	PC0372	Tetra Tech	0.01	0.67
GRA 51 pad footprint	concrete	PC0373	Tetra Tech	0.4	0.67
Vault	water	PC8820	Tetra Tech	ND	NA
Vault	residue	PC8821	Tetra Tech	21	NA
Vault	residue	PC8822	Tetra Tech	18	NA

Notes:

Conc	Concentration
DL	Detection Limit
ID	Identification
ppm	Part per million
NA	Not available or applicable
ND	Non-detect

3.0 RESULTS OF DATA GAP ASSESSMENT

On June 4, 2003, SCG personnel performed a PCB data gap assessment for Building 797/GRA 51. The assessment was designed to identify and document any of the following:

- Locations of electrical equipment, transformers, vaults, conduits, and cabling that may have contained PCBs.
- Evidence of previous PCB sampling conducted by SSPORTS or Tetra Tech.

- Evidence of previous PCB abatement conducted by SSPORTS, such as areas of scabbling.

- Assessment of the adequacy of previous PCB characterization and abatement of the AOCs identified.

The footprint of the former GRA 51 concrete equipment pad and the locations of Tetra Tech concrete confirmation samples were field verified. The locations of transformers associated with Building 797 as listed in the EBS database (SSPORTS 1999) were not identified during the field visit. Transformer T-1219 is listed as being located on Q Street on Pier 55. A manhole located at the site leads to the vault associated with the former transformers and GRA.

4.0 DATA SUMMARY

Building 797 was previously used as a boiler/salt water pump house and later as an electrical distribution center. Cable insulation from electrical cables removed from the fire pump switchboard was documented as containing PCBs. Analytical data indicates the presence of PCBs at concentrations greater than 1 ppm at Building 797. Analytical data also indicates the presence of PCBs at concentrations greater than 1 ppm on the concrete where GRA 51 and the transformer pad were removed.

There are three AOCs at this site. AOC 1 consists of the interior surfaces and permanent equipment inside Building 797. AOC 2 consists of the area below the Pier 55 surface and a vault. AOC 3 consists of the exterior concrete in the vicinity of former GRA 51 and the transformers.

5.0 CONCLUSIONS

The following conclusions are based on existing documentation and observations made during the data gap assessment:

- Equipment and articles known to have contained PCBs are documented as having existed in and around Building 797.

- Samples collected from the site indicate the presence of PCBs at concentrations greater than 1 ppm.

- The exact locations of the eight transformers associated with Building 797 and the removed load center could not be verified.

- The three AOCs are not ready for closure.

6.0 RECOMMENDATIONS

Further assessment and abatement at Building 797 is recommended. Recommendations are provided below by AOC.

AOC 1 (Interior surfaces and equipment inside of Building 797): Further characterization sampling should be conducted on the interior surfaces and equipment inside of Building 797. Such sampling should include one composite sample from three locations where the cable insulation was removed and six verification samples where the former SSPORTS samples were collected to verify the absence of PCBs at these locations (see Figure 2).

AOC 2 (the vault): Further sampling should be conducted in the vault. All residues from the vault should be removed, and 3 verification samples should be collected from the floor of the vault.

AOC 3 (Exterior concrete in the vicinity of former GRA 51 and transformers): Additional characterization sampling should be conducted on the concrete pad that held GRA 51 and the transformers. Sampling should incorporate a 3-meter grid, which will result in an additional three samples. Abatement will be required around SSPORTS sample location 6127-0260.

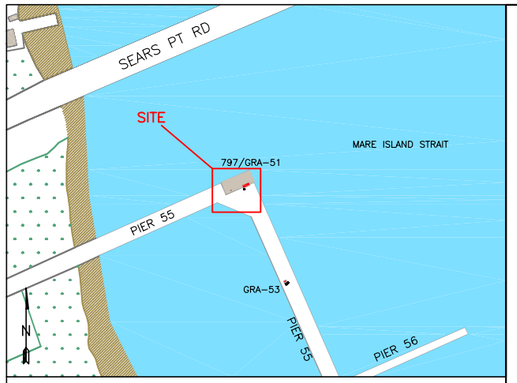
7.0 REFERENCES

SSPORTS. 1996. "PCB Assessment for Parcel 01-Q2." June 6.

SSPORTS. 1999. "Mare Island Naval Shipyard Environmental Baseline Survey Database." Last updated 1999.

Tetra Tech. 1998. "Final Basewide Confirmation Sampling Summary Report, Mare Island."

Tetra Tech. 2002. "Internal Draft Polychlorinated Biphenyl Assessment and Abatement Summary Report, Mare Island, California, Volumes I-VII." August.



BUILDING 797/GRA-51 VICINITY MAP

SCALE: 1 INCH = 400 FEET

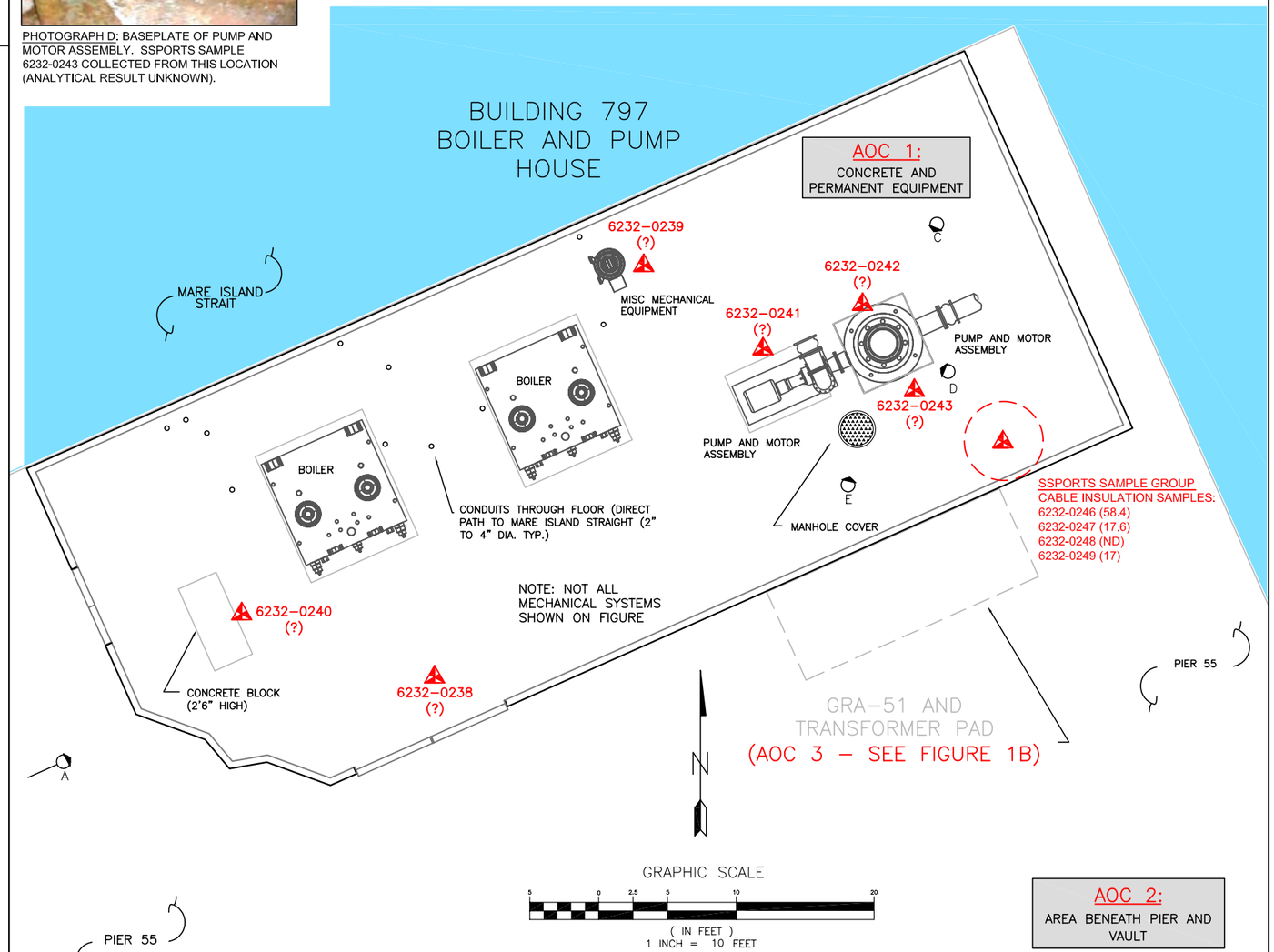
PHOTOGRAPH A: VIEW PIER 55 FROM SHORELINE LOOKING EAST-NORTHEAST. BUILDING 797 IS IN THE BACKGROUND.

PHOTOGRAPH B: SOUTHEAST CORNER OF BUILDING 797 LOOKING NORTH. THE FORMER LOCATION OF GRA-51 IS JUST RIGHT OF THE FIELD OF VIEW AGAINST THE SOUTH WALL.

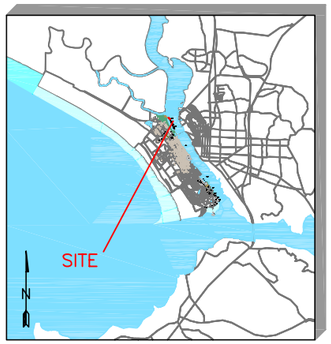
PHOTOGRAPH C: PUMP AND MOTOR ASSEMBLY. SSPORTS WIPE SAMPLES WERE COLLECTED FROM THIS AND OTHER PERMANENT EQUIPMENT INSIDE BUILDING 797.

PHOTOGRAPH D: BASEPLATE OF PUMP AND MOTOR ASSEMBLY. SSPORTS SAMPLE 6232-0243 COLLECTED FROM THIS LOCATION (ANALYTICAL RESULT UNKNOWN).

PHOTOGRAPH E: MANHOLE COVER INSIDE BUILDING 797 NEAR PUMP AND MOTOR ASSEMBLY.



SITE PLAN
BUILDING 797/GRA-51



MARE ISLAND AREA MAP

NO SCALE

LEGEND:

- 6232-0249 (17) — SSPORTS INITIAL SAMPLE LOCATIONS AND IDENTIFICATION (RESULTS IN PPM, ? = UNKNOWN)
- PHOTOGRAPH VIEWPOINT
- CONDUITS WITH APPROXIMATE DIAMETER (DIA.)
- MANHOLE COVER
- CONCRETE ENCASEMENT WITH ELECTRICAL EQUIPMENT
- PUMP HOUSE MECHANICAL EQUIPMENT (TYP.)
- STEEL FRAME STRUCTURE WITH CORRUGATED METAL SIDING/DOORS AND ROOF

NOTES:

1. THREE AOCs AT BUILDING 797: AOC 1 – INTERIOR SURFACES AND PERMANENT EQUIPMENT INSIDE BUILDING 797; AOC 2 – VAULTS AND AREA BELOW PIER 55 SURFACE; AOC 3 – EXTERIOR CONCRETE IN VICINITY OF FORMER GRA 51, TRANSFORMERS, AND PAD (ALL REMOVED – SEE FIGURES 1B AND 2B).
2. MULTIPLE SSPORTS INITIAL ASSESSMENT AND POST–ABATMENT SAMPLES COLLECTED OF CONCRETE, OIL, INSULATION, AND WIPE. LOCATIONS AND ANALYTICAL RESULTS NOT VERIFIED FOR ALL SAMPLES COLLECTED.
3. THIS SITE IS NOT READY FOR CLOSURE.

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SULLIVAN

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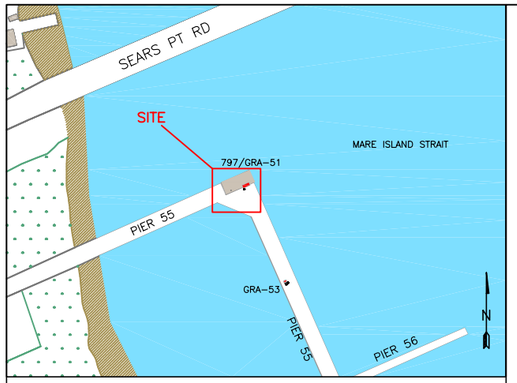
FIGURE 1A
SITE FIGURES AND FIELD OBSERVATIONS
BLDG 797/GRA-51

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES 797 FIG_1A.DWG V31AUG04



BUILDING 797/GRA-51 VICINITY MAP

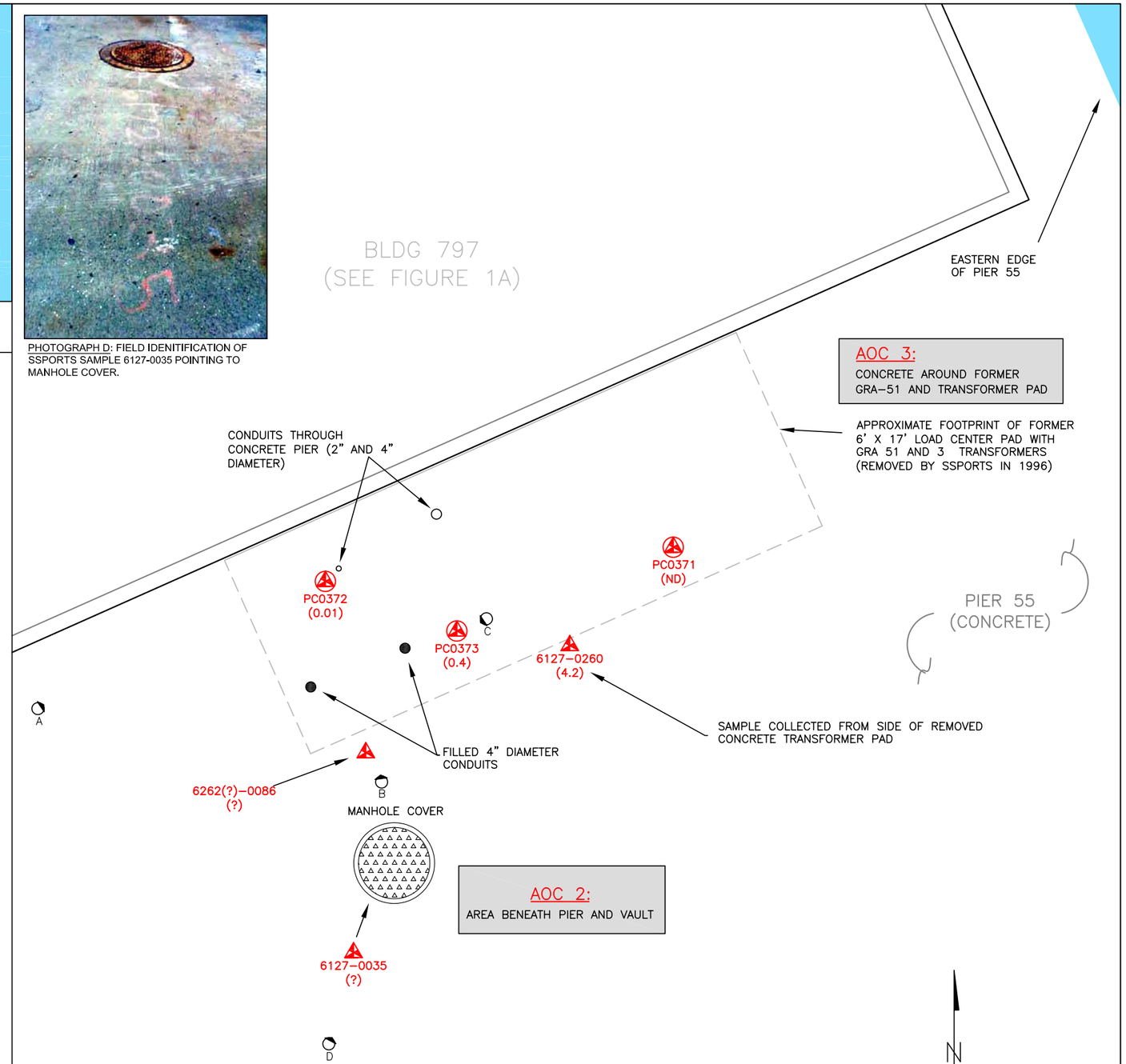
SCALE: 1 INCH = 400 FEET

PHOTOGRAPH A: VIEW OF FORMER GRA-51 AND TRANSFORMER AREA OF CONCERN LOOKING NORTHEAST. BUILDING 797 IS ON LEFT SIDE OF PHOTOGRAPH.

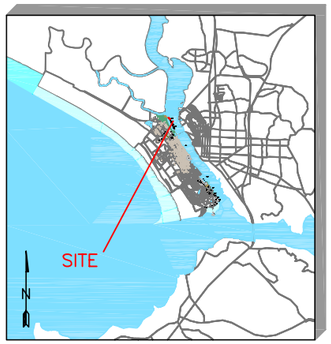
PHOTOGRAPH B: FORMER LOCATION OF GRA-51 AND TRANSFORMERS LOOKING NORTH.

PHOTOGRAPH C: CLOSE UP OF TETRA TECH CONFIRMATION SAMPLE PC0373 AND FORMER PAD/STAINING.

PHOTOGRAPH D: FIELD IDENITIFICATION OF SSPORTS SAMPLE 6127-0035 POINTING TO MANHOLE COVER.



SITE PLAN
BUILDING 797/GRA-51



MARE ISLAND AREA MAP

NO SCALE

LEGEND:

- 6127-0060 (4.2) — SSPORTS PCB SAMPLE LOCATION – QUESTION MARK INDICATES NOT VERIFIED BY FIELD OBSERVATION OR AVAILABLE LAB DATA (CONCENTRATION INDICATED IN PPM IF KNOWN)
- PC0373 (0.4) — TETRA TECH CONFIRMATION SAMPLE LOCATION AND IDENTIFICATION (RESULTS IN PPM)
- PHOTOGRAPH VIEWPOINT
- CONDUITS WITH APPROXIMATE DIAMETER (DIA.)
- MANHOLE COVER
- FOOTPRINT OF FORMER GRA AND TRANSFORMERS

NOTES:

1. THREE AOCs AT BLDG 797/GRA-51 LOCATION: AOC 1 – INTERIOR OF BUILDING 797 (SEE FIGURE 1A); AOC 2 – VAULTS AND AREA BELOW PIER 55 SURFACE AND AOC 3, CONCRETE SURFACE IN VICINITY OF FORMER GRA 51, TRANSFORMERS, AND TRANSFORMER PAD (ALL REMOVED).
2. SSPORTS INITIAL ASSESSMENT SAMPLES PARTIALLY VERIFIED. ALL TETRA TECH CONFIRMATION SAMPLE LOCATIONS IDENTIFIED.
3. THIS SITE IS NOT READY FOR CLOSURE.

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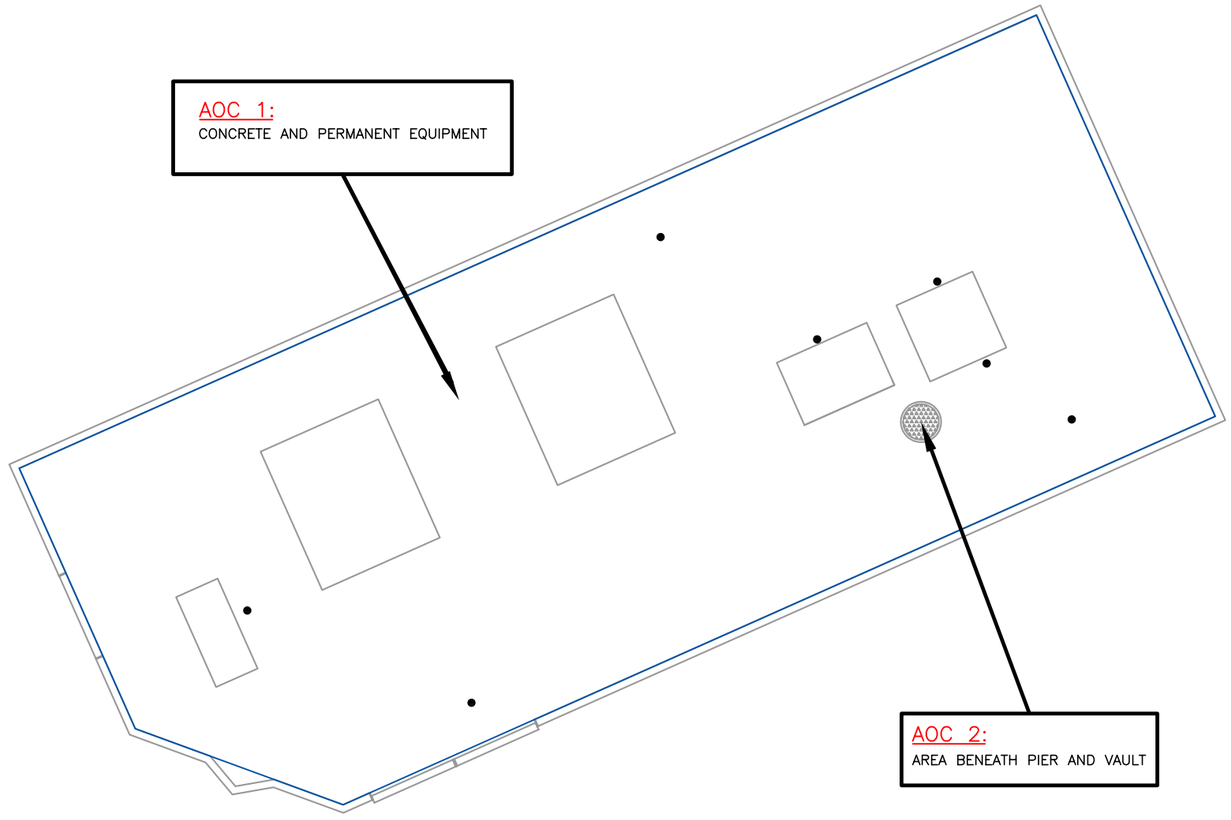
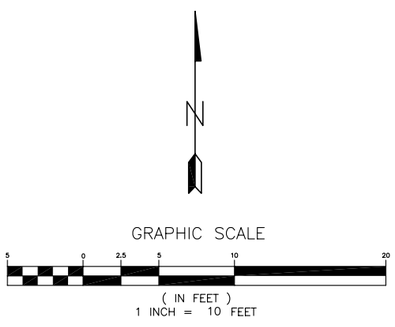
FIGURE 1B
SITE FIGURES AND FIELD OBSERVATIONS
BLDG 797/GRA-51

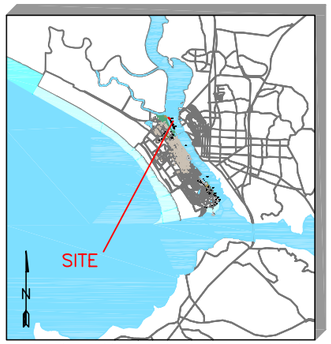
PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES GRA-51 FIG-1B.DWG V31AUG04





PROPOSED SAMPLING LOCATIONS
BUILDING 797/GRA-51



MARE ISLAND AREA MAP
NO SCALE

LEGEND:

- ● PROPOSED SAMPLE LOCATIONS
- MANHOLE COVER
- CONCRETE ENCASEMENT WITH ELECTRICAL EQUIPMENT (POTENTIAL PCB SOURCE)

NOTES:

1. THREE AOCs AT SITE: AOC 1 – INTERIOR POROUS SURFACES AND EQUIPMENT INSIDE BUILDING 797; AOC 2 – VAULT AND AREA BELOW PIER 55 SURFACE; AOC 3 – CONCRETE SURFACES IN VICINITY OF FORMER GRA–51, TRANSFORMERS, AND PAD (ALL REMOVED).
2. THIS SITE IS NOT READY FOR CLOSURE.

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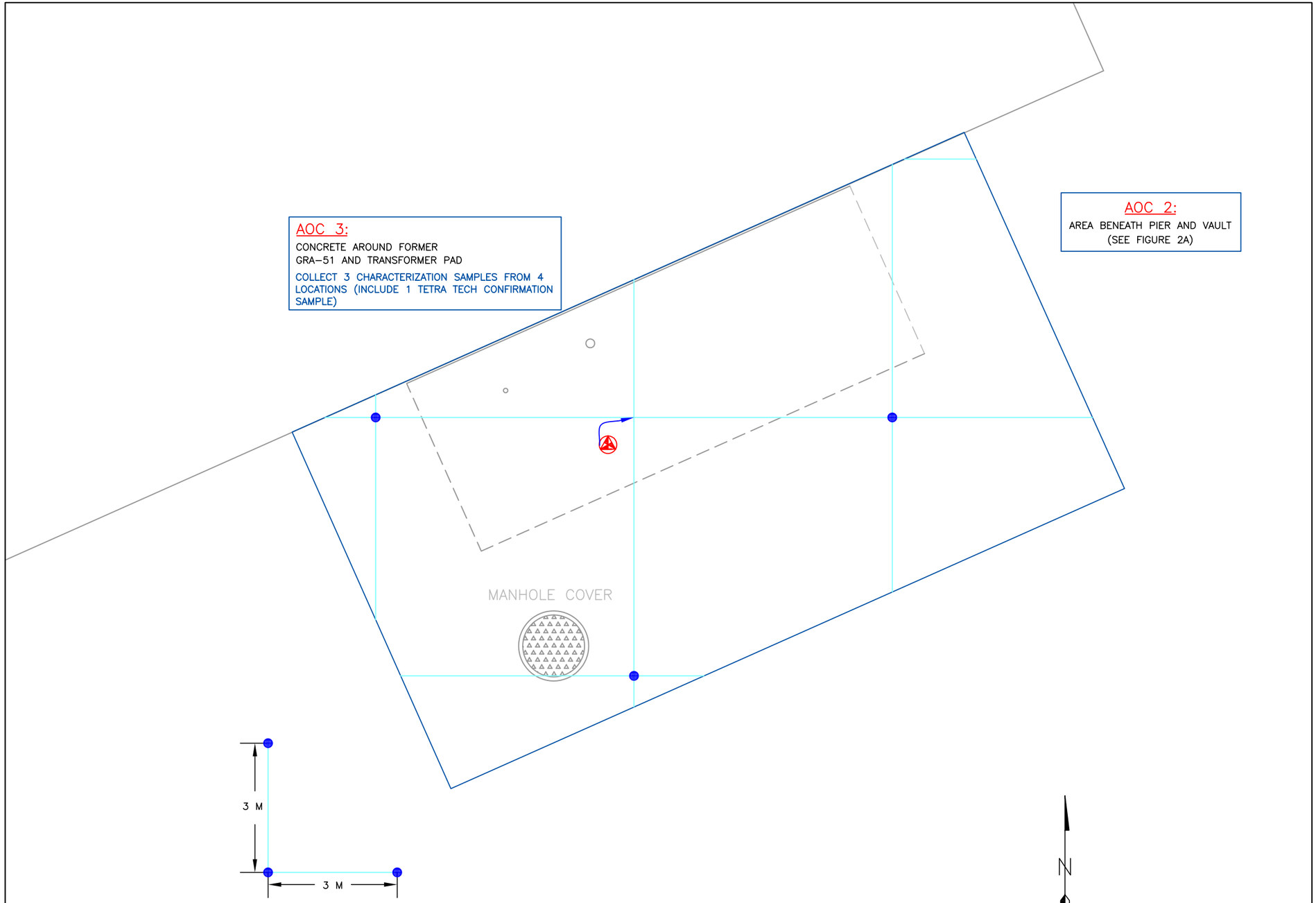
FIGURE 2A
PROPOSED SAMPLING LOCATIONS
BUILDING 797/GRA-51

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES DRAFT 797_GRA-51 FIG 2A.DWG V31AUG04



PROPOSED SAMPLING LOCATONS
BUILDING 797/GRA-51

MARE ISLAND AREA MAP

NO SCALE

LEGEND:

- TETRA TECH CONFIRMATION SAMPLE LOCATION (USE AS VERIFICATION SAMPLE POINT)
- PROPOSED SAMPLE AREA BASED ON SITE FEATURES AND EVIDENCE, HISTORICAL DOCUMENTANTION, AND TSCA REGULATIONS
- TSCA SAMPLE GRID (DARK BLUE INDICATES ACTUAL SAMPLE LOCATIONS THAT ARE LOCATED WITHIN CHARACTERIZATION AREA)

NOTES:

1. THREE AOCs AT SITE: AOC 1 – INTERIOR POROUS SURFACES AND EQUIPMENT INSIDE BUILDING 797; AOC 2 – VAULT AND AREA BELOW PIER 55 SURFACE; AOC 3 – CONCRETE SURFACES IN VICINITY OF FORMER GRA-51, TRANSFORMERS, AND PAD (ALL REMOVED).
2. THIS SITE IS NOT READY FOR CLOSURE.

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FIGURE 2B
PROPOSED SAMPLING LOCATIONS
BUILDING 797/GRA-51

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES 797_GRA 51 FIG_2B.DWG V31AUG04

BUILDING 799 (INVESTIGATION AREA A2) SITE-SPECIFIC DATA GAP SUMMARY ON POLYCHLORINATED BIPHENYLS

This site-specific data gap summary report identifies the previous activities conducted at Building 799 to assess PCBs, and documents the results, conclusions, recommendations, and references from a site-specific PCB data gap assessment. The purpose of this report is to identify whether Building 799 requires any further assessment or abatement activities with respect to PCBs. The methods used to conduct the data gap assessment are presented in Section 2.0 of the "PCB Summary Report, Former Mare Island Shipyard, Vallejo, California", to which this site-specific report is appended.

1.0 SITE DESCRIPTION

Building 799 is located on Pier 55 adjacent to the northwest side of Building 825 (Figure 1). Building 799 is surrounded by the concrete surface of Pier 55.

Building 799 occupies 1,481 square feet. The building is enclosed with corrugated metal walls and roof. The lower portion of the walls and the floor are constructed of concrete. The building was constructed in 1948 and used as a direct current generating station. Information regarding building construction and use was obtained from the EBS database (SSPORTS 1999) and field observations and is presented in the table below.

SITE INFORMATION, BUILDING 799

Descriptive Information		Notes
Building Size	1,481 square feet	Source: EBS database
Building Construction	Concrete and corrugated metal walls and concrete floor	Concrete floor
Date of Construction	1948	NA
Exterior Ground Cover	Concrete pier surface	NA
Former Building Identification	NA	NA
Former/Current Use	Former Use: Direct current generating station Current Use: Empty, no current use	NA
Closure Date	Not specified	NA

Notes:
NA Not Available or Applicable
Source: SSPORTS 1999

Building 799 was listed as having transformers and other PCB-containing articles (cables/transformer pads). Electrical equipment known to contain PCBs is documented in the EBS database (SSPORTS 1999) and SSPORTS TWDs (SSPORTS 1996a, b and 1997). At least one electrical vault is located beneath Building 799. The concrete floor overlying the vault contains multiple conduit holes that lead directly into the vault and other areas beneath the pier. Figure 1 shows the locations of utilities and the building footprint.

Two transformers were listed in the EBS database (SSPORTS 1999) for Building 799 (see table below). Transformer T-1492 was a PCB transformer removed in 1983. The exact location of transformer T-1492 is unknown. Transformer T-1270 is an existing transformer located on the south side of Building 799.

ELECTRICAL EQUIPMENT POTENTIALLY CONTAINING POLYCHLORINATED BIPHENYLS, BUILDING 799

Equipment Type	Equipment Number	Relative Location	PCBs Identified	Volume (Gallons)	Status	Leaks Identified
Transformer	T-1492	Building 799 (exact location unknown)	Yes	50	Removed (1983)	No
Transformer	T-1270	South exterior of Building 799	No	Dry	Listed as active	NA

Notes:
NA Not Available
Source: SSPORTS 1999

2.0 PREVIOUS POLYCHLORINATED BIPHENYLS ASSESSMENT AND ABATEMENT ACTIVITIES

A PCB assessment survey of Building 799 was conducted by SSPORTS in 1996 (Tetra Tech 1998 and 2002). During the survey, four interior concrete samples were collected, and the analytical results and locations were published (see summary table below). Based on the analytical results, a portion of the interior concrete floor was scabbled (6’ x 20’ x ½” rectangular area). The TWD 96-1399 (SSPORTS 1997) indicated that scabbling and post-abatement sampling was completed in 1997. Chain-of-custody documentation indicated that concrete samples (7037-0235 through 7037-0242) were collected from seven areas of the abated concrete floor. The locations were listed in the TWD, but the analytical data were not reported.

Tetra Tech subsequently performed confirmation PCB sampling in and around Building 799 as is shown in the table below. A total of 15 samples were collected: nine interior concrete samples, one exterior concrete sample north of the building, one exterior sample south of the building near Transformer T-1270, and four samples from the electrical vault (1 water and 3 residue). The analytical results for the concrete samples indicated PCB concentrations ranging from ND to 10 ppm, with a detection limit of 0.67 ppm. Analytical results for the residue samples indicated PCB concentrations between 11 ppm and 15 ppm. The water sample was reported as ND, but the detection limit for the analysis is not included in the available documentation.

SUMMARY OF PREVIOUS ASSESSMENT SAMPLES, BUILDING 799

Location	Sample Matrix	Sample ID	Collected by	Conc (ppm)	DL (ppm)
Interior Floor	NA	6260-0317	SSPORTS	NA	NA
Interior Floor	NA	6260-0318	SSPORTS	NA	NA
Interior Floor	NA	6260-0319	SSPORTS	NA	NA
Interior Floor	concrete	6260-0320	SSPORTS	191	10
Interior Floor	concrete	6260-0321	SSPORTS	146	10
Interior Floor	concrete	6260-0322	SSPORTS	NA	NA
Interior Floor	concrete	6260-0323	SSPORTS	30.2	1
Interior Floor	NA	6260-0324	SSPORTS	NA	NA
Interior Floor	NA	6260-0325	SSPORTS	NA	NA
Interior Floor	NA	6260-0326	SSPORTS	NA	NA
Interior Floor	NA	6260-0327	SSPORTS	NA	NA
Interior Scabbled Area	concrete	7037-0235	SSPORTS	NA	NA
Interior Scabbled Area	concrete	7037-0236	SSPORTS	NA	NA
Interior Scabbled Area	concrete	7037-0237	SSPORTS	NA	NA
Interior Scabbled Area	concrete	7037-0238	SSPORTS	NA	NA
Interior Scabbled Area	concrete	7037-0239	SSPORTS	NA	NA
Interior Scabbled Area	concrete	7037-0240	SSPORTS	NA	NA
Interior Scabbled Area	concrete	7037-0241	SSPORTS	NA	NA
Interior Scabbled Area	concrete	7037-0242	SSPORTS	NA	NA
Transformer pad	concrete	PC-9006	Tetra Tech	2.0	0.67
Transformer pad	concrete	PC-9009	Tetra Tech	0.2	0.67
Interior Floor	concrete	PC-9010	Tetra Tech	0.08	0.67
Interior Floor	concrete	PC-9011	Tetra Tech	0.1	0.67
Interior Floor	concrete	PC-9012	Tetra Tech	0.4	0.67
Interior Floor	concrete	PC-9013	Tetra Tech	0.1	0.67
Interior Floor	concrete	PC-9014	Tetra Tech	10	0.67
Interior Floor	concrete	PC-9015	Tetra Tech	0.4	0.67
Interior Floor	concrete	PC-9016	Tetra Tech	1.0	0.67
Interior Floor	concrete	PC-9017	Tetra Tech	0.6	0.67
Interior Floor	concrete	PC-9018	Tetra Tech	0.4	0.67
Vault	water	PC-8832	Tetra Tech	Non-detect	NA
Vault	residue	PC-8833	Tetra Tech	13	NA
Vault	residue	PC-8834	Tetra Tech	11	NA
Vault	residue	PC-8835	Tetra Tech	15	NA

Notes:

NA Not Available (Unknown)
Conc Concentration
DL Detection Limit
ID Identification
ppm Part per million

3.0 RESULTS OF DATA GAP ASSESSMENT

On June 6, 2003, SCG personnel performed a PCB data gap assessment at Building 799. The assessment was designed to identify and document any of the following:

- Locations of electrical equipment, transformers, vaults, conduits, and cabling that may have contained PCBs.
- Evidence of previous PCB sampling conducted by SSPORTS or Tetra Tech.
- Evidence of previous PCB abatement conducted by SSPORTS, such as areas of scabbling.
- Assessment of the adequacy of previous PCB characterization and abatement of the AOCs identified.

Evidence of SSPORTS initial sampling, scabbling, and post-abatement sampling was observed. However, analytical reports were not available for all SSPORTS samples collected. Three of the SSPORTS samples had reported concentrations above 1 ppm. Outside the building, the transformer pads were sampled by Tetra Tech as shown on Figure 1. Sample PC-9009 collected on the exterior transformer pad located on the north end of the building had an estimated reported concentration of 0.2 ppm. Sample PC-9006 collected from the exterior transformer pad located on the southern end of the building had an estimated concentration of 2.0 ppm. Most of the SSPORTS initial sampling locations were delineated by red paint as illustrated on Figure 1. Positive identification was not possible for all samples collected from the abated area.

No electrical equipment was observed other than transformer T-1270 on the exterior south side of Building 799. Electrical conduits cut to several inches above the existing concrete floor surface were identified. Visible standing water in vaults below the floor was observed through the conduits.

4.0 DATA SUMMARY

Building 799 was formerly used as a direct current generating station. Electrical transformers containing PCBs are documented to have been located at Building 799.

There are four AOCs at Building 799. AOC 1 consists of the concrete slab where a transformer was formerly located outside the northwest corner of Building 799. AOC 2 consists of the area within Building 799 where electrical equipment was formerly located. AOC 3 consists of the concrete slab where a transformer was formerly located outside the southwest corner of Building 799 and between Buildings 799 and 825. AOC 4 consists of the electrical vault beneath Building 799.

5.0 CONCLUSIONS

The following conclusions are based on existing documentation and observations made during the data gap assessment:

- Known PCB contamination of interior and exterior concrete surfaces and subfloor vaults exists.
- Laboratory data sheets are unavailable for many of the samples collected at this building. Thus, the reported PCB concentrations and the laboratory detection limits cannot be verified.
- Additional characterization and verification sampling is required.

6.0 RECOMMENDATIONS

Further assessment and abatement is recommended. The four AOCs in and around Building 799 are not ready for closure. The following recommendations are presented by AOC.

AOC 1 (Northwest Exterior Corner of Building 799): Concrete characterization samples should be collected using a 3.0-meter grid superimposed over AOC 1 as indicated in 40CFR761.283(b) and illustrated on Figure 2 (3 total samples). Two additional samples should be collected to supplement the one previous Tetra Tech confirmation sample.

AOC 2 (Entire Interior Concrete Floor): Three concrete characterization samples should be collected in the area of sample PC9014, as illustrated on Figure 2. A total of nine additional concrete samples should be collected on a 1.5 meter grid within the grid area as shown on Figure 2. These samples include four characterization samples outside the scabbled area and five confirmation samples within the scabbled area. Abatement of the area of impact will also be required to achieve a 1 ppm cleanup standard.

AOC 3 (Exterior surfaces between Buildings 799 and 825): Two additional concrete characterization samples should be collected adjacent to sample PC9006, as illustrated on Figure 2.

AOC 4 (Electrical Vault): PCB-contaminated residue should be removed from the vault, and 3 verification samples should be collected.

7.0 REFERENCES

SSPORTS. 1996. "PCB Decontamination for Parcel 01-Q2."

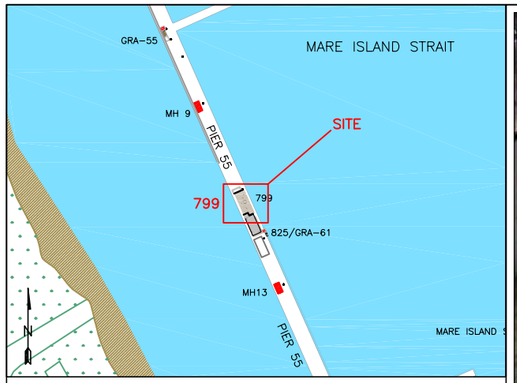
SSPORTS. 1996. "PCB Decontamination Technical Work Document 96-1296." August 26.

SSPORTS. 1997. "PCB Decontamination Technical Work Document 96-1399." February 3.

SSPORTS. 1999. "Mare Island Naval Shipyard Environmental Baseline Survey Database." Last updated 1999.

Tetra Tech. 1998. "Final Basewide Confirmation Sampling Summary Report, Mare Island."

Tetra Tech. 2002. "Internal Draft Polychlorinated Biphenyl Assessment and Abatement Summary Report, Mare Island, California, Volumes I-VII." August.



BUILDING 799 VICINITY MAP

SCALE: 1 INCH = 400 FEET

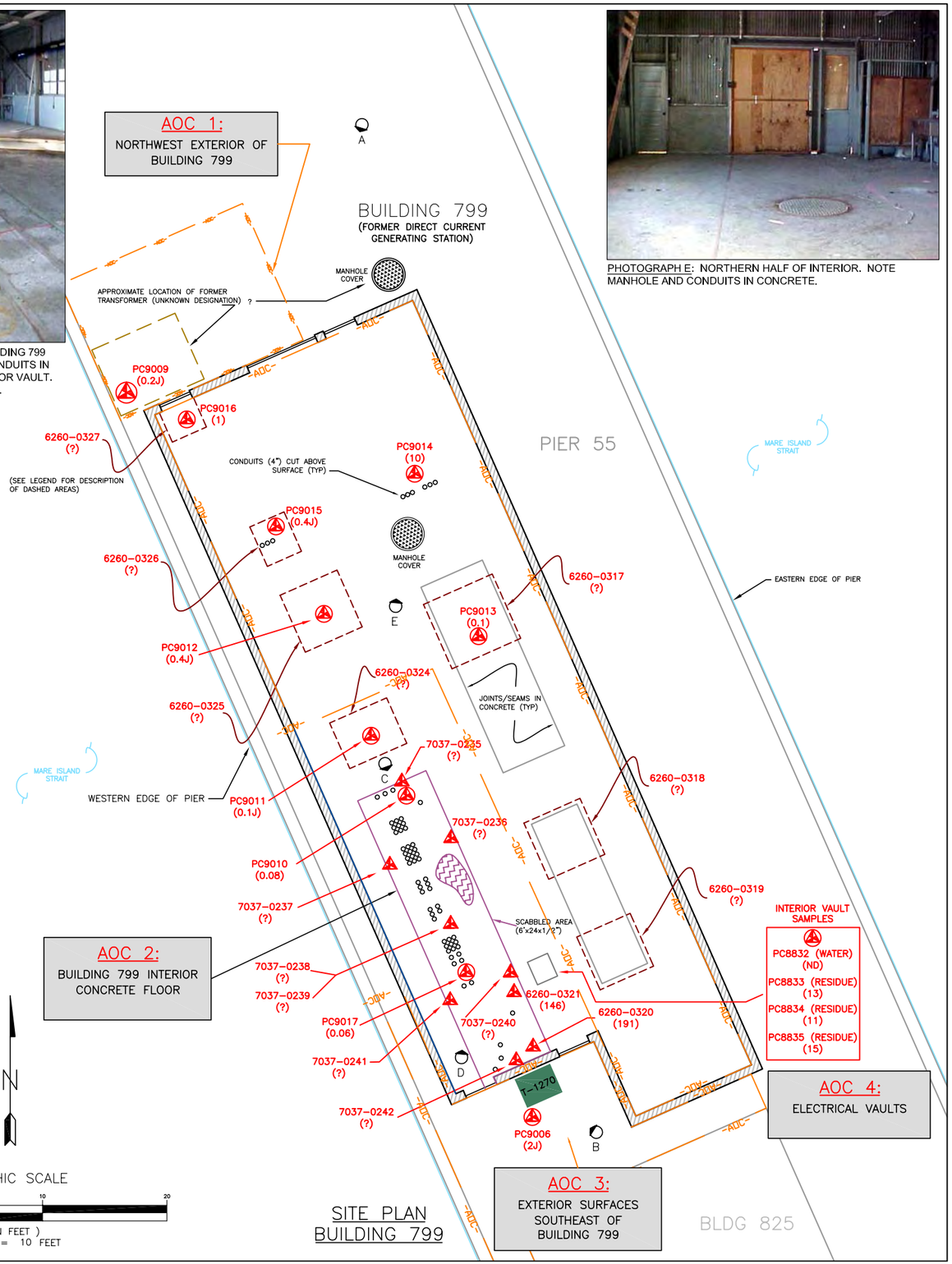
PHOTOGRAPH A: BUILDING 799 LOOKING SOUTH-SOUTHWEST.

PHOTOGRAPH B: 25 KVA TRANSFORMER AND SAMPLE PC9006 (EXTERIOR SOUTH SIDE OF BUILDING 799).

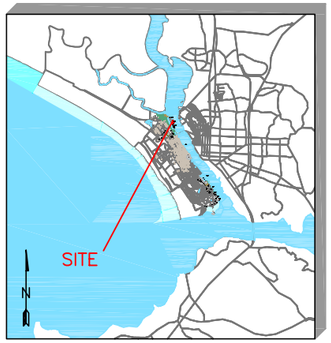
PHOTOGRAPH C: CLOSE UP OF SCABBLED CONCRETE, STEEL CONDUITS CUT JUST ABOVE FLOOR LEVEL AND SAMPLE PC9010 (LOOKING SOUTH FROM CENTER OF BUILDING 799).

PHOTOGRAPH D: INTERIOR OF BUILDING 799 LOOKING NORTH-NORTHWEST. CONDUITS IN FLOOR LEAD DIRECTLY TO SUBFLOOR VAULT. AREA WAS SCABBLED BY SSPORTS.

PHOTOGRAPH E: NORTHERN HALF OF INTERIOR. NOTE MANHOLE AND CONDUITS IN CONCRETE.



SITE PLAN
BUILDING 799



MARE ISLAND AREA MAP

NO SCALE

LEGEND:

- 7037-0239 (?) — SSPORTS PCB SAMPLE LOCATION AND IDENTIFICATION NUMBER (PCB CONCENTRATION IN PPM, ? IF UNKNOWN)
- PC9017 (0.06) — TETRA TECH PCB CONFIRMATION SAMPLE LOCATION AND IDENTIFICATION NUMBER (PCB CONCENTRATION IN PPM)
- E — PHOTO ID AND VANTAGE POINT
- MASONRY/CONCRETE WALLS AND DOOR (WITH ROOF)
- AREA DELINEATED BY RED PAINT WHERE SSPORTS INITIAL ASSESSMENT SAMPLE WAS COLLECTED
- JOINTS/SEAMS IN CONCRETE
- SCABBLED CONCRETE (ENTIRE AREA BOUNDED BY BOX SCABBLED)
- EXISTING TRANSFORMER
- AOC BOUNDARY

NOTES:

1. FOUR AOCs AT BUILDING 799: AOC 1 – NORTHWEST EXTERIOR CORNER OF BUILDING 799; AOC 2 – INTERIOR CONCRETE FLOOR; AOC 3 – EXTERIOR SURFACES OF SOUTHEAST CORNER OF BUILDING 799 BETWEEN BUILDINGS 799 AND 825; AOC 4 – ELECTRICAL VAULT.
2. MULTIPLE SSPORTS INITIAL ASSESSMENT AND POST-ABATMENT SAMPLES COLLECTED OF CONCRETE. LOCATIONS AND ANALYTICAL RESULTS NOT VERIFIED FOR ALL SAMPLES COLLECTED.
3. THIS SITE IS NOT READY FOR CLOSURE.

DEPARTMENT OF THE NAVY
SOUTHWEST DIVISION
SAN DIEGO, CALIFORNIA

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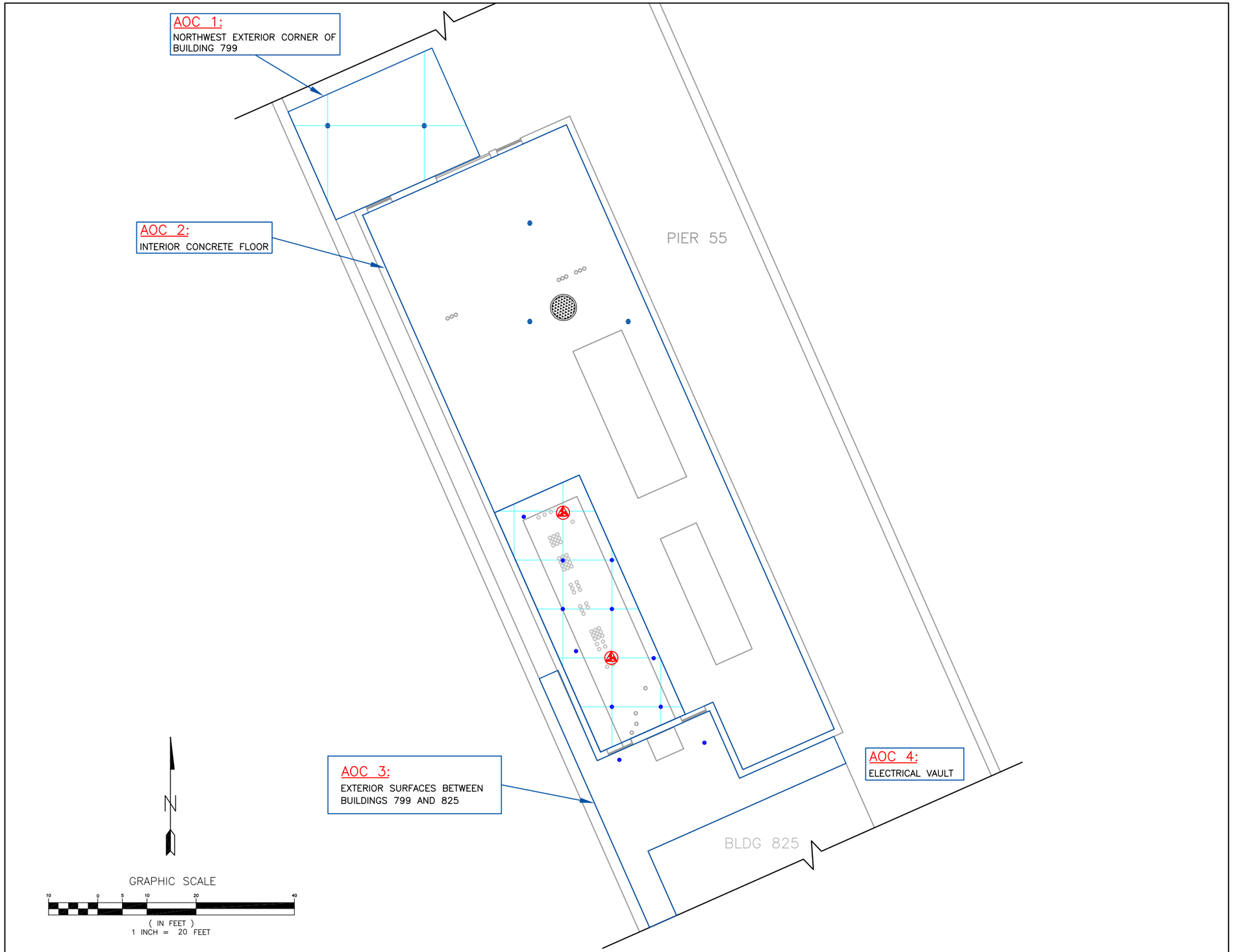
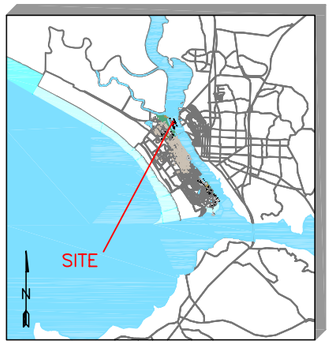
FIGURE 1
SITE FIGURES AND FIELD OBSERVATIONS
BUILDING 799

PCB SUMMARY REPORT , MARE ISLAND, CALIFORNIA

PCB FIGURES 799 FIG 1 DWG V31AUG04



PROPOSED SAMPLE LOCATIONS
BUILDING 799



MARE ISLAND AREA MAP
NO SCALE

LEGEND:

- PROPOSED SAMPLE AREA BASED ON SITE FEATURES AND EVIDENCE, HISTORICAL DOCUMENTANTION, AND TSCA REGULATIONS
- TSCA SAMPLE GRID (DARK BLUE INDICATES ACTUAL SAMPLE LOCATIONS THAT ARE LOCATED WITHIN VERIFICATION AREA)
- CONDUITS WITH APPROXIMATE DIAMETER (DIA.)
- MANHOLE COVER
- PROPOSED SAMPLING LOCATIONS

NOTES:

1. FOUR AOCs AT BUILDING 799: AOC 1– NORTHWEST EXTERIOR CORNER OF BUILDING 799; AOC 2 –INTERIOR CONCRETE FLOOR; AOC 3 – EXTERIOR SURFACES BETWEEN BUILDINGS 799 AND 825; AOC 4 – ELECTRICAL VAULT.
2. THIS SITE IS NOT READY FOR CLOSURE.

DEPARTMENT OF THE NAVY
SOUTHWEST DIVISION
SAN DIEGO, CALIFORNIA

SULLIVAN

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CONTRACT NO. N68711-03-C-5004
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FIGURE 2
PROPOSED SAMPLING LOCATIONS
BUILDING 799

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES DRAFT 799 FIG 2.DWG V30SEPT04

BUILDING 825/GRA-61 (INVESTIGATION AREA A2) SITE-SPECIFIC DATA GAP SUMMARY ON POLYCHLORINATED BIPHENYLS

This site-specific data gap summary report identifies the previous activities conducted at Building 825 and GRA 61 to assess PCBs, and documents the results, conclusions, recommendations, and references from a site-specific PCB data gap assessment. The purpose of this report is to identify whether Building 825 and GRA 61 requires any further assessment or abatement activities with respect to PCBs. The methods used to conduct the data gap assessment are presented in Section 2.0 of the "PCB Summary Report, Former Mare Island Shipyard, Vallejo, California", to which this site-specific report is appended.

1.0 SITE DESCRIPTION

Building 825 and GRA-61 are located adjacent to Building 799 near the center of Pier 55 (Figure 1). Building 825 consists of an abandoned shed attached to a structure of similar size and condition, which in turn adjoins Building 799. Available documentation indicates that GRA 61 was removed sometime prior to June 1997. Information regarding building construction and use was obtained from the EBS database (SSPORTS 1999) and field observations and is presented below.

SITE INFORMATION, BUILDING 825/GRA 61

Descriptive Information		Notes
Building Size	Approximately 1,000 feet	NA
Building Construction	Concrete, steel, wood	NA
Date of Construction	1946 or after	NA
Ground Surface	Concrete	NA
Former Building Identification	NA	NA
Former/Current Use	Former Use: Maintenance/Sailing club house Current Use: Empty, no current use	NA
Closure Date	GRA-61 Removed in 1997	NA

Notes:
NA Not Available or Applicable
Source: SSPORTS 1999

Building 825 was not listed as having transformers and other PCB-containing articles (cables/transformer pads). No electrical equipment was located inside Building 825, and no vaults are located beneath the structure.

Former GRA-61 was located immediately north of two concrete-encased 460-volt electrical units.

Figure 1 shows the location of GRA 61 and Building 825 relative to the pier, as well as sampling locations. Photographs with vantage points and brief descriptions are also provided on the figure.

ELECTRICAL EQUIPMENT POTENTIALLY CONTAINING POLYCHLORINATED BIPHENYLS, BUILDING 825/GRA 61

Equipment Type	Equipment Number	Relative Location	PCBs Identified	Volume (Gallons)	Status	Leaks Identified
Grounded Rocker Arm	GRA-61	Adjacent to Bldg 825	Yes	10	Removed*	Not specified
460V System	NA	Adjacent to Bldg 825	Not Sampled	NA	Inactive[1]	NA
460V System	NA	Adjacent to Bldg 825	Not Sampled	NA	Inactive[1]	NA

Notes:
1 As of June 5, 2003
* Removal date is not known
Source: SSPORTS 1999
NA Not applicable

2.0 PREVIOUS POLYCHLORINATED BIPHENYLS ASSESSMENT AND ABATEMENT ACTIVITIES

A PCB assessment survey of GRA-61 was conducted by SSPORTS in April 1996 (SSPORTS Tetra Tech 1998 and 2002). During the survey one concrete sample was collected in the vicinity of GRA-61 (see summary table below). The GRA was removed in accordance with TWD 96-1399 (SSPORTS 1997). No post-removal samples were collected by SSPORTS.

In July 1997, Tetra Tech subsequently collected two confirmation samples in the vicinity of former GRA-61. One sample was from the concrete pad, and the other sample was from loose soil on the pad. Previous sampling activities are summarized in the table below.

SUMMARY OF PREVIOUS ASSESSMENT SAMPLES, BUILDING 825/GRA 61

Location	Sample Matrix	Sample ID	Collected by	Conc (ppm)	DL (ppm)
Rocker arm pad	concrete	6102-0069	SSPORTS	ND	1
Rocker arm pad	concrete	PC-9007	Tetra Tech	0.04J	0.67
Rocker arm pad	loose soil	PC-9008	Tetra Tech	2.0	Unknown

Notes:
Conc Concentration
DL Detection Limit
ID Identification
ND Non-Detect
ppm Part per million

3.0 RESULTS OF DATA GAP ASSESSMENT

On June 5, 2003, SCG personnel performed a PCB data gap assessment at Building 825 and GRA 61. The assessment was designed to identify and document any of the following:

- Locations of electrical equipment, transformers, vaults, conduits, and cabling that may have contained PCBs.
- Evidence of previous PCB sampling conducted by SSPORTS or Tetra Tech.
- Evidence of previous PCB abatement conducted by SSPORTS, such as areas of scabbling.
- Assessment of the adequacy of previous PCB characterization and abatement of the AOCs identified.

Two concrete encased 460-volt electrical systems are located immediately south of the former GRA location. Insulation from these systems at other locations has been documented as containing PCBs. It is unknown whether the insulation or cables were sampled previously.

Unlabeled sampling markings and a sealed disconnected 2-inch-diameter conduit were observed on the pier surface at the north side of the rocker arm pad. Labeled sampling locations were discovered along the east side of the pier, approximately 10 to 15 feet east of Building 825. Sampling locations 7164-0002, PC9007, and PC9008 were identified.

4.0 DATA SUMMARY

Building 825 was formerly used for maintenance activities and was converted into a sailing club house in the 1970s. GRA 61 is documented to have contained PCBs. AOC 1 consists of the concrete surface in the former area of GRA-61, and the PCB-contaminated soil located on the rocker arm pad.

5.0 CONCLUSIONS

The following conclusions are based on existing documentation and observations made during the data gap assessment:

- PCB contamination above 1 ppm exists in the area around former GRA-61. A sample of loose soil collected at the GRA 61 concrete pad had a reported PCB concentration of 2.0 ppm. A rocker arm pad concrete sample had a reported estimated PCB concentration of 0.04 ppm, which is below the detection limit of 0.67 ppm.
- AOC 1 is not ready for closure.

6.0 RECOMMENDATIONS

Further assessment within Building 825 is not required. However, further assessment and abatement at GRA-61 is recommended (see Figure 2). The following recommendations are presented by AOC:

AOC 1 (Exterior Surfaces around former GRA-61 and 460-Volt Systems): Removal and disposal activities should be conducted to address the loose soil on the rocker arm pad. In addition, two samples should be collected from the concrete surface of the pad to confirm removal of PCB-contaminated media.

Electrical Vault: The manhole cover should be opened, and the vault interior inspected for suspect PCB sources or potentially contaminated media.

7.0 REFERENCES

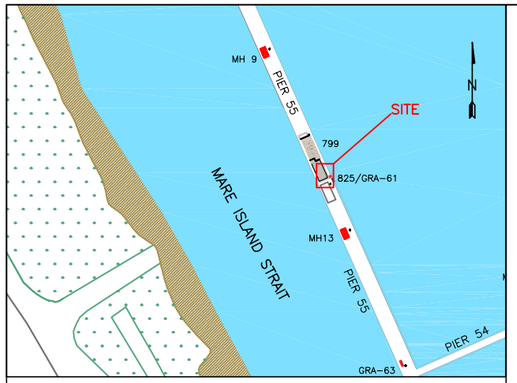
SSPORTS. 1996. "PCB Assessment for Parcel 01-Q2." June 6.

SSPORTS, 1997. "PCB Decontamination Technical Work Document 96-1399." February 3.

SSPORTS. 1999. "Mare Island Naval Shipyard Environmental Baseline Survey Database." Last updated 1999.

Tetra Tech. 1998. "Final Basewide Confirmation Sampling Summary Report, Mare Island."

Tetra Tech. 2002. "Internal Draft Polychlorinated Biphenyl Assessment and Abatement Summary Report, Mare Island, California, Volumes I-VII." August.

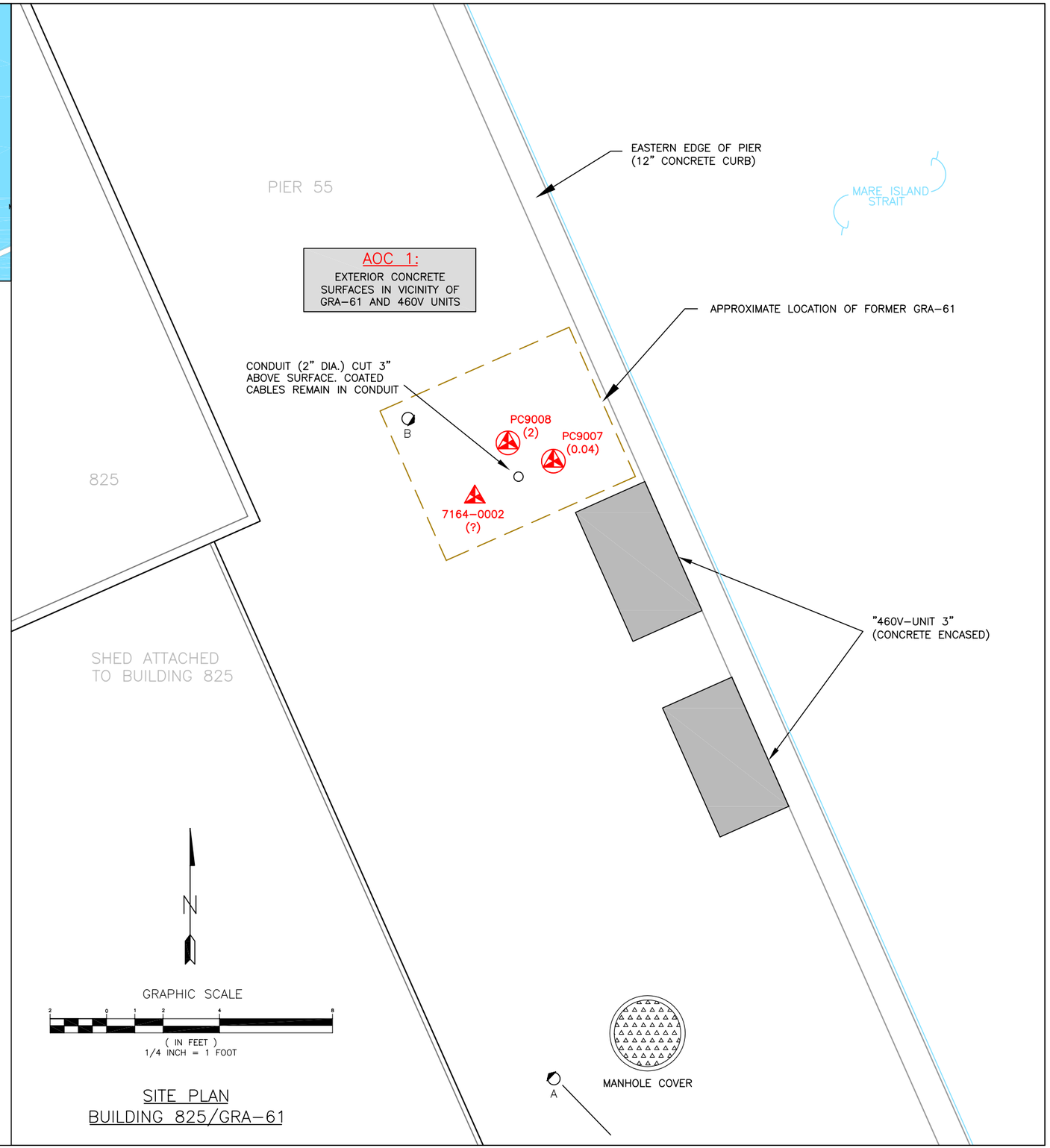


BUILDING 825/GRA-61 VICINITY MAP

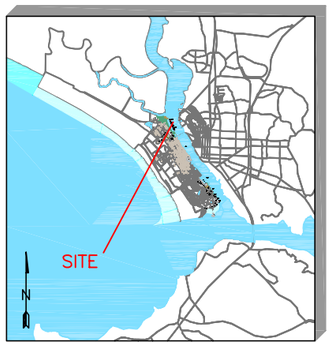
SCALE: 1 INCH = 400 FEET

PHOTOGRAPH A: CORRUGATED METAL AND WOOD SHED ATTACHED TO SOUTH END OF BUILDING 825. GRA-51 IS TO THE IMMEDIATE LEFT (OUT OF PHOTO).

PHOTOGRAPH B: LOCATION OF FORMER GRA-61 AND SAMPLES PC9007 AND PC9008 IN FOREGROUND. 460-VOLT UNITS IN BACKGROUND (LOOKING SOUTHEAST).



SITE PLAN
BUILDING 825/GRA-61



MARE ISLAND AREA MAP

NO SCALE

LEGEND:

- 7164-0002 (?) — SSPORTS INITIAL SAMPLE LOCATIONS AND IDENTIFICATION (RESULTS IN PPM, ? = UNKNOWN)
- PC9008 (2) — TETRA TECH CONFIRMATION SAMPLE LOCATION AND IDENTIFICATION (RESULTS IN PPM)
- C — PHOTOGRAPH VIEWPOINT
- CONDUITS WITH APPROXIMATE DIAMETER (DIA.)
- MANHOLE COVER
- CONCRETE ENCASEMENT WITH ELECTRICAL EQUIPMENT (460V)
- LOCATION OF FORMER GROUNDED ROCKER ARM
- STEEL/WOOD-FRAMED STRUCTURE WITH CORRUGATED METAL SIDING/DOORS AND ROOF

NOTES:

1. ONE AOC AT BLDG 825\GRA-61: AOC 1 – EXTERIOR CONCRETE SURFACES IN VICINITY OF FORMER GRA-61 AND 460V ELECTRICAL EQUIPMENT.
2. THIS SITE IS NOT READY FOR CLOSURE.

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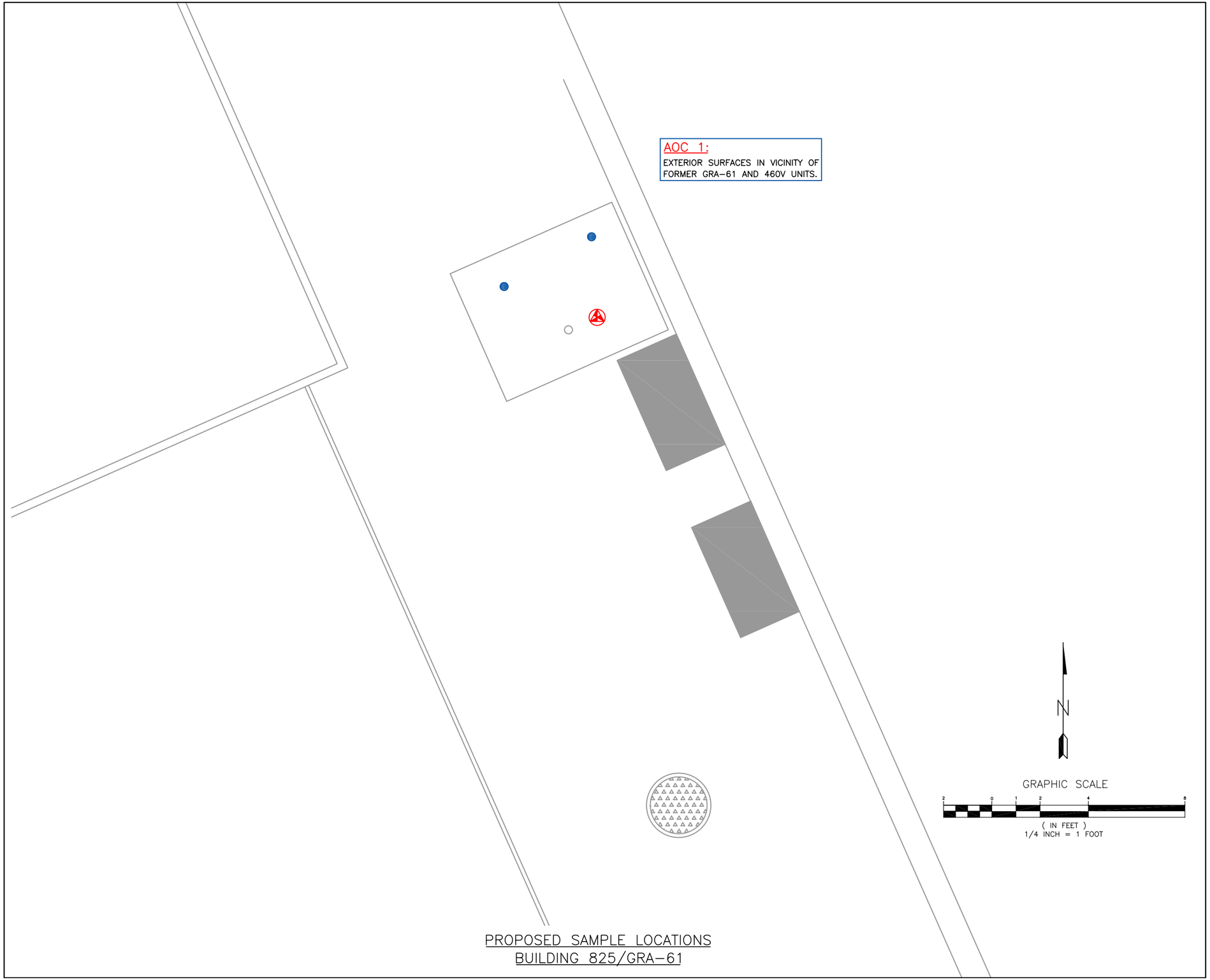
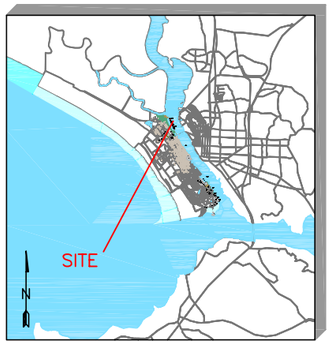
FIGURE 1
SITE FIGURES AND FIELD OBSERVATIONS
BUILDING 825/GRA-61

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES 825 FIG_1.DWG V12AUG04



PROPOSED SAMPLE LOCATIONS
BUILDING 825/GRA-61



MARE ISLAND AREA MAP

NO SCALE

LEGEND:

- PROPOSED SAMPLING LOCATIONS
- TETRA TECH CONFIRMATION SAMPLE LOCATION (USE AS VERIFICATION SAMPLE POINT)

NOTES:

1. ONE AOC AT BUILDING 825\GRA-61: AOC 1 – EXTERIOR CONCRETE SURFACES IN VICINITY OF FORMER GRA-61 AND 460V ELECTRICAL EQUIPMENT.
2. THIS SITE IS NOT READY FOR CLOSURE.

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FIGURE 2
PROPOSED SAMPLING LOCATIONS
BUILDING 825/GRA-61

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES 825_GRA 51 FIG_2.DWG V12AUG04

GRA 53 (INVESTIGATION AREA A2) SITE-SPECIFIC DATA GAP SUMMARY ON POLYCHLORINATED BIPHENYLS

This site-specific data gap summary report identifies the previous activities conducted at GRA 53 to assess PCBs, and documents the results, conclusions, recommendations, and references from a site-specific PCB data gap assessment. The purpose of this report is to identify whether GRA 53 requires any further assessment or abatement activities with respect to PCBs. The methods used to conduct the data gap assessment are presented in Section 2.0 of the "PCB Summary Report, Former Mare Island Shipyard, Vallejo, California", to which this site-specific report is appended.

1.0 SITE DESCRIPTION

GRA 53 was formerly located on the southwest side of Pier 55 approximately 290 feet southeast of Building 797 (Figure 1). The GRA was attached to the concrete surface of the pier and to a 9- by 4-foot concrete structure that currently contains electrical equipment.

Pier 55 forms an L-shaped structure extending northeast and southeast from the northeastern corner of IA A2. Pier 55 has a concrete surface with associated wood pilings and fenders. General building construction information obtained from the EBS database (SSPORTS 1999) and field observations are presented below.

SITE INFORMATION, GRA 53

Descriptive Information		Notes
Structure Size	NA	NA
Construction	Concrete pier base	NA
Date of Construction	1946 or after	Pier 55 constructed in 1946 according to EBS database
Exterior Ground Cover	Concrete	NA
Former Building Identification	NA	NA
Former/Current Use	Former Use: GRA installation Current Use: Removed	NA
Closure Date	Removed in around 1997	NA

Notes:
EBS Environmental baseline survey
NA Not available or applicable
Source: SSPORTS 1999

Documented subsurface utilities exist below former GRA 53 and in the vicinity. A vault cover is located 3 feet northeast of the concrete encasement. Cut conduits with coated cables extend several inches above the concrete near former GRA 53. Figure 1 illustrates the former location of GRA 53 and cable and sampling locations. Photographs with vantage points and brief descriptions are also provided on the figure.

The EBS database (SSPORTS 1999) for Pier 55 lists GRA 53 but does not provide any data regarding the volume, status, or PCB concentrations within the equipment.

ELECTRICAL EQUIPMENT POTENTIALLY CONTAINING POLYCHLORINATED BIPHENYLS, GRA 53

Equipment Type	Equipment Number	Relative Location	PCBs Identified[a]	Volume (gallons)	Status	Leaks Identified[b]
GRA	GRA 53	290 feet southeast of Building 797	Yes	Unknown	Removed	Yes

Notes:
a PCBs identified in transformer fluid
b Most transformers identified as having leaked did not release to the environment.
GRA Grounded rocker arm
PCB Polychlorinated biphenyl
Source: SSPORTS 1999

2.0 PREVIOUS POLYCHLORINATED BIPHENYLS ASSESSMENT AND ABATEMENT ACTIVITIES

SSPORTS conducted a PCB assessment survey of GRA 53 in April 1996 (SSPORTS 1996; Tetra Tech 1998). SSPORTS reported that GRA 53 was leaking. The extent or duration of the leaking is not known. SSPORTS collected a sample of dielectric fluid from GRA 53 (sample 6102-0074) that contained PCBs at a concentration of 290 ppm. Based on the identified leaks and the PCB concentration in sample 6102-0074, SSPORTS recommended further assessment and TWD 97-1452 was prepared (SSPORTS 1997). The TWD directed the removal of the PCB-containing dielectric fluid and subsequent removal of the GRA.

After removal of GRA 53, SSPORTS collected a post-removal sample (sample 6122-0055; laboratory results not available) from concrete below the former GRA (SSPORTS 1997). The PCB concentration in the sample was 1.4 ppm (SSPORTS 1997).

Tetra Tech collected one PCB confirmation sample (sample PC0411). The sample contained 1.0 ppm PCBs (Tetra Tech 2002). At the request of the regulators, the subsurface vault was also sampled. Samples PC8823, PC8824, and PC8825 were collected (see the summary table below). The vault samples contained PCBs at concentrations of 1.4 and 1.7 ppm. The water sample PCB concentration was reported as non-detect (1 ppm detection limit). Concrete samples of the vault were not collected.

SUMMARY OF PREVIOUS ASSESSMENT SAMPLES, GRA 53

Location	Sample Matrix	Sample ID	Collected by	Conc (ppm)	DL (ppm)
GRA Fluid	dielectric fluid	6102-0074	SSPORTS	290	10
Former GRA	concrete	6102-0055	SSPORTS	1.4	1
Former GRA location	concrete	PC0411	Tetra Tech	1.0	0.067
Subsurface Vault	residue	PC8823	Tetra Tech	1.4	NA
Subsurface Vault	residue	PC8824	Tetra Tech	1.7	NA
Subsurface Vault	water	PC8825	Tetra Tech	ND	1

Notes:

Conc	Concentration
DL	Detection limit
GRA	Grounded rocker arm
ID	Identification
NA	Not available or applicable
ND	Non-detect
ppm	Part per million
SSPORTS	Supervisor of Shipbuilding, Conversion, and Repair
Tetra Tech	Tetra Tech EM Inc.

3.0 RESULTS OF DATA GAP ASSESSMENT

On June 4, 2003, SCG personnel performed a PCB data gap assessment at GRA 53. The assessment was designed to identify and document any of the following:

- Locations of electrical equipment, transformers, vaults, conduits, and cabling that may have contained PCBs.
- Evidence of previous PCB sampling conducted by SSPORTS or Tetra Tech.
- Evidence of previous PCB abatement conducted by SSPORTS, such as areas of scabbling.
- Assessment of the adequacy of previous PCB characterization and abatement of the AOCs identified.

Electrical equipment related to former GRA 53 is currently present on site but non-operational. Both the SSPORTS post-removal and Tetra Tech confirmation sampling locations were identified. No evidence of PCB abatement was found.

4.0 DATA SUMMARY

Former GRA 53 is a documented leaking PCB source. The concrete surface in the vicinity of former GRA 53 is contaminated with PCBs at concentrations greater than 1 ppm. PCB concentrations greater than 1 ppm are also documented in residue in the subsurface vault. There are two AOCs at this site. AOC 1 consists of the concrete pier surface in the vicinity of former GRA 53 and the concrete encasement. AOC 2 consists of the interior surfaces of the vault and Pier 55 components beneath the concrete.

5.0 CONCLUSIONS

The conclusions below are based on evaluation of existing documentation and observations made during the data gap assessment:

- The dielectric fluid in former GRA 53 contained PCBs
- GRA 53 is documented as leaking. The extent and duration of the leaks is unknown.
- GRA 53 was removed in 1997. No PCB abatement was conducted.
- One post-removal sample was collected by SSPORTS, and one confirmation sample was collected by Tetra Tech. PCB concentrations in both samples were at or above 1 ppm.
- The extent of PCB contamination above 1 ppm has not been sufficiently delineated.
- Residue samples from the vault contained PCBs at concentrations of 1.4 and 1.7 ppm.
- AOCs 1 and 2 are not ready for closure.

6.0 RECOMMENDATIONS

Further assessment and abatement at GRA 53 is recommended. Recommendations are provided below by AOC.

<u>AOC 1 (Pier surface and concrete encasement):</u> Additional characterization sampling of the pier surface in the area of GRA 53 should be conducted to delineate the extent of PCBs in the concrete. Three concrete samples should be collected at the locations shown on Figure 2, yielding a total of four sampling locations (three samples in addition to the one previously collected Tetra Tech sample) for this AOC.

AOC 2 (Vault interior and Pier 55 components beneath concrete): The interior concrete surface of the vault should be sampled. Because PCB contamination of the residue in the vault is documented, three verification samples of the vault should be collected after the vault is cleaned.

7.0 REFERENCES

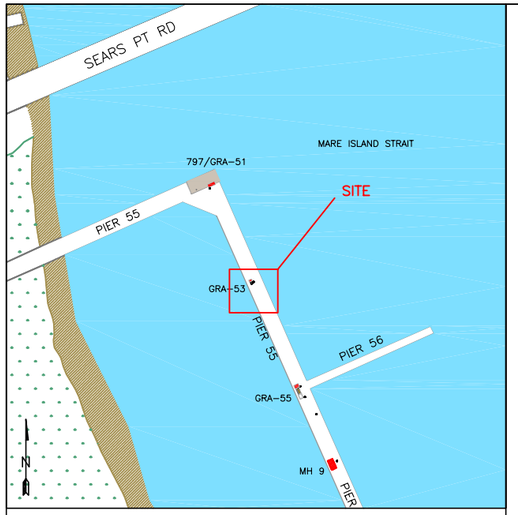
SSPORTS. 1996. "PCB Decontamination for Parcel 01-Q2." June 6.

SSPORTS. 1997. "PCB Decontamination Technical Work Document (TWD), PCB Contaminated Site: Transformers # T-0512, 0514, and 0516, TWD No. 97-1452." June 4.

SSPORTS. 1999. "Mare Island Naval Shipyard Environmental Baseline Survey Database." Last updated 1999.

Tetra Tech. 1998. "Final Basewide Confirmation Sampling Summary Report, Mare Island."

Tetra Tech. 2002. "Internal Draft Polychlorinated Biphenyl Assessment and Abatement Summary Report, Mare Island, California, Volumes I-VII." August.



GRA-53 VICINITY MAP

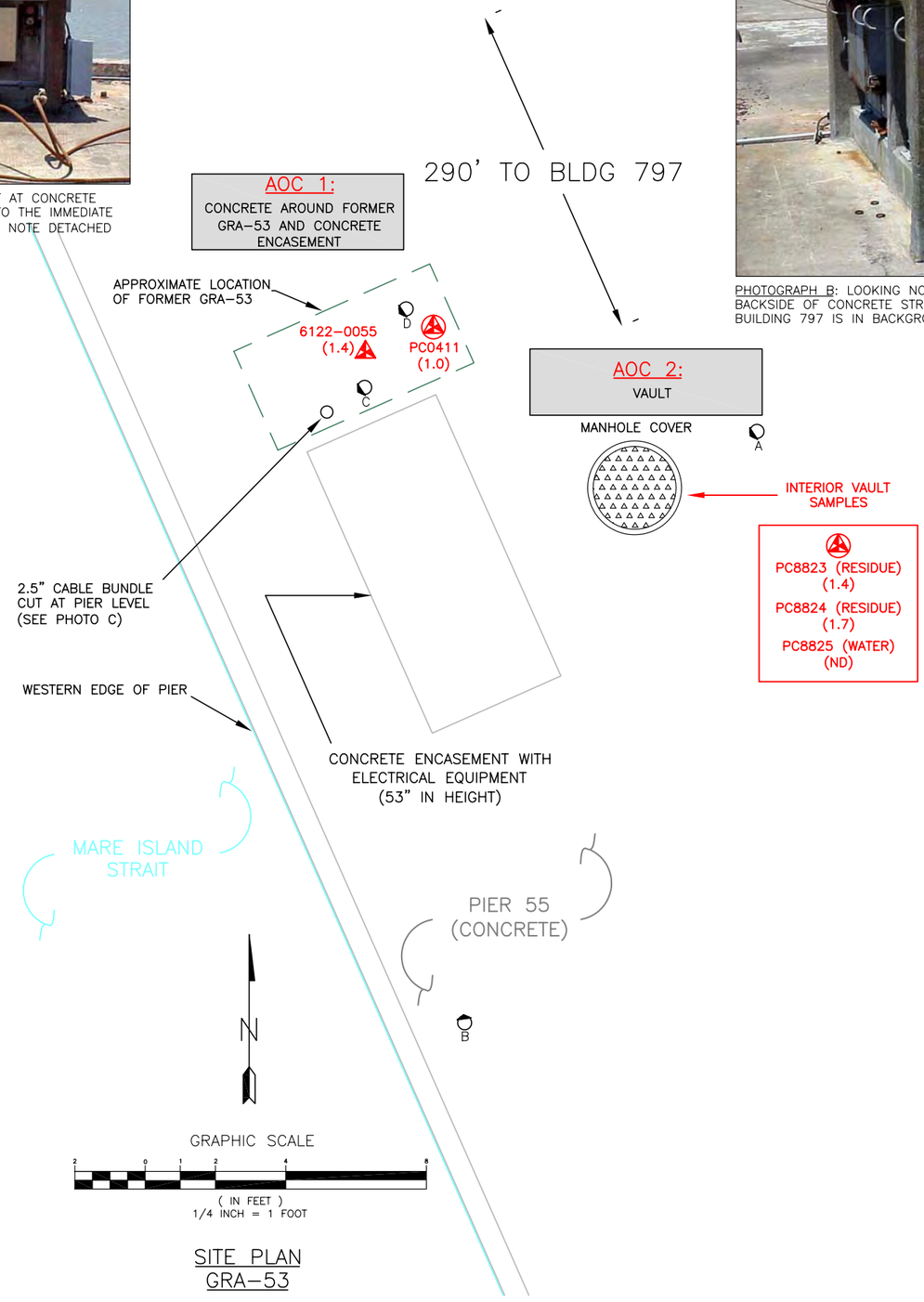
SCALE: 1 INCH = 400 FEET

PHOTOGRAPH A: LOOKING SOUTHWEST AT CONCRETE STRUCTURE. GRA-53 WAS LOCATED TO THE IMMEDIATE RIGHT (NORTH) AND WAS ATTACHED. NOTE DETACHED CABLE (1" DIAMETER).

PHOTOGRAPH B: LOOKING NORTHWEST AT BACKSIDE OF CONCRETE STRUCTURE. BUILDING 797 IS IN BACKGROUND.

PHOTOGRAPH C: CUT CABLE FORMERLY ATTACHED TO GRA-53 NORTH OF CONCRETE STRUCTURE.

PHOTOGRAPH D: RUST, STAINING, AND EVIDENCE OF PREVIOUS SSPORTS SAMPLING (BLUE PAINT).



SITE PLAN
GRA-53

MARE ISLAND AREA MAP

NO SCALE

LEGEND:

- 6122-0074 (290) — SSPORTS PCB SAMPLE LOCATION
- PC0411 (1.0) — TETRA TECH CONFIRMATION SAMPLE LOCATION AND IDENTIFICATION (RESULTS IN PPM)
- C — PHOTOGRAPH VIEWPOINT
- CONDUITS WITH APPROXIMATE DIAMETER (DIA.)
- CONCRETE GROUNDED ROCKER ARM ENCASEMENT

NOTES:

1. TWO AOCs AT SITE: AOC 1 – CONCRETE PIER SURFACE AND ENCASEMENT; AOC 2 – VAULT.
2. SSPORTS INITIAL ASSESSMENT SAMPLES PARTIALLY VERIFIED (LOCATION BUT NOT ID). TETRA TECH CONFIRMATION SAMPLE IDENTIFIED.
3. THIS SITE IS NOT READY FOR CLOSURE.

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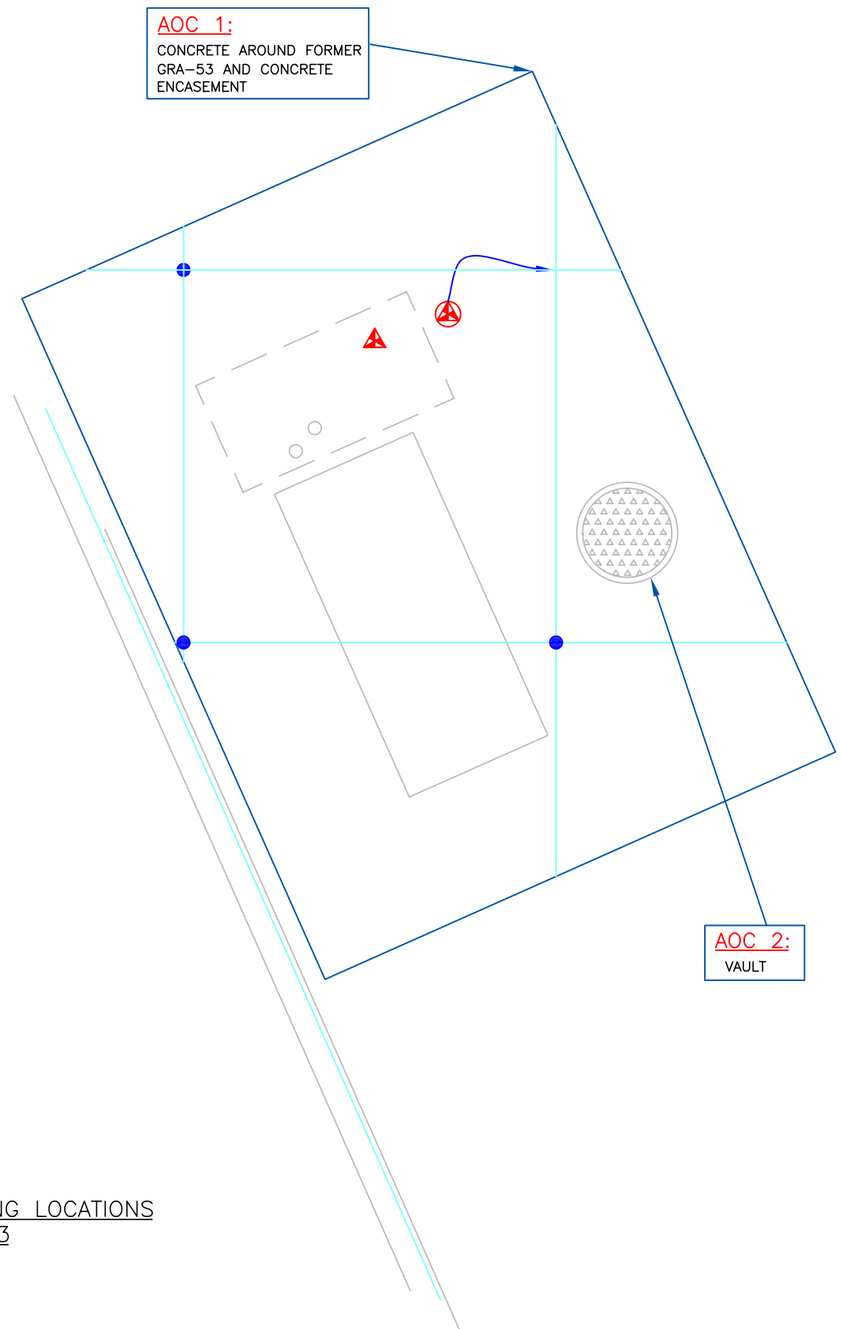
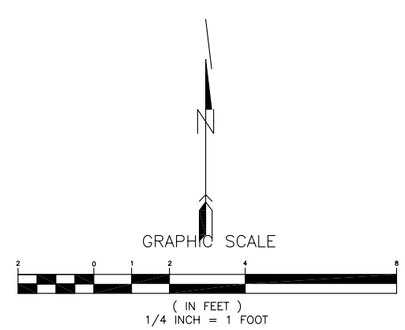
FIGURE 1
SITE FIGURES AND FIELD OBSERVATIONS
GRA-53

PCB REPORT SUMMARY, MARE ISLAND, CALIFORNIA

PCB FIGURES GRA-53.DWG 31AUG04



PROPOSED SAMPLING LOCATIONS
GRA-53



MARE ISLAND AREA MAP

NO SCALE

LEGEND:

- PROPOSED SAMPLE AREA BASED ON SITE FEATURES AND EVIDENCE, HISTORICAL DOCUMENTANTION, AND TSCA REGULATIONS
- TSCA CHARACTERIZATION SAMPLE GRID (3-METER GRID; DARK BLUE INDICATES ACTUAL SAMPLE LOCATIONS THAT ARE LOCATED WITHIN VERIFICATION AREA)
- SSPORTS PCB SAMPLE LOCATION (1.4 PPM)
- TETRA TECH CONFIRMATION SAMPLE LOCATION (TO BE USED AS ONE TSCA VERFICATION SAMPLE POINT)

NOTES:

1. TWO AOCs AT SITE: AOC 1 – EXTERIOR CONCRETE PIER IN VICINITY OF GRA-53 INCLUDING CABLES AND CONCRETE ENCASEMENT; AOC 2 – SUBSURFACE VAULT.
2. THIS SITE IS NOT READY FOR CLOSURE.

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SAN DIEGO, CALIFORNIA

SULLIVAN

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FIGURE 2
PROPOSED SAMPLING LOCATIONS
GRA-53

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES GRA-53.DWG 31AUG04

GRA 55/LOAD CONTROL CENTER (INVESTIGATION AREA A2) SITE-SPECIFIC DATA GAP SUMMARY ON POLYCHLORINATED BIPHENYLS

This site-specific data gap summary report identifies the previous activities conducted at GRA 55/load control center to assess PCBs, and documents the results, conclusions, recommendations, and references from a site-specific PCB data gap assessment. The purpose of this report is to identify whether GRA 55/load control center requires any further assessment or abatement activities with respect to PCBs. The methods used to conduct the data gap assessment are presented in Section 2.0 of the "PCB Summary Report, Former Mare Island Shipyard, Vallejo, California", to which this site-specific report is appended.

1.0 SITE DESCRIPTION

Former GRA 55 is on the west edge of Pier 55 approximately 580 feet southeast of Building 797 (Figure 1). A load control center with three former transformers (T-512, T-514, and T-516) and one existing transformer (T-1269) is located southeast of former GRA 55. Pier 55 has a concrete surface in the vicinity of GRA 55 and the load control center. General information obtained from the EBS database (SSPORTS 1999), SSPORTS documents, and field observations is provided below.

SITE INFORMATION, GRA 55/LOAD CONTROL CENTER

Descriptive Information		Notes
Size of GRA 55 footprint	About 115 square feet	NA
Size of load control center pad	6 by 17 feet by 6 inches (102 square feet)	
Construction (pads)	Concrete	NA
Date of Construction	1946 or after	EBS database indicates Pier 55 was constructed in 1946
Exterior Ground Cover	Concrete	NA
Former Building Identification	NA	NA
Former/Current Use	Former Use: GRA Current Use: Inactive	NA
Closure Date	1996	NA

Notes:
GRA Grounded rocker arm
NA Not available or applicable
Source: SSPORTS 1999

A subsurface vault formerly connected to GRA 55 and the load control center is located several feet north of the load control center pad. Figure 1 shows the locations of GRA 55 and the load control center, the pier, adjacent structures, and sampling locations. Photographs with vantage points and brief descriptions are also provided on the figure.

The EBS database (SSPORTS 1999) for Pier 55 lists GRA 55 as "active," but the GRA and load control center were removed in 1997. See the table below for information on former and existing electrical equipment associated with the GRA and load control center potentially containing PCBs.

ELECTRICAL EQUIPMENT POTENTIALLY CONTAINING POLYCHLORINATED BIPHENYLS, GRA 55/LOAD CONTROL CENTER

Equipment Type	Equipment Number	Relative Location	PCBs Identified[a]	Volume (gallons)	Status	Leaks Identified[b]
GRA	GRA 55	580 feet southeast of Building 797	No	25	Removed (1997) ("Active" according to EBS database)	Not specified
Cables and Wireways	NA	Load control center[c]	Yes	NA	Partially removed	NA
Transformer	T-512	Load control center[c]	Yes	75	Removed	Unknown
Transformer	T-514	Load control center[c]	Yes	75	Removed	Unknown
Transformer	T-516	Load control center[c]	Yes	75	Removed	Unknown
Transformer	T-1269	Load control center[c]	No	Dry	Inactive	NA

Notes:
a PCBs identified in transformer fluid
b Most transformers identified as having leaked did not release to the environment.
c Immediately adjacent to former GRA 55
EBS Environmental baseline survey
GRA Grounded rocker arm
NA Not applicable or available
PCB Polychlorinated biphenyl
Source: SSPORTS 1999

2.0 PREVIOUS POLYCHLORINATED BIPHENYLS ASSESSMENT AND ABATEMENT ACTIVITIES

SSPORTS conducted a PCB assessment survey of GRA 55 in April 1996 (SSPORTS 1996; Tetra Tech 1998). SPPORTS reported that the oil from GRA 55 did not contain detectable concentrations of PCBs. The laboratory results and detection limit information were not available. A sample was collected of the pier floor where GRA 55 was located; however, the exact sampling location is unknown. The PCB analytical result for the concrete sample was non-detect (1 ppm detection limit).

SSPORTS's TWD 97-1452 indicates that GRA 55 was removed in mid-1997 and that GRA 55 did not contain PCBs (SSPORTS 1997); however, the analytical data reports were not available. Tetra Tech reports that one post-removal concrete confirmation sample was collected and analyzed for PCBs. The sample contained PCBs at a concentration above the 1 ppm reporting limit (Tetra Tech 1998).

Concrete sampling was performed as described by SSPORTS (1997) and Tetra Tech (1998 and 2002) at the load center shown on Figure 1. A total of seven concrete sampling locations are shown on Figure 1. PCB concentrations in six of the seven samples collected were reportedly at or near the detection limit of 1 ppm. Concrete sample 7160-0085 collected from near the center of the load center pad and south of the former Transformer T-514 contained PCBs at 2.8 ppm. No indication of abatement activities could be found in the historical record or during the site inspection of the site.

SUMMARY OF PREVIOUS ASSESSMENT SAMPLES, GRA 55/LOAD CONTROL CENTER

Location	Sample Matrix	Sample ID	Collected by	Conc (ppm)	DL (ppm)
GRA 55	concrete	6102-0073	SSPORTS	ND	1
GRA 55	oil	Unknown	SPPORTS	ND	NA
Transformer T-512	oil	KO606	SSPORTS	1.68	1.2
Transformer T-514	oil	KO607	SSPORTS	1.21	1.2
Transformer T-516	oil	KO608	SSPORTS	4.49	1.2
Load Control Center Pad	concrete	7037-0145	SSPORTS	ND	1
Load Control Center Pad	concrete	7037-0146	SSPORTS	ND	1
Load Control Center Pad	concrete	7037-0147	SSPORTS	ND	1
Load Control Center Pad	concrete	7160-0082	SSPORTS	ND	1
Load Control Center Pad	concrete	7160-0083	SSPORTS	1.1	1
Load Control Center Pad	concrete	7160-0084	SSPORTS	ND	1
Load Control Center Pad	concrete	7160-0085	SSPORTS	2.8	1
Load Control Center Pad	concrete	7160-0086	SSPORTS	ND	1
Load Control Center Pad	concrete	PC0401	Tetra Tech	0.04	0.67
Load Control Center Pad	concrete	PC0402	Tetra Tech	0.02	0.67
Vault	NA	PC8846	Tetra Tech	1.5	NA
Vault	NA	PC8847	Tetra Tech	1.7	NA

Notes:

Conc	Concentration
DL	Detection limit
ID	Identification
NA	Not available (unknown)
ND	Non-detect
ppm	Part per million
SSPORTS	Supervisor of Shipbuilding, Conversion, and Repair
Tetra Tech	Tetra Tech EM Inc.

3.0 RESULTS OF DATA GAP ASSESSMENT

On June 4, 2003, SCG personnel performed a PCB data gap assessment at GRA 55. The assessment was designed to identify and document any of the following:

- Locations of electrical equipment, transformers, vaults, conduits, and cabling that may have contained PCBs.
- Evidence of previous PCB sampling conducted by SSPORTS or Tetra Tech.
- Evidence of previous PCB abatement conducted by SSPORTS, such as areas of scabbling.
- Assessment of the adequacy of previous PCB characterization and abatement of the AOCs identified.

Evidence of SSPORTS initial sampling was not found. Sampling locations for samples 7037-0145 through 7037-0147 were not observed during the field visit. Electrical cables remain at the former location of GRA 55. No other electrical equipment was observed other than Transformer T-1269. Wireways and electrical conduits are cut several inches above the existing concrete floor surface.

4.0 DATA SUMMARY

Building history indicates that GRA 55 was associated with an adjacent load control center that housed four transformers. Three electrical transformers known to have contained PCBs are documented.

PCB contamination above 1 ppm is documented on the load control center pad and in the subsurface vault associated with GRA 55 and the load center. There are two AOCs at the GRA 55/load control center. AOC 1 consists of the concrete slab where the three former transformers were removed and the concrete pier surface in the area where former GRA 55 was located north of the concrete pad. AOC 2 consists of the electrical vault and vault contents.

5.0 CONCLUSIONS

The conclusions below are based on evaluation of existing documentation and observations made during the data gap assessment:

- Known PCB contamination exists on the load control center concrete pad.
- The subsurface vault contained PCBs at concentrations above 1 ppm.
- AOCs 1 and 2 are not ready for closure.

6.0 RECOMMENDATIONS

Further assessment and abatement is recommended. The following recommendations are presented by AOC:

AOC 1 (Concrete transformer slab and concrete pier surface): Concrete characterization samples should be collected using a 3.0-meter grid as illustrated on Figure 2. An additional three samples should be collected to supplement results from the six previous SSPORTS and Tetra Tech confirmation samples.

AOC 2 (Electrical vault): The vault should be cleaned. Upon cleaning the vault, three verification samples of the vault should be collected.

7.0 REFERENCES

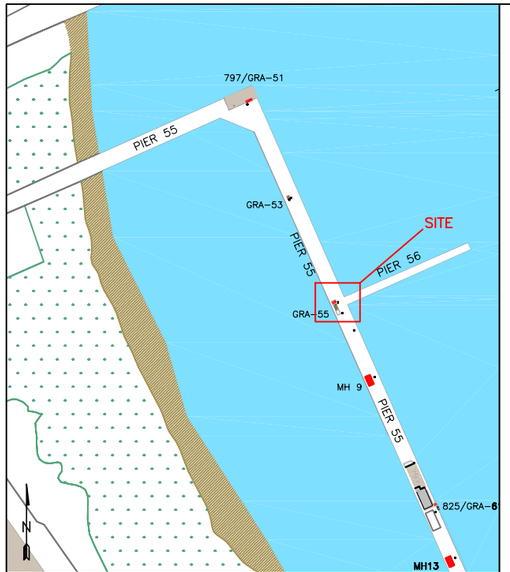
SSPORTS. 1996. "PCB Assessment for Parcel 01-Q2." June 6.

SSPORTS. 1997. "PCB Decontamination Technical Work Document (TWD), PCB Contaminated Site: Transformers # T-0512, 0514, and 0516, TWD No. 97-1452." June 4.

SSPORTS. 1999. "Mare Island Naval Shipyard Environmental Baseline Survey Database." Last updated 1999.

Tetra Tech. 1998. "Final Basewide Confirmation Sampling Summary Report, Mare Island."

Tetra Tech. 2002. "Internal Draft Polychlorinated Biphenyl Assessment and Abatement Summary Report, Mare Island, California, Volumes I-VII." August.

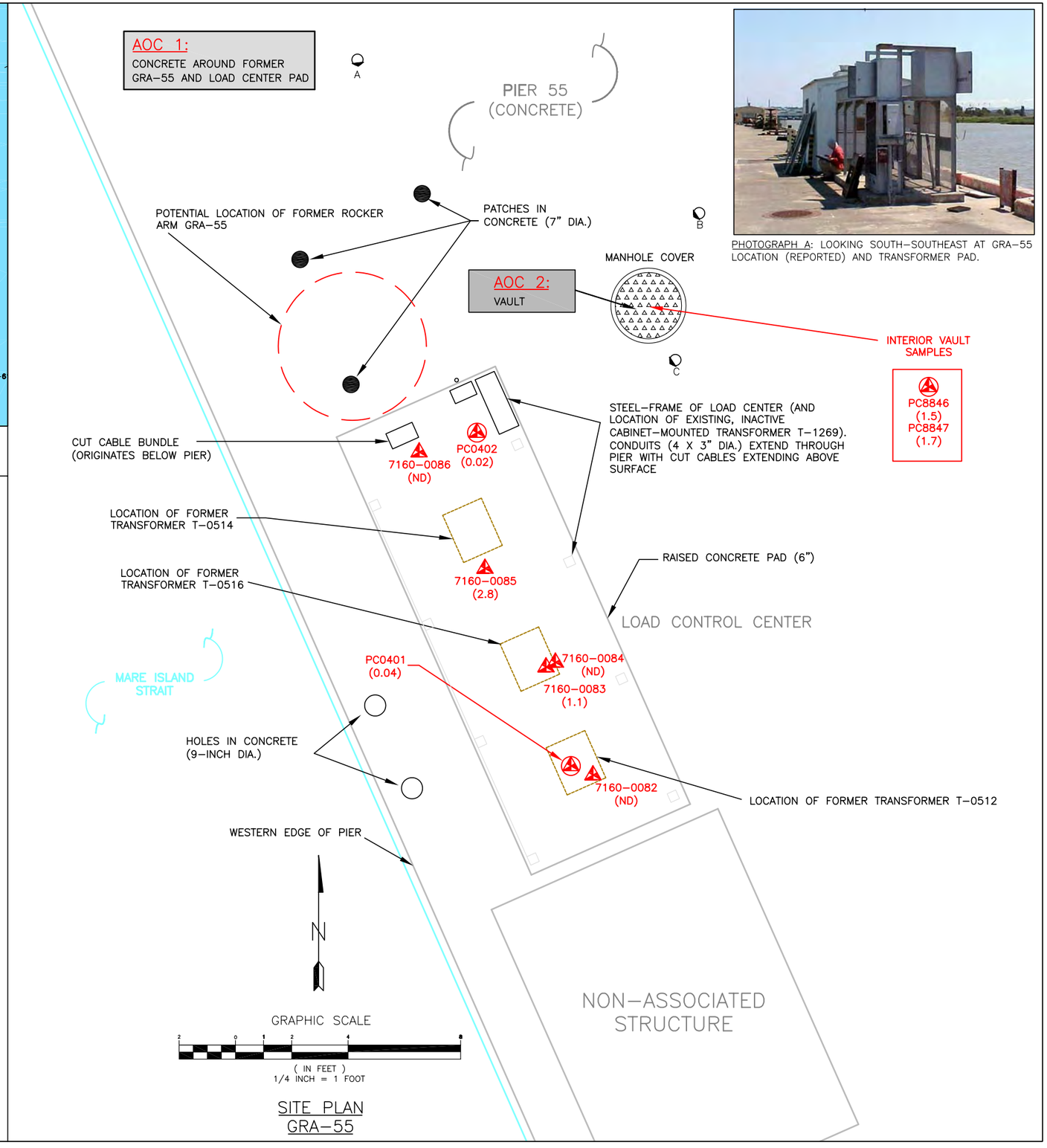


GRA–55 VICINITY MAP

SCALE: 1 INCH = 400 FEET

PHOTOGRAPH B: LOAD CENTER PAD AND STEEL–FRAME, VAULT ACCESS, AND CONCRETE WHERE GRA–55 WAS REPORTEDLY LOCATED.

PHOTOGRAPH C: LOCATION OF CABINET–MOUNTED TRANSFORMER T–1269 (DRY TYPE).



SITE PLAN
GRA–55

PHOTOGRAPH A: LOOKING SOUTH–SOUTHEAST AT GRA–55 LOCATION (REPORTED) AND TRANSFORMER PAD.

MARE ISLAND AREA MAP

NO SCALE

LEGEND:

- 7160–0086 (ND) — SSPORTS INITIAL PCB SAMPLE LOCATION. CONCENTRATION INDICATED IN PPM IF KNOWN
- PC0402 (0.02) — TETRA TECH CONFIRMATION SAMPLE LOCATION AND IDENTIFICATION (RESULTS IN PPM)
- PHOTOGRAPH VIEWPOINT
- CONDUITS WITH APPROXIMATE DIAMETER (DIA.)
- CONCRETE LOAD CONTROL CENTER PAD
- LOCATION OF FORMER PCB TRANSFORMER

NOTES:

1. TWO AOCs AT SITE: AOC 1 – CONCRETE PIER AND CONCRETE TRANSFORMER PAD SURFACES; AOC 2 – VAULT.
2. SSPORTS INITIAL ASSESSMENT SAMPLES PARTIALLY VERIFIED. EVIDENCE OF GRA–55 SAMPLE GROUP NOT FOUND. TETRA TECH CONFIRMATION SAMPLES IDENTIFIED.
3. LOCATIONS OF THE THREE FORMER TRANSFORMERS IDENTIFIED.
4. THIS SITE IS NOT READY FOR CLOSURE.

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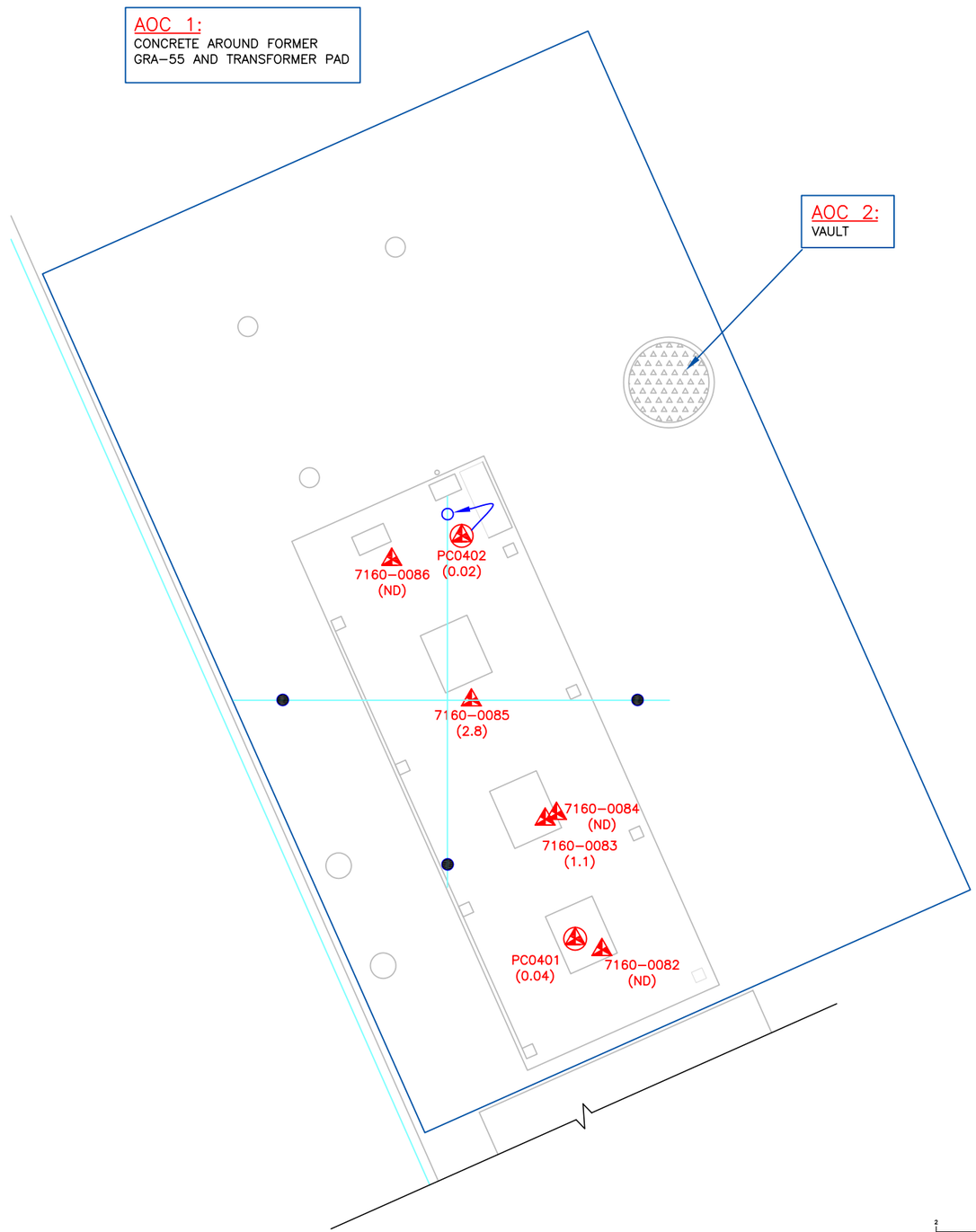
FIGURE 1
SITE FIGURES AND FIELD OBSERVATIONS
GRA-55/LOAD CONTROL CENTER

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES GRA 55.DWG30SEPT04



PROPOSED SAMPLING LOCATIONS
GRA–55

MARE ISLAND AREA MAP

NO SCALE

LEGEND:

PROPOSED SAMPLE AREA BASED ON SITE FEATURES AND EVIDENCE, HISTORICAL DOCUMENTANTION, AND TSCA REGULATIONS

TSCA SAMPLE GRID (DARK BLUE INDICATES ACTUAL SAMPLE LOCATIONS THAT ARE LOCATED WITHIN VERIFICATION AREA)

N

GRAPHIC SCALE

2 0 1 2 4 8

(IN FEET)
1/4 INCH = 1 FOOT

NOTES:

1. TWO AOCs AT SITE: AOC 1 – EXTERIOR CONCRETE PIER AND TRANSFORMER PAD; AOC 2 – SUBSURFACE VAULT.
2. THREE FORMER TRANSFORMERS LOCATED AT SITE. ONE INACTIVE TRANSFOMER (T–1269) REMAINS ON THE SITE.
3. THIS SITE IS NOT READY FOR CLOSURE.

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FIGURE 2
PROPOSED SAMPLING LOCATIONS
GRA-55/LOAD CONTROL CENTER

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES GRA–55.DWG V050CT04

GRA 63 (INVESTIGATION AREA A2) SITE-SPECIFIC DATA GAP SUMMARY ON POLYCHLORINATED BIPHENYLS

This site-specific data gap summary report identifies the previous activities conducted at GRA 63 to assess PCBs, and documents the results, conclusions, recommendations, and references from a site-specific PCB data gap assessment. The purpose of this report is to identify whether GRA 63 requires any further assessment or abatement activities with respect to PCBs. The methods used to conduct the data gap assessment are presented in Section 2.0 of the "PCB Summary Report, Former Mare Island Shipyard, Vallejo, California", to which this site-specific report is appended.

1.0 SITE DESCRIPTION

GRA 63 was formerly located on west side of Pier 55 at the intersection of Piers 55 and 54 (Figure 1) The GRA was attached the concrete surface of the Pier 55.

Pier 55 is technically one in a series of piers (Piers 53 through 56) that form an L-shaped structure extending northeast and southeast from the northeastern corner of IA A2. Pier 55 is a concrete structure constructed out into Mare Island Strait. General building construction information obtained from the EBS database (SSPORTS 1999) and field observations is presented below

SITE INFORMATION, GRA 63

Descriptive Information		Notes
Building Size	NA	Source: EBS database
Building Construction	Concrete pier base	NA
Date of Construction	1946 or after	EBS database indicates Pier 55 construction in 1946
Exterior Ground Cover	NA	NA
Former Building Identification	NA	NA
Former/Current Use	Former Use: GRA Current Use: Removed	NA
Closure Date	Removed in about 1997	NA

Notes:
EBS Environmental baseline survey
GRA Grounded rocker arm
NA Not available or applicable
Source: SSPORTS 1999

Subsurface utilities are documented below the location of former GRA 63 and in the vicinity. A vault cover is located 3 feet southeast of the former GRA footprint. Cut conduits extend several inches above the concrete in the footprint of former GRA 63. Figure 1 shows the location and

footprint of former GRA 63, associated conduits, and sampling locations. Photographs with vantage points and brief descriptions are also provided on the figure.

The EBS database (SSPORTS 1999) for Pier 55 lists GRA 63. A summary of the available information is provided in the table below.

ELECTRICAL EQUIPMENT POTENTIALLY CONTAINING POLYCHLORINATED BIPHENYLS, BUILDING GRA 63

Equipment Type	Equipment Number	Relative Location	PCBs Identified[a]	Volume (gallons)	Status	Leaks Identified[b]
GRA	GRA 63	Intersection of Piers 55 and 54 335 feet from south edge of Pier 55	Yes	Unknown	Removed	Not specified

Notes:
a PCBs identified in GRA fluid at 12.5 ppm according to TWD 97-1452 (SSPORTS 1997)
b Most transformers identified as having leaked did not release to the environment.
GRA Grounded rocker arm
PCB Polychlorinated biphenyl
ppm Part per million
TWD Technical work document
Source: SSPORTS 1999

PCB concentrations in fluids within GRA 63 were 12.5 ppm. Although the GRA fluids contained PCBs, the GRA is not considered to be PCB-contaminated electrical equipment under TSCA.

2.0 PREVIOUS POLYCHLORINATED BIPHENYLS ASSESSMENT AND ABATEMENT ACTIVITIES

SSPORTS conducted a PCB assessment survey of GRA 63 in April 1996 (SSPORTS 1996; Tetra Tech 1998). SSPORTS collected a sample of dielectric fluid from GRA 63 (sample 6102-0068). The sample contained PCBs at a concentration of 12.5 ppm. Based on the identified PCB concentration and the removal of the GRA, TWD 97-1452 was prepared (SSPORTS 1997).

After removal of GRA 63, SSPORTS collected a post-removal sample (6122-0055) from concrete below the former GRA. The exact sampling location is not known. The PCB concentration in the sample was reportedly non-detect (1 ppm detection limit).

Tetra Tech collected five PCB confirmation samples (PC0381 through PC0385; see the summary table below) from the concrete footprint of former GRA 63 and a drainage pathway approximately 3 feet southwest of the footprint. The PCB concentrations in the five samples were reportedly less than 1 ppm. (Tetra Tech 2002). At the request of the regulators, the subsurface vault was also sampled. Three samples (PC8837, PC8840, and PC8841 were

collected. The residue samples contained PCBs at concentrations of 1.4 and 3.5 ppm. The water sample PCB concentration was non-detect. Concrete samples of the vault were not collected.

SUMMARY OF PREVIOUS ASSESSMENT SAMPLES, GRA 63

Location	Sample Matrix	Sample ID	Collected by	Conc (ppm)	DL (ppm)
GRA 63	dielectric fluid	6102-0068	SSPORTS	12.5	1
GRA 63 Footprint	concrete	6122-0056	SSPORTS	ND	1
GRA 63 Footprint	concrete	PC0381	Tetra Tech	0.02	0.067
GRA 63 Footprint	concrete	PC0382	Tetra Tech	0.04	0.067
Drainage	concrete	PC0383	Tetra Tech	0.02	0.067
GRA 63 Footprint	soil	PC0384	Tetra Tech	0.04	0.067
GRA 63 Footprint	concrete	PC0385	Tetra Tech	0.05	0.067
	residue	PC8837	Tetra Tech	1.4	NA
Vault	residue	PC8840	Tetra Tech	3.5	NA
	water	PC8841	Tetra Tech	ND	NA

Notes:

Conc	Concentration
DL	Detection Limit
GRA	Grounded rocker arm
ID	Identification
NA	Not available or applicable
ND	Non-detect
ppm	Part per million
SSPORTS	Supervisor of Shipbuilding, Conversion, and Repair
Tetra Tech	Tetra Tech EM Inc.

3.0 RESULTS OF DATA GAP ASSESSMENT

On June 5, 2003, SCG personnel performed a PCB data gap assessment at GRA 63. The assessment was designed to identify and document any of the following:

- Locations of electrical equipment, transformers, vaults, conduits, and cabling that may have contained PCBs.
- Evidence of previous PCB sampling conducted by SSPORTS or Tetra Tech.
- Evidence of previous PCB abatement conducted by SSPORTS, such as areas of scabbling.
- Assessment of the adequacy of previous PCB characterization and abatement of the AOCs identified.

Cut conduit, stained concrete, and a manhole cover leading to a subsurface electrical vault associated with former GRA 63 were observed. The GRA and all associated electrical equipment related to the GRA on the surface have been removed. Nine 2- and 4-inch-diameter conduits were observed within the footprint of former GRA-63. No evidence of the SSPORTS post-removal sampling was found. All five Tetra Tech surface confirmation sampling locations were identified. No evidence of PCB abatement was found.

4.0 DATA SUMMARY

Former GRA 63 is documented as non-leaking PCB equipment. Confirmation samples collected from the concrete surface of the pier contained PCBs concentrations below 1 ppm. PCB concentrations in the associated vault indicate that PCB releases have occurred in the GRA 63 electrical system. PCB concentrations slightly greater than 1 ppm are documented in residue located in the subsurface vault. There are two AOCs at this site. AOC 1 consists of the concrete pier surface in the vicinity of former GRA 63 and associated conduits, drainage pathways, and vault cover. AOC 2 consists of the interior surfaces and contents of the vault.

5.0 CONCLUSIONS

The conclusions below are based on evaluation of existing documentation and observations made during the PCB data gap assessment:

- The dielectric fluid in former GRA 63 contained PCBs at a concentration above 1 ppm.
- GRA 63 is not documented as leaking.
- GRA 63 was removed in 1997. No PCB abatement was conducted.
- One post-removal sample was collected by SSPORTS, and five confirmation samples were collected by Tetra Tech. PCB concentrations were detected but not above 1 ppm.
- Residue samples from the vault contained PCBs at concentrations of 1.4 and 3.5 ppm.
- AOC 1 is ready for closure.
- AOC 2 requires abatement and further assessment.

6.0 RECOMMENDATIONS

Further abatement and assessment at GRA 63 is recommended. Recommendations are provided below by AOC.

AOC 1: (Concrete pier surface, conduits, drainage pathways, and vault cover): No further assessment of the pier surface is recommended.

AOC 2 (Vault interior and Pier 55 components beneath concrete surface): After cleaning the vault, 3 verification samples should be collected.

7.0 REFERENCES

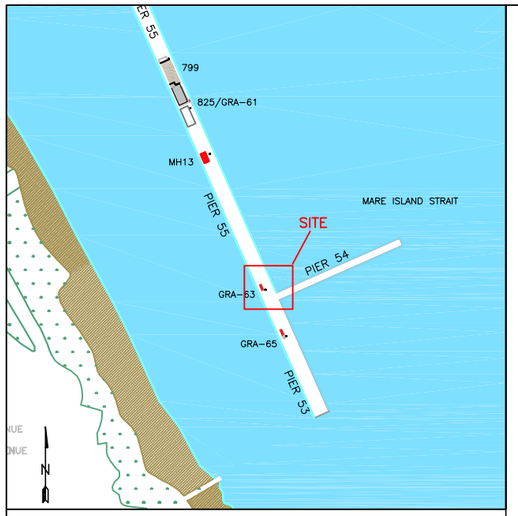
SSPORTS. 1996. "PCB Assessment for Parcel 01-Q2." June 6.

SSPORTS. 1997. "PCB Decontamination Technical Work Document (TWD), PCB Contaminated Site: Transformers # T-0512, 0514, and 0516, TWD No. 97-1452." June 4.

SSPORTS. 1999. "Mare Island Naval Shipyard Environmental Baseline Survey Database." Last updated 1999.

Tetra Tech. 1998. "Final Basewide Confirmation Sampling Summary Report, Mare Island."

Tetra Tech. 2002. "Internal Draft Polychlorinated Biphenyl Assessment and Abatement Summary Report, Mare Island, California, Volumes I-VII." August.



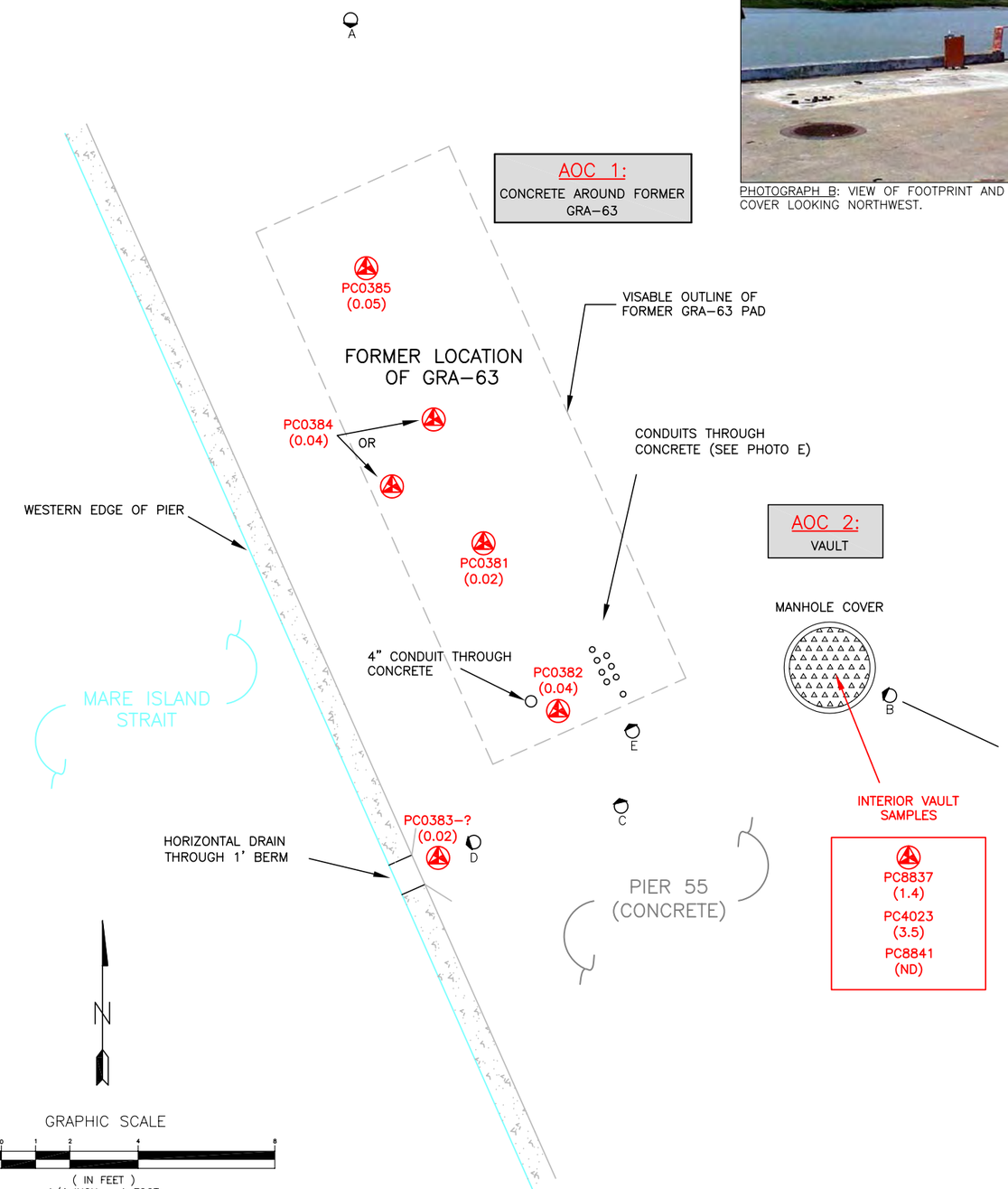
GRA-63 VICINITY MAP

SCALE: 1 INCH = 400 FEET

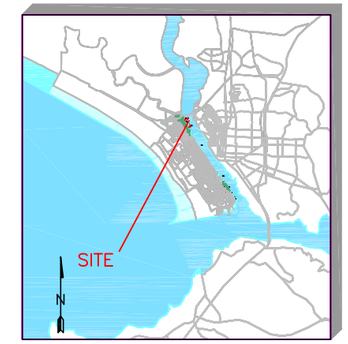
PHOTOGRAPH A: FORMER GRA-63 FOOTPRINT ON CONCRETE SURFACE OF PIER 55 (LOOKING SOUTH).

PHOTOGRAPH C: FORMER GRA-63 FOOTPRINT LOOKING NORTHWEST.

PHOTOGRAPH B: VIEW OF FOOTPRINT AND MANHOLE COVER LOOKING NORTHWEST.



SITE PLAN
GRA-63



MARE ISLAND AREA MAP

NO SCALE

LEGEND:

PC0385 (0.05) — TETRA TECH CONFIRMATION SAMPLE LOCATION AND IDENTIFICATION (RESULTS IN PPM). (QUESTION MARK INDICATES INFERRED IDENTIFICATION)

C — PHOTOGRAPH VIEWPOINT

PERIMETER OF FORMER GRA (CONCRETE SURFACE OF PIER 55)

NOTES:

1. TWO AOCs AT SITE: AOC 1 – CONCRETE PIER SURFACE AND ENCASEMENT; AOC 2 – VAULT.
2. SSPORTS INITIAL ASSESSMENT SAMPLES PARTIALLY VERIFIED (LOCATION BUT NOT ID). TETRA TECH CONFIRMATION SAMPLE IDENTIFIED.
3. THIS SITE IS NOT READY FOR CLOSURE.

DEPARTMENT OF THE NAVY
SOUTHWEST DIVISION
SAN DIEGO, CALIFORNIA

SULLIVAN

SCG PROJECT NO: 110-01
CONTRACT NO. N68711-03-C-5004
AUGUST 2004

FIGURE 1
SITE FIGURES AND FIELD OBSERVATIONS
GRA-63

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES GRA-63 FIG 1.DWG V31AUG04

GRA 65/LOAD CONTROL CENTER (INVESTIGATION AREA A2) SITE-SPECIFIC DATA GAP SUMMARY ON POLYCHLORINATED BIPHENYLS

This site-specific data gap summary report identifies the previous activities conducted at GRA 65/load control center to assess PCBs, and documents the results, conclusions, recommendations, and references from a site-specific PCB data gap assessment. The purpose of this report is to identify whether GRA 65/load control center requires any further assessment or abatement activities with respect to PCBs. The methods used to conduct the data gap assessment are presented in Section 2.0 of the "PCB Summary Report, Former Mare Island Shipyard, Vallejo, California", to which this site-specific report is appended.

1.0 SITE DESCRIPTION

Former GRA 65 and the load control center are approximately 136 feet southeast of GRA 63 and approximately 700 feet south of Building 825 on Pier 53, which is the southern extension of Pier 55 (Figure 1). The area around GRA 65 consists of the concrete surface of Pier 53 and Mare Island Strait. General building construction information was obtained from the EBS database (SSPORTS 1999) and from field observations and is presented below.

SITE INFORMATION, GRA 65

Descriptive Information		Notes
Size of GRA 55 footprint	About 115 square feet	NA
Size of load control center pad	6 by 17 feet by 6 inches (102 square feet)	
Construction	Concrete equipment slab on pier	NA
Date of Construction	1946 or after	EBS database indicates Pier 55 construction in 1946
Exterior Ground Cover	NA	NA
Former Identification	NA	NA
Former/Current Use	Former Use: GRA Current Use: Removed	NA
Closure Date	Removed in 1996	TWD [96-1296]

Notes:
EBS Environmental baseline survey
GRA Grounded rocker arm
NA Not available or applicable
TWD Technical work document (SSPORTS 1996)
Source: SSPORTS 1999

A subfloor vault formerly connected to GRA 65 and the load control center is located beneath the manhole cover illustrated on Figure 1. Cables extend from the vault through the pier in steel conduits. The cables were cut and sealed during removal of GRA 65. Figure 1 also illustrates the location of GRA 65 and load control center, adjacent structures, and sampling locations.

The EBS database (SSPORTS 1999) for Pier 53 lists GRA 65 as "active," but the GRA and load control center were not present as of mid-2003. The table below presents information on the former and existing potentially PCB-containing electrical equipment associated with the GRA and load control center.

ELECTRICAL EQUIPMENT POTENTIALLY CONTAINING POLYCHLORINATED BIPHENYLS, GRA 65/LOAD CONTROL CENTER

Equipment Type	Equipment Number	Relative Location	PCBs Identified[a]	Volume (gallons)	Status	Leaks Identified[b]
GRA[c]	GRA 65	190 feet southeast of Pier 56	Yes	10	Removed	NA
Cables and Wireways	NA	Load control center	Yes	NA	Partially removed	NA
Transformer (North)	NA	Load control enter	Unknown	Unknown	Removed	NA
Transformer (Center)	NA	Load control enter	Unknown	Unknown	Removed	NA
Transformer (South)	NA	Load control enter	Unknown	Unknown	Removed	NA
460-Volt Cable Insulation	NA	South of load control center	Yes	Solid insulation	Inactive	NA

Notes:
a PCBs identified in transformer fluid
b Most transformers identified as having leaked did not release to the environment.
GRA Grounded rocker arm
NA Not applicable or available
PCB Polychlorinated biphenyl
Source: SSPORTS 1999

2.0 PREVIOUS POLYCHLORINATED BIPHENYLS ASSESSMENT AND ABATEMENT ACTIVITIES

SSPORTS conducted a PCB assessment survey of GRA 65 in April and May 1996 (Tetra Tech 1998 and 2002). A sample of the dielectric fluid within GRA 65 was collected. Analytical results for the sample reportedly contained PCBs at a concentration of 6.18 ppm (see the summary table below). A total of three insulation swipe samples were collected, and reported PCB concentrations ranged from 7 to 590 µg/swipe. After the entire load control system including the concrete pad was removed, SSPORTS collected three concrete samples from the footprint of each former transformer. The southernmost sample contained PCBs at a concentration above 1 ppm.

Tetra Tech collected one concrete confirmation sample from the footprint of former GRA 65. The sample contained PCBs at a concentration of 0.04 ppm (estimated). A water sample and two residue samples were also collected from the vault located southeast of the former load control center. Laboratory analyses of one residue sample indicated a PCB concentration of 0.04 ppm. PCBs were not detected in the other residue sample or the water sample collected from the vault.

Observations made during the data gap site assessment indicated that the area had been scabbled and sandblasted.

SUMMARY OF PREVIOUS ASSESSMENT SAMPLES, GRA 65/LOAD CONTROL CENTER

Location	Sample Matrix	Sample ID	Collected by	Conc (ppm)	DL (ppm)
GRA 65	oil	6102-0064	SSPORTS	6.18	1
South XFMR Footprint	concrete	6102-0065	SSPORTS	1.68	1
Center XFMR Footprint	concrete	6102-0066	SSPORTS	ND	1
North XFMR Footprint	concrete	6102-0067	SSPORTS	ND	1
GRA 65/LCC	insulation swipe	6122-0022	SSPORTS	112 µg/swipe	5 µg/swipe
GRA 65/LCC	insulation swipe	6122-0023	SSPORTS	590 µg/swipe	5 µg/swipe
GRA 65/LCC	insulation swipe	6122-0024	SSPORTS	7 µg/swipe	5 µg/swipe
GRA 65	concrete	PC9005	Tetra Tech	0.04	0.067
Vault	water	PC8842	Tetra Tech	ND	NA
Vault	residue	PC8843	Tetra Tech	0.04	NA
Vault	residue	PC8844	Tetra Tech	ND	NA

Notes:

µg	Microgram
Conc	Concentration
DL	Detection limit
GRA	Grounded rocker arm
ID	Identification
LCC	Load control center
NA	Not available (unknown)
ND	Non-detect
ppm	Part per million
SSPORTS	Supervisor of Shipbuilding, Conversion, and Repair
Tetra Tech	Tetra Tech EM Inc.
XFMR	Transformer

3.0 RESULTS OF DATA GAP ASSESSMENT

On June 5, 2003, SCG personnel performed a PCB data gap assessment at Building GRA 65. The assessment was designed to identify and document any of the following:

- Locations of electrical equipment, transformers, vaults, conduits, and cabling that may have contained PCBs.
- Evidence of previous PCB sampling conducted by SSPORTS or Tetra Tech.
- Evidence of previous PCB abatement conducted by SSPORTS, such as areas of scabbling.

- Assessment of the adequacy of previous PCB characterization and abatement of the AOCs identified.

The data gap survey confirmed the removal of the load control center, transformers, GRA 65, and the concrete equipment pad. The concrete encasement still housed the 460-volt electrical system; however, cables extending from the system were cut and the ends sealed. Sampling locations for samples 6102-0065, 6102-0066, 6102-0067, and PC9005 were verified in the field.

4.0 DATA SUMMARY

Building history indicates that GRA 65 was associated with a load control center that housed three transformers and an adjacent 460-volt electrical system encased in a concrete structure. No data on the transformers was available. Cable insulation and the GRA oil contained PCBs.

Documented PCB contamination above 1 ppm exists within the footprint of the load control center pad. Samples collected from the subsurface vault associated with the electrical equipment in the vicinity of GRA 65 did not contain PCBs above 1 ppm. No samples were collected from concrete surfaces of the 460-volt system. There are two AOCs in the vicinity of the site. AOC 1 consists of concrete surfaces around the former load control center and adjacent concrete encasement. AOC 2 consists of the electrical vault.

5.0 CONCLUSIONS

The conclusions below are based on evaluation of existing documentation and observations made during the data gap assessment:

- The oil in GRA 65 contained low concentrations of PCBs.
- Sampling was not conducted on concrete surfaces on and around the 460-volt system.
- AOC 1 is not ready for closure. AOC 2 is ready for closure.

6.0 RECOMMENDATIONS

Further assessment is recommended. The recommendations below are presented by AOC.

<u>AOC 1 (Concrete surfaces in vicinity of former and existing electrical equipment):</u> Four concrete characterization samples should be collected as illustrated on Figure 2.

<u>AOC 2 (Electrical vault):</u> No further assessment of the vault is recommended.

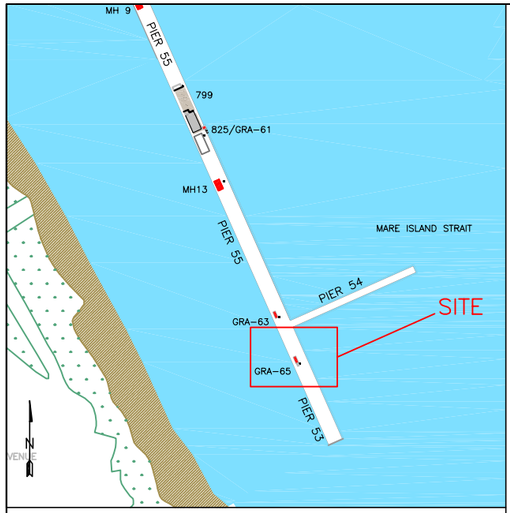
7.0 REFERENCES

SSPORTS. 1996. "PCB Decontamination Technical Work Document (TWD), PCB Contaminated Spill Site No. Reserve Fleet Piers, TWD No. 96-1296." August 26.

SSPORTS. 1999. "Mare Island Naval Shipyard Environmental Baseline Survey Database." Last updated 1999.

Tetra Tech. 1998. "Final Basewide Confirmation Sampling Summary Report, Mare Island."

Tetra Tech. 2002. "Internal Draft Polychlorinated Biphenyl Assessment and Abatement Summary Report, Mare Island, California, Volumes I-VII." August.



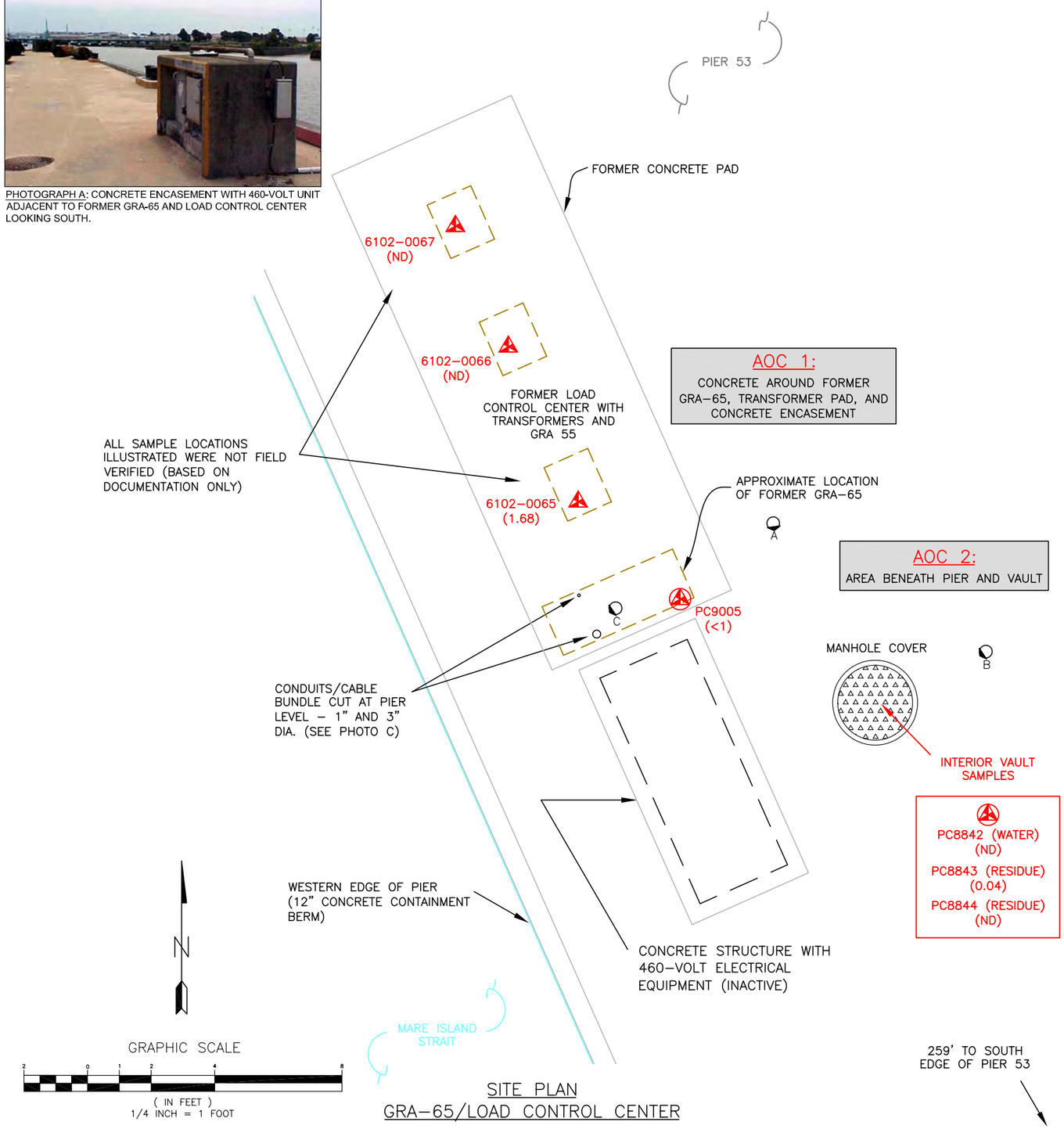
GRA-65 VICINITY MAP

SCALE: 1 INCH = 400 FEET

PHOTOGRAPH B: PHOTOGRAPH OF CONCRETE ENCASEMENT FORMERLY ATTACHED TO GRA-65 AND VIEW OF MANHOLE COVER LOOKING WEST. MANHOLE LEADS TO VAULT ASSOCIATED WITH ELECTRICAL EQUIPMENT IN VICINITY.

PHOTOGRAPH C: 3" CUT AND SEALED CONDUIT FROM GRA-65.

PHOTOGRAPH A: CONCRETE ENCASEMENT WITH 460-VOLT UNIT ADJACENT TO FORMER GRA-65 AND LOAD CONTROL CENTER LOOKING SOUTH.



SITE PLAN

GRA-65/LOAD CONTROL CENTER

MARE ISLAND AREA MAP

NO SCALE

LEGEND:

- PC9006 (<1) — TETRA TECH CONFIRMATION SAMPLE LOCATION AND IDENTIFICATION (RESULTS IN PPM)
- SSPORTS SAMPLE
- PHOTOGRAPH VIEWPOINT
- CONDUITS WITH APPROXIMATE DIAMETER (DIA.)
- CONCRETE ENCASEMENT WITH 460-VOLT ELECTRICAL EQUIPMENT
- FOOTPRINT OF FORMER GROUNDED ROCKER ARM
- FOOTPRINT OF FORMER LOAD CONTROL CENTER WITH THREE TRANSFORMERS AND GRA

NOTES:

1. TWO AOCs AT SITE: AOC 1 – CONCRETE PIER SURFACE AND ENCASEMENT AROUND FORMER GRA-65/LOAD CONTROL CENTER; AOC 2 – VAULT.
2. SSPORTS INITIAL ASSESSMENT SAMPLES INCLUDED THREE CONCRETE AND THREE SWIPE SAMPLES. LOCATIONS COULD NOT BE FIELD-VERIFIED.
3. THIS SITE IS NOT READY FOR CLOSURE.

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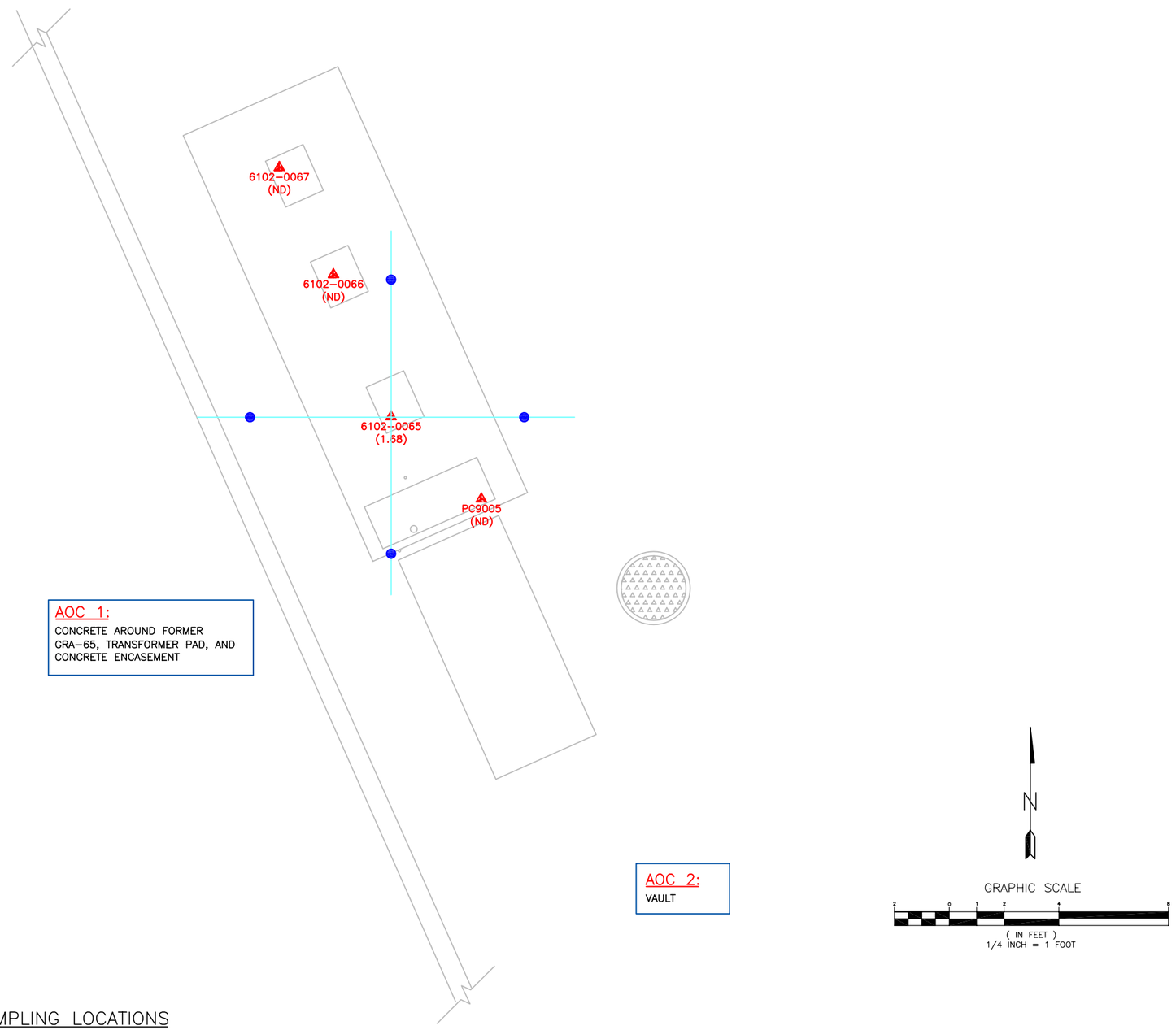
CONTRACT NO. N68711-03-C-5004
AUGUST 2004

FIGURE 1
SITE FIGURES AND FIELD OBSERVATIONS
GRA-65/LOAD CONTROL CENTER

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES GRA-65.DWG V31AUG04



PROPOSED SAMPLING LOCATIONS
GRA-65

MARE ISLAND AREA MAP

NO SCALE

LEGEND:

6102-0066 (ND) SSPORTS SAMPLE

PROPOSED SAMPLE AREA BASED ON SITE FEATURES AND EVIDENCE, HISTORICAL DOCUMENTATION, AND TSCA REGULATIONS

TSCA SAMPLE GRID (DARK BLUE INDICATES ACTUAL SAMPLE LOCATIONS THAT ARE LOCATED WITHIN VERIFICATION AREA)

MANHOLE COVER

CONCRETE ENCASEMENT WITH 460-VOLT ELECTRICAL EQUIPMENT

FOOTPRINT OF FORMER LOAD CONTROL CENTER WITH THREE TRANSFORMERS AND GRA

NOTES:

1. TWO AOCs AT SITE: AOC 1 – EXTERIOR CONCRETE SURFACES ON PIER AROUND FORMER LOAD CENTER/GRA-65 AND CONCRETE ENCASEMENT; AOC 2 – SUBSURFACE VAULT.

2. THIS SITE IS NOT READY FOR CLOSURE.

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FIGURE 2
PROPOSED SAMPLING LOCATIONS
GRA-65/LOAD CONTROL CENTER

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURES GRA-65.DWG V31AUG04

PIER 55 (INVESTIGATION AREA A2) SITE-SPECIFIC DATA GAP SUMMARY ON POLYCHLORINATED BIPHENYLS

This site-specific data gap summary report identifies the previous activities conducted on Pier 55 to assess PCBs, and documents the results, conclusions, recommendations, and references from a site-specific PCB data gap assessment. The purpose of this report is to identify whether Pier 55 requires any further assessment or abatement activities with respect to PCBs. The methods used to conduct the data gap assessment are presented in Section 2.0 of the "PCB Summary Report, Former Mare Island Shipyard, Vallejo, California", to which this site-specific report is appended.

1.0 SITE DESCRIPTION

Except for its landward connection at the north corner of the island, Pier 55 is surrounded by Mare Island Strait (Figure 1). Pier 55 is the longest component of the Reserve Fleet Piers, which is a series of piers (Piers 53 through 56) and forms an L-shaped structure that extends east-northeast from Q Street and south-southeast from the north corner of Building 797. All PCB sites evaluated are on Pier 55 except for the GRA Load Control Center, which is located on Pier 53, as noted below and on Figure 1. PCB sites on the Reserve Fleet Piers include the following, listed from the northwest corner to the southwest extent of Pier 53:

- Building 797, GRA-51, and Load Control Center (LCC)
- GRA-53
- GRA-55 and LCC transformers
- Manhole 9 (MH-09), also known as "Location 7" (Tetra Tech 2002)
- Building 799
- Building 825/GRA-61
- Manhole 13 (MH-13), also known as "Location 6" (Tetra Tech 2002)
- GRA-63
- GRA-65 and LCC

Individual data gap assessment reports have been prepared for all of the sites above except for MH-09 and MH-13, which are included in this assessment report. MH-09 consists of a vault and the former location of an electrical equipment pad. MH-13 consists of a vault and the location of former electrical equipment (no pad is mentioned in documentation for the site) (Tetra Tech 2002).

No site information was provided in the EBS database (SSPORTS 1999) specifically for MH-09 and MH-13. As a result, only general information on Pier 55 is provided in the table below.

SITE INFORMATION, PIER 55

Descriptive Information		Notes
Structure Dimensions	850 feet by 40 feet (extension from Q Street)	NA
	2,100 feet by 38 feet (south-southeast extension)	
Construction Type	Concrete, steel, and wood	NA
Date of Construction	1946	NA
Exterior Surface	Concrete	NA
Former Identification	Reserve Fleet Pier	NA
Former/Current Use	Former Use: Pier	NA
	Current Use: Pier	
Closure Date	10/17/95	NA

Notes:
NA Not available or not applicable
Source: SSPORTS 1999

Subsurface utilities are located beneath Pier 55. The electrical system is connected by horizontal conduits to a series of vaults suspended from the pier. The vaults are accessed through 19 exterior manholes (numbered by SCG as MH-01 to MH-19). The vaults are spaced approximately 125 to 135 feet apart and extend from Building 797 to the ends of each pier. Additional manhole covers and associated vaults are located inside Buildings 797 and 799. These additional features are addressed in separate assessment reports.

2.0 PREVIOUS POLYCHLORINATED BIPHENYLS ASSESSMENT AND ABATEMENT

No available documentation was available that indicated SSPORTS completed initial assessment work at MH-09 or MH-13 (SSPORTS 1996). It is possible that SSPORTS sample 6122-0054 was collected near MH-09; however, analytical data are not available (SSPORTS 1997).

Tetra Tech collected one confirmation sample each at MH-09 and MH-13. Additionally, the interiors of the vaults were sampled in both locations. The analytical results are summarized in the table below.

LOCATIONS POTENTIALLY CONTAINING POLYCHLORINATED BIPHENYLS, PIER 55, MANHOLES MH-09 AND MH-13

Location	Sample Matrix	Sample ID	Collected by	Conc (ppm)	DL (ppm)
Uncertain*	NA	6122-0054*	SSPORTS	NA	NA
MH-09	concrete	PC0403	Tetra Tech	0.5J	NA
MH-09	concrete	PC8829	Tetra Tech	ND	NA
MH-09	concrete	PC8830	Tetra Tech	ND	NA
MH-09	concrete	PC8831	Tetra Tech	ND	NA
MH-09	residue	PC8848	Tetra Tech	3.3	NA
MH-09	residue	PC8849	Tetra Tech	4.5	NA
MH-13	concrete	PC0391	Tetra Tech	0.2	NA
MH-13	water	PC8836	Tetra Tech	ND	NA
MH-13	residue	PC8837	Tetra Tech	1.7	NA
MH-13	residue	PC8838	Tetra Tech	1.2	NA

Notes:

*	Location of sample uncertain.
NA	Not available
ND	Non-detect
MH	Manhole
ppm	Part per million
SSPORTS	Supervisor of Shipbuilding, Conversion, and Repair
Tetra Tech	Tetra Tech EM Inc.

3.0 RESULTS OF DATA GAP ASSESSMENT

On June 4, 2003, SCG personnel conducted a PCB data gap assessment on Pier 55. The assessment was designed to identify and document any of the following:

- Locations of electrical equipment, transformers, vaults, conduits, and cabling that may have contained PCBs.
- Evidence of previous PCB sampling conducted by SSPORTS or Tetra Tech.
- Evidence of previous PCB abatement conducted by SSPORTS, such as areas of scabbling.
- Assessment of the adequacy of previous PCB characterization and abatement of the AOCs identified.

None of the sample markings or locations listed in the table above was identified in the field except for PC0391 at MH-13, which was partially identified by paint markings and partly by process of elimination. This sample location was identified by blue paint markings only. At MH-09, large steel pontoons covered the area where the pad and sample location PC0403 were likely located. No evidence of electrical equipment, equipment pads, or other potentially PCB-containing articles was observed.

A 460-volt electrical system encased in concrete is at MH-13. Additional PCB-containing electrical equipment was observed immediately north of the 460-volt system (see Figure 1). Insulation from these systems has been documented as containing PCBs. It is unknown if the insulation or cables were sampled previously.

4.0 DATA SUMMARY

No known sources of PCBs were identified at MH-09 or MH-13. PCBs in concentrations above 1 ppm were identified in the vaults at both sites. PCB impacts have been identified in other sub-pier electrical vaults, which are interconnected.

There are two AOCs at each site. At MH-09, AOC 1 consists of the pier surface. At MH-13, AOC 1 consists of the concrete surface and exposed cables. AOC 2 consists of the electrical vaults beneath Pier 55 and is the same for both MH-09 and MH-13.

5.0 CONCLUSIONS

The following conclusions are based on evaluation of existing documentation and observations during the data gap assessment:

<u>AOC 1 (MH-09)</u>

- No known sources of PCBs are documented.
- Limited information is available on former electrical equipment and the concrete equipment pad at MH-09. Visual observations were not possible because pontoons were stacked along the edge of the pier.
- Confirmation sampling consisted of two samples with a concentration less than 1 ppm.

<u>AOC 1 (MH-13)</u>

- No known sources of PCBs are documented.
- PCBs are present in concrete at concentrations less than 1 ppm.
- Confirmation sampling consisted of one sample, which may have been exploratory.
- PCBs are present in residue in the vault at concentrations above 1 ppm at both locations.

Summary:

- No documented sources of PCBs were identified at the surface.
- AOC 1 (MH-09 and MH-13) is not ready for closure.
- AOC 2 (vaults and equipment beneath the pier) is ready for closure.

6.0 RECOMMENDATIONS

Further abatement and assessment at MH-09 and MH-13 is recommended. PCB contaminated residue within the manhole vaults MH-09 and MH-13 should be removed and 3 verification samples of the surface within each manhole should be collected after abatement. No further assessment of the vaults and equipment beneath the pier is recommended.

7.0 REFERENCES

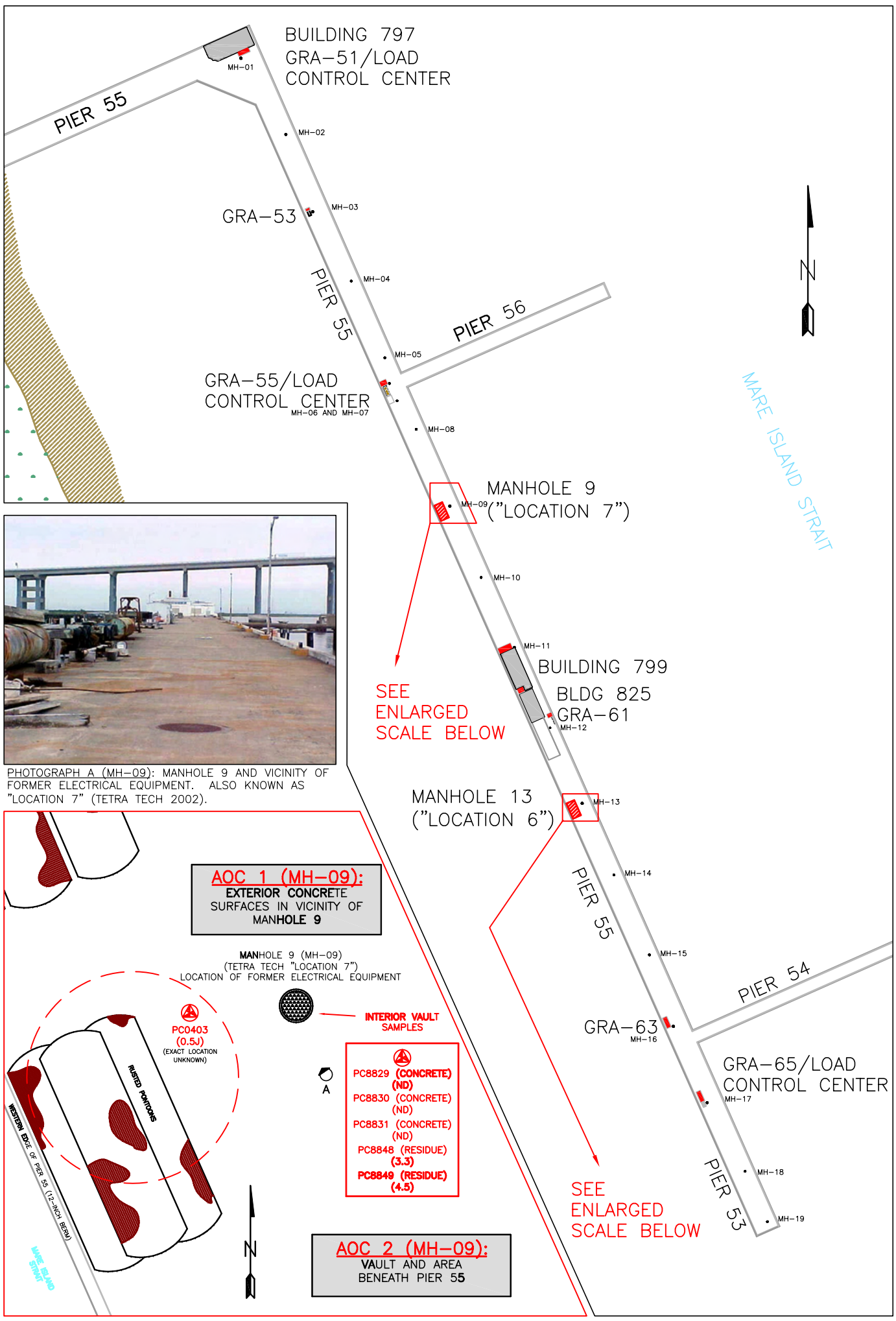
SSPORTS. 1996. "PCB Assessment for Parcel 01-Q2." June 6.

SSPORTS. 1997. "PCB Decontamination Technical Work Document (TWD), PCB Contaminated Site: Transformers # T-0512, 0514, and 0516." June 4.

SSPORTS. 1999. "Mare Island Naval Shipyard Environmental Baseline Survey Database." Last updated 1999.

Tetra Tech. 1998. "Final Basewide Confirmation Sampling Summary Report, Mare Island."

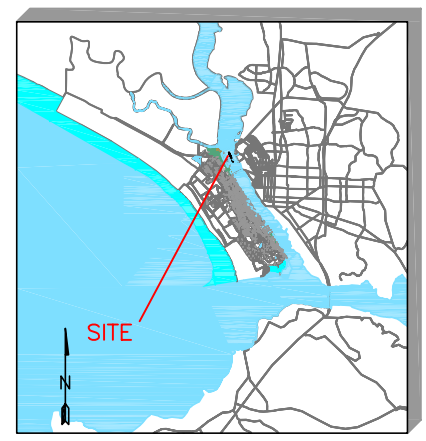
Tetra Tech. 2002. "Internal Draft Polychlorinated Biphenyl Assessment and Abatement Summary Report, Mare Island, California, Volumes I-VII." August.



PHOTOGRAPH A (MH-09): MANHOLE 9 AND VICINITY OF FORMER ELECTRICAL EQUIPMENT. ALSO KNOWN AS "LOCATION 7" (TETRA TECH 2002).

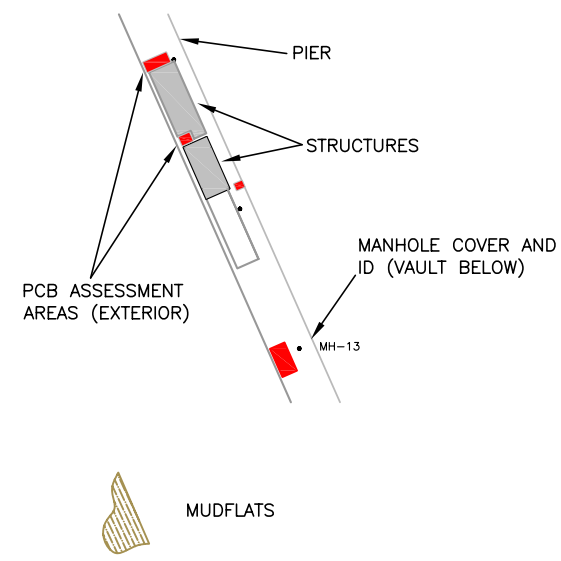
MANHOLE 9
SCALE: 1 INCH = 10 FEET

RESERVE FLEET PIERS
SCALE: 1 INCH = 200 FEET



MARE ISLAND AREA MAP
NO SCALE

LEGEND (200 SCALE):

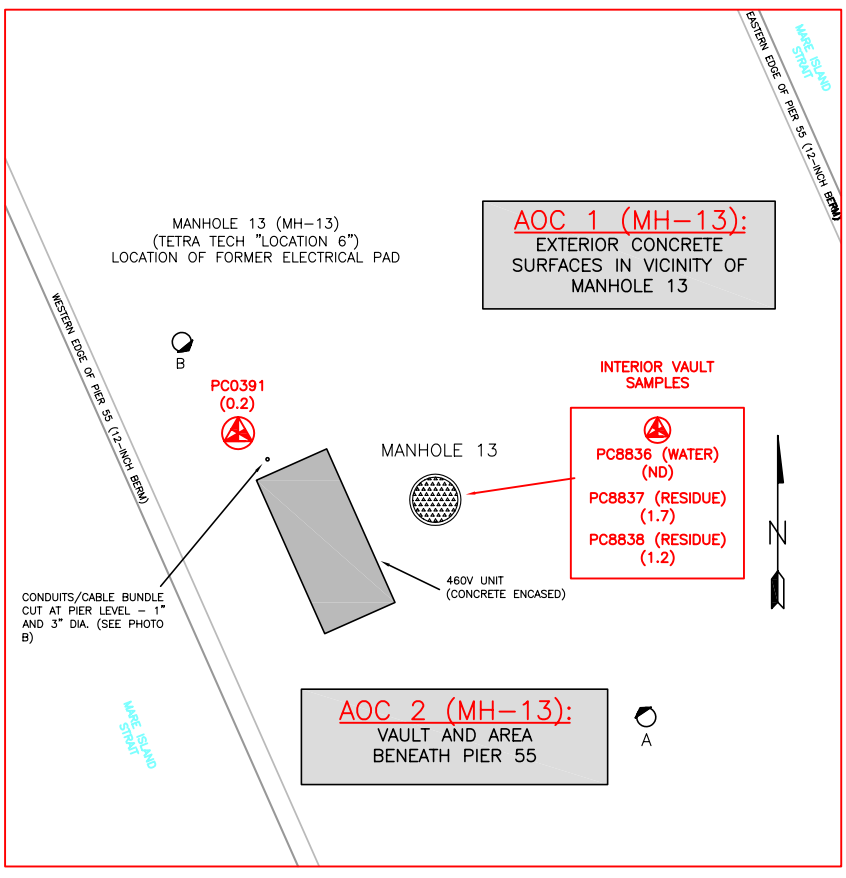


LEGEND (10 SCALE)

- PC0403 (0.05J) — TETRA TECH CONFIRMATION SAMPLE LOCATION AND IDENTIFICATION (RESULTS IN PPM)
- B — PHOTOGRAPH VIEWPOINT
- CONDUITS WITH APPROXIMATE DIAMETER (DIA.)
- MANHOLE COVER
- CONCRETE ENCASEMENT WITH ELECTRICAL EQUIPMENT (460V)
- APPROXIMATE AREA OF KNOWN BUT UNVERIFIED SAMPLE LOCATION
- PONTOONS (TYP)

PHOTOGRAPH A (MH-13): MANHOLE 13 AND VICINITY OF FORMER ELECTRICAL PAD LOOKING NORTHWEST. ALSO KNOWN AS "LOCATION 6" (TETRA TECH 2002).

PHOTOGRAPH B (MH-13): LOCATION OF TETRA TECH CONFIRMATION SAMPLE PC0391 (LOOKING SOUTHEAST).



MANHOLE 13
SCALE: 1 INCH = 10 FEET

NOTES:

1. TWO AOCs AT EACH LOCATION: AOC 1 (MH-09) – EXTERIOR CONCRETE SURFACES IN VICINITY OF FORMER ELECTRICAL EQUIPMENT; AOC 1 (MH-13) – EXTERIOR CONCRETE IN VICINITY OF FORMER ELECTRICAL EQUIPMENT PAD; AOC 2 (BOTH SITES) – AREA BELOW PIER 55 SURFACE (VAULTS AND CONDUITS)
2. THIS SITE IS NOT READY FOR CLOSURE.

DEPARTMENT OF THE NAVY
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SAN DIEGO, CALIFORNIA

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AUGUST 2004

FIGURE 1
SITE FIGURES AND FIELD OBSERVATIONS
PIER 55 PCB ASSESSMENT LOCATIONS

PCB SUMMARY REPORT, MARE ISLAND, CALIFORNIA

PCB FIGURE PIER 55 FIG_1.DWG 02OCT04

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
29	Summary tables	Table 1	Draft PCB Summary Report, Mare Island, Vallejo, California. Section 5.0 and Table 3. Sullivan Consulting Group and Tetra Tech EM Inc. October 2004.

5.0 DATA GAP ASSESSMENT SUMMARY

The data gap assessments resulted in the following types of information for each site:

- Delineation of specific AOCs
- Identification of areas where PCB concentrations exceed the clean up levels for bulk remediation waste for high-occupancy areas of 1 mg/kg and 100 micrograms per 100 centimeters squared for impermeable surfaces in accordance with 40 CFR Sections 761.61(a)(4)(i)
- Adequacy of characterization sampling in accordance with 40 CFR Sections 761.61(a)(2) and 761.265 (Subpart N)
- Adequacy of verification sampling in accordance with 40 CFR Sections 761.61(a)(6) and 761.280 (Subpart O)
- Whether the evaluation followed the regulations for conducting site characterization in 40 CFR Section 761.61(a)(2)

Table 3 summarizes the conclusions and recommendations regarding the actions that are necessary at each site to conform to the self-cleanup standards presented in 40 CFR Section 761.61. As the table shows, no further action is recommended at 28 sites and further action is required at 39 sites. PCB abatement is known to be required at eight sites. Table 3 also indicates the numbers of samples recommended for collection at each site. Of the four sites where PCB contamination has migrated to the soil, the reported PCB concentrations do not present unacceptable levels of risk to human health or the environment.

TABLE 3: SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

PCB Summary Report, Former Mare Island Naval Shipyard, Vallejo, California

Building Number	Further Assessment Required?	Abatement Required?	Number of Data Gap Samples Recommended[a]	Number of Anticipated Post Abatement Samples Recommended	Estimated Analyses if Sample Compositing Recommended[b]
A1	No	No	NA	NA	NA
A2	No	No	NA	NA	NA
A3	No	No	NA	NA	NA
A4	No	No	NA	NA	NA
A5	No	No	NA	NA	NA
A6	No	No	NA	NA	NA
A8	No	No	NA	NA	NA
A15	No	No	NA	NA	NA
A17	Yes	TBD	8	NA	NA
A44	No	No	NA	NA	NA
A58	Yes	TBD	1	NA	NA
A65	Yes	TBD	3	NA	NA
A71	Yes	Yes	4	NA	NA
A85	No	No	NA	NA	NA
A103	No	No	NA	NA	NA
A136	Yes	TBD	5	NA	3
A142	Yes	Yes	1	8	NA
A144	Yes	Yes	5	NA	NA
A145	Yes	TBD	3	NA	NA
A153	No	No	NA	NA	NA
A154	No	No	NA	NA	NA
A161	No	No	NA	NA	NA
A162	No	No	NA	NA	NA
A163	No	No	NA	NA	NA
A169	No	No	NA	NA	NA
A191	Yes	TBD	3	NA	NA
A192	Yes	Yes	5	3	NA
A194	Yes	TBD	9	NA	NA
A197	Yes	TBD	6	NA	NA
A215	Yes	TBD	3	NA	NA
A226	Yes	Yes	0	3	NA
A227	Yes	TBD	2	NA	NA
A253	Yes	TBD	3	NA	NA
A260	Yes	TBD	8	NA	NA
A265	Yes	TBD	4	NA	NA
A266	Yes	Yes	10	NA	5
GRA 53	Yes	Yes	3	3	NA
GRA 55	Yes	Yes	3	3	NA
GRA 63	Yes	Yes	0	3	NA

TABLE 3: SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS (CONT'D)

PCB Summary Report, Former Mare Island Naval Shipyard, Vallejo, California

Building Number	Further Assessment Required?	Abatement Required?	Number of Data Gap Samples Recommended[a]	Number of Anticipated Post Abatement Samples Recommended	Estimated Analyses if Sample Compositing Recommended[b]
GRA 65	Yes	TBD	4	NA	NA
H86 and 1296	No	No	NA	NA	NA
Meseda Road	No	No	NA	NA	NA
Pier 55	Yes	Yes	0	6	NA
163	Yes	Yes	NA	TBD	NA
499	No	No	NA	NA	NA
505A	Yes	TBD	11	NA	NA
505B	Yes	TBD	16	NA	NA
517	Yes	Yes	2	TBD	NA
589	No	No	NA	NA	NA
591	No	No	NA	NA	NA
593	Yes	TBD	4	NA	NA
597	No	No	NA	NA	NA
641	No	No	NA	NA	NA
643	Yes	Yes	7	TBD	NA
726	No	No	NA	NA	NA
734	Yes	TBD	22	NA	17
736/ Pier 23	No	No	NA	NA	NA
778	No	No	NA	NA	NA
782	Yes	TBD	13	NA	NA
797/ GRA 51	Yes	Yes	12	3	13
799	Yes	Yes	16	3	NA
825/ GRA 61	Yes	Yes	2	NA	NA
832	Yes	Yes	5	TBD	NA
900	Yes	TBD	17	NA	NA
930	Yes	TBD	5	NA	NA
1001	No	No	NA	NA	NA
1300	Yes	TBD	31	NA	23

Notes:

[a] Where the number of samples recommended includes vault characterization, assume one porous medium present.

[b] Compositing of samples is recommended where appropriate to reduce the total analyses.

NA Not applicable

TBD To be determined

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
30	Closure plan	Table 1	Final Abatement Work Plan for PCB Sites Sampling, Abatement, and Closure Documentation, Former Mare Island Naval Shipyard, Vallejo, California. Sections 1.2, 1.3, and 1.6. ERS-Joint Venture. May 2009.

The purpose of this Abatement Work Plan is to outline the steps to complete the required tasks for Contract No. N62473-07-D-3219 CTO 0002, Polychlorinated Biphenyl (PCB) Sites Sampling, Abatement and Closure Documentation – Former Mare Island Naval Shipyard, Vallejo, California.

1.1 SITE LOCATION

The Former Mare Island Naval Shipyard (MINS) is located in Solano County, California, approximately 25 miles northeast of San Francisco. The Napa River (Mare Island Strait) separates the peninsula shipyard (Mare Island, California) from the City of Vallejo. Figure 1 indicates the location of each PCB site.

1.2 SITE BACKGROUND

MINS was the first United States Navy Shipyard established on the Pacific coast. The Navy purchased the original 956 acres in 1853 and commenced shipbuilding operations on September 16, 1854. Mare Island Naval Shipyard expanded to over 5,200 acres in its service life and was responsible for construction of over 500 naval vessels and overhauling of thousands of others. MINS was identified for closure during the Base Realignment and Closure (BRAC) process of 1993. Naval operations ceased and the facility was decommissioned on April 1, 1996. Supervisor of Shipbuilding, Conversion, and Repair, Portsmouth, Virginia, Environmental Detachment (SSPORTS) personnel performed sampling and abatement activities to remediate the PCB contaminated areas at MINS. After an early transfer of Mare Island property in 2002, a data gap assessment was conducted for all PCB sites retained under Navy responsibility. The results from this data gap assessment are presented in the PCB Summary Report: Former Mare Island Naval Shipyard, Vallejo, California (Sullivan and Tetra Tech 2004). This report identifies specific actions to be conducted at 67 sites to comply with PCB Self-Implementing Regulations, as described in US Code of Federal Regulations (CFR) 40 CFR 761.61. Based on the recommendations in the 2004 PCB Summary Report, additional sampling was conducted at 15 PCB sites in Investigation Area (IA) F1 in October 2006. The results of this sampling effort are outlined in Investigation Area F1 PCB Data Gap Sampling Summary Report: Former Mare Island Naval Shipyard, Vallejo, California (Sullivan 2007).

Weston prepared an Engineering Technical Report for Building 163 PCB Remediation Efforts and an Engineering Technical Report Building 832 PCB Assessment Report (Weston 2001). The information in the reports presents previous activities conducted to abate the PCBs and recommendations for completing the abatement at these two sites.

Based on both the 2004 and 2007 reports and current site conditions, 36 sites meet the requirements for site closure under the TSCA self-implementing regulations. Five (5) of these PCB sites have had PCB Site Closure reports submitted to the EPA Regional Administrator [or designee] in March 2008. The PCB Site Closure reports are based on sampling results at Buildings 589, 591, 593,641, and 1001. Therefore, 31 other sites are ready for site closure documentation. The remaining 31 sites need additional verification sampling and/or abatement prior to preparing site closure documentation and are the focus of this work plan.

1.3 SCOPE OF WORK

The scope of work (SOW) for this contract task order (CTO) is the PCB sampling, abatement and closure documentation necessary to obtain site closure of the identified PCB sites. ERS-Joint Venture (ERS) will complete this project by following all applicable Navy, NAVFAC, DoD policies, and NFECSW Environmental Work Instructions, as well as, 40 CFR 760.61. The SOW is divided into the following work elements:

Abatement Work Plan

ERS will prepare this PCB Abatement Work Plan identifying the schedule, resource requirements, execution and associated activities. ERS will also prepare for approval; Individual site cleanup plans, a Sampling and Analysis Plan (SAP), Accident Prevention Plan (APP), Site Safety and Health Plan (SSHP), and Transportation and Disposal (T&D) Plan. The SAP will be organized according to the current Uniform Federal Policy for Implementing Environmental Quality Systems (UFP-QS) format, utilizing the 37 worksheets.

Sites Ready for Closure Documentation

Thirty-six (36) sites have been identified as "Ready for Closure". Five (5) of these PCB sites have had PCB Site Closure reports submitted to the EPA Regional Administrator [or designee] in March 2008. ERS will document that the Navy has reached its responsibilities under PCB Self-Implementing Regulations and submit closure reports for each of the remaining 31 sites in a consistent format as other PCB site closeout documentation. ERS will develop the closure document outline and submit it to the Navy for review and approval. The outline will follow the guideline at 40 CFR 761.125 (c)(5) as cross referenced in 40 CFR 761.61(a)(9).

Sites Requiring Verification and/or Characterization Sampling

Nine sites require verification sampling only. ERS will sample the sites in the locations recommended by previous assessment reports. The exact locations at each identified building that is to have verification sampling will be determined with a measuring wheel or steel measuring tape based on the scaled figures in the previous investigations (Sullivan & Tetra Tech 2004 and Sullivan 2007).

Sites Requiring Abatement and Verification Sampling

Twenty two sites require abatement and verification sampling. ERS will use the previous reports to determine the extent of abatement required for each site. ERS will abate the proposed areas and perform re-verification sampling to ensure PCB contamination meets the cleanup goal.

Project Schedule

The project schedule showing the sequence of events and milestone dates is included as Appendix A. In addition, a pre-construction meeting will be held prior to mobilization to the site.

1.4 ABATEMENT WORK PLAN ORGANIZATION

This Abatement Work Plan is developed to address site-specific needs addressed to properly perform abatement, sampling, and site closure documentation for the above-referenced sites. The Plan is organized as follows:

Section 1.0 - Gives a background of the sites and defines the scope of work for this project.

Section 2.0 - Describes the pre-construction activities to be completed before the field work can begin including the approval of this Abatement Work Plan.

Section 3.0 - Describes the field activities that will be implemented to clean up the PCB contamination.

Appendices A-F include the Project Schedule, Sampling and Analysis Plan, Organization Chart, Transportation and Disposal Plan, Quality Control Plan, and Example Sampling Grid Layout, respectively.

Site Cleanup Plans (SCP) for individual PCB sites that require further abatement or verification sampling are part of this Abatement Work Plan but published as separate, standalone plans.

1.5 PROJECT TEAM ORGANIZATION

The project team consists of managers, administrators, and professional necessary to coordinate and implement the removal activities under this CTO. A project organization with a defined "chain of command" has been established for office and field operations. A project organization chart is provided in Appendix C.

1.6 CLEANUP OBJECTIVE

The objective of this cleanup is to provide for:

> The reduction of the potential for current and future MINS residents and workers to contact PCB-impacted concrete or soil within MINS at or below the high occupancy cleanup goal of 1 ppm. For the sake of this project, high occupancy is defined as any site that does not have permanent inaccessibility, such as a vault.

The remedial activities detailed in this Abatement Work Plan will achieve these objectives while providing a safe work environment.

2.0 PRE-CONSTRUCTION ACTIVITIES

2.1 PREPARATION OF PRE-CONSTRUCTION PLANS

Prior to beginning on-site activities ERS will prepare and submit to the Navy the following documents:

- Project Schedule
- Internal Outline for Site Closure Documentation for One Site Ready for Closure
- Internal Work Plan and associated documents (SAP and T&D Plan)
- Draft Work Plan and associated documents (SAP and T&D Plan)
- Final Work Plan and associated documents (SAP and T&D Plan)
- Draft Accident Prevention Plan and Site Safety and Health Plan (APP/SSHP)
- Final Accident Prevention Plan and Site Safety and Health Plan (APP/SSHP)

Site work will not be allowed until the Navy has approved these plans.

2.2 CLOSURE DOCUMENTS

Closure documentation is required for 31 MINS sites ready for closure based on the past sampling results at these sites. ERS will develop the closure document outline and submit it to the Navy for review and approval. The outline will follow the guideline at 40 CFR 761.125(c)(5) as cross-referenced in 40 CFR 761.61(a)(9). The following reporting elements will be included at a minimum where known and applicable.

> (i) Identification of the source of the spill, e.g., type of equipment.
>
> (ii) Estimated or actual date and time of the spill occurrence.
>
> (iii) The date and time cleanup was completed or terminated (if cleanup was delayed by emergency or adverse weather: the nature and duration of the delay).
>
> (iv) A brief description of the spill location and the nature of the materials contaminated. This information should include whether the spill occurred in an outdoor electrical substation, other restricted access location, or in a no restricted access area.

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
31	Abatement	Table 1	Final Abatement Work Plan for PCB Sites Sampling, Abatement, and Closure Documentation, Former Mare Island Naval Shipyard, Vallejo, California. Table 3. ERS-Joint Venture. May 2009.

3.1 SITES REQUIRING FURTHER SAMPLING AND ABATEMENT

The sites requiring verification sampling only are summarized in Table 2 below. Site requiring abatement and verification sampling are summarized in Table 3. Sampling and abatement procedures are outlined in sections 3.6 and 3.7 respectively. Individual site cleanup plans have been developed separately for this project. The T&D Plan can be found in Appendix D and the Project Quality Control Plan can be found in Appendix E.

Table 2 – Sites Requiring Verification Sampling Only

Building No.	Investigation Area	Comments
734	C2	Requires verification sampling only
930	D	Requires verification sampling only
900	F2	Requires verification sampling only
1300	F2	Requires verification sampling only
A58	G	Requires verification sampling only
A191	G	Requires verification sampling only
A194	G	Requires verification sampling only
A227	G	Requires verification sampling only

Table 3 – Sites Requiring Abatement and Verification Sampling

Building No.	Investigation Area	Comments
517	A1	Requires abatement and verification
GRA 65	A2	Requires verification sampling only
643	A2	Requires abatement and verification
797 & GRA 51	A2	Requires abatement and verification
782	F2	Requires abatement and verification
GRA 53	A2	Requires abatement and verification
GRA 55	A2	Requires abatement and verification
GRA 63	A2	Requires abatement and verification
799	A2	Requires abatement and verification
825 & GRA 61	A2	Requires abatement and verification
Pier 55	A2	Requires abatement and verification
163	C1	Requires abatement and verification
832	C2	Requires abatement and verification
A17	F1	Requires abatement and verification
A71	F1	Requires abatement and verification
A142	F1	Requires abatement and verification
A144	F1	Requires abatement and verification
A192	F1	Requires abatement and verification
A253	F1	Requires abatement and verification
A260	F1	Requires abatement and verification
A266	F1	Requires abatement and verification
505A	I	Requires abatement and verification
505B	I	Requires abatement and verification

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
32	PCB sites	Table 1	Final Abatement Work Plan for PCB Sites Sampling, Abatement, and Closure Documentation, Former Mare Island Naval Shipyard, Vallejo, California. Table 1. ERS-Joint Venture. May 2009.

Table 1 – PCB Sites Ready for Closure

Building No.	Investigation Area	Comments
1001	A1	Recommended for Closure, closure document compiled by other contractor
589	A2	Recommended for Closure, closure document compiled by other contractor
591	A2	Recommended for Closure, closure document compiled by other contractor
593	A2	Recommended for Closure, closure document compiled by other contractor
641	A2	Recommended for Closure, closure document compiled by other contractor
499	A1	Recommended for Closure
Former 597	C2	Recommended for Closure
736 & Pier 23	C2	Recommended for Closure
Bldg H86 & 1296	D	Recommended for Closure
726	D	Recommended for Closure
A1	F1	Recommended for Closure
A2	F1	Recommended for Closure
A3	F1	Recommended for Closure
A4	F1	Recommended for Closure
A5	F1	Recommended for Closure
A6	F1	Recommended for Closure
A8	F1	Recommended for Closure
A15	F1	Recommended for Closure
A65	F1	Recommended for Closure
A85	F1	Recommended for Closure
A103	F1	Recommended for Closure
A136	F1	Recommended for Closure
A145	F1	Recommended for Closure
A154	F1	Recommended for Closure
A197	F1	Recommended for Closure
A215	F1	Recommended for Closure
A226	F1	Recommended for Closure
A265	F1	Recommended for Closure
778	F2	Recommended for Closure
A44	G	Recommended for Closure
A153	G	Recommended for Closure
A161	G	Recommended for Closure
A162	G	Recommended for Closure
A163	G	Recommended for Closure
MESEDA RD	G	Recommended for Closure
A169	I	Recommended for Closure

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
33	NFA closure reports	Table 1	Revised Final Building 589, IA A2, PCB Site Request for Closure, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 4.0. ERS JV. April 2010.
			Final Building 591, IA A2, PCB Site Request for Closure, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 4.0. SulTech. September 2010.
			Revised Final Building 641, IA A2, PCB Site Request for Closure, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 4.0. ERS JV. April 2010.

4.0 CONCLUSIONS

No further sampling or cleanup actions are necessary at Building 589. A no-action determination for PCBs is protective of human health and the environment at Building 589. Under TSCA, no action is appropriate for Building 589 based on the conclusions summarized below.

- The site has been adequately characterized. Available historical documents and regulations have been reviewed.
- The single PCB transformer formerly located at Building 589 was likely removed in 1992, thereby removing the potential source of PCBs.
- No spills or PCB abatement was reported for Building 589.
- During the PCB assessment performed by Tetra Tech in October 1997 (Tetra Tech 2002), the highest concentration of PCBs detected was 0.27 mg/kg of Aroclor-1260.
- All concrete and soil sample results indicate that residual PCB concentrations are lower than the TSCA screening criterion for high-occupancy areas ($\leq$ 1.0 mg/kg) (40 CFR §761.61).
- Conduits in the building floor are empty of cable.

The Navy has determined that Building 589 may be closed with respect to PCBs, and request EPA concurrence to this finding.

4.0 CONCLUSIONS

No further sampling or cleanup actions are necessary at Building 591 because no AOC was identified at this site during the 1999 PCB investigation (SSPORTS 1999) or the 2003 data gap assessment (Sullivan 2004). There was no documented information or indications that sources of PCBs existed at Building 591 or that a release of PCBs occurred. This PCB site closure evaluation indicates that a no-action determination would be protective of human health and environment at Building 591. No action is appropriate for Building 591 because of the conclusions summarized below:

- The site has been adequately characterized. Available historical documents and regulations have been reviewed.
- No documentation was found indicating PCB-containing transformers were located in the building.
- No spills or PCB abatement were reported for Building 591.
- Documentation of analytical results is available.
- No significant staining was identified in the building or within and around the vault.
- Analytical results for PCB concentrations in concrete samples were $\leq$ 1.0 mg/kg.
- No AOC was identified at Building 591.

The Navy has determined that Building 591 may be closed with respect to PCBs, and request EPA concurrence to this finding.

4.0 CONCLUSIONS

The results of this PCB site closure evaluation indicate that a no-action determination is protective of human health and environment at Building 641. Under TSCA, no-action is appropriate for Building 641 because of the conclusions summarized below:

- The site has been adequately characterized. Available historical documents and regulations have been reviewed.
- Two transformers remaining on site contain oil with less than 50 ppm PCBs.
- All electrical cable insulation samples returned analytic results well below 50 ppm PCBs. All cut conduit with abandoned cable inside have been capped.
- No spills or PCB abatement were reported for Building 641.
- Documentation of analytical results is available.
- Analytical results from a concrete sample collected from an oil stain next to one of the transformers indicate that no PCB oil had been released.
- The maximum PCB concentration at this site was comparable to the detection limit and was estimated to be 0.06 mg/kg (SSPORTS 1999). Concrete and soil sample results indicate that residual PCB concentrations are lower than the TSCA screening criterion for high-occupancy areas ($\leq$ 1.0 mg/kg) (40 CFR §761.61).
- The data gap assessment verified one SSPORTS concrete sampling location and both Tetra Tech confirmation sampling locations.

The Navy has determined that Building 641 may be closed with respect to PCBs, and requests EPA concurrence to this finding.

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
34	PCB closure letters	Table 1	Concurrence Letter Regarding Revised Final Closure Report for Building 589 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facility and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 18, 2010.
			Concurrence Letter Regarding Navy's Request for No Further Action for PCB Site Building 591, IA A2, Mare Island, Vallejo, California. From Mr. Mike Montgomery, Assistant Director, Federal Facility and Site Branch Cleanup, to Mr. Michael Bloom, Department of the Navy. February 8, 2010.
			Concurrence Letter Regarding Revised Final Closure Report for Building 641 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facility and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 18, 2010.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

JUN 18 2010

Anthony Megliola
Dept of the Navy
Base Realignment and Closure
Program Management Office West
1455 Frazee Rd. Suite 900
San Diego, CA 92106-4310

Re: Revised Final Closure Report for Building 589 Polychlorinated Biphenyl (PCB) Site in Investigation Area A2, former Mare Island Naval Shipyard, Vallejo, California, April 29, 2010

Dear Mr. Megliola:

EPA has reviewed your April 29, 2010 Revised Final Closure Report for Building 589 Polychlorinated Biphenyl (PCB) Site in Investigation Area A2. We concur that the requirements for closure under TSCA have been met for this site.

Building 549 was used for storage of electrical equipment and formerly contained one PCB transformer which has been removed. No leaks had been documented for the transformer. Four concrete samples initially collected by the Navy in the northern open-air portion of the structure were non-detect for PCBs. Because the roofed interior portion of the building had been used for electrical equipment storage, EPA requested that samples be collected to confirm the absence of PCBs. Navy completed grid sampling of the interior of the building; all samples were below the 1 mg/kg cleanup goal for PCBs. All electrical cable has been removed from the site.

Please contact Carolyn d'Almeida at (415) 972-3150 if you have any questions about this letter.

Sincerely,

Michael Montgomery
Assistant Director
Federal Facilities and Site Cleanup Branch

cc: Janet Naito, DTSC

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

FEB 8 2010

Mr. Michael Bloom
Dept of the Navy
Base Realignment and Closure
Program Management Office
1455 Frazee Road, Suite 900
San Diego, CA 92108-4301

Re: September 30, 2009 Letter Requesting No Further Action for Polychlorinated Biphenyl (PCB) Site Building 591 Investigation Area A2, Former Mare Island Naval Shipyard, Vallejo, CA

Dear Mr. Bloom:

EPA has reviewed your September 30, 2009 letter requesting a determination of no further action NFA) under TSCA for the above referenced PCB site. Based upon the information provided in your September 30, 3009 letter, EPA concurs with the NFA determination.

Building 591 formerly used for storage, was demolished in 1989. Only a concrete foundation and underlying vault remain. Four samples previously collected from the northern half of the slab were non-detect for PCBs. Water in the vault appears to be clear, with no evidence of oily sheen.

Please feel free to contact Carolyn d'Almeida at (415) 972-3150 if you have any questions about this letter.

Sincerely,

Mike Montgomery
Assistant Director
Federal Facility and Site Cleanup Branch

cc: Janet Naito, DTSC

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

JUN 18 2010

Anthony Megliola
Dept of the Navy
Base Realignment and Closure
Program Management Office West
1455 Frazee Rd. Suite 900
San Diego, CA 92106-4310

Re: Revised Final Closure Report for Building 641 Polychlorinated Biphenyl (PCB) Site in Investigation Area A2, former Mare Island Naval Shipyard, Vallejo, California, May 5, 2010

Dear Mr. Megliola:

EPA has reviewed your May 5, 2010 Revised Final Closure Report for Building 641 Polychlorinated Biphenyl (PCB) Site in Investigation Area A2. We concur that the requirements for closure under TSCA have been met for this site.

Building 641 is the former North Fire Station, which was also used for submarine repair support. Three transformers, one dry, two containing PCBs, and an associated electrical vault are located on the east exterior side of the building. The dry transformer is still active and operates the city street lights. The two PCB transformers are inactive, hold 20 gallons and were found to contain 0 and 19 ppm PCBs. All of the transformers have already been sold to Island Energy for reuse. Pursuant to the definitions in 40 CFR 761.3, transformers containing less than 50 ppm PCBs are classified as "non- PCB" with respect to TSCA provisions. Six samples were collected from the concrete pad surrounding the transformers and 13 wipe samples were collected from the building interior; all were non-detect for PCBs. Electrical cable conduits have been cut and capped.

Please contact Carolyn d'Almeida at (415) 972-3150 if you have any questions about this letter.

Sincerely,

Michael Montgomery
Assistant Director
Federal Facilities and Site Cleanup Branch

cc: Janet Naito, DTSC

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
35	Closure reports	Table 1	Final Building 593, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. March 2010.
			Final Building 643, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. May 2010.
			Final Building 797/GRA 51, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. April 2010.
			Final Building 799, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. June 2010.
			Final Building 825/GRA 61, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. March 2010.
			Final Grounded Rocker Arm 53, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. March 2010.
			Final Grounded Rocker Arm 55, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. June 2010.
			Final Grounded Rocker Arm 63, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. March 2010.
			Final Grounded Rocker Arm 65, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. May 2010.
			Final Pier 55 – Manholes 9 and 13, IA A2, PCB Site Closure Report, TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, California. Section 6.0. ERS JV. March 2010.

5.2.2 Abandoned Electrical Cable

The site was also surveyed for cable insulation associated with cut electrical conduit or insulation debris. Loose insulation debris was observed. This material was drummed for off-site disposal in accordance with the Final Abatement Work Plan, Appendix D (ERS Joint Venture 2009a).

No cut conduit with insulated cable was observed at Building 593 and no further action is required regarding abandoned electrical cable at this site.

6.0 Conclusions

No further PCB sampling or cleanup actions are necessary at Building 593. Previous PCB assessments by SSPORTS and SulTech (SSPORTS 1995, SulTech 2004) and additional confirmation sampling done as part of the current sampling and abatement activities show that remaining PCB concentrations are below 1 ppm. This indicates that the PCB concentrations at this site are less than the TSCA high-occupancy criterion of 1.0 mg/kg (40 CFR §761.61).

A no-further-action determination is protective of human health and environment at Building 593. Under TSCA no further action is appropriate for this site because of the following conclusions:

- Available documents and regulations have been carefully reviewed.
- The source of PCBs has been identified and removed.
- The site was adequately characterized.
- The remaining total PCB concentrations are less than 1.0 ppm.

The conditions for EPA closure of PCB sites (less than 1.0 mg/kg according to 40 CFR §761.61) have been satisfied at this site. Therefore, pursuant to TSCA, the Navy has determined that the site may be closed with respect to PCBs.

TABLE 3. FINAL CHARACTERIZATION AND VERIFICATION SAMPLING RESULTS, BUILDING 643

AOC	Location	Date Sampled	Sample ID	Sample Matrix	Detection Limit (ppm)	Total PCBs (ppm)
1	scabbled area of vault floor	10-Feb-10	B643-034C	CONCRETE	0.012	0.0085
1	scabbled area of vault floor	10-Feb-10	B643-035C	CONCRETE	0.012	ND
1	scabbled area of vault floor	10-Feb-10	B643-036C	CONCRETE	0.012	0.082
1	scabbled area of vault floor	10-Feb-10	B643-037C	CONCRETE	0.012	0.0027
1	scabbled area of vault floor	10-Feb-10	B643-038C	CONCRETE	0.012	0.0042
1	scabbled area of vault floor	10-Feb-10	B643-039C	CONCRETE	0.012	0.038
1	scabbled area of vault floor	10-Feb-10	B643-040C	CONCRETE	0.012	0.0023
1	scabbled area of vault floor	10-Feb-10	B643-041C	CONCRETE	0.012	0.0078
1	scabbled area of vault floor	10-Feb-10	B643-042C	CONCRETE	0.012	0.0027
AOC 2 Post-abatement Verification Sampling						
2	exterior excavation near west wall, 2 ft bgs	10-Feb-10	B643-001D	SOIL	0.014	ND
		10-Feb-10	B643-002D	SOIL	0.014	0.013
		10-Feb-10	B643-003D	SOIL	0.014	0.21
		10-Feb-10	B643-004D	SOIL	0.014	0.036
		10-Feb-10	B643-005D	SOIL	0.016	0.015
		10-Feb-10	B643-006D	SOIL	0.016	0.0058
2	exterior excavation northwest corner, 2 ft bgs	10-Feb-10	B643-007D	SOIL	0.017	0.0042
		10-Feb-10	B643-008D	SOIL	0.014	0.05
		10-Feb-10	B643-009D	SOIL	0.014	0.054

6.0 Conclusions

No further PCB sampling or cleanup action is necessary at Building 643. Previous PCB assessments by SSPORTS and SulTech (SSPORTS 1995, SulTech 2004) and additional confirmation sampling done as part of the current sampling and abatement activities show that remaining PCB concentrations are below 1 ppm. This indicates that the PCB concentrations at this site are less than the TSCA high-occupancy criterion of 1.0 mg/kg (40 CFR §761.61).

A no-further-action determination is protective of human health and environment at Building 643. Under TSCA no further action is appropriate for this site because of the following conclusions:

- Available documents and regulations have been carefully reviewed.
- The source of PCBs has been identified and removed.
- The site was adequately characterized.
- The remaining total PCB concentrations are less than 1.0 ppm.
- Abandoned electrical cable was removed.

The conditions for EPA closure of PCB sites (less than 1.0 mg/kg according to 40 CFR §761.61) have been satisfied at this site. Therefore, pursuant to TSCA, the Navy has determined that the site may be closed with respect to PCBs.

TABLE 4. FINAL CHARACTERIZATION AND VERIFICATION SAMPLE RESULTS, BUILDING 797/GRA51

AOC	Location	Date Sampled	Sample ID	Sample Matrix	Detection Limit (ppm)	Total PCBs (ppm)
1	N of concrete block, E side of Bldg	06-Oct-09	B797-001C	concrete	0.012	0.18
1	E of concrete block, E side of Bldg	06-Oct-09	B797-002C	concrete	0.012	0.19
1	S of Boiler on E side of Bldg	06-Oct-09	B797-003C	concrete	0.012	0.04
1	S of Boiler on E side of Bldg	06-Oct-09	B797-004C	concrete	0.012	0.065
1	Between both Boilers	06-Oct-09	B797-005C	concrete	0.012	0.35
1	S of Boiler in middle of Bldg	06-Oct-09	B797-006C	concrete	0.012	0.065
1	N of Boiler in middle of Bldg	06-Oct-09	B797-007C	concrete	0.012	0.043
1	S of Boiler in middle of Bldg	06-Oct-09	B797-008C	concrete	0.012	0.12
1	S of Boiler in middle of Bldg	06-Oct-09	B797-009C	concrete	0.012	0.046
1	N of pump and motor assembly	06-Oct-09	B797-010C	concrete	0.012	0.063
1	Middle of pump and motor assembly	06-Oct-09	B797-011C	concrete	0.012	0.037
1	E of pump and motor assembly	06-Oct-09	B797-012C	concrete	0.012	0.0052
1	S of pump and motor assembly	06-Oct-09	B797-013C	concrete	0.012	0.12
1	interior electrical cabinets	13-Nov-09	B797-014S	wipe	0.0025	ND
2	within electrical vault	15-Dec-09	GRA51-004C	concrete	0.012	0.042
2	within electrical vault	15-Dec-09	GRA51-005C	concrete	0.012	0.068
2	within electrical vault	15-Dec-09	GRA51-006C	concrete	0.012	0.016
3	W of former GRA51	06-Oct-09	GRA51-001C	concrete	0.012	0.0055
3	S of former GRA51	06-Oct-09	GRA51-002C	concrete	0.012	0.0063
3	SE of former GRA51	06-Oct-09	GRA51-003C	concrete	0.012	0.023
4	Tub 1A conduit	22-Mar-10	TUB1A-001I	cable insulation	0.48	3.4
4	Tub 1A vault floor	23-Mar-10	TUB1A-001C	concrete	0.012	0.0072
4	Tub 1A vault floor	23-Mar-10	TUB1A-002C	concrete	0.012	0.0047
4	Tub 1A vault floor	23-Mar-10	TUB1A-003C	concrete	0.012	0.0031

ID identification
ND not detected above the sample reporting limits
PCB polychlorinated biphenyl compound
ppm part per million

6.0 Conclusions

No further PCB sampling or cleanup actions are necessary at Building 7975/GRA51. Previous PCB assessments by SSPORTS and SulTech (SSPORTS 1995, SulTech 2004) and additional confirmation sampling done as part of the current sampling and abatement activities show that remaining PCB concentrations are below 1 ppm. This indicates that residual PCB concentrations in concrete at this site are less than the TSCA high-occupancy criterion of 1.0 mg/kg (40 CFR §761.61).

A no-further-action determination is protective of human health and environment at Building 797/GRA51. Under TSCA no further action is appropriate for this site because of the following conclusions:

- Available documents and regulations have been carefully reviewed.
- The source of PCBs has been identified and removed.
- The site was adequately characterized.
- The remaining total PCB concentrations in concrete are less than 1.0 ppm.
- Sampled electrical cable insulation returned analytic results well below 50 ppm PCBs. Cut conduit with cable was left in place and sealed, and loose insulation debris was removed.

The conditions for EPA closure of PCB sites (less than 1.0 mg/kg according to 40 CFR §761.61) have been satisfied at this site, and no cable insulation remains onsite above the TSCA bulk-product limit of 50-ppm (40 CFR 761.62). Therefore, pursuant to TSCA, the Navy has determined that the site may be closed with respect to PCBs.

TABLE 4: FINAL SAMPLE RESULTS

AOC	Location	Date Sampled	Sample ID	Sample Matrix	Detection Limit (ppm)	Total PCBs (ppm)
3	exterior surface between 825 & 799	02-Mar-10	B799-045C	CONCRETE	0.17	0.074
3	exterior surface between 825 & 799	02-Mar-10	B799-046C	CONCRETE	0.17	0.115
AOC 4 (electrical vaults) - Characterization, Figure 2E						
4	concrete within vault	16-Dec-09	B799-047C	CONCRETE	0.012	0.185
4	concrete within vault	16-Dec-09	B799-048C	CONCRETE	0.012	0.097
4	concrete within vault	16-Dec-09	B799-049C	CONCRETE	0.012	0.061
4	concrete floor of vault	16-Feb-10	B799-083C	CONCRETE	0.012	0.0438
4	concrete floor of vault	16-Feb-10	B799-084C	CONCRETE	0.012	0.089
4	concrete floor of vault	16-Feb-10	B799-085C	CONCRETE	0.012	0.071
4	concrete floor of vault	16-Feb-10	B799-086C	CONCRETE	0.012	0.052
4	concrete floor of vault	16-Feb-10	B799-087C	CONCRETE	0.012	0.07
4	concrete floor of vault	16-Feb-10	B799-088C	CONCRETE	0.012	0.085
4	concrete floor of vault	16-Feb-10	B799-089C	CONCRETE	0.012	0.09
4	concrete floor of vault	16-Feb-10	B799-090C	CONCRETE	0.012	0.1
4	concrete floor of vault	16-Feb-10	B799-091C	CONCRETE	0.012	0.079
4	concrete floor of vault	16-Feb-10	B799-092C	CONCRETE	0.012	0.0539
4	concrete floor of vault	16-Feb-10	B799-093C	CONCRETE	0.012	0.129
4	concrete floor of vault	16-Feb-10	B799-094C	CONCRETE	0.012	0.071
4	concrete floor of vault	16-Feb-10	B799-095C	CONCRETE	0.012	0.061

6.0 Conclusions

No further PCB sampling or cleanup action is necessary at Building 799. Previous PCB assessments (SSPORTS 1996-1999, Sullivan and Tetra Tech 2004) and additional confirmation sampling done as part of the current sampling and abatement activities show that remaining PCB concentrations are below 1 ppm. This indicates that the PCB concentrations at this site are less than the TSCA high-occupancy criterion of 1.0 mg/kg (40 CFR §761.61).

A no-further-action determination is protective of human health and environment at Building 799. Under TSCA no further action is appropriate for this site because of the following conclusions:

- Available documents and regulations have been carefully reviewed.
- The source of PCBs has been identified and removed.
- The site was adequately characterized.
- The remaining total PCB concentrations are less than 1.0 ppm.
- No abandoned cable insulation remains on site.

The conditions for EPA closure of PCB sites (less than 1.0 mg/kg according to 40 CFR §761.61) have been satisfied at this site. Therefore, pursuant to TSCA, the Navy has determined that the site may be closed with respect to PCBs.

6.0 Conclusions

No further PCB sampling or cleanup actions are necessary at Building 825/GRA61. Previous PCB assessments by SSPORTS and SulTech (SSPORTS 1995, SulTech 2004) and additional confirmation sampling done as part of the current sampling and abatement activities show that remaining PCB concentrations are below 1 ppm. This indicates that the PCB concentrations at this site are less than the TSCA high-occupancy criterion of 1.0 mg/kg (40 CFR §761.61).

A no-further-action determination is protective of human health and environment at Building 825/GRA61. Under TSCA no further action is appropriate for this site because of the following conclusions:

- Available documents and regulations have been carefully reviewed.
- The source of PCBs has been identified and removed.
- The site was adequately characterized.
- The remaining total PCB concentrations are less than 1.0 ppm.

The conditions for EPA closure of PCB sites (less than 1.0 mg/kg according to 40 CFR §761.61) have been satisfied at this site. Therefore, pursuant to TSCA, the Navy has determined that the site may be closed with respect to PCBs.

7.0 References

ERS Joint Venture 2008, Sampling and Analysis Plan, PCB Sites Sampling, Abatement and Closure Documentation, Former Mare Island Naval Shipyard, Vallejo CA.

ERS Joint Venture 2009a. Final Abatement Work Plan, PCB Sites Sampling, Abatement and Closure Documentation, Former Mare Island Naval Shipyard, Vallejo CA.

ERS Joint Venture 2009b. Accident Prevention Plan, PCB Sites Sampling, Abatement and Closure Documentation, Former Mare Island Naval Shipyard, Vallejo CA.

ERS Joint Venture 2009c. Final Building 825/GRA 61, Investigation Area A2, PCB Site Cleanup Plan - TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, CA

SSPORTS. 1996. “PCB Decontamination for Parcel 01-Q2.” June 6.

SSPORTS. 1997. “PCB Decontamination Technical Work Document 96-1399.” February 3.

SSPORTS. 1999. “Mare Island Naval Shipyard Environmental Baseline Survey Database.” Last updated 1999.

Sullivan and Tetra Tech. 2004. "PCB Summary Report, Former Mare Island Naval Shipyard, Vallejo, California." October.

Tetra Tech. 1998. “Final Basewide Confirmation Sampling Summary Report, Mare Island.”

Tetra Tech. 2002. “Internal Draft Polychlorinated Biphenyl Assessment and Abatement Summary Report, Mare Island, California, Volumes I-VII.” August.

U.S. EPA PCB Website, Interpretive Guidance: Question and Answer Manuals (Sampling Guidance for Subpart O), TSCA Self-Implementing Program, 40 CFR 761.61.

http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/subpartmopr.pdf

5.2.3 Abandoned Electrical Cable

The site was surveyed for cable insulation associated with cut electrical conduit or insulation debris. Abandoned electrical cable seen in Figure 1 Photograph A has since been removed. No abandoned electrical cable or insulation debris was found at GRA 53 and no further action is required for this potential issue.

TABLE 4. FINAL CHARACTERIZATION AND VERIFICATION SAMPLING RESULTS, GRA 53

AOC	Location	Date Sampled	Sample ID	Sample Matrix	Detection Limit (ppm)	Total PCBs (ppm)
1	concrete surface N of GRA53	06-Oct-09	GRA53-001C	CONCRETE	0.012	0.11
1	west of former GRA53 location	06-Oct-09	GRA53-002C	CONCRETE	0.012	0.029
1	south of former GRA53 location	06-Oct-09	GRA53-003C	CONCRETE	0.012	0.0077
1	scabbled concrete at former GRA location	17-Nov-09	GRA53-004C	CONCRETE	0.012	0.014
1	scabbled concrete at former GRA location	17-Nov-09	GRA53-005C	CONCRETE	0.012	0.022
1	scabbled concrete at former GRA location	17-Nov-09	GRA53-006C	CONCRETE	0.012	0.014
2	concrete within vault	15-Dec-09	GRA53-007C	CONCRETE	0.012	0.0045
2	concrete within vault	15-Dec-09	GRA53-008C	CONCRETE	0.012	0.0093
2	concrete within vault	15-Dec-09	GRA53-009C	CONCRETE	0.012	0.006

6.0 Conclusions

No further PCB sampling or cleanup actions are necessary at GRA 53. Previous PCB assessments by SSPORTS and SulTech (SSPORTS 1995, SulTech 2004) and additional confirmation sampling done as part of the current sampling and abatement activities show that remaining PCB concentrations are below 1 ppm. This indicates that the PCB concentrations at this site are less than the TSCA high-occupancy criterion of 1.0 mg/kg (40 CFR §761.61).

A no-further-action determination is protective of human health and environment at GRA 53. Under TSCA no further action is appropriate for this site because of the following conclusions:

- Available documents and regulations have been carefully reviewed.
- The source of PCBs has been identified and removed.
- The site was adequately characterized.
- The remaining total PCB concentrations are less than 1.0 ppm.

The conditions for EPA closure of PCB sites (less than 1.0 mg/kg according to 40 CFR §761.61) have been satisfied at this site. Therefore, pursuant to TSCA, the Navy has determined that the site may be closed with respect to PCBs.

TABLE 4. FINAL CHARACTERIZATION AND VERIFICATION SAMPLING RESULTS, GRA 55

AOC	Location	Date Sampled	Sample ID	Sample Matrix	Detection Limit (ppm)	Total PCBs (ppm)
1	footprint of former GRA55	06-Oct-09	GRA55-001C	concrete	0.012	0.0024
1	footprint of former GRA55	06-Oct-09	GRA55-002C	concrete	0.012	0.0021
1	footprint of former GRA55	06-Oct-09	GRA55-003C	concrete	0.012	0.0077
1	concrete around former GRA55	13-Nov-09	GRA55-004C	concrete	0.012	0.0197
1	concrete around former GRA55	13-Nov-09	GRA55-005C	concrete	0.012	0.0091
1	concrete around former GRA55	13-Nov-09	GRA55-006C	concrete	0.012	0.021
1	LCC panel on concrete pad	22-Mar-10	GRA55-001I	cable insulation	0.24	ND
1	LCC panel on concrete pad	22-Mar-10	GRA55-002I	cable insulation	0.24	1.84
2	concrete within vault	15-Dec-09	GRA55-007C	concrete	0.012	0.055
2	concrete within vault	15-Dec-09	GRA55-008C	concrete	0.012	0.198
2	concrete within vault	15-Dec-09	GRA55-009C	concrete	0.012	0.056

6.0 Conclusions

No further PCB sampling or cleanup actions are necessary at GRA 55. Previous PCB assessments by SSPORTS and SulTech (SSPORTS 1995, SulTech 2004) and additional confirmation sampling done as part of the current sampling and abatement activities show that remaining PCB concentrations are below 1 ppm. This indicates that the PCB concentrations at this site are less than the TSCA high-occupancy criterion of 1.0 mg/kg (40 CFR §761.61).

A no-further-action determination is protective of human health and environment at GRA 55. Under TSCA no further action is appropriate for this site because of the following conclusions:

- Available documents and regulations have been carefully reviewed.
- The source of PCBs has been identified and removed.
- The site was adequately characterized.
- The remaining total PCB concentrations in concrete are less than 1.0 ppm.
- Electrical cable insulation samples returned analytic results well below 50 ppm PCBs (TSCA bulk-product limit of 50-ppm, 40 CFR 761.62). Cable was removed from the cut conduit.

The conditions for EPA closure of PCB sites (less than 1.0 mg/kg according to 40 CFR §761.61) have been satisfied at this site, and no cable insulation remains onsite. Therefore, pursuant to TSCA, the Navy has determined that the site may be closed with respect to PCBs.

TABLE 4. FINAL VERIFICATION SAMPLING RESULTS, GRA 63

AOC	Location	Date Sampled	Sample ID	Sample Matrix	Detection Limit (ppm)	Total PCBs (ppm)
2	concrete within vault	15-Dec-09	GRA63-001C	CONCRETE	0.012	0.017
2	concrete within vault	15-Dec-09	GRA63-002C	CONCRETE	0.012	0.025
2	concrete within vault	15-Dec-09	GRA63-003C	CONCRETE	0.012	0.016

6.0 Conclusions

No further PCB sampling or cleanup actions are necessary at GRA 63. Previous PCB assessments by SSPORTS and SulTech (SSPORTS 1995, SulTech 2004) and additional confirmation sampling done as part of the current sampling and abatement activities show that remaining PCB concentrations are below 1 ppm. This indicates that the PCB concentrations at this site are less than the TSCA high-occupancy criterion of 1.0 mg/kg (40 CFR §761.61).

A no-further-action determination is protective of human health and environment at GRA 63. Under TSCA no further action is appropriate for this site because of the following conclusions:

- Available documents and regulations have been carefully reviewed.
- The source of PCBs has been identified and removed.
- The site was adequately characterized.
- The remaining total PCB concentrations are less than 1.0 ppm.

The conditions for EPA closure of PCB sites (less than 1.0 mg/kg according to 40 CFR §761.61) have been satisfied at this site. Therefore, pursuant to TSCA, the Navy has determined that the site may be closed with respect to PCBs.

6.0 Conclusions

No further PCB sampling or cleanup actions are necessary at GRA 65. Previous PCB assessments by SSPORTS and SulTech (SSPORTS 1995, SulTech 2004) and additional confirmation sampling done as part of the current sampling and abatement activities show that remaining PCB concentrations are below 1 ppm. This indicates that the PCB concentrations at this site are less than the TSCA high-occupancy criterion of 1.0 mg/kg (40 CFR §761.61).

A no-further-action determination is protective of human health and environment at GRA 65. Under TSCA no further action is appropriate for this site because of the following conclusions:

- Available documents and regulations have been carefully reviewed.
- The source of PCBs has been identified and removed.
- The site was adequately characterized.
- The remaining total PCB concentrations are less than 1.0 ppm.

The conditions for EPA closure of PCB sites (less than 1.0 mg/kg according to 40 CFR §761.61) have been satisfied at this site. Therefore, pursuant to TSCA, the Navy has determined that the site may be closed with respect to PCBs.

7.0 References

ERS Joint Venture 2008, Sampling and Analysis Plan, PCB Sites Sampling, Abatement and Closure Documentation, Former Mare Island Naval Shipyard, Vallejo CA.

ERS Joint Venture 2009a. Final Abatement Work Plan, PCB Sites Sampling, Abatement and Closure Documentation, Former Mare Island Naval Shipyard, Vallejo CA.

ERS Joint Venture 2009b. Accident Prevention Plan, PCB Sites Sampling, Abatement and Closure Documentation, Former Mare Island Naval Shipyard, Vallejo CA.

ERS Joint Venture 2009c. Final Grounded Rocker Arm 65, Investigation Area A2, PCB Site Cleanup Plan - TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, CA

SSPORTS. 1996. “PCB Decontamination Technical Work Document (TWD), PCB Contaminated Spill Site No. Reserve Fleet Piers, TWD No. 96-1296.” August 26.

SSPORTS. 1999. “Mare Island Naval Shipyard Environmental Baseline Survey Database.” Last updated 1999.

Sullivan and Tetra Tech. 2004. "PCB Summary Report, Former Mare Island Naval Shipyard, Vallejo, California." October.

Tetra Tech. 1998. “Final Basewide Confirmation Sampling Summary Report, Mare Island.”

Tetra Tech. 2002. “Internal Draft Polychlorinated Biphenyl Assessment and Abatement Summary Report, Mare Island, California, Volumes I-VII.” August.

U.S. EPA PCB Website, Interpretive Guidance: Question and Answer Manuals (Sampling Guidance for Subpart O), TSCA Self-Implementing Program, 40 CFR 761.61.

http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/subpartmopr.pdf

TABLE 3. FINAL CHARACTERIZATION SAMPLE RESULTS FOR PIER 55

AOC	Location	Date Sampled	Sample ID	Sample Matrix	Detection Limit (ppm)	Total PCBs (ppm)
1	concrete next to manhole	06-Oct-09	MH09-001C	CONCRETE	0.012	0.022
1	concrete next to manhole	06-Oct-09	MH09-002C	CONCRETE	0.012	0.0047
1	concrete next to manhole	06-Oct-09	MH13-001C	CONCRETE	0.012	0.0051
1	concrete next to manhole	06-Oct-09	MH13-002C	CONCRETE	0.012	0.0019
2	concrete within vault	17-Dec-09	MH-09-003C	CONCRETE	0.012	0.049
2	concrete within vault	17-Dec-09	MH-09-004C	CONCRETE	0.012	0.046
2	concrete within vault	17-Dec-09	MH-09-005C	CONCRETE	0.012	0.016
2	concrete within northern vault	18-Dec-09	MH-13-003C/N	CONCRETE	0.012	0.0077
2	concrete within northern vault	18-Dec-09	MH-13-004C/N	CONCRETE	0.012	0.093
2	concrete within northern vault	18-Dec-09	MH-13-005C/N	CONCRETE	0.012	0.0042
2	concrete within southern vault	18-Dec-09	MH-13-006C/S	CONCRETE	0.012	0.019
2	concrete within southern vault	18-Dec-09	MH-13-007C/S	CONCRETE	0.012	0.071
2	concrete within southern vault	18-Dec-09	MH-13-008C/S	CONCRETE	0.012	0.0081

6.0 Conclusions

No further PCB sampling or cleanup actions are necessary at the Pier 55 PCB site. Previous PCB assessments by SSPORTS and SulTech (SSPORTS 1995, SulTech 2004) and additional confirmation sampling done as part of the current sampling and abatement activities show that remaining PCB concentrations are below 1 ppm. This indicates that the PCB concentrations at this site are less than the TSCA high-occupancy criterion of 1.0 mg/kg (40 CFR §761.61).

A no-further-action determination is protective of human health and environment at Pier 55. Under TSCA no further action is appropriate for this site because of the following conclusions:

- Available documents and regulations have been carefully reviewed.
- The source of PCBs has been identified and removed.
- The site was adequately characterized.
- The remaining total PCB concentrations are less than 1.0 ppm.

The conditions for EPA closure of PCB sites (less than 1.0 mg/kg according to 40 CFR §761.61) have been satisfied at this site. Therefore, pursuant to TSCA, the Navy has determined that the site may be closed with respect to PCBs.

7.0 References

ERS Joint Venture 2008, Sampling and Analysis Plan, PCB Sites Sampling, Abatement and Closure Documentation, Former Mare Island Naval Shipyard, Vallejo CA.

ERS Joint Venture 2009a. Final Abatement Work Plan, PCB Sites Sampling, Abatement and Closure Documentation, Former Mare Island Naval Shipyard, Vallejo CA.

ERS Joint Venture 2009b. Accident Prevention Plan, PCB Sites Sampling, Abatement and Closure Documentation, Former Mare Island Naval Shipyard, Vallejo CA.

ERS Joint Venture 2009c. Final Pier 55, Investigation Area A2, PCB Site Cleanup Plan - TSCA Self-Implementing Program, Former Mare Island Naval Shipyard, Vallejo, CA

SSPORTS. 1996. “PCB Decontamination for Parcel 01-Q2.” June 6.

SSPORTS. 1997. “PCB Decontamination Technical Work Document 96-1399.” February 3.

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
36	PCB closure letters	Table 1	Concurrence Letter Regarding Final Closure Report for Building 593 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 7, 2010.
			Letter Regarding TSCA Closure of PCB Transformer 1204, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. August 17, 2010.
			Concurrence Letter Regarding Final Closure Report for Building 643 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 18, 2010.
			Concurrence Letter Regarding Final Closure Report for Building 797 and Grounded Rocker Arm 51 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 7, 2010.
			Concurrence Letter Regarding Final Closure Report for Building 799 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. August 17, 2010.
			Concurrence Letter Regarding Final Closure Report for Building 825 and Grounded Rocker Arm 61 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Mike Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 7, 2010.
			Concurrence Letter Regarding Final Closure Report for Grounded Rocker Arm 53 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 7, 2010.
			Concurrence Letter Regarding Final Closure Report for Grounded Rocker Arm 55 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. August 17, 2010.
			Concurrence Letter Regarding Final Closure Report for Grounded Rocker Arm 63 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Mike Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 7, 2010.
			Concurrence Letter Regarding Final Closure Report for Grounded Rocker Arm 65/Load Control Center PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 18, 2010.
			Concurrence Letter Regarding Final Closure Report for Pier 55 PCB Site in IA A2, Mare Island, Vallejo, California. From Mr. Michael Montgomery, Assistant Director, Federal Facilities and Site Branch Cleanup, to Mr. Anthony Megliola, Department of the Navy. June 7, 2010.

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JUN 7 2010

Anthony Megliola
Dept of the Navy
Base Realignment and Closure
Program Management Office West
1455 Frazee Rd. Suite 900
San Diego, CA 92106-4310

Re: Final Closure Report for Building 593 Polychlorinated Biphenyl (PCB) Site in Investigation Area A2, former Mare Island Naval Shipyard, Vallejo, California, March 25, 2010

Dear Mr. Megliola:

EPA has reviewed your March 25, 2010 Final Closure Report for Building 593 Polychlorinated Biphenyl (PCB) Site Closure Report in Investigation Area A2. We concur that the requirements for closure under TSCA have been met for this site. EPA previously granted a determination of No Further Action under TSCA for this site in our letter dated March 12, 2010, based upon the draft closure report dated February 4, 2010. This closure determination covers the building 593 structure and does not cover former leaking transformer T1204 which has not been located and verified.

Building 593 is a single story concrete structure formerly used for radiological decontamination. Two PCB transformers were formerly associated with the building, one inside the north end of the building, and a second identified as T 1204 located "in the field" which reportedly leaked. The exact location of T 1204 was not determined, and both transformers were removed in 1992. Navy has provided no further information on former transformer T1204 which has not been located. Eight concrete grid samples and two soil samples have been collected. Only one sample was found to contain PCBs above the cleanup goal of 1 mg/kg, to a maximum concentration of 1.7 mg/kg. The northwest corner of the building was scabbled and verification samples were below the 1 mg/kg cleanup goal.

Please contact Carolyn d'Almeida at (415) 972-3150 if you have any questions about this letter.

Sincerely,

Michael Montgomery
Assistant Director
Federal Facilities and Site Cleanup Branch

cc: Janet Naito, DTSC

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Re: July 15, 2010 Letter Regarding TSCA Closure of PCB Transformer 1204 in Investigation Area A1, Former Mare Island Naval Shipyard, Vallejo California.

Dear Mr. Megliola:

EPA has reviewed your July 15, 2010 letter requesting TSCA Closure for Transformer 1204 which was formerly associated with building 593 in Investigation Area A2. In a letter dated June 7, 2010, EPA granted TSCA closure for building 593 but excluded Transformer 1204 which was noted in your March 25, 2010 Final Closure Report as having been located "in the field" and had reportedly leaked. Because the location of the leaking transformer had not been verified, EPA requested additional information. Based upon the information provided in your July 15, 2010 letter, EPA agrees the most likely location for transformer 1204 was inside building 593, and would thus be covered under the June 7, 2010 closure letter.

Building 593 is a single story concrete structure formerly used for radiological decontamination. Two PCB transformers were formerly associated with the building, one inside the north end of the building, and a second identified as T-1204 located "in the field" which reportedly leaked. The exact location of T-1204 was not determined, and both transformers were removed in 1992. Eight concrete grid samples and two soil samples have been collected. Only one sample was found to contain PCBs above the cleanup goal of 1 mg/kg, to a maximum concentration of 1.7 mg/kg. The northwest corner of the building was scabbled and verification samples were below the 1 mg/kg cleanup goal.

Please contact Carolyn d'Almeida at (415) 972-3150 if you have any questions about this letter.

Sincerely,

Michael Montgomery
Assistant Director
Federal Facilities and Site Cleanup Branch

cc: Janet Naito, DTSC

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Re: Final Closure Report for Building 643 Polychlorinated Biphenyl (PCB) Site in Investigation Area A2, former Mare Island Naval Shipyard, Vallejo, California, June 1, 2010

Dear Mr. Megliola:

EPA has reviewed your June 1, 2010 Final Closure Report for Building 643 Polychlorinated Biphenyl (PCB) Site in Investigation Area A2. We concur that the requirements for closure under TSCA have been met for this site. EPA previously granted a determination of No Further Action for under TSCA for this site in our letter dated April 28, 2010, based upon the draft closure report dated April 6, 2010. We requested that the data and manifests be included in the final version which you have provided on the CD transmitted with your June 1, 2010 final report.

Building 643 was an electrical substation with a subsurface vault. The building floor had been previously scabbled and encapsulated with a single layer of paint which was not maintained; PCBs had been found in the floor sealant in concentrations as high as 280,000 ppm and in an electrical conduit as high as 9,500 ppm. Prior to the Navy's final cleanup action, the maximum remaining PCB concentrations were 5.9 in residue on the concrete floor and 43 mg/kg in soils adjacent to the building floor vents. In a July 2009 notification Navy proposed to remove the interior concrete slab and collect verification samples of the underlying soil, and excavate addition exterior soils to meet the 1 mg/kg cleanup goal. EPA also requested verification samples be collected from the vault. During the 2009 cleanup, the walls and foundation slab of building 643 were demolished, surrounding soils were excavated and the vault floor was scabbled to a depth of half an inch to remove remaining PCBs. Verification samples indicate that the 1 mg/kg cleanup goal for unrestricted use has been met.

Please contact Carolyn d'Almeida at (415) 972-3150 if you have any questions about this letter.

Sincerely,

Michael Montgomery
Assistant Director
Federal Facilities and Site Cleanup Branch

cc: Janet Naito, DTSC

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Re: Final Closure Report for Building 797 and Grounded Rocker Arm (GRA) 51 Polychlorinated Biphenyl (PCB) Site in Investigation Area A2, former Mare Island Naval Shipyard, Vallejo, California, April 20, 2010

Dear Mr. Megliola:

EPA has reviewed your April 20, 2010 Final Closure Report for Building 797 and Grounded Rocker Arm 51 Polychlorinated Biphenyl (PCB) Site Closure Report in Investigation Area A2. We concur that the requirements for closure under TSCA have been met for this site. EPA previously granted a determination of No Further Action under TSCA for this site in our letter dated March 3, 2010, based upon the draft closure report dated February 4, 2010. We requested that the data and manifests be included in the final version which you have provided on the CD transmitted with your April 20, 2010 final report.

Building 797 was a boiler and salt water pump house located on the north end of the Fleet Reserve Pier. GRA 51 and eight PCB transformers were associated with the site, all of which reportedly leaked. All transformers and GRA 51 have been removed. PCBs have been found in concrete in concentrations as high as 58.4 mg/kg and 52 mg/kg in loose soil. The pad and surrounding loose soils where the transformers formerly sat has since been removed, the electrical vault has been cleaned out and abandoned electrical cable has been removed. Twenty additional verification samples have been collected, with results all below the 1 mg/kg cleanup goal for unrestricted use. The additional electrical outlet (Tub 1A) and vault identified on the post abatement site walk has also been addressed.

Please contact Carolyn d'Almeida at (415) 972-3150 if you have any questions about this letter.

Sincerely,

Michael Montgomery
Assistant Director
Federal Facilities and Site Cleanup Branch

cc: Janet Naito, DTSC

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Re: Final Closure Report for building 799 Polychlorinated Biphenyl (PCB) Site in Investigation Area A2, former Mare Island Naval Shipyard, Vallejo, California, June 23, 2010

Dear Mr. Megliola:

EPA has reviewed your June 23, 2010 Final Closure Report for Building 799 Polychlorinated Biphenyl (PCB) Site in Investigation Area A2. We concur that the requirements for closure under TSCA have been met for this site.

The site designated Building 799 was a direct current generating station on Fleet Reserve Pier 55. Two transformers were associated with the building, one which contained PCBs. An existing inactive dry transformer remains adjacent to the south side of Building 799. PCBs were found in samples collected from the interior floor in concentrations as high as 191 mg/kg. The contaminated areas of the floor have been scabbled and portions of the floor over the vault were completely removed. Verification samples collected from a 1.5 meter grid over the remainder of the floor indicate that the 1 mg/kg cleanup goal for unrestricted use has been met.

Please contact Carolyn d'Almeida at (415) 972- 3150 if you have any questions about this letter.

Sincerely,

Michael Montgomery
Assistant Director
Federal Facilities and Site Cleanup Branch

cc: Janet Naito, DTSC

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Anthony Megliola
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Re: Final Closure Report for Building 825 Grounded Rocker Arm (GRA) 61 Polychlorinated Biphenyl (PCB) Site in Investigation Area A2, former Mare Island Naval Shipyard, Vallejo, California March 25, 2010

Dear Mr. Megliola

EPA has reviewed your March 25, 2010 Final Closure Report for Building 825 and Grounded Rocker Arm 61 Polychlorinated Biphenyl (PCB) Site Closure Report in Investigation Area A2. We concur that the requirements for closure under TSCA have been met for this site. EPA previously granted a determination of No Further Action under TSCA for this site in our letter dated March 11, 2010, based upon the draft closure report dated February 4, 2010. We requested that the data and manifests be included in the final version which you have provided on the CD transmitted with your March 25, 2010 final report.

Building 825 is a 1000 square foot structure adjoining Building 799 near the center of the former fleet reserve pier (Pier 55), that formerly served as a sailing clubhouse and maintenance facility. Building 825 contained no transformers but did have two electrical distribution panels. Adjacent to building 799 was GRA 61, a former electrical switch. The equipment reportedly contained PCBs but has since been removed. PCBs were not found in concrete adjacent to the former GRA, but some nearby soils were found to contain 2 ppm PCBs. The soils have been removed from the site, along with all electrical cable and insulation debris. Two additional concrete samples were collected from the former GRA pad; all results were below the 1 mg/kg TSCA cleanup goal for unrestricted use.

Please contact Carolyn d'Almeida at (415) 972- 3150 if you have any questions about this letter.

Sincerely,

Mike Montgomery
Assistant Director
Federal Facilities and Site Cleanup Branch

cc: Janet Naito, DTSC

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Re: Final Closure Report for Grounded Rocker Arm (GRA) 53 Polychlorinated Biphenyl (PCB) Site in Investigation Area A2, former Mare Island Naval Shipyard, Vallejo, California, March 25, 2010

Dear Mr. Megliola:

EPA has reviewed your March 25, 2010 Final Closure Report for Grounded Rocker Arm 53 Polychlorinated Biphenyl (PCB) Site Closure Report in Investigation Area A2. We concur that the requirements for closure under TSCA have been met for this site. EPA previously granted a determination of No Further Action under TSCA for this site in our letter dated March 12, 2010, based upon the draft closure report dated February 4, 2010. We requested that the data and manifests be included in the final version which you have provided on the CD transmitted with your March 25, 2010 final report.

The site designated GRA 53 was a former electrical switch and associated utility vault on the former Fleet Reserve Piers located on the southeast side of Pier 55 approximately 290 feet southeast of building 797. The equipment contained 290 ppm PCBs and was reported to have leaked. GRA 53 has been removed. PCBs were found in concrete adjacent to the former GRA in concentrations as high as 1.4 mg/kg and 1.7 mg/kg in sediments inside the electrical utility vault. A 7 by 10 foot area of concrete was scabbled to a depth of ½ inch and three verification samples were collected which confirm the 1 mg/kg cleanup goal for unrestricted use has been met. The water and sediments have also been removed and the vault has been pressure washed. Three verification samples were collected from the vault; all results were below the 1 mg/kg TSCA cleanup goal for unrestricted use. All associated cable has been removed from the site.

Please contact Carolyn d'Almeida at (415) 972-3150 if you have any questions about this letter.

Sincerely,

Michael Montgomery
Assistant Director
Federal Facilities and Site Cleanup Branch

cc: Janet Naito, DTSC

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Re: Final Closure Report for Grounded Rocker Arm (GRA) 55 Polychlorinated Biphenyl (PCB) Site in Investigation Area A2, former Mare Island Naval Shipyard, Vallejo, California, June 23, 2010

Dear Mr. Megliola:

EPA has reviewed your June 23, 2010 Final Closure Report for Grounded Rocker Arm 55 Polychlorinated Biphenyl (PCB) Site in Investigation Area A2. We concur that the requirements for closure under TSCA have been met for this site.

The site designated GRA 55 was a former electrical switch and load control center and associated utility vault on the former Fleet Reserve Piers located on Pier 55 at the intersection of Pier 56. The load control center housed 4 transformers, 3 of which contained PCBs; GRA 55 did not contain PCBs. All of the equipment and electrical cable has been removed from the site. PCBs were found in two of eight samples collected from the former transformer pad of the load control center, at a maximum concentration of 2.8 mg/kg. The pad was scabbled until verification samples indicated the 1 mg/kg cleanup goal for unrestricted use had been met. Water and residues were also removed from the electrical vault, which was pressured washed and sampled. Verification samples confirmed the vault also met the 1 mg/kg cleanup goal for unrestricted use.

Please contact Carolyn d'Almeida at (415) 972-3150 if you have any questions about this letter.

Sincerely,

Michael Montgomery
Assistant Director
Federal Facilities and Site Cleanup Branch

cc: Janet Naito, DTSC

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Re: Final Closure Report for Grounded Rocker Arm (GRA) 63 Polychlorinated Biphenyl (PCB) Site in Investigation Area A2, former Mare Island Naval Shipyard, Vallejo, California March 25, 2010

Dear Mr. Megliola:

EPA has reviewed your March 25, 2010 Final Closure Report for Grounded Rocker Arm 63 Polychlorinated Biphenyl (PCB) Site Closure Report in Investigation Area A2. We concur that the requirements for closure under TSCA have been met for this site. EPA previously granted a determination of No Further Action under TSCA for this site in our letter dated March 12, 2010, based upon the draft closure report dated February 4, 2010. We requested that the data and manifests be included in the final version which you have provided on the CD transmitted with your March 25, 2010 final report.

The site designated GRA 63 was a former electrical switch and associated utility vault on the former Fleet Reserve Piers located on the west side of Pier 55 at the intersection with Pier 54. The equipment reportedly contained 12.5 ppm PCBs, but has since been removed, and all associated electrical cable has been removed. Six samples were collected from surrounding concrete and soil; all results were below the 1 mg/kg cleanup goal. 3.5 mg/kg PCBs were found in sediments inside the electrical utility vault. The water and sediments have since been removed and the vault has been pressure washed. Three verification samples were collected from the vault; all results were below the 1 mg/kg TSCA cleanup goal for unrestricted use.

Please contact Carolyn d'Almeida at (415) 972- 3150 if you have any questions about this letter.

Sincerely,

Mike Montgomery
Assistant Director
Federal Facilities and Site Cleanup Branch

cc: Janet Naito, DTSC

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Re: Final Closure Report for Grounded Rocker Arm (GRA) 65/ Load Control Center Polychlorinated Biphenyl (PCB) Site in Investigation Area A2, former Mare Island Naval Shipyard, Vallejo, California, June 1, 2010

Dear Mr. Megliola:

EPA has reviewed your June 1, 2010 Final Closure Report for Grounded Rocker Arm 65 Polychlorinated Biphenyl (PCB) Site in Investigation Area A2. We concur that the requirements for closure under TSCA have been met for this site. EPA previously granted a determination of No Further Action for under TSCA for this site in our letter dated May 11, 2010, based upon the draft closure report dated April 6, 2010. We requested that the data and manifests be included in the final version which you have provided on the CD transmitted with your June 1, 2010 final report.

The site designated GRA 65 was an electrical switch containing PCBs located south of GRA 63 on Fleet Reserve Pier 53. A load control center housing 3 transformers was associated with the site. The electrical equipment, transformer pad and cable have been removed from the site. Residue samples collected from the adjacent electrical vault beneath the pier do not exceed the 1 mg/kg cleanup goal for PCBs. The concrete deck of the pier has been scabbled to a depth of ½ inch where 1.68 mg/kg PCBs had been found. Verification samples following abatement indicate that the 1 mg/kg cleanup goal has been met.

Please contact Carolyn d'Almeida at (415) 972-3150 if you have any questions about this letter.

Sincerely,

Michael Montgomery
Assistant Director
Federal Facilities and Site Cleanup Branch

cc: Janet Naito, DTSC

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Anthony Megliola
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Re: Final Closure Report for Pier 55 Polychlorinated Biphenyl (PCB) Site in Investigation Area A2, former Mare Island Naval Shipyard, Vallejo, California, March 25, 2010

Dear Mr. Megliola:

EPA has reviewed your March 17, 2010 Final Closure Report for Pier 55 Polychlorinated Biphenyl (PCB) Site Closure Report in Investigation Area A2. We concur that the requirements for closure under TSCA have been met for this site. EPA previously granted a determination of No Further Action under TSCA for this site in our letter dated March 3, 2010, based upon the draft closure report dated February 4, 2010. We requested that the data and manifests be included in the final version which you have provided on the CD transmitted with your March 17, 2010 final report.

Pier 55 is the longest segment of the former Fleet Reserve Piers at Mare Island. The PCB site includes the pier deck around manholes MH-09 and MH13 and associated electrical vaults and equipment. PCBs have been identified in sediments in the vaults in concentrations up to 4.5 mg/kg. All electrical vaults have been cleaned out and pressured washed and verification samples indicate that the cleanup goal of 1 mg/kg has been met. Samples collected from the concrete deck did not exceed 0.022 mg/kg PCBs.

Please contact Carolyn d'Almeida at (415) 972-3150 if you have any questions about this letter.

Sincerely,

Michael Montgomery
Assistant Director
Federal Facilities and Site Cleanup Branch

cc: Janet Naito, DTSC

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
37	Implementation of the PCAP	Table 1	Final Petroleum Corrective Action Plan Completion Report, Former North Building Ways within Investigation Area A2, Former Mare Island Naval Shipyard, Vallejo, California. Sections 1.0 and 1.4. TN & Associates, Inc. October 13, 2009.

1.0 INTRODUCTION

This Petroleum Corrective Action Plan (PCAP) Completion Report is prepared by T N & Associates, Inc. (TN&A) for the U.S. Department of the Navy (Navy), Naval Facilities Engineering Command Southwest (NAVFAC), under Remedial Action Contract No. N62473-07-D-3217, Contract Task Order (CTO) No. 0002. The purpose of this completion report is to document the field activities conducted under the PCAP at the Former North Building Ways (FNBW) within Investigation Area (IA) A2, Former Mare Island Naval Shipyard (MINS), Vallejo, California.

The field activities conducted under the PCAP involved removing surface and subsurface soils to below the Tier 2 residential environmental screening levels (ESL) for total petroleum hydrocarbon motor oil (TPH-mo) at seventeen locations where concentrations of TPH-mo exceeded 1,000 milligrams per kilograms (mg/kg) during previous remedial investigations conducted between 1997 and 2003 at the FNBW IA A2. The Tier 2 TPH-mo ESL used to evaluate soil analytical results was provided in the technical memorandum approved by the San Francisco Area Regional Water Quality Control Board "Tier 2 Risk Assessment Approach for Water Board Sites in the Eastern Early Transfer Parcel, Lennar Mare Island, Vallejo, California" (CH2M Hill, 2009).

The objective of the PCAP is to obtain site closure, i.e., "no further action" from the San Francisco Regional Water Quality Control Board (Water Board) with unlimited land use restrictions. FNBW IA-A2 is located within 300-feet of the Mare Island Strait, therefore the Tier 2 residential TPH-mo ESL of 500 mg/kg was used to evaluate confirmation soil analytical results for soil (0 to 10-feet) below ground surface (bgs) for sites located within 300-feet of a sensitive receptor. Soil samples were screened for TPH-mo on-site using a PetroFlag test kit, then shipped to an off-site Navy approved laboratory for confirmation TPH-mo analyses. The field work was conducted in accordance with the Final Petroleum Corrective Action Plan, Former North Building Ways within Investigative Area A2, Former Mare Island Naval Shipyard, Vallejo, California (TN&A, December, 2008).

1.1 SITE LOCATION

Mare Island is a peninsula located in Solano County, California, approximately 25 miles northeast of San Francisco, Figure 1, Mare Island Location Map. Mare Island is surrounded by Highway 37 to the north, Carquinez Strait to the south, and San Pablo Bay to the west. The Napa River (Mare Island Strait) separates the peninsula from the City of Vallejo; a bridge crosses the Napa River, connecting Mare Island to Vallejo at Tennessee Street in Vallejo. A second access is located at the northern end of Mare Island, where Railroad and Walnut avenues connect to Highway 37. Mare Island is within the incorporated boundaries of the City of Vallejo, California.

The FNBW Area is located within IA A2 north of G Street and south of K Street, between Railroad Avenue and Mare Island Strait in the northeastern portion of Mare Island, Figure 2, FNBW Area Location Map. The area consists of an approximately 32-acre upland area, the tidal wetland area along Mare Island Strait, and the adjacent offshore areas (intertidal mudflat and open water [Mare Island Strait]). The future reuse of the upland area of the site is light industry (City of Vallejo 1994).

1.2 SITE HISTORY AND DESCRIPTION

The FNBW Area was used by the Navy to assemble destroyers and landing crafts during World War II. The site consisted of numerous buildings, five building ways, and associated wharf areas situated along Mare Island Strait. At the end of World War II, shipbuilding activities at the site were phased out, and most of the buildings and wharves were removed.

Currently, the FNBW site is vacant and primarily overgrown with vegetation. There are three remaining structures, Buildings 589, 593, and 643, which consist of concrete-block walls on concrete slab foundations. Several concrete foundation slabs, and both train and crane tracks are present in various portions of the site. A portion of the site near the northwestern site boundary is fenced.

The site appears largely unpaved except for some asphalt-paved access roads and asphalt-paved areas of varying condition. Weathered and crushed asphalt has been observed in soil samples collected during drilling activities conducted at the project site. Asphalt that remains from a former parking lot or base layer has disintegrated over time and has mixed with existing fill material at the site.

1.3 PROJECT OBJECTIVES

The remedial actions at the site were conducted to obtain regulatory closure, i.e., “no further action” for the FNBW IA A2 site by removing TPH-mo impacted surface and subsurface soils that exceed the Tier 2 residential TPH-mo ESL (CH2M Hill 2009) at seventeen locations at FNBW. The Tier 2 residential TPH-mo ESL for soil 0 to 10-feet bgs is provided in Table 1.

Table 1
Tier 2 Residential TPH-mo ESL – Soil 0 to 10 Feet bgs

Reference Location from Mare Island Strait	Depth bgs (feet)	TPH-mo concentration (mg/kg)
<300-feet	0 to 10	500

1.4 PROJECT DESCRIPTION

The implementation of the PCAP consisted of excavation and removal of approximately 3,500 cubic yards (CY) of TPH-mo impacted soil from 0 to 3-feet bgs. Seventeen TPH-mo hot spots were identified at FNBW A2 from previous investigations (Figure 3). The lateral and vertical extent of the excavation parameters were based on original surveyed excavation locations and associated step-out over-excavations, as determined by off-site laboratory analysis (Figure 4 through Figure 20). Initial soil samples were screened on-site for TPH-mo using PetroFlag test kits (Environmental Protection Agency [EPA] Method 9074-modified) and confirmed by a Navy approved off-site laboratory by EPA Method 3550B/8015M. Step-out excavations were only performed, if reported concentrations of TPH-mo from confirmation soil samples exceeded the Tier 2 residential TPH-mo ESL of 500 mg/kg.

Soils exceeding the Tier 2 residential ESL were over-excavated by 2-feet in a horizontal or vertical direction depending on the location of the soil sample that exceeded TPH-mo concentration of 500 mg/kg. Confirmation soil samples were collected to verify the lateral and vertical extent of the over-excavation was below Tier 2 residential TPH-mo ESL. After removal of TPH-mo impacted soils, the excavations were backfilled with clean borrow fill and compacted. Field quality control forms that document daily field activities are provided in Appendix A.

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
38	Confirmation sampling was performed	Table 1	Final Petroleum Corrective Action Plan Completion Report, Former North Building Ways within Investigation Area A2, Former Mare Island Naval Shipyard, Vallejo, California. Section 3.2.2 and Figures 4 through 20. TN & Associates, Inc. October 13, 2009.

3.2.1 Site Preparation

The seventeen excavation areas were marked with wooden stakes and spray painted based on the GPS survey locations. Work zones were demarcated with safety cones and orange temporary fence immediately surrounding the excavation boundaries. At the end of each day, each TPH-mo impacted area was secured.

3.2.2 Excavation of Contaminated Soil

Excavation activities occurred between April 14, 2009 and April 22, 2009. Excavation, transportation and disposal services were provided by Sequoia Construction and Development, Inc., located in Martinez, California. Following mobilization and site preparation, excavation and direct loading into end dump trucks began on April 14, 2009. After being loaded with soil, the trucks were then tarped and sent off-site to West Contra Costa Sanitary Landfill under Class 2 hazardous waste manifest.

Field personnel determined that end dump trucks would not be able to direct load from excavations A1, A2, A3, A4, A5, and A6 due to their location in the middle of the open and unpaved field. Field personnel decided to use excavation locations A7 and A10 as stockpile areas for material excavated from the locations situated in the unpaved areas in the middle of the field. Using one excavator, soil was excavated and loaded into the off-road dump truck, then transported to A7 or A10 locations and stockpiled. Another excavator then loaded the end dump trucks with the stockpiled soil for transport to the landfill.

Asphalt and/or concrete were encountered at six excavation areas; A1, A2, A8, A11, A13 and A14. Miscellaneous pipes were encountered at four excavations; A5, A7, A12 and A13. Concrete, asphalt and pipes were removed and placed adjacent to the excavations. Later on concrete, asphalt and pipes were broken into smaller pieces and transported off-site for disposal.

Sections of pipe with potential asbestos containing coating were encountered in excavation A2. The pipes were securely wrapped in 4-millimeter plastic and transported off-site for disposal.

Soil samples from each of the seventeen excavation areas were submitted for on-site screening analysis for TPH-mo using the PetroFlag test kits, except A9. All soil samples were also sent to an off-site Navy approved laboratory for confirmatory TPH-mo analysis by EPA 3550B/8015M.

Based on reported concentrations of TPH-mo that exceeded 500 mg/kg from on-site screening (PetroFlag test kit) and off-site soil analytical results, step-out (over-excavation) were performed and confirmation soil samples were collected. Step-out excavations were extended 2-feet in a lateral or vertical direction depending on the location of the soil sample exceedence. Excavations were backfilled after analytical results of confirmation soil samples indicated that soil concentrations were below the TPH-mo Tier 2 residential ESL.

The specific removal activities at each TPH-mo impacted area are described below. Photographs of the excavation activities are presented in Appendix C.

<u>Excavation A1</u>

A thick layer of asphalt was removed using the excavator and stockpiled adjacent to the excavation prior to soil removal. The soil was then excavated and transported to the stockpile area for loading into the end dump trucks. No utilities or pipes were encountered within excavation A1. A total of six soil samples; two from the excavation floor and one from each of four side walls, and a field duplicate were collected at excavation A1. The excavation floor

samples; A1-SO-001 and A1-SO-002, were collected at 3-feet bgs. The sidewall samples; A1-SO-003 through A1-SO-007, were collected at 1.5-feet bgs.

The confirmation analysis reported TPH-mo below the Tier 2 residential ESL in all soil samples from excavation A1, except A1-SO-007, which had TPH-mo at a concentration of 4,100 mg/kg. The soil sample A1-SO-007 was collected from the center of the north sidewall at a depth of 1.5-feet bgs. Based on confirmation soil analytical results, the lateral extent of the excavation along north sidewall was extended by 2-feet. The confirmation analysis did not detect TPH-mo in the soil sample A1-SO-128 collected at 1.5-feet bgs from the step-out north sidewall excavated area.

Approximately 233-tons of soil was removed from A1. Final excavation dimensions of A1 are shown on Figure 4, Excavation A1 Soil Sample Locations.

Excavation A2

Two concrete pillars and a concrete vault were encountered during excavation activities. Under direction from the Navy Resident Officer in Charge of Construction (ROICC), both concrete pillars and the concrete vault were removed and placed adjacent to the excavation. The vault was solid concrete and did not contain any additional material .The concrete was later broken into smaller pieces and transported off-site for disposal. No odor or staining was observed with the vault and concrete pillars. In addition, sections of a presumed asbestos-containing 4-inch diameter pipe were encountered on the eastern edge of the perimeter. The pipe was removed, inspected, and was found to have no contents. The pipes were securely wrapped in 4-millimeter plastic and later transported off-site for disposal. Excavated soil was transported to the stockpile area and loaded into the end dump trucks for off-site disposal. A total of six soil samples; two from the excavation floor and one from each of four side walls, and a field duplicate were collected at excavation A2. The excavation floor samples; A2-SO-008 and A1-SO-009, were collected at 3-feet bgs. The sidewall samples; A2-SO-010 through A2-SO-014, were collected at 1.5-feet bgs.

The confirmation analysis reported TPH-mo below the Tier 2 residential ESL in all soil samples collected from excavation A2.

Approximately 169-tons of soil was removed from A2. Final excavation dimensions of A2 are shown on Figure 5, Excavation A2 Soil Sample Locations.

Excavation A3

No pipes or utilities were encountered within excavation A3. Excavated soil was transported to the stockpile area and loaded into end dump trucks for off-site disposal. A total of six soil samples; two from the excavation floor and one from each of four side walls, and a field duplicate were collected at excavation A3. The excavation floor samples; A3-SO-015 to A3-SO-017, were collected at 3-feet bgs. The sidewall samples; A3-SO-018 through A3-SO-021, were collected at 1.5-feet bgs.

The confirmation analysis reported TPH-mo below the Tier 2 residential ESL in all soil samples collected from excavation A3.

Approximately 146-tons of soil was removed from A3. Final excavation dimensions of A3 are shown on Figure 6, Excavation A3 Soil Sample Locations.

Excavation A4

Soil removal at excavation A4 occurred over the course of two days. No pipes or utilities were encountered during excavation activities at A4. Excavated soil was transported to the stockpile area and loaded into end dump trucks for off-site disposal. A total of eleven soil samples; five from the excavation floor, two from each east and west side walls and one from each north and south side walls, and a field duplicate were collected at excavation A4. The excavation floor samples; A4-SO-022 to A4-SO-026, were collected at 3-feet bgs. The sidewall samples; A4-SO-027 through A4-SO-033, were collected at 1.5-feet bgs.

The confirmation analysis reported TPH-mo below the Tier 2 residential ESL in all soil samples from excavation A4, except A4-SO-032, which had TPH-mo at a concentration of 560 mg/kg. The soil sample A4-SO-032 was collected from the center of the north sidewall at a depth of 1.5-feet bgs. Based on confirmation soil analytical results, the lateral extent of the excavation along north sidewall was extended by 2-feet. The confirmation analysis reported TPH-mo at a concentration of 23 mg/kg in soil sample A4-SO-127 collected at 1.5-feet bgs from the step-out north sidewall excavated area.

Approximately 522-tons of soil was removed from A4. Final excavation dimensions of A4 are shown on Figure 7, Excavation A4 Soil Sample Locations.

Excavation A5

During excavation activities, two metal pipes were encountered at approximately 1-foot bgs, oriented north to south along the western edge of the A5 excavation. Under direction from the Navy ROICC, the pipes were cut at both ends of the excavation and removed from the excavation. Pipes did not have any contents and no staining was observed upon inspection. The pipes were placed adjacent to the excavations and cut into smaller pieces, and then loaded into end dump trucks for off-site disposal. Soil was excavated, transported to the stockpile area, and then loaded into end dump trucks for off-site disposal. A total of six soil samples; two from the excavation floor and one from each of four side walls, and a field duplicate were collected at excavation A5. The excavation floor samples; A5-SO-034 to A5-SO-036, were collected at 3-feet bgs. The sidewall samples; A5-SO-037 through A5-SO-040, were collected at 1.5-feet bgs.

The confirmation analysis reported TPH-mo below the Tier 2 residential ESL in all soil samples collected from excavation A5.

Approximately 198-tons of soil was removed from A5. Final excavation dimensions of A5 are shown on Figure 8, Excavation A5 Soil Sample Locations.

Excavation A6

A vertical pipe (approximately 4-6 inch in diameter) was encountered along the eastern perimeter of the A6 excavation. The pipe did not affect the excavation activities, and therefore did not need to be removed. Soil was excavated, transported to the stockpile area using the off road dump truck, and then loaded into end dump trucks for off-site disposal. A total of six soil samples; two from the excavation floor and one from each of four side walls, were collected at excavation A6. The excavation floor samples; A6-SO-041 and A6-SO-042, were collected at 3-feet bgs. The sidewall samples; A6-SO-043 through A6-SO-046, were collected at 1.5-feet bgs.

The confirmation analysis reported TPH-mo below the Tier 2 residential ESL in all soil samples collected from excavation A6.

Approximately 238-tons of soil was removed from A6. Final excavation dimensions of A6 are shown on Figure 9, Excavation A6 Soil Sample Locations.

Excavation A7

Prior to soil removal at the A7 excavation, excavated material from A1, A3, A4 and A6 was stockpiled on the A7 footprint. The stockpiled soil was loaded into end dump trucks and transported to the landfill prior to excavation activities at A7. Two pipes were located within excavation A7. The first two-inch diameter metal pipe oriented east to west in the northern portion of the excavation was located at 3-feet bgs. Since it was located at the bottom of the excavation, the pipe was not removed. The second two-inch diameter metal pipe was also oriented east to west, but located in the southern portion of the excavation at approximately 2.5-feet bgs. Since the initial excavation depth was 3-feet bgs, this pipe was cut at both ends of the excavation and removed. No contents were observed in this pipe. No staining or odor was observed with these two pipes. A set of railroad track was also encountered in the southern portion of the excavation during excavation activities at A7. The railroad track was cut at both ends of the excavation and removed. Pipe and railroad track were placed adjacent to the excavations and cut into smaller pieces, and transported off-site for disposal. Soil from A7 was directly loaded into end dump trucks and transported off-site for disposal.

A total of eight soil samples; two from the excavation floor, two from each east and west side walls and one from each north and south side walls, and a field duplicate were collected at excavation A7. The excavation floor samples; A7-SO-047 to A7-SO-049, were collected at 3-feet bgs. The sidewall samples; A7-SO-050 through A7-SO-055, were collected at 1.5-feet bgs.

The confirmation analysis reported TPH-mo below the Tier 2 residential ESL in all soil samples from excavation A7, except A7-SO-051 and A7-SO-055. Soil samples A7-SO-051 and A7-SO-055 were collected at a depth of 1.5-feet bgs each from the west sidewall (in the north segment) and north sidewall center, respectively. The confirmation analysis reported TPH-mo at concentrations of 590 mg/kg and 540 mg/kg in soil samples A7-SO-051 and A7-SO-055, respectively. Based on confirmation soil analytical results, the lateral extent of the excavation along the west sidewall (in the north segment) and north sidewall was extended by 2-feet. The confirmation analysis reported TPH-mo at concentrations of 13 mg/kg (A7-SO-125) and 92 mg/kg (A7-SO-126) collected at a depth of 1.5-feet bgs from the step-out west sidewall (in the north segment) and north sidewall, correspondingly.

Approximately 253-tons of soil was removed from A7. Final excavation dimensions of A7 are shown on Figure 10, Excavation A7 Soil Sample Locations.

Excavation A8

A thick layer of asphalt was removed using the excavator and stockpiled adjacent to the excavation prior to soil removal at A8. A concrete utility corridor 3-feet wide, north to south oriented was encountered approximately 11-feet from the eastern edge of the A8 excavation. The utility corridor appeared to be oriented towards Building 589, directly north of the A8 excavation. Under direction from the Navy ROICC, soil was removed from either side of the concrete utility corridor while leaving it in place. Soil from A8 was directly loaded into end dump trucks and transported off-site for disposal. A total of six soil samples; two from the excavation floor and one from each of four side walls, were collected at excavation A8. The excavation floor samples; A8-SO-056 and A8-SO-057, were collected at 3-feet bgs. The sidewall samples; A8-SO-058 through A8-SO-061, were collected at 1.5-feet bgs.

The confirmation analysis reported TPH-mo below the Tier 2 residential ESL in all soil samples from excavation A8, except A8-SO-060, which had reported concentrations of TPH-mo at 500 mg/kg. This soil sample was collected from the center of the south sidewall at a depth of 1.5-feet bgs. As a result, the lateral extent of the excavation along the south sidewall was extended by 2-feet. TPH-mo was not reported from the confirmation soil sample (A8-SO-135) collected at 1.5 feet bgs from the step-out south sidewall excavated area.

Approximately 167-tons of soil was removed from A8. Final excavation dimensions of A8 are shown on Figure 11, Excavation A8 Soil Sample Locations.

Excavation A9

Excavation A9 is located adjacent to Building 589. Soil was excavated from A9 and directly loaded into end dump trucks for off-site disposal. No pipes or utilities were encountered during excavation activities at A9. A total of six soil samples; two from the excavation floor and one from each of four side walls, and a field duplicate were collected at excavation A9. The excavation floor samples; A9-SO-062 and A9-SO-063, were collected at 3-feet bgs. The sidewall samples; A9-SO-064 through A9-SO-068, were collected at 1.5-feet bgs.

The confirmation analysis reported TPH-mo below the Tier 2 residential ESL in all soil samples from excavation A9, except A9-SO-062, which had TPH-mo at a concentration of 2,000 mg/kg. This soil sample was collected from the bottom of the excavation at 3-feet bgs on the west side of the excavation. As a result, A9 was over-excavated by 2-feet (on west side) and the confirmation soil sample (A9-SO-132) reported TPH-mo at 89 mg/kg at 5-feet bgs.

Approximately 208-tons of soil was removed from A9. Final excavation dimensions of A9 are shown on Figure 12, Excavation A9 Soil Sample Locations.

Excavation A10

Prior to soil removal at excavation A10, excavated material from locations A2 and A5 was stockpiled on the A10 foot print. The stockpiled soil was loaded into end dump trucks and transported to the landfill prior to excavation activities at A10. The small southeast corner of A10 is located in the wetland below the upland area of the excavation. This southeast corner was not excavated. Soil was loaded directly into end dump trucks for transport to the landfill. No pipes or utilities were encountered at excavation A10. A total of seven soil samples; three from the excavation floor and one from each of four side walls, were collected at excavation A10. The excavation floor samples; A10-SO-069 to A10-SO-071, were collected at 3-feet bgs. The sidewall samples; A10-SO-072 through A10-SO-075, were collected at 1.5-feet bgs.

The confirmation analysis reported TPH-mo below the Tier 2 residential ESL in all soil samples from excavation A10, except A10-SO-072 and A10-SO-074. Soil samples A10-SO-072 and A10-SO-074 were collected at a depth of 1.5-feet bgs from the west and south sidewalls, respectively. The confirmation analysis reported TPH-mo at concentrations of 1,300 mg/kg (A10-SO-072) and 880 mg/kg (A10-SO-074). As a result, the lateral extent of the excavation along the west and south sidewalls was extended by 2-feet. The confirmation analysis reported TPH-mo at concentrations of 270 mg/kg (A10-SO-133) and 280 mg/kg (A10-SO-134) collected at 1.5-feet bgs from the step-out over-excavated areas along the west and south sidewalls, respectively.

Approximately 265-tons of soil was removed from A10. Final excavation dimensions of A10 are shown on Figure 13, Excavation A10 Soil Sample Locations.

Excavation A11

A layer of asphalt was removed from the western edge of the excavation prior to soil removal. A two-inch diameter metal pipe oriented north to south was encountered along the western edge of excavation A11 at approximately 12-15 inches bgs. Due to its location at the boundary of the excavation, the pipe was left in place, and would only be removed if required by a step-out excavation. Soil from this location was directly loaded into end dump trucks for off-site disposal. A total of six soil samples; two from the excavation floor and one from each of four side walls, and a field duplicate were collected at excavation A11. The excavation floor samples; A11-SO-077 and A10-SO-078, were collected at 3-feet bgs. The sidewall samples; A11-SO-076, and A11-SO-079 through A11-SO-082, were collected at 1.5-feet bgs.

The confirmation analysis reported TPH-mo below the Tier 2 residential ESL in all soil samples from excavation A11, except A11-SO-079, which had TPH-mo at a concentration of 570 mg/kg. This soil sample was collected from center of the south sidewall at a depth of 1.5-feet bgs. Based on off-site analytical results, the lateral extent of the excavation along the south sidewall was extended by 2-feet. The confirmation soil sample (A11-SO-129) reported TPH-mo at a concentration of 7 mg/kg and was collected from the step-out excavated area along the south sidewall at a depth of 1.5-feet bgs.

Approximately 138-tons of soil was removed from A11. Final excavation dimensions of A11 are shown on Figure 14, Excavation A11 Soil Sample Locations.

Excavation A12

A cluster of three two-inch pipes were located 18-inches bgs and oriented east to west in the middle of A12. Two of the pipes were constructed from HDPE, and one was cast iron. Upon direction from Navy personnel, the pipes were cut at the perimeter edge of the excavation and removed. No contents and odor or staining were observed in this pipe. These pipes were placed adjacent to the excavations, cut into smaller pieces, and transported off-site for disposal. End dump trucks were able to access this location in the field; therefore, excavated soils were directly loaded into end dump trucks for off-site disposal. A total of six soil samples; two from the excavation floor and one from each of four side walls, were collected at excavation A12. The excavation floor samples; A12-SO-083 and A12-SO-084, were collected at 3-feet bgs. The sidewall samples; A12-SO-085 through A12-SO-088, were collected at 1.5-feet bgs.

The confirmation analysis reported TPH-mo below the Tier 2 residential ESL in all soil samples collected from excavation A12.

Approximately 134-tons of soil were removed from A12. Final excavation dimensions of A12 are shown on Figure 15, Excavation A12 Soil Sample Locations.

Excavation A13

A cluster of three two-inch pipes were located 18 inches bgs. Two of the pipes were constructed from HDPE, and one was cast iron. Upon receiving direction from Navy Caretaker Site Office (CSO) personnel, the three pipes were removed (cut at the east and west edges of the excavation). No contents and odor or staining were observed in this pipe. A concrete utility corridor was also encountered at the middle of the excavation A13. Per Navy CSO direction, the concrete utility corridor was left in place. In addition, some asphalt was encountered at the surface and removed. Excavated soil from A13 was directly loaded into end dump trucks for off-site disposal. A total of six soil samples; two from the excavation floor and one from each of four

side walls, and a field duplicate were collected at excavation A13. The excavation floor samples; A13-SO-089 and A13-SO-090, were collected at 3-feet bgs. The sidewall samples; A13-SO-091 through A13-SO-095, were collected at 1.5-feet bgs.

The confirmation analysis reported TPH-mo below the Tier 2 residential ESL in all soil samples collected from excavation A13.

Approximately 147-tons of soil were removed from A13. Final excavation dimensions of A13 are shown on Figure 16, Excavation A13 Soil Sample Locations.

Excavation A14

A thick layer of asphalt was removed using the excavator and stockpiled adjacent to the excavation prior to soil removal at location A14. The soil was then excavated and directly loaded into the end dump trucks for disposal. No utilities or pipes were encountered within excavation A14. A total of six soil samples; two from the excavation floor and one from each of four side walls, were collected at excavation A14. The excavation floor samples; A14-SO-096 and A14-SO-097, were collected at 3-feet bgs. The sidewall samples; A14-SO-098 through A14-SO-101, were collected at 1.5-feet bgs.

The confirmation analysis reported TPH-mo below the Tier 2 residential ESL in all soil samples collected from excavation A14.

Approximately 133-tons of soil were removed from A14. Final excavation dimensions of A14 are shown on Figure 17, Excavation A14 Soil Sample Locations.

Excavation A15

Excavation A15 is located adjacent to Building 643. The excavated soil was able to be directly loaded into the end dumps for off-site disposal. No pipes or utilities were encountered within excavation A15. A total of six soil samples; two from the excavation floor and one from each of four side walls, and a field duplicate were collected at excavation A15. The excavation floor samples; A15-SO-102 through A15-SO-104, were collected at 3-feet bgs. The sidewall samples; A15-SO-105 through A15-SO-108, were collected at 1.5-feet bgs.

The confirmation analysis reported TPH-mo below the Tier 2 residential ESL in all soil samples collected from excavation A15.

Approximately 139-tons of soil was removed from A15. Final excavation dimensions of A15 are shown on Figure 18, Excavation A15 Soil Sample Locations.

Excavation A16

A thick layer of asphalt was removed using the excavator and stockpiled adjacent to the excavation prior to soil removal at location A16. The soil was then excavated and loaded directly into the end dump trucks and transported off-site for disposal. The soil at the bottom of the excavation seemed to be saturated. No utilities or pipes were encountered within the excavation. A total of six soil samples; two from the excavation floor and one from each of four side walls, were collected at excavation A16. The excavation floor samples; A16-SO-109 and A16-SO-110, were collected at 3-feet bgs. The sidewall samples; A16-SO-111 through A16-SO-114, were collected at 1.5-feet bgs.

The confirmation analysis reported TPH-mo below the Tier 2 residential ESL in all soil samples collected from excavation A16.

Approximately 124-tons of soil was removed from A16. Final excavation dimensions of A16 are shown on Figure 19, Excavation A16 Soil Sample Locations.

Excavation A17

An electrical conduit (PVC approximately ¾ inch diameter) was encountered at approximately 1-foot bgs in the northwest corner, moving through the excavation to the middle eastern perimeter. The conduit was oriented southeast. Upon inspection by both Island Energy and Navy CSO personnel, the electrical conduit was found to be dead and was removed. No odor or staining was observed within the excavation associated with the electrical conduit. A utility trench consisting of base rock was also encountered near the southern edge of the excavation. The utility trench was removed to 3-feet bgs. Additionally, several wooden creosote poles were encountered in the northern half of the excavation. Wooden creosote poles were broken and removed. See Appendix C for photographs. Soil was excavated and directly loaded into end dump trucks and transported off-site for disposal. A total of six soil samples; two from the excavation floor and one from each of four side walls, and a field duplicate were collected at excavation A17. The excavation floor samples; A17-SO-115 and A17-SO-116, were collected at 3-feet bgs. The sidewall samples; A17-SO-117 through A17-SO-121, were collected at 1.5-feet bgs.

The confirmation soil samples reported TPH-mo below the Tier 2 residential ESL in all soil samples collected from excavation A17, except A17-SO-118 and A17-SO-121. Soil sample A17-SO-118 and A17-SO-121 were collected at a depth of 1.5 -feet bgs from the east sidewall and north sidewall, respectively. TPH-mo was reported at 710 mg/kg (A17-SO-118) and 3,300 mg/kg (A17-SO-121). Based on off-site analytical results, the lateral extent of the excavation along the east and north sidewalls was extended by 2-feet. The off-site analytical results reported TPH-mo at concentrations of 330 mg/kg (A17-SO-130) and 30 mg/kg (A17-SO-131) in samples collected at a depth of 1.5-feet bgs from the step-out east sidewall and north sidewall excavated areas, respectively.

Approximately 173-tons of soil were removed from A17. Final excavation dimensions of A17 are shown on Figure 20, Excavation A17 Soil Sample Locations.

3.2.3 Step-out Excavation Summaries

Step-out excavations were required when confirmation soil analytical results by EPA 3550B/8015M exceeded the TPH-mo Tier 2 ESL for residential sites. The results from on-site screening analysis and off-site confirmation analysis are summarized in Table 2. The lateral and vertical extent of the excavations was extended by 2-feet depending on the location of the soil sample exceedence. Step-out excavations occurred in the following locations:

A1 – 2-feet lateral on the north sidewall,

A4 – 2-feet lateral on the north sidewall,

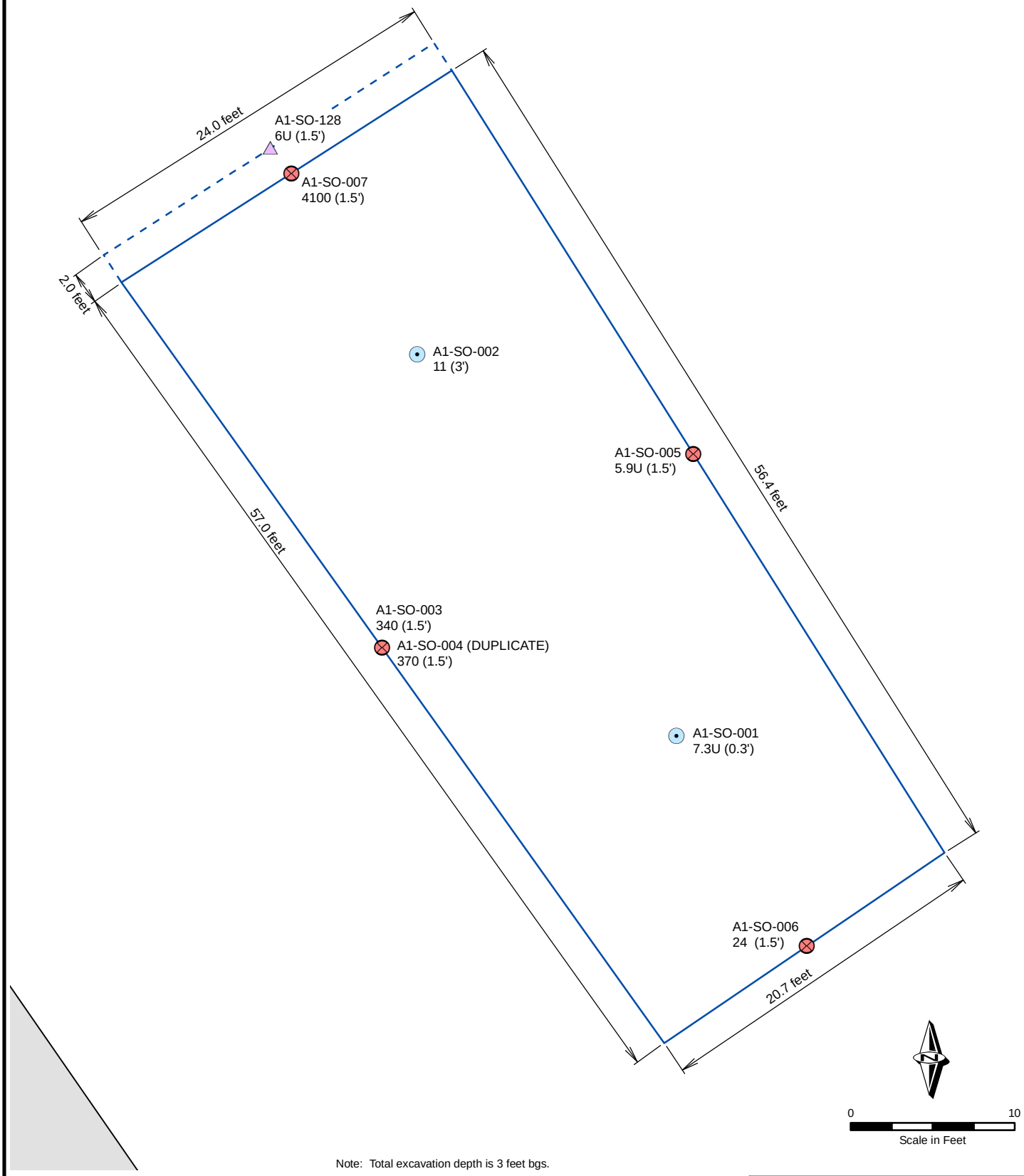
A7 – 2-feet lateral on the north sidewall, 2-feet lateral on the west sidewall,

A8 – 2-feet lateral on the south sidewall,

A9 – 2-feet vertical in the western bottom half,

A10 – 2-feet lateral on the south sidewall, 2 -feet lateral on the west sidewall,

A11 – 2-feet lateral on the south sidewall, and



Note: Total excavation depth is 3 feet bgs.

Legend

Final TPH-mo Contaminated Soil Removal Area	U	Sample was analyzed for, but not detected at the specified detection limit
Stepout Excavation Limit	4100	TPH-mo result in mg/kg from off-site laboratory analysis
Road	1.5'	Sample depth in feet bgs
TPH-mo Sidewalll Confirmation Sample	bgs	below ground surface
TPH-mo Bottom Confirmation Sample	mg/kg	milligram per kilogram
TPH-mo Sidewall Stepout Confirmation Sample	⟷	Excavation dimension

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SAN DIEGO, CA

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FIGURE 4
EXCAVATION A1 SOIL SAMPLE LOCATIONS

FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA A2,
FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA

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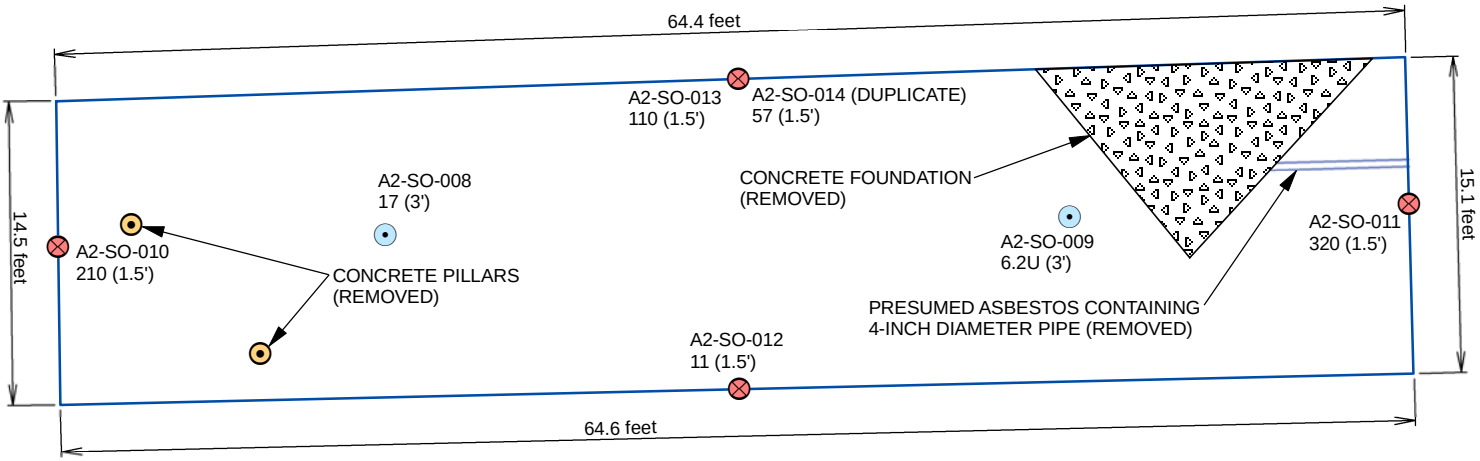

Note: Total excavation depth is 3 feet bgs.

Legend

- Final TPH-mo Contaminated Soil Removal Area
- TPH-mo Sidewalll Confirmation Sample
- TPH-mo Bottom Confirmation Sample
- U — Sample was analyzed for, but not detected at the specified detection limit
- 110 — TPH-mo result in mg/kg from off-site laboratory analysis
- 1.5' — Sample depth in feet bgs
- bgs — below ground surface
- mg/kg — milligram per kilogram
- Excavation dimension
- Presume Asbestos Containing Pipe
- Concrete Pillar
- Concrete Foundation

N

0 10
Scale in Feet

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FIGURE 5
EXCAVATION A2 SOIL SAMPLE LOCATIONS

FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA A2,
FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA

TN & Associates, Inc.
Engineering and Science

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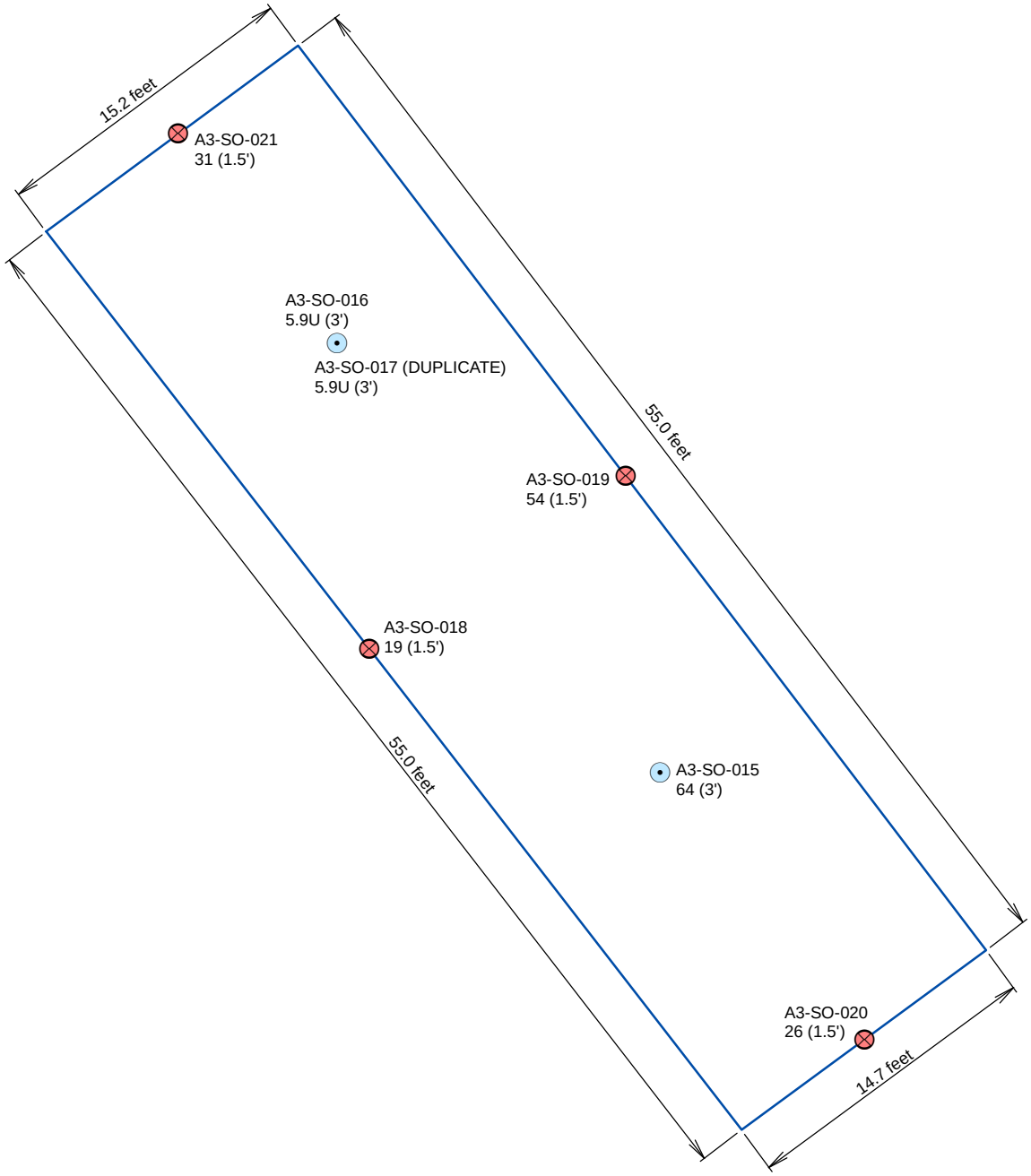

Note: Total excavation depth is 3 feet bgs.

Legend

- Final TPH-mo Contaminated Soil Removal Area
- TPH-mo Sidewalll Confirmation Sample
- TPH-mo Bottom Confirmation Sample
- U — Sample was analyzed for, but not detected at the specified detection limit
- 54 — TPH-mo result in mg/kg from off-site laboratory analysis
- 1.5' — Sample depth in feet bgs
- bgs — below ground surface
- mg/kg — milligram per kilogram
- Excavation dimension

0 10
Scale in Feet

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FIGURE 6
EXCAVATION A3 SOIL SAMPLE LOCATIONS

FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA A2,
FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA

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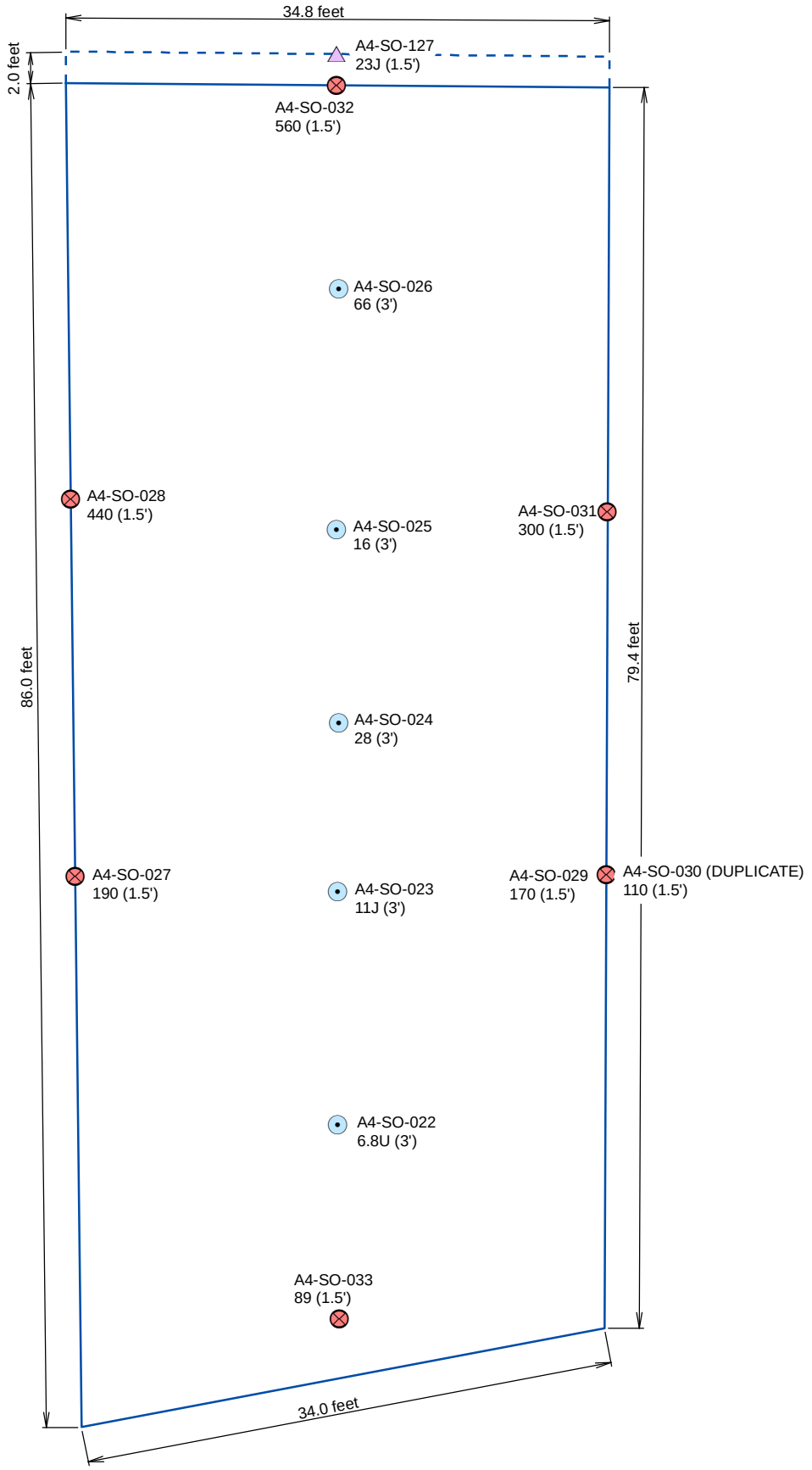


Note: Total excavation depth is 3 feet bgs.

Legend

- Final TPH-mo Contaminated Soil Removal Area
- Stepout Excavation Limit
- TPH-mo Sidewalll Confirmation Sample
- TPH-mo Bottom Confirmation Sample
- TPH-mo Sidewall Stepout Confirmation Sample
- J — Estimated value
- U — Sample was analyzed for, but not detected at the specified detection limit
- 66 — TPH-mo result in mg/kg from off-site laboratory analysis
- 1.5' — Sample depth in feet bgs
- bgs — below ground surface
- mg/kg — milligram per kilogram
- Excavation dimension

0 10
Scale in Feet

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CA

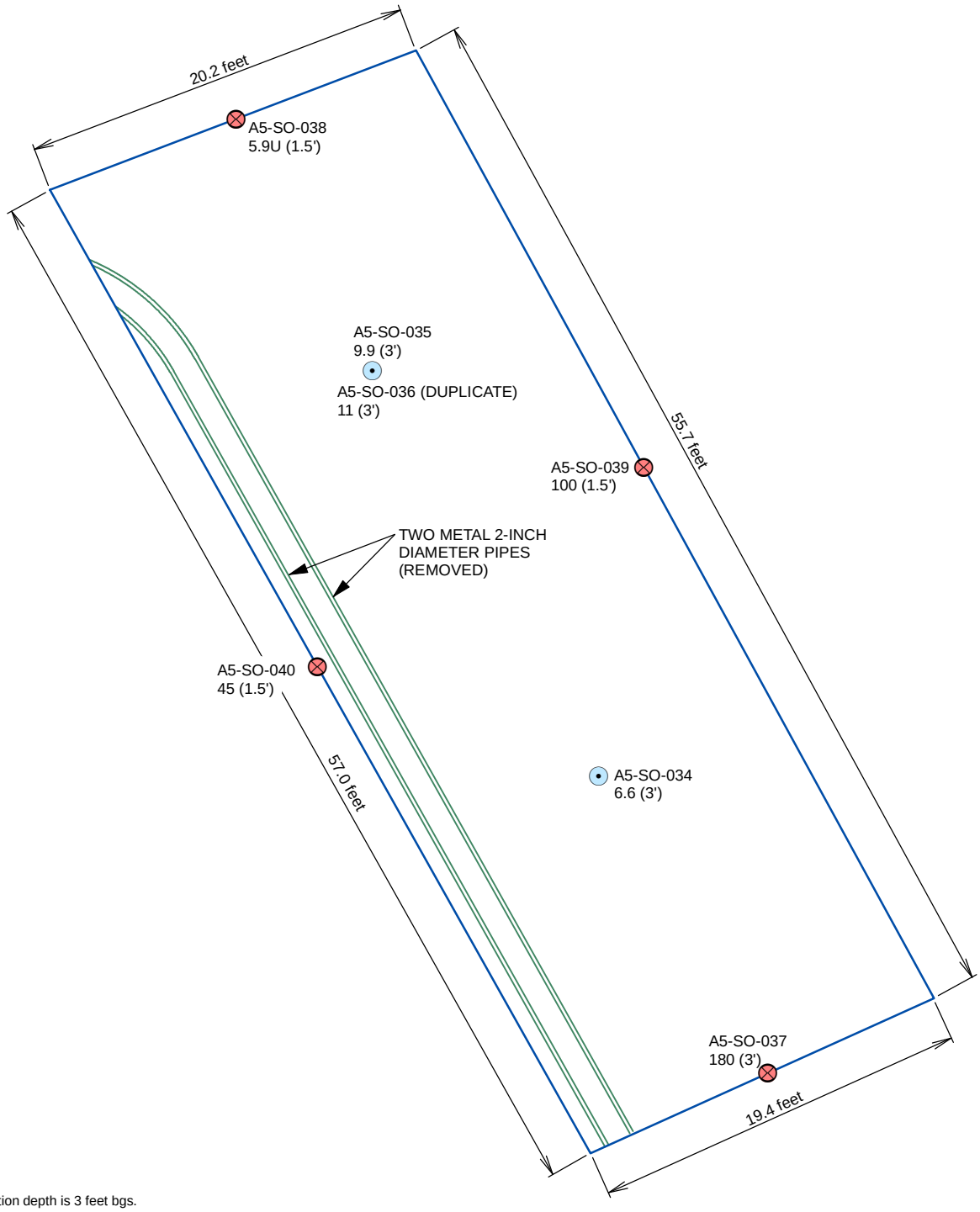
PETROLEUM CORRECTIVE ACTION PLAN COMPLETION REPORT

FIGURE 7
EXCAVATION A4 SOIL SAMPLE LOCATIONS

FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA A2,
FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA

T N & Associates, Inc.
Engineering and Science

G:\arc\projects\Mare Island\Figure 07-A4.mxd



Note: Total excavation depth is 3 feet bgs.

Legend

- Final TPH-mo Contaminated Soil Removal Area
- TPH-mo Sidewalll Confirmation Sample
- TPH-mo Bottom Confirmation Sample
- U — Sample was analyzed for, but not detected at the specified detection limit
- 45 — TPH-mo result in mg/kg from off-site laboratory analysis
- 1.5' — Sample depth in feet bgs
- bgs — below ground surface
- mg/kg — milligram per kilogram
- Excavation dimension
- Metal Pipe

N

0 10
Scale in Feet

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CA

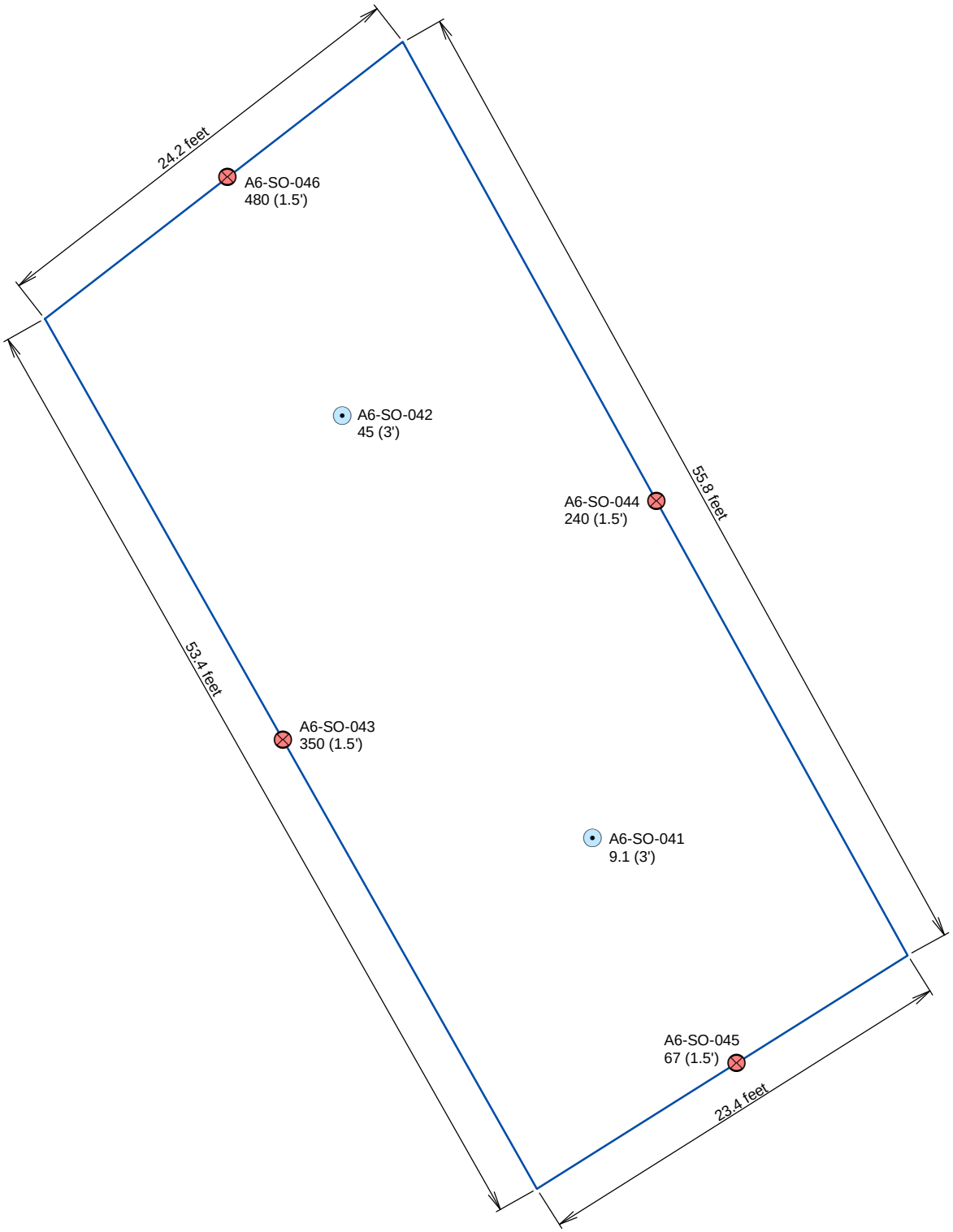
PETROLEUM CORRECTIVE ACTION PLAN COMPLETION REPORT

FIGURE 8
EXCAVATION A5 SOIL SAMPLE LOCATIONS

FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA A2,
FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA

TN & Associates, Inc.
Engineering and Science

G:\arc\projects\Mare Island\Figure 07-A5.mxd



Note: Total excavation depth is 3 feet bgs.

Legend

- Final TPH-mo Contaminated Soil Removal Area
- TPH-mo Sidewalll Confirmation Sample
- TPH-mo Bottom Confirmation Sample
- 45 — TPH-mo result in mg/kg from off-site laboratory analysis
- 1.5' — Sample depth in feet bgs
- bgs — below ground surface
- mg/kg — milligram per kilogram
- Excavation dimension

N

0 10
Scale in Feet

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CA

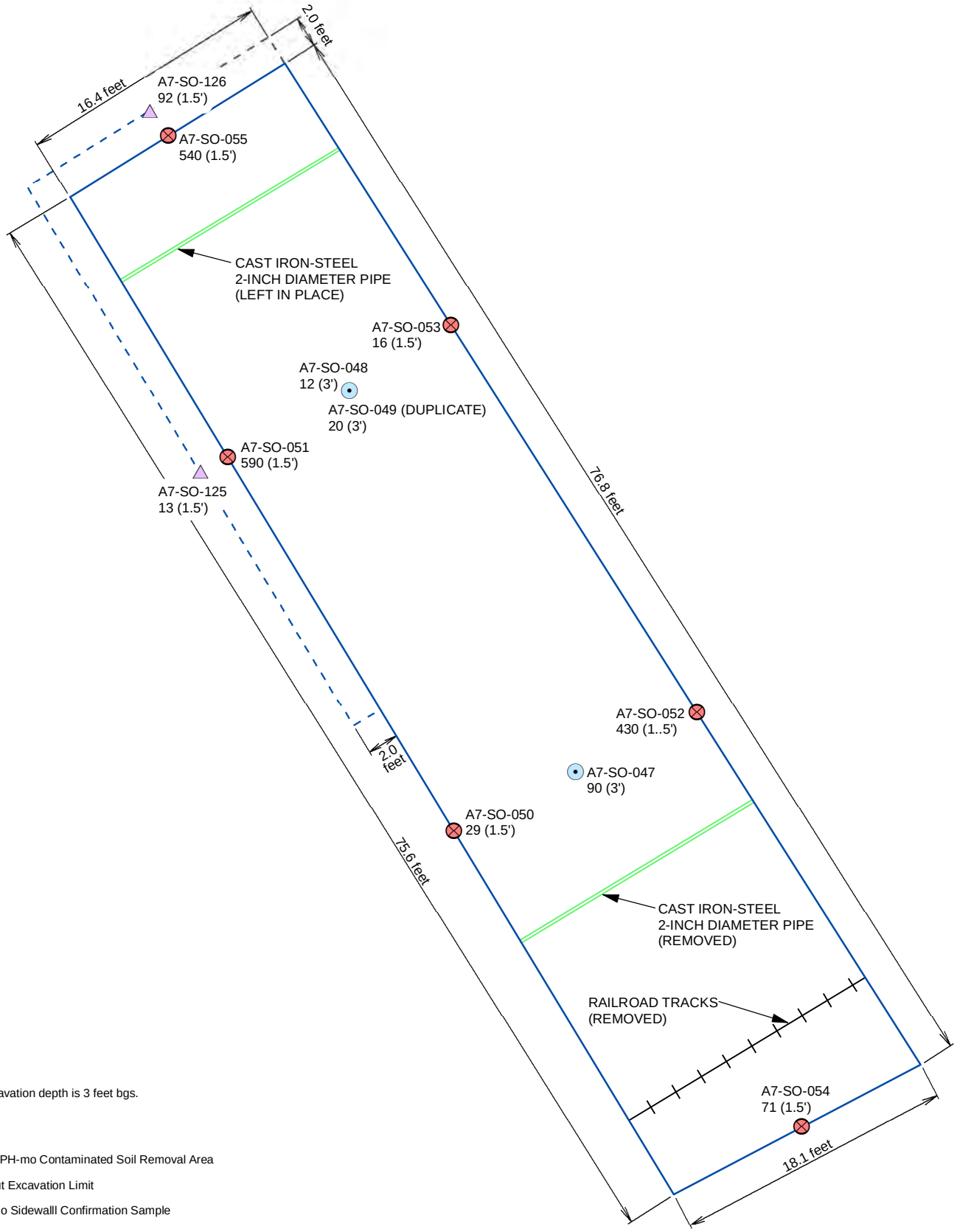
PETROLEUM CORRECTIVE ACTION PLAN COMPLETION REPORT

FIGURE 9
EXCAVATION A6 SOIL SAMPLE LOCATIONS

FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA A2,
FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA

TN & Associates, Inc.
Engineering and Science

G:\arc\projects\Mare Island\Figure 09-A6.mxd



Note: Total excavation depth is 3 feet bgs.

Legend

- Final TPH-mo Contaminated Soil Removal Area
- Stepout Excavation Limit
- TPH-mo Sidewalll Confirmation Sample
- TPH-mo Bottom Confirmation Sample
- TPH-mo Sidewall Stepout Confirmation Sample
- 90 — TPH-mo result in mg/kg from off-site laboratory analysis
- 1.5' — Sample depth in feet bgs
- bgs — below ground surface
- mg/kg — milligram per kilogram
- Excavation dimension
- Cast Iron-Steel Pipe
- Railroad Tracks

0 10
Scale in Feet

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CA

PETROLEUM CORRECTIVE ACTION PLAN COMPLETION REPORT

FIGURE 10
EXCAVATION A7 SOIL SAMPLE LOCATIONS

FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA A2,
FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA

T N & Associates, Inc.
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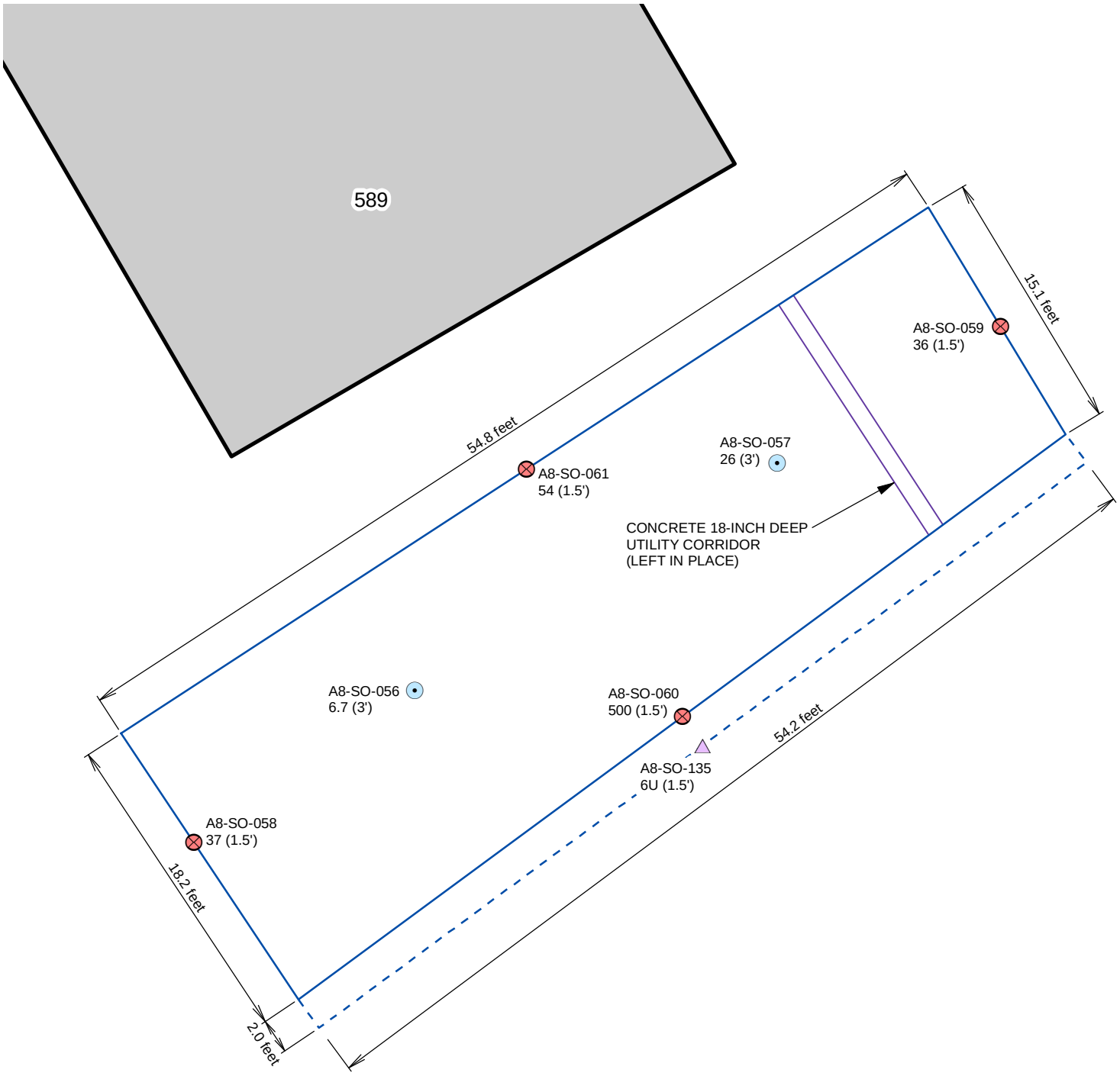
G:\arc\projects\Mare Island\Figure 10-A7.mxd



Note: Total excavation depth is 3 feet bgs.

Legend

- Final TPH-mo Contaminated Soil Removal Area
- Stepout Excavation Limit
- Building/Structure
- TPH-mo Sidewalll Confirmation Sample
- TPH-mo Bottom Confirmation Sample
- TPH-mo Sidewall Stepout Confirmation Sample
- U — Sample was analyzed for, but not detected at the specified detection limit
- 26 — TPH-mo result in mg/kg from off-site laboratory analysis
- 1.5' — Sample depth in feet bgs
- bgs — below ground surface
- mg/kg — milligram per kilogram
- Excavation dimension
- Utility Corridor

0 10
Scale in Feet

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CA

PETROLEUM CORRECTIVE ACTION PLAN COMPLETION REPORT

FIGURE 11
EXCAVATION A8 SOIL SAMPLE LOCATIONS

FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA A2,
FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA

T N & Associates, Inc.
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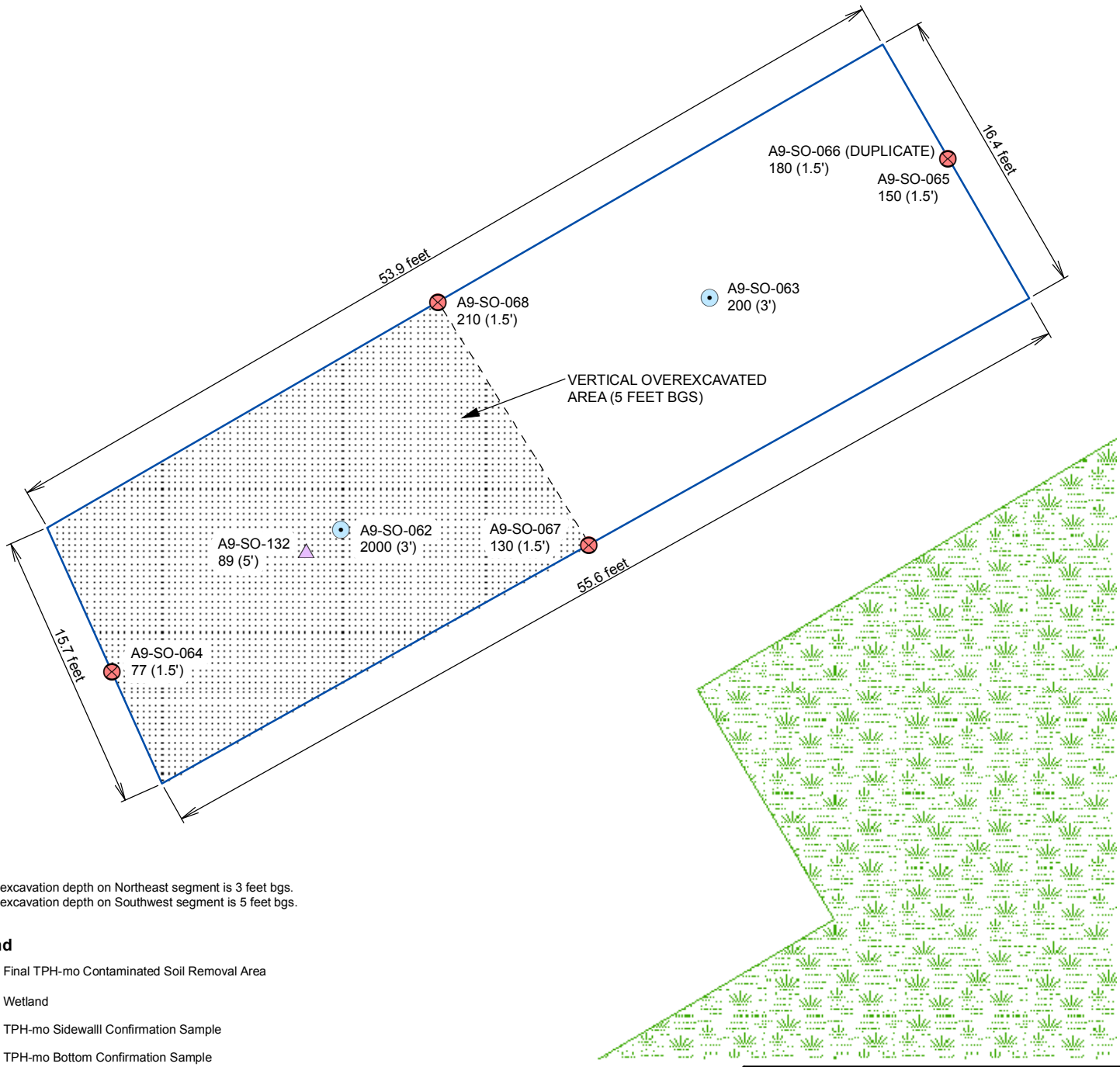
G:\arc\projects\Mare Island\Figure 11-A8.mxd



Notes:
1. Total excavation depth on Northeast segment is 3 feet bgs.
2. Total excavation depth on Southwest segment is 5 feet bgs.

Legend

- Final TPH-mo Contaminated Soil Removal Area
- Wetland
- TPH-mo Sidewalll Confirmation Sample
- TPH-mo Bottom Confirmation Sample
- TPH-mo Bottom Stepout Confirmation Sample
- 210 TPH-mo result in mg/kg from off-site laboratory analysis
- 1.5' Sample depth in feet bgs
- bgs below ground surface
- mg/kg milligram per kilogram
- Excavation dimension
- Vertical Overexcavated Area

0 10
Scale in Feet

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CA

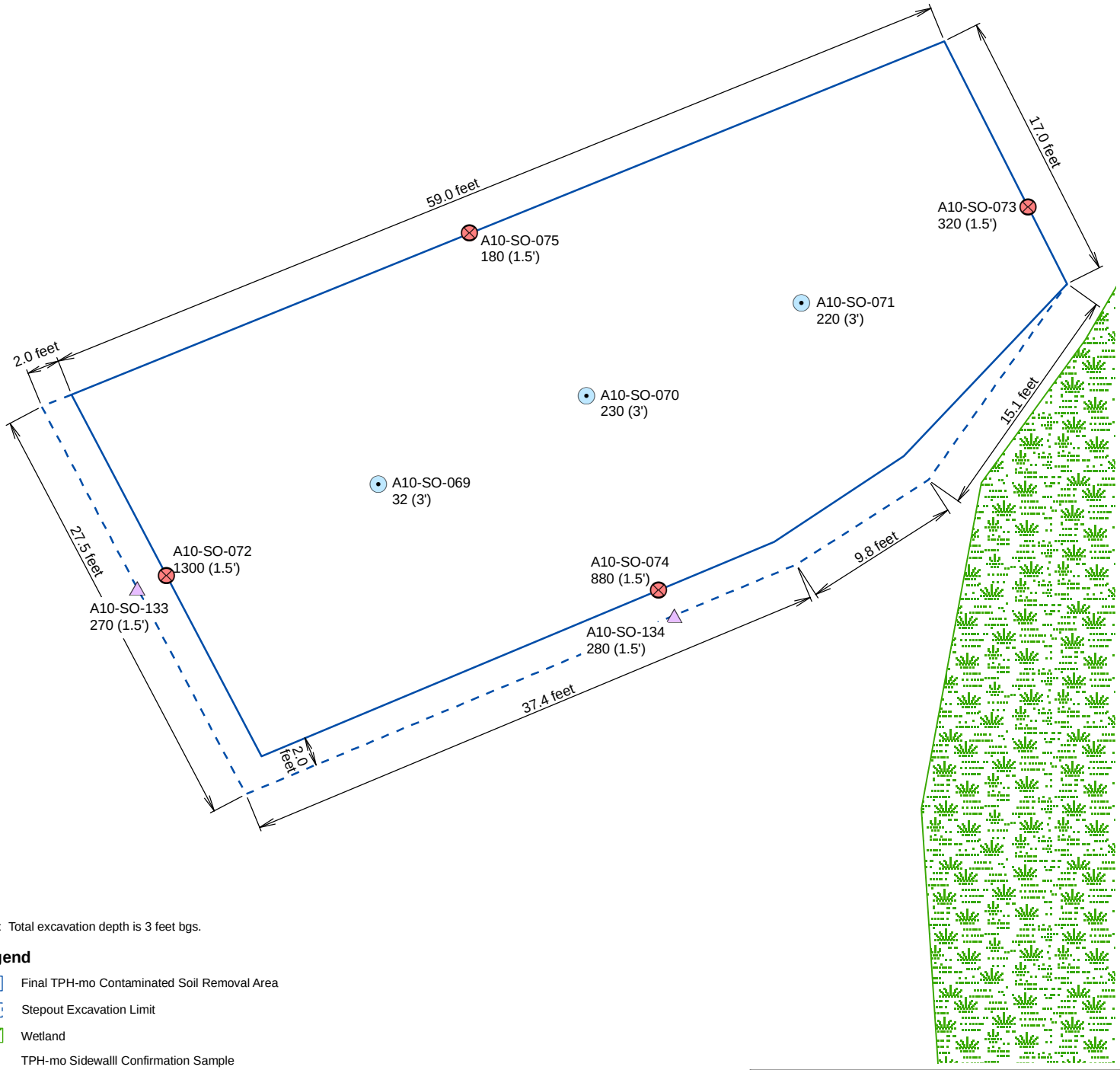
PETROLEUM CORRECTIVE ACTION PLAN COMPLETION REPORT

FIGURE 12
EXCAVATION A9 SOIL SAMPLE LOCATIONS

FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA A2,
FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA

T N & Associates, Inc.
Engineering and Science

G:\arc\projects\Mare Island\Figure 14-A11.mxd



Note: Total excavation depth is 3 feet bgs.

Legend

- Final TPH-mo Contaminated Soil Removal Area
- Stepout Excavation Limit
- Wetland
- TPH-mo Sidewalll Confirmation Sample
- TPH-mo Bottom Confirmation Sample
- TPH-mo Sidewall Stepout Confirmation Sample
- 230 TPH-mo result in mg/kg from off-site laboratory analysis
- 1.5' Sample depth in feet bgs
- bgs below ground surface
- mg/kg milligram per kilogram
- Excavation dimension

0 10
Scale in Feet

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CA

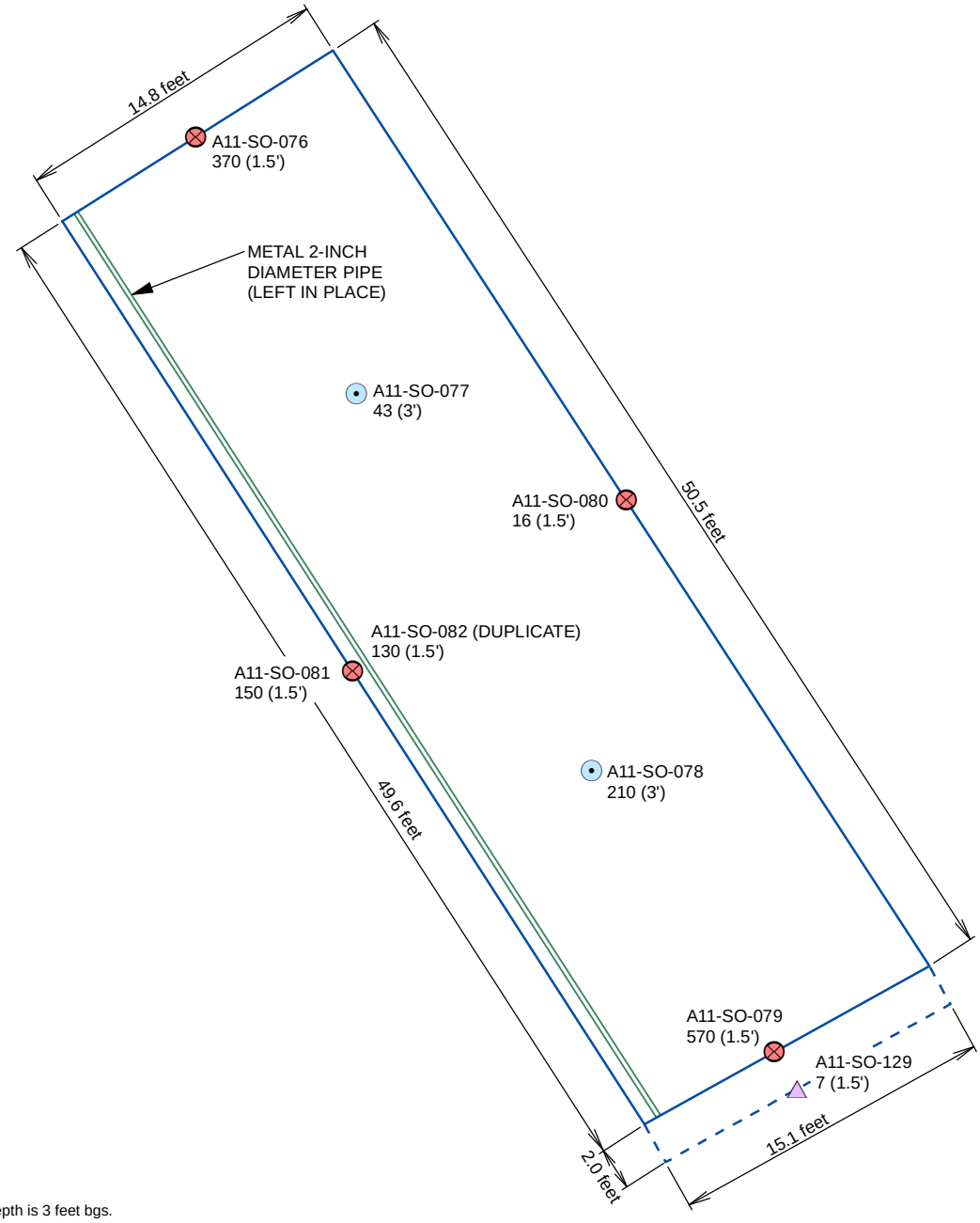
PETROLEUM CORRECTIVE ACTION PLAN COMPLETION REPORT

FIGURE 13
EXCAVATION A10 SOIL SAMPLE LOCATIONS

FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA A2,
FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA

T N & Associates, Inc.
Engineering and Science

G:\arc\projects\Mare Island\Figure 13-A10.mxd



Note: Total excavation depth is 3 feet bgs.

Legend

- Final TPH-mo Contaminated Soil Removal Area
- Stepout Excavation Limit
- TPH-mo Sidewalll Confirmation Sample
- TPH-mo Bottom Confirmation Sample
- TPH-mo Sidewall Stepout Confirmation Sample
- 210 TPH-mo result in mg/kg from off-site laboratory analysis
- 1.5' Sample depth in feet bgs
- bgs below ground surface
- mg/kg milligram per kilogram
- Excavation dimension
- Metal Pipe

0 10
Scale in Feet

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CA

PETROLEUM CORRECTIVE ACTION PLAN COMPLETION REPORT

FIGURE 14
EXCAVATION A11 SOIL SAMPLE LOCATIONS

FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA A2,
FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA

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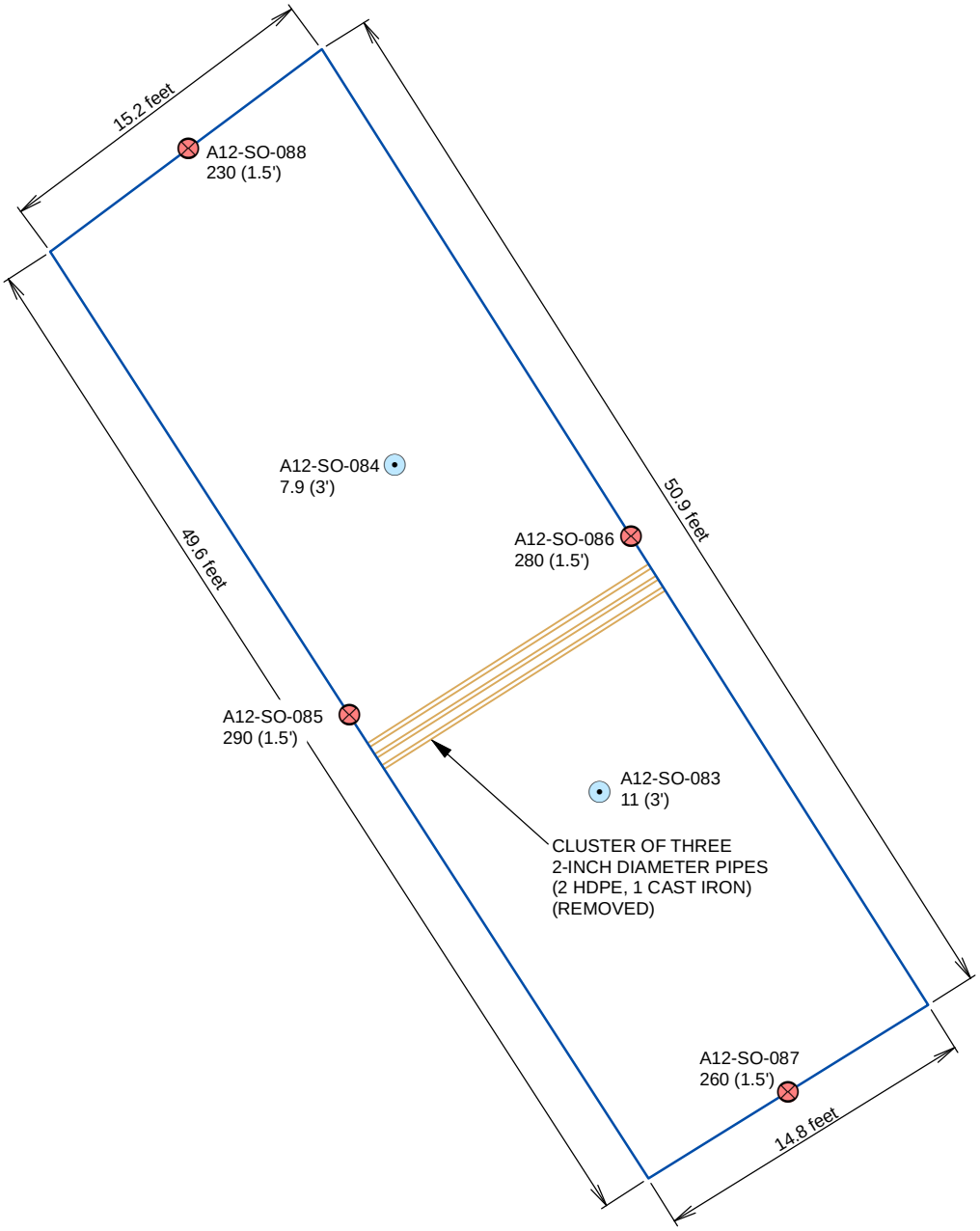
G:\arc\projects\Mare Island\Figure 14-A11.mxd



Note: Total excavation depth is 3 feet bgs.

Legend

- Final TPH-mo Contaminated Soil Removal Area
- TPH-mo Sidewalll Confirmation Sample
- TPH-mo Bottom Confirmation Sample
- 290 TPH-mo result in mg/kg from off-site laboratory analysis
- 1.5' Sample depth in feet bgs
- bgs below ground surface
- mg/kg milligram per kilogram
- Excavation dimension
- Cluster of Pipes

N

0 10

Scale in Feet

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CA

PETROLEUM CORRECTIVE ACTION PLAN COMPLETION REPORT

FIGURE 15
EXCAVATION A12 SOIL SAMPLE LOCATIONS

FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA A2,
FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA

TN & Associates, Inc.
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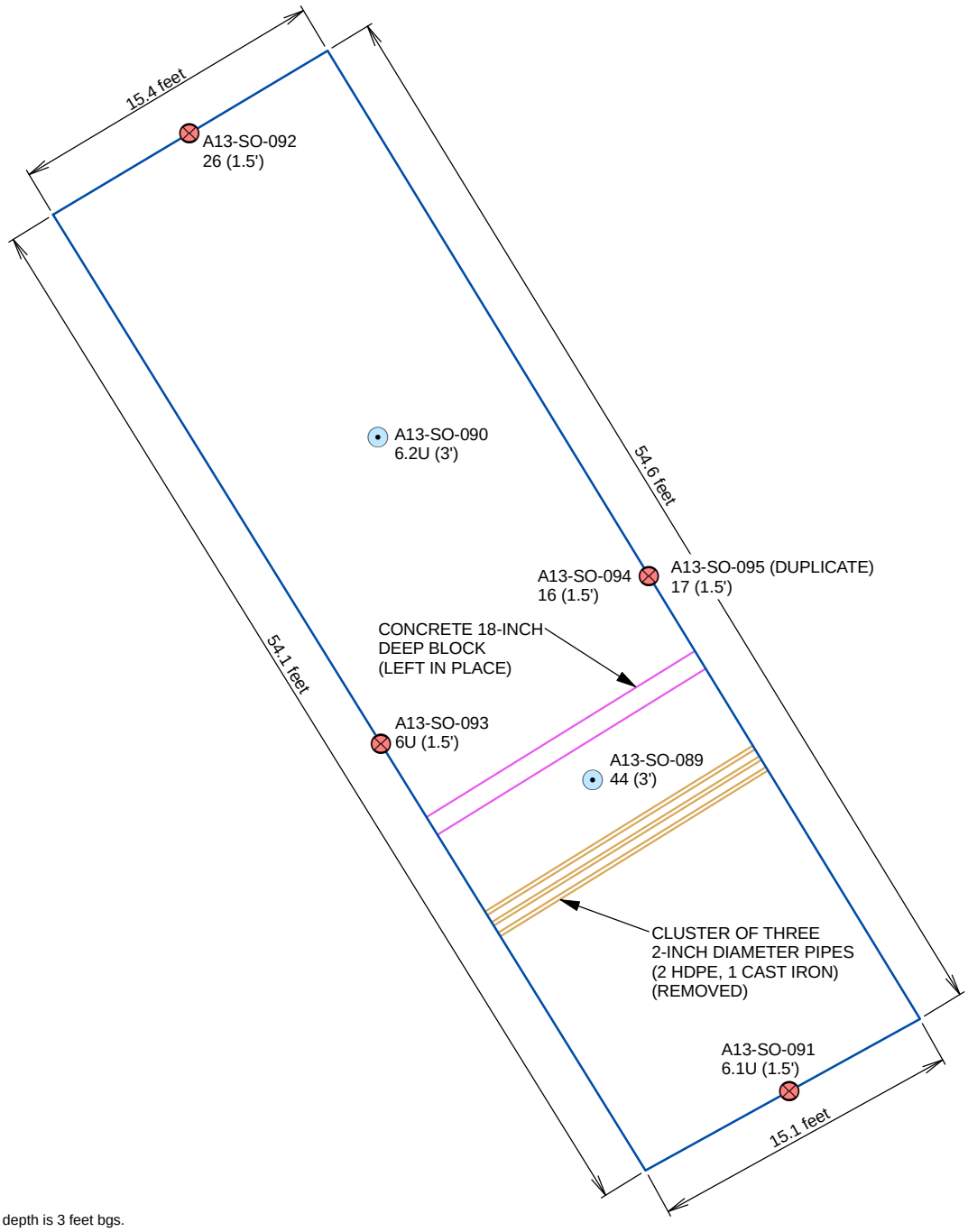
G:\arc\projects\Mare Island\Figure A1.mxd



Note: Total excavation depth is 3 feet bgs.

Legend

- Final TPH-mo Contaminated Soil Removal Area
- TPH-mo Sidewalll Confirmation Sample
- TPH-mo Bottom Confirmation Sample
- U — Sample was analyzed for, but not detected at the specified detection limit
- 44 — TPH-mo result in mg/kg from off-site laboratory analysis
- 1.5' — Sample depth in feet bgs
- bgs — below ground surface
- mg/kg — milligram per kilogram
- Excavation dimension
- Concrete Block
- Cluster of Pipes

0 10
Scale in Feet

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CA

PETROLEUM CORRECTIVE ACTION PLAN COMPLETION REPORT

FIGURE 16
EXCAVATION A13 SOIL SAMPLE LOCATIONS

FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA A2,
FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA

T N & Associates, Inc.
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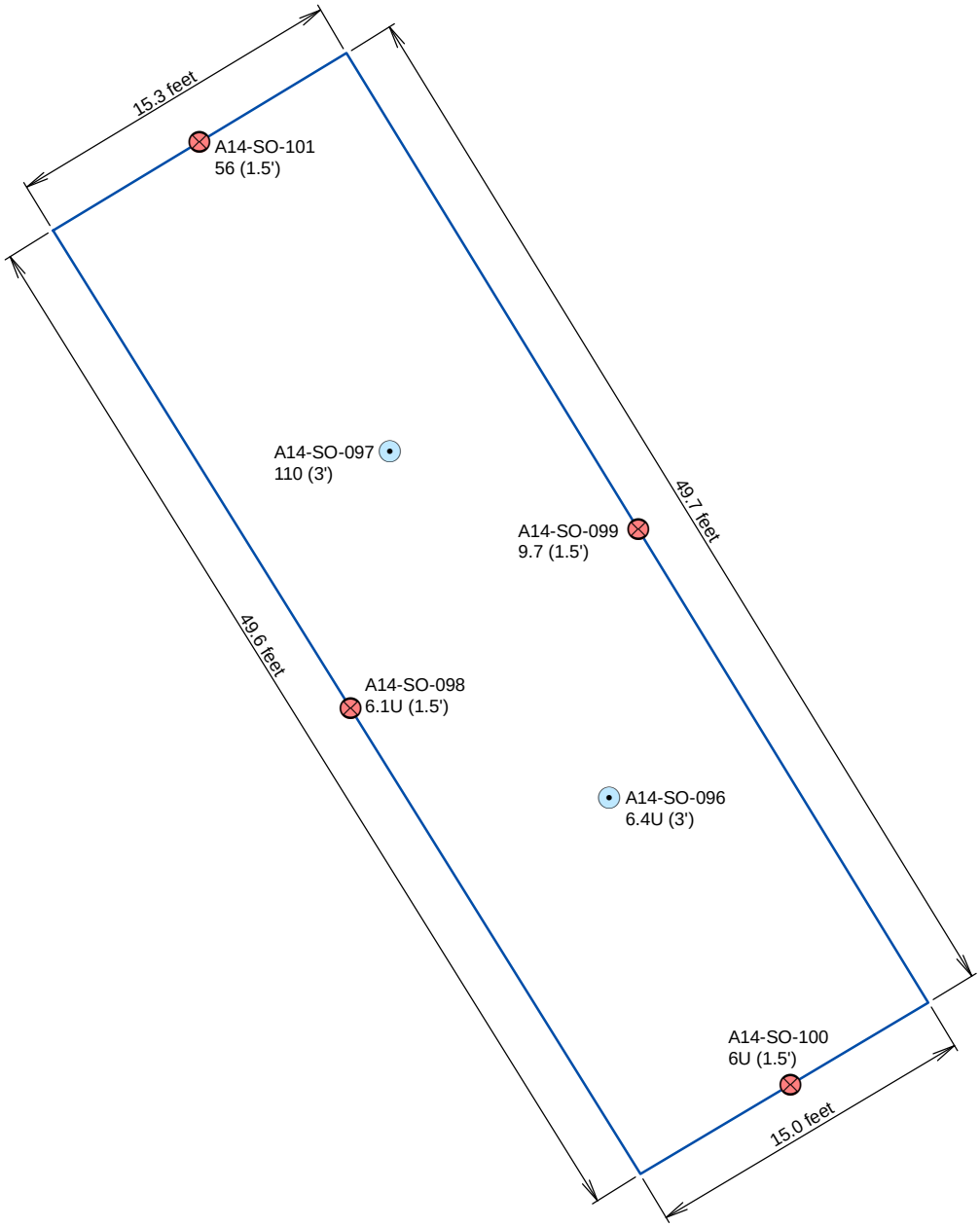
G:\arc\projects\Mare Island\Figure A1.mxd



Note: Total excavation depth is 3 feet bgs.

Legend

- Final TPH-mo Contaminated Soil Removal Area
- TPH-mo Sidewalll Confirmation Sample
- TPH-mo Bottom Confirmation Sample
- U — Sample was analyzed for, but not detected at the specified detection limit
- 9.7 — TPH-mo result in mg/kg from off-site laboratory analysis
- 1.5' — Sample depth in feet bgs
- bgs — below ground surface
- mg/kg — milligram per kilogram
- Excavation dimension

N

0 10
Scale in Feet

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CA

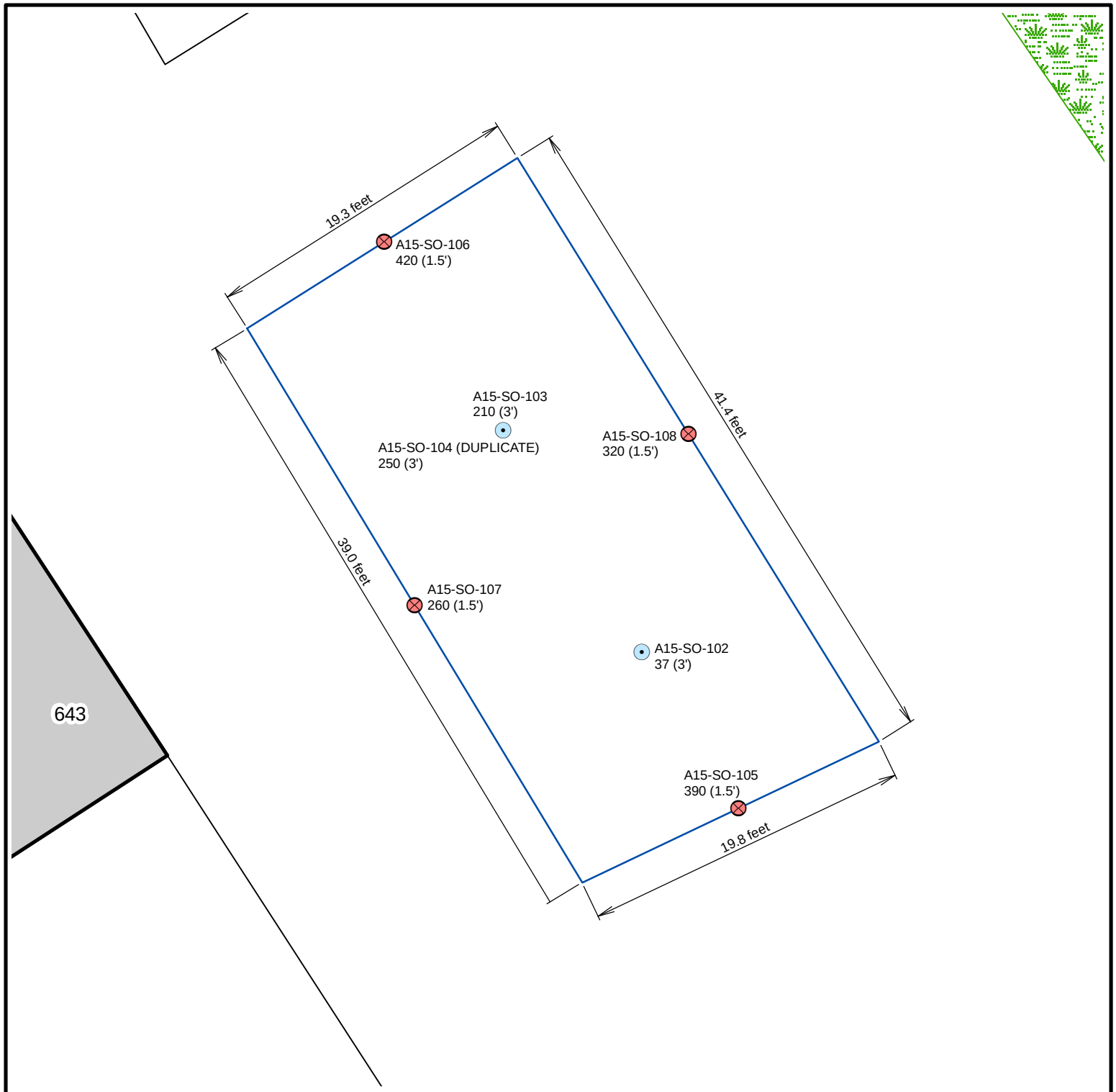
PETROLEUM CORRECTIVE ACTION PLAN COMPLETION REPORT

FIGURE 17
EXCAVATION A14 SOIL SAMPLE LOCATIONS

FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA A2,
FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA

TN & A T N & Associates, Inc.
Engineering and Science

G:\arc\projects\Mare Island\Figure A1.mxd



Note: Total excavation depth is 3 feet bgs.

Legend

- Final TPH-mo Contaminated Soil Removal Area
- Building/Structure
- Wetland
- TPH-mo Sidewalll Confirmation Sample
- TPH-mo Bottom Confirmation Sample
- 37 — TPH-mo result in mg/kg from off-site laboratory analysis
- 1.5' — Sample depth in feet bgs
- bgs — below ground surface
- mg/kg — milligram per kilogram
- Excavation dimension

0 10
Scale in Feet

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CA

PETROLEUM CORRECTIVE ACTION PLAN COMPLETION REPORT

FIGURE 18
EXCAVATION A15 SOIL SAMPLE LOCATIONS

FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA A2,
FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA

T N & Associates, Inc.
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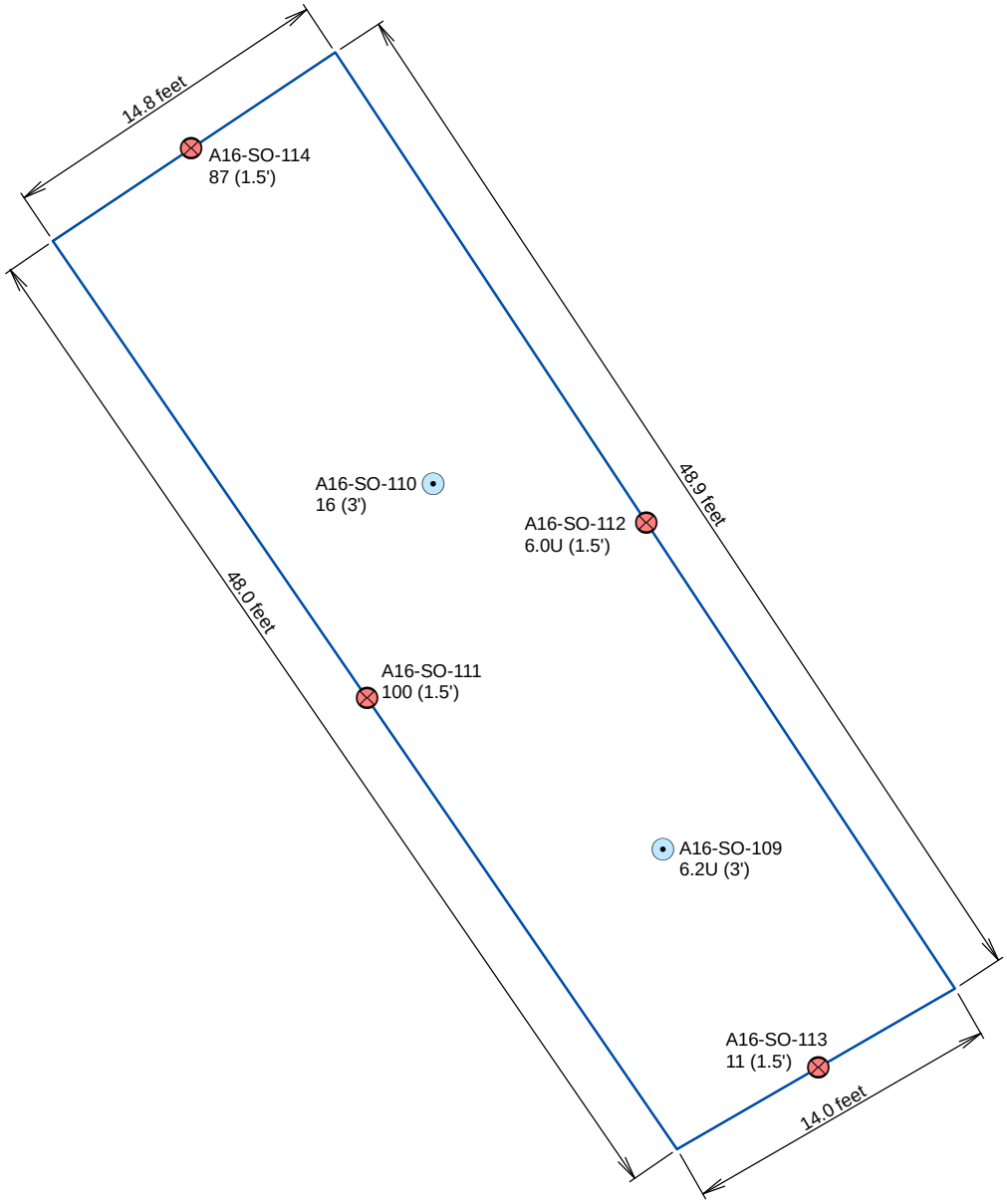
G:\arc\projects\Mare Island\Figure 18-A15.mxd



Note: Total excavation depth is 3 feet bgs.

Legend

- Final TPH-mo Contaminated Soil Removal Area
- Road
- TPH-mo Sidewalll Confirmation Sample
- TPH-mo Bottom Confirmation Sample
- U — Sample was analyzed for, but not detected at the specified detection limit
- 11 — TPH-mo result in mg/kg from off-site laboratory analysis
- 1.5' — Sample depth in feet bgs
- bgs — below ground surface
- mg/kg — milligram per kilogram
- Excavation dimension

0 10
Scale in Feet

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CA

PETROLEUM CORRECTIVE ACTION PLAN COMPLETION REPORT

FIGURE 19
EXCAVATION A16 SOIL SAMPLE LOCATIONS

FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA A2,
FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA

T N & Associates, Inc.
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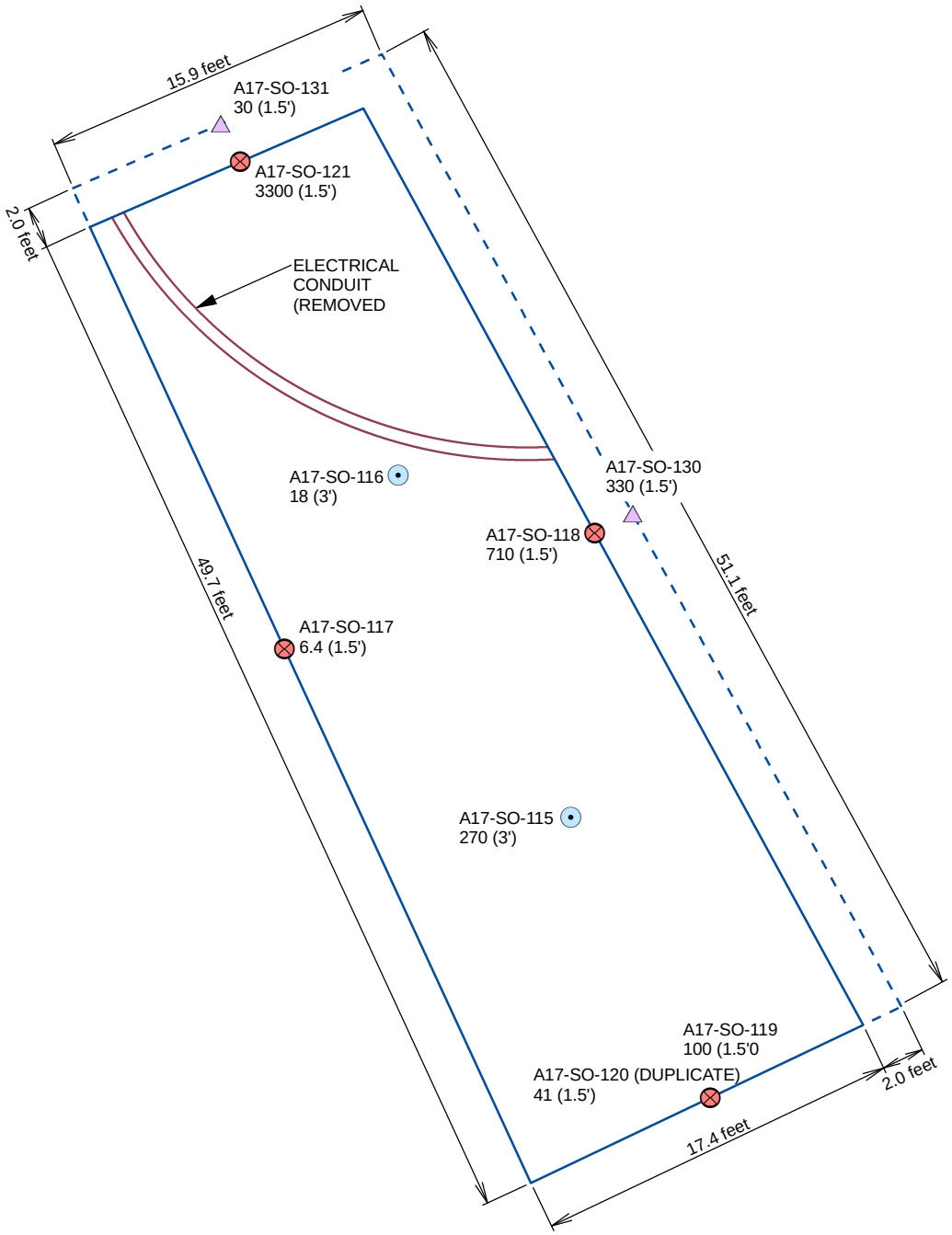
G:\arc\projects\Mare Island\Figure 19-A16.mxd



Note: Total excavation depth is 3 feet bgs.

Legend

- Final TPH-mo Contaminated Soil Removal Area
- Stepout Excavation Limit
- TPH-mo Sidewalll Confirmation Sample
- TPH-mo Bottom Confirmation Sample
- TPH-mo Sidewall Stepout Confirmation Sample
- 270 TPH-mo result in mg/kg from off-site laboratory analysis
- 1.5' Sample depth in feet bgs
- bgs below ground surface
- mg/kg milligram per kilogram
- Excavation dimension
- Electrical Conduit

N

0 10
Scale in Feet

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CA

PETROLEUM CORRECTIVE ACTION PLAN COMPLETION REPORT

FIGURE 20
EXCAVATION A17 SOIL SAMPLE LOCATIONS

FORMER NORTH BUILDING WAYS WITHIN INVESTIGATION AREA A2,
FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA

TN & Associates, Inc.
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G:\arc\projects\Mare Island\Figure 20-A17.mxd

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
39	Closure letter	Table 1	Letter Regarding the "No Further Action for Total Petroleum Hydrocarbons at the Former North Building Ways Area within Investigation Area A2, Former Mare Island Naval Shipyard, Vallejo, California." From Bruce Wolfe, RWQCB, to Michael Bloom, BRAC PMO. October 29, 2009.

Letter sent via email

Date: October 29, 2009
File No. 2129.2011 (PJ)
GeoTracker No. T0609560708

Department of the Navy
BRAC Program Management Office
Attn: Mr. Michael Bloom
1455 Frazee Road, Suite 900
San Diego, CA 92108-4301
michael.s.bloom@navy.mil

SUBJECT: No Further Action for Total Petroleum Hydrocarbons at the Former North Building Ways Area Within Investigation Area A2
Former Mare Island Naval Shipyard
Vallejo, California

Dear Mr. Bloom:

The Former North Building Ways Area is located within Investigation Area A2 in the northeastern portion of Mare Island. Currently, the FNBW site is vacant and primarily overgrown with vegetation. Based on results of previous investigations between 1997 and 2003, total petroleum hydrocarbons (TPH) were detected in soil across the site, and appear to be from non-point sources.

Seventeen excavations were completed in 2009 to remove soil impacted with TPH as motor oil. Confirmation soil sample results indicated TPH as motor oil-impacted soil had been removed to below the established Tier 2 residential screening levels for soil (500 milligrams per kilogram).

Based upon the available information, including the current and proposed land use, and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related petroleum hydrocarbons at the subject site is required. Additionally, the Water Board may reconsider this finding should new information be discovered regarding previously undetected contamination. The Water Board shall be notified of any changes in future land use.

If you have any questions, please contact Paisha Jorgensen of my staff at (510) 622-2756 or pjorgensen@waterboards.ca.gov.

Sincerely,

Terry Seward for

Digitally signed by Terry Seward
Date: 2009.10.29 15:29:05 -07'00'

Bruce H. Wolfe
Executive Officer

Distribution:

Department of the Navy
Ms. Heather Wochnick – heather.wochnick@navy.mil
Ms. Nadina Walton – nadina.walton.ctr@navy.mil

Department of Toxic Substances Control
Ms. Janet Naito – jnaito@dtsc.ca.gov

Environmental Protection Agency
Ms. Carolyn d'Almeida – dAlmeida.Carolyn@epamail.epa.gov

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
40	Reuses	Section 2.4	Mare Island Specific Plan. Sections 3.3.1, 3.4, 3.4.4, 3.5.1, 3.5.18, and 4.10.1. City of Vallejo, California. Amended June 2008.

Mixed-Use (Non-Residential):.....6,265,772 sf
(Office/R&D, light industrial, retail, warehousing)

Industrial: .....1,537,126 sf
(Heavy industrial)

Education/Civic: .....1,254,698 sf*

Total Non-Residential: .....9,057,596 sf

Total Residential:.....1,400 units
*Includes federal agencies)

A summary description of the distribution of these major land use designations among the 13 Reuse Areas is provided as follows:

3.3.1 Mixed-Use Office/Research & Development

Reuse Area 1A (**North Island Industrial Park**) is a proposed employment area north of the Mare Island Causeway and east of Azuar Drive that is identified for a development program of 1.2 million square feet of light industrial, commercial, office R&D and warehouse uses.

3.3.1 Industrial

Reuse Area 1B (**Northwest Industrial Area**) is proposed for warehousing, light and heavy industrial.

Reuse Area 5 (**Waterfront Industrial Park**) and Reuse Area 10A (**South Island Business Park**), will provide locations for major heavy and light industrial development that utilizes the existing buildings and waterfront access while also allowing for new infill buildings of compatible size and function. Reuse Area 10B (**Army Reserve**), with its existing port facilities and warehouses, is a location for continued Army Reserve activities.

3.3.2 Mixed-Use Employment

South of Mare Island Causeway is the major mixed-use employment center of Mare Island, consisting of office, retail/service, R&D, and light industrial uses in existing and infill buildings sited along the existing street grid.

Reuse Area 2A (**Town Center**) incorporates a number of distinctive historic buildings along Walnut Avenue and additional new infill development along Walnut Avenue and Azuar Drive. A 50,000 square foot commercial center provides retail services at the intersection of Railroad Avenue and G Street.

3.4 PARKS AND OPEN SPACE

The bodies of water that surround Mare Island constitute the single most important factor in considering its land use character, including shipbuilding and other waterfront activities. Approximately 78% (3,787 acres) of the Specific Plan Area is either wetlands or inactive dredge pond areas, which are restricted to open space, conservation and managed wetlands uses, as described earlier in Section 3.2.2. In addition to the smaller, non-dedicated parks and open space that are part of the recognized development area, approximately 9% (463 acres) of the overall Specific Plan Area has been designated for moderate to large parks and recreational areas.

Parks and Open Space for Mare Island (**Figure 3-3**) have been planned to support the development program for each Reuse Area in order to assure an overall framework that will organize the structure of the community and provide a comprehensive system of recreational amenities for residential and work life. This Plan exceeds the City of Vallejo General Plan standards for park dedication, as identified in the subsequent discussions of parks and open space. Proposed types of urban open space include Community Parks, Neighborhood Parks, Pocket Parks, and the Waterfront Promenade and Plaza along the Mare Island Strait.

The unique characteristics of Mare Island require some flexibility in City standards, including for parks and open space, in order to accommodate development within the historic environment. In some areas, small parks that "fit" within an existing complex of buildings may provide valuable benefits that would not otherwise be feasible without undesirable demolitions. Also, bicycle and pedestrian use is an existing aspect of life of Mare Island and is planned as a major aspect of the proposed Parks and Open Space framework. Bicycle and pedestrian circulation is described in the Transportation Element of the Plan (**Section 5.6**).

(A) Golf Course

The Plan provides for improvements to and management of the existing 18hole course as a regional destination golf club. The golf course site totals 172 acres.

(B) Regional Park

The Regional Park in Reuse Area 12 is intended to provide walking, cycling and equestrian trails, habitat conservation, and other passive recreational uses. It will be developed and managed as part of the extended open space framework for Mare Island and encompasses 176 acres.

(C) City Park

Approximately 32 acres of recreational open space is planned for a portion of Reuse Area 13, which is located on a landfill site and almost completely surrounded by inactive dredge ponds and non-tidal open space areas. Access is via an extension of A Street, which extends through the West Business Park (Reuse Area 2B).

(D) Wildlife Refuge

Conservation easements for wildlife refuge use include 29 acres in Reuse Area 1A, 9 acres in Reuse Area 10, and 11 acres in Reuse Area 12. In addition to dedicated conservation easements there are 2,865 acres of state owned wetlands on Mare Island as well as 922 acres of inactive dredge ponds that are located outside the Reuse Areas.

3.4.4 Urban Parks

The urban parks category includes public open space within more densely developed areas which are anticipated as being subject to more intense use. They are associated with central features of Mare Island such as the Strait or the Historic Core. Design treatment is predominately hardscape.

(A) Waterfront Promenade

One of Mare Island's greatest assets is its waterfront along Mare Island Strait. The proposed Waterfront Promenade provides opportunities for a variety of experiences based on the character and amount of the development to the west and the type of water habitat to the east. Specific details about the reuse and enhancement of the waterfront will be developed through an overall plan prepared for the waterfront that will be submitted to the San Francisco Bay Conservation and Development Commission (BCDC) for approval.

As shown by **Figure 3-3**, the Waterfront Promenade is conceived as an urban walkway that extends from the Causeway north and south to the Historic Core Plaza and shipyard area through Reuse Areas 3A, 3B and 4. North of the Causeway, a pedestrian and bicycle pathway will connect the Promenade, through Reuse Area 1A (and under SR 37), to existing access trails in the adjacent San Pablo Bay National Wildlife Refuge. This

urban linear parkway is intended to reflect the character of the City waterfront directly across the river and, where the opportunity exists, may be linked to the inland parks and the regional park by shared pedestrian/bicycle paths. Although the basic configuration of the Waterfront Promenade will be within the boundary of the anticipated State Lands Commission ownership, adjacent private areas may be designed to interface with the Waterfront Promenade by providing compatible improvements. This urban linear Waterfront Promenade will be owned by the State Lands Commission and either leased to or, as per proposed legislation, owned by the City of Vallejo.

(B) Historic Core Plaza

This urban park provides a link between the Waterfront Promenade and other parks in the community and serves the surrounding commercial uses, including the proposed museum and ship exhibits. It also provides a potential location for gatherings, markets, festivals, and other public events. Design criteria and guidelines for the plaza are provided in the **Urban Design Section 4.3.**

The development of the Plaza is considered to be part of the surrounding commercial development plan for Reuse Area 4, although the Plaza will be City owned. When the project is designed and constructed, each use and/or property owner around the Plaza should be allocated and assessed a fair share of the cost of converting and refurbishing the Plaza from an industrial yard to a pedestrian mall. These assessed fees would be placed in an escrow account to be used to fund the Plaza improvements. Maintenance of the Plaza could be provided by the City or an association made up of commercial tenants and land owners on the Island. An association or some similar funding entity, such as an assessment district or a Community Facilities District (CFD), may help provide for and share the costs of parking for the visitors to the Plaza and, possibly, for a large portion of possible future passenger shuttle service which could serve many of the visitors.

3.4.5 Pocket Parks

Pocket parks are small open space areas less than two acres in size that are associated with individual neighborhoods. They may provide playgrounds, small free play space, or simply be visual focal points at key intersections and entries. Parks in this category are considered to be too small to be acceptable for dedication to the GVRD and are proposed to be privately developed, owned by the City and maintained by a community facilities district.

Pocket parks would constitute approximately seven acres of the total developed recreation area in the master development area, as identified in the Development Program (**Table 3-2**). Some of these parks will include landscape features that contribute to the character of surrounding residential neighborhoods, including Crescent Park, Hilltop Commons, and Hilltop Circle. Other pocket parks, notably Crescent Playground, Coral Sea Playground and Townhome Square, will be playgrounds that serve nearby residential uses. North and South Grove Parks will be located adjacent to the proposed Flagship Drive through Reuse Areas 6 and 8 (*see* **Figure 5-1: Street Framework**) and may be included within the parkway right-of-way and maintained as part of the streetscape.

Qualifying Notes for **Table 3-2**: Development Program by Reuse Area

- Building areas include proposed buildings and existing buildings to remain.
- Civic Use in Reuse Area 4 includes some historic buildings not under the control of the Master Developer.
- Civic use in Reuse Area 9 is part of Touro University development program total square footage.
- Building area totals do not include utility facilities.
- Roosevelt Terrace (29 acres) is privately developed and is no longer part of the Specific Plan Area.

3.5.1 Reuse Area 1A (North Island Industrial Park)

The North Island Industrial Park (Reuse Area 1A) contains a total of 155 acres situated in the northern portion of Mare Island. It has direct access to the State Route 37 interchange. State Route 37 and the North Gate form the northern boundary; G Street and the Causeway form the southern boundary. To the west are Reuse Area 1B and wetland areas, and to the east are wetlands and Mare Island Strait. A large pier extends from Reuse Area 1A into Mare Island Strait. This Reuse Area is not within the Historic District.

This Reuse Area will be developed primarily with light industrial, warehouse and office uses in a contemporary office park. A small commercial area to serve primarily office park users will be located at the entrance. The Waterfront Promenade will extend the length of the eastern edge of the area on the upland portion.

(A) Land Use

Given the direct freeway access and the relative absence of historic properties, Reuse Area 1A is intended for comprehensive development with new buildings as a warehouse/distribution district or office park.

- Approximately 29 acres in Reuse Area 1A are to be dedicated as a conservation easement.
- The proposed development program for Reuse Area 1A is 1,222,000 square feet of mixed-use (54,000 office/R&D; 348,000 retail; and 370,000 warehouse, and 450,000 square feet light industrial) and 6,000 square feet educational/civic.

3.5.2 Reuse Area 1B (Northwest Industrial Area)

Reuse Area 1B, a 37-acre industrial and warehousing site, will be part of the major industrial development at the northern end of Mare Island near the State Route 37

- The Naval Ammunition Depots located in Reuse Area 12 is part of a National Historic Landmark (NHL) District and includes some of the earliest structures on Mare Island, including a cemetery and archaeological features such as portions of a seawall and earth works from a Civil War era defense battery.

- Given that much of the area will remain in public ownership and is planned for public use, protection of the large number of historic resources may require restricting access to the NHL sub-area and limiting transport vehicles through the area.

3.5.17 Reuse Area 13 (Open Space/Recreation)

Reuse Area 13 is approximately 92 acres in size. It is bounded on almost all sides by wetlands and inactive dredge ponds. On the east side, it shares a short boundary with the West Business Park (Reuse Area 2B).

(A) Land Use:

Public access is prohibited for approximately 60 acres of Reuse Area 13 (RCRA). The remaining 32 acres is proposed for developed recreational uses as public open space.

3.5.18 Wetlands, Submerged Lands and Dredge Disposal Areas

Wetlands, submerged lands and inactive dredge ponds total approximately 3,787 acres, which are primarily the western half of Mare Island, but which also include water areas along the eastern and southern sides of Mare Island. Wetlands and submerged lands total approximately 2,865 acres and the inactive dredge ponds total approximately 922 acres. Approximately 162 acres were originally intended to be transferred to the U.S. Fish and Wildlife Service including Building 505. The land was to be used as an extension of the San Pablo Wildlife Refuge and as an interpretive center. However, in 2005, the U.S. Fish and Wildlife Service vacated Building 505 and a new sponsor of the proposed Wildlife Refuge and interpretive center has not been identified.

(A) Land Use:

- Wetlands: wetland areas; conservation easements; habitat maintenance and restoration; interpretive facilities, scientific/educational facilities; and trails

- Inactive Dredge Ponds: maintenance facilities; interpretative facilities; scientific/educational facilities; trails; open space, conservation and habitat management

- Eco-Recreation/Education: interpretative facilities, scientific/educational facilities, trails, staging areas, passive recreation and concessions

iv The sign's removal or alteration will not irreversibly damage the building or area. Any damage to a building or area resulting from the removal or alteration of a sign shall be repaired immediately by the tenant to meet City approval.

v The altered sign is in conformance with the new signage program for Mare Island, as described below.

The five existing freestanding, changeable copy signs on Mare Island may be used only by the City for informational, non-commercial purposes. No additional freestanding, changeable copy signs will be allowed.

4.9.2 Sign Program

As part of the Specific Plan, a unified sign program has been developed for all new public and private sector signs on Mare Island (Appendix C: Sign Program). The Sign Program provides standards and guidelines for a range of applicable sign types, including signs for entryways, wayfinding, and street address. Guidelines for commercial signs include business identification, freestanding (panel, blade, monument and retail center tenant directory), fascia (panel, blade, rail, and individual letters), and window located. The guidelines also address lighting as well as temporary, interim marketing and prohibited sign types. A photo gallery provides illustrations of what are considered handsomely designed signs appropriate to Mare Island. A final section discusses the sign permit process.

4.10 URBAN DESIGN GUIDELINES AND STANDARDS BY REUSE AREA

In addition to the general urban design policies and the guidelines and standards for Setting, Landscape, Architecture, and Site Furnishings that were discussed in the previous sections for all 13 Reuse Areas, the urban design plan also provides the following design guidelines and standards intended to preserve the established setting of individual Reuse Areas. A thorough analysis and description of the setting is part of the scope of the Historic Project Guidelines for the Historic District.

4.10.1 North Island Industrial Park (Reuse Area 1A)

The relative absence of historic resources enables Reuse Area 1A to be comprehensively redeveloped with new buildings.

i Proposed buildings should be laid out in conformance with the established street grid system. Larger footprint buildings should be located in the western portion of the Reuse Area. Smaller buildings with more ample parking should occupy the eastern portion.

ii As part of Mare Island's Waterfront Promenade, a public access trail will be incorporated into office/industrial development along the east edge of Reuse Area 1A from the Causeway to the pier.

iii At the far northern end, between the pier and the Causeway, there are wetlands to the east which include a habitat conservation area. There will be a public promenade traversing the length of the area between the wetlands and the light industrial and office uses. This public access is intended to connect the pedestrian access points onto the pier and the Causeway. The type and intensity of the promenade adjacent to the wetlands will be designed based on consultation with BCDC. New development should be sited and buildings oriented to take advantage of the waterfront by providing view and access corridors.

4.10.2 Northwest Industrial Area (Reuse Area 1B)

The buildings of Reuse Area 1B are typically oriented to Mare Island's street grid as expressed by Azuar Drive and perpendicular east-west streets.

i Any future buildings should respect the existing orientation of buildings to the street.

ii Building layout should provide street frontage setbacks similar to existing setbacks and should provide adequate parking, service and loading.

4.10.3 Town Center (Reuse Area 2A)

The overall urban design objective for Reuse Area 2A is to establish a walkable, mixed use area that reinforces the existing street grid, focused on the Rodman Center (Building 545), on Walnut Avenue, and on a pedestrian-oriented "Main Street" that forms a north-south spine through the Area.

i Principal building entrances of the Rodman Center and of other existing and proposed buildings along Walnut Avenue should be oriented to face the street.

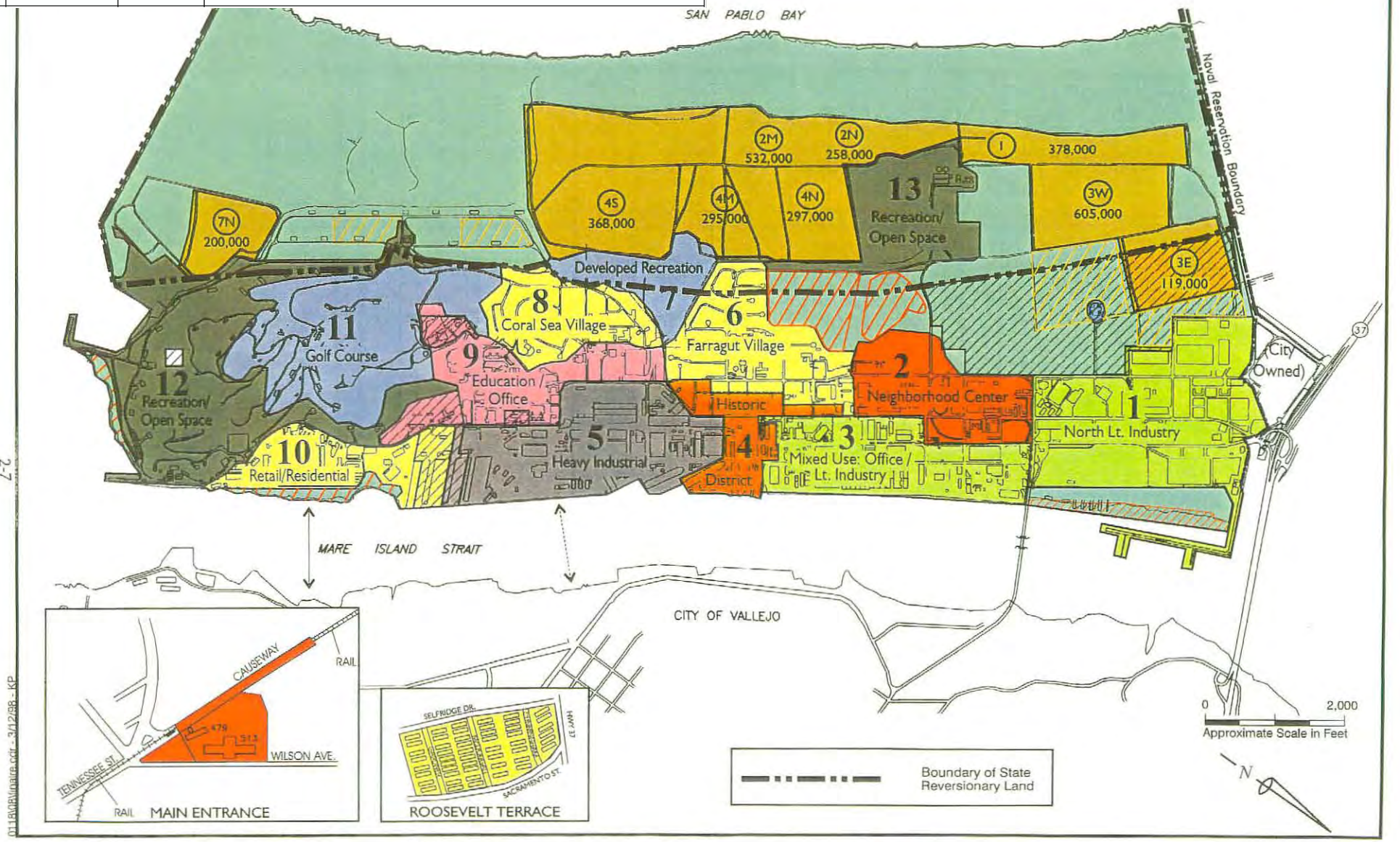
ii Where feasible, parking should be located behind the buildings.

iii Building setbacks should establish a compatible building edge along the street and complement adjacent or nearby historic buildings.

iv The building and entry configurations of the Rodman Center should be reflected in the layout of the new retail center to encourage visual connections for pedestrians. Retail development should reinforce the street edges of Walnut Avenue, G Street and Railroad Avenue, with parking shielded from view by buildings. Pedestrian spaces and outdoor seating may be provided on the interior or street edge of the retail center, with easy access to the Walnut Avenue pedestrian corridor and Rodman Center.

v A new "Rodman Lawn" should be provided at the intersection of Azuar Drive and G Street. This area may provide informal recreational uses

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
41	Reuse Plan map	Section 2.4	Mare Island Final Reuse Plan. City of Vallejo, California. Figure 2-2. July 1994.



The Mare Island Reuse Plan identifies 13 reuse areas and two off-site properties. Both the Reuse Plan Alternative and the Medium Density Alternative reflect the same land use configurations. The southern crossing would occur only under the Reuse Plan alternative.

LEGEND:

- Potential Southern Crossing Locations
- 1 Reuse Area
- Residential
- Commercial
- Historic
- Federal Transfer Lands
- Institutional
- Light Industrial
- Heavy Industrial
- Active Dredge Pond
- Inactive Dredge Ponds
- Developed Recreation
- Recreation/Open Space
- Wetlands/Open Space
- Conservation Easements

Source: Vallejo, 1994c

Final Reuse Plan

Mare Island, California

Figure 2-2

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
42	Drinking water	Section 2.4	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Section 3.2.3. Tetra Tech EM Inc. September 22, 2008.

3.2.3 Beneficial Use of Groundwater

The potability of the shallow groundwater at the FNBW Area was assessed using EPA's groundwater classification guidelines. Under EPA guidelines, groundwater with a total dissolved solids (TDS) content of up to 10,000 milligrams per liter (mg/L) and a groundwater production rate (or well yield) of 150 gallons per day (gpd) may be considered as a potential source of drinking water. State criteria for a potential drinking water sources are: TDS content of up to 3,000 mg/L and well yield of 200 gpd.

Using EPA's classification guidelines, the groundwater at the FNBW Area is not considered potable for the following reasons:

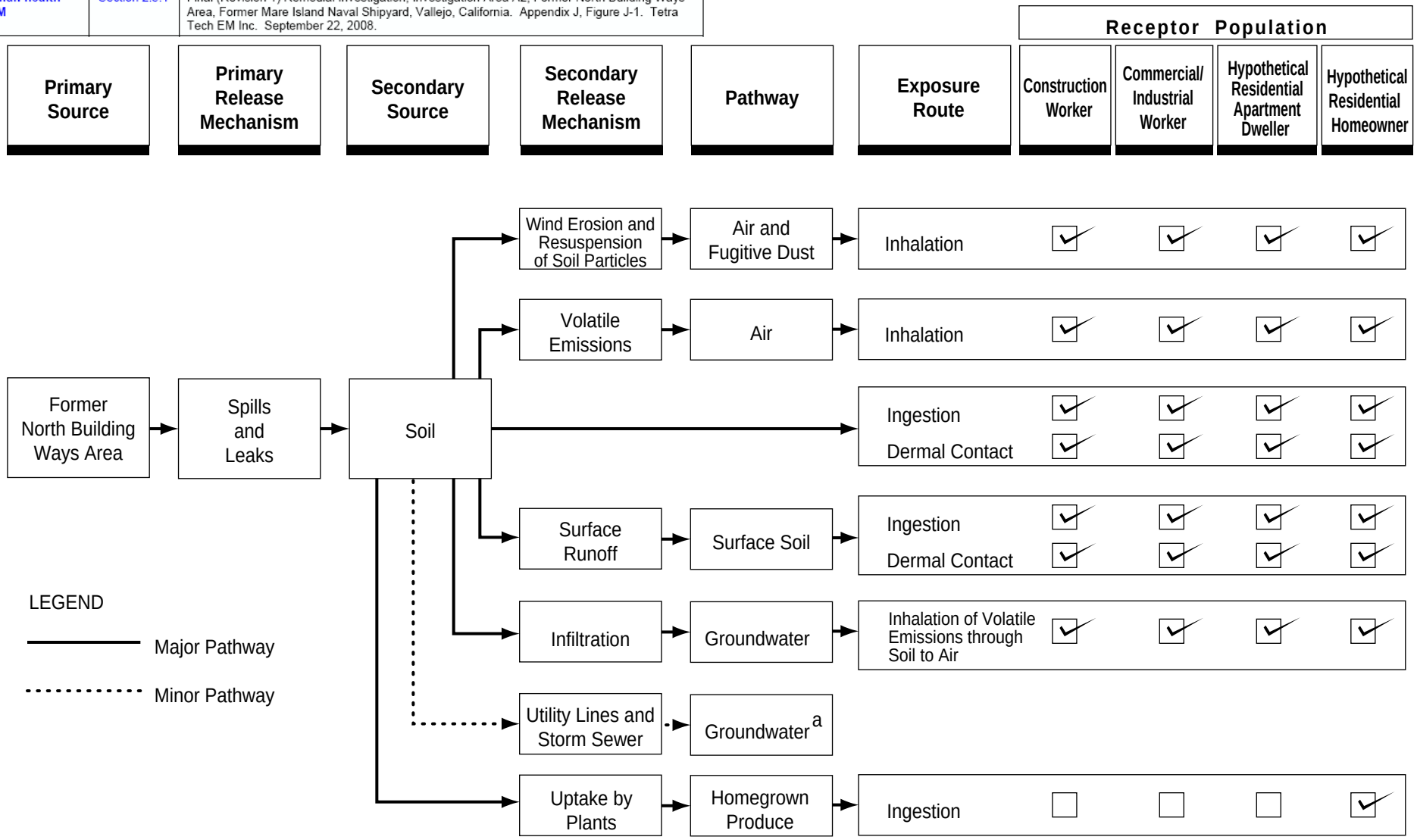
- The calculated yield for a theoretical groundwater production well screened in the shallow water-bearing zone at the site is 108 gpd, which is below the EPA criterion of 150 gpd. This expected well yield was calculated based on hydraulic conductivity estimates from measurements made at the nearby IR17 and Building 503 Area, the saturated thickness of the shallow water-bearing zone, and other site-specific stratigraphic data.
- Groundwater at the site is expected to have site-specific TDS values exceeding 10,000 mg/L because the site is adjacent to Mare Island Strait, and was originally reclaimed from the strait. Although no wells were installed at FNBW Area, TDS values in groundwater samples collected from shallow water-bearing zone wells at a nearby site located further inland, IR17 and Building 503 Area, are greater than 10,000 mg/L in half of the wells in that area. In addition, TDS values in groundwater samples collected from background wells (BGW01 and BGW02) adjacent to and inland from the site are also near or greater than 10,000 mg/L; these wells are screened at 20 feet bgs.

3.2.4 Ecology

Three habitats exist at the FNBW Area include upland, tidal wetland, and offshore (intertidal mudflat) areas; this section briefly summarizes these habitats. Appendix F provides a more detailed discussion of ecology at Mare Island.

The upland habitat consists of a broad, relatively flat area that is largely asphalt paved, highly compacted from past, sustained heavy traffic, or covered by buildings. Much of the site is littered with construction debris such as concrete. As a result, this habitat mostly supports ruderal (opportunistic) vegetation, including some grass and shrub species, with only a few stands of trees. Populations of resident small mammals are present, including rodents and

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
43	Human health CSM	Section 2.5.1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix J, Figure J-1. Tetra Tech EM Inc. September 22, 2008.



NOTE

a Receptors and exposure pathways associated with contaminants in surface water will be evaluated in conjunction with the Mare Island basewide ecological risk assessment.

b Attachment J4 includes assessment of hypothetical residential homeowner

FORMER NORTH BUILDING WAYS AREA
REMEDIAL INVESTIGATION
MARE ISLAND, CALIFORNIA

FIGURE J-1
CONCEPTUAL SITE MODEL

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
44	HHRA	Section 2.5.1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix J, Sections 3.0 through 3.4. Tetra Tech EM Inc. September 22, 2008.

2.2.3 Miscellaneous Issues Related to Selection of Chemicals of Potential Concern

Although sediment samples were collected from the tidal wetland area along the northeastern side of the site, chemical data for these sediments were not evaluated further in the HHRA because exposure to the sediments is unlikely (see Section 3.2). Additionally, chemical concentrations in sediment are low and similar to concentrations in soils at the Former North Buildings Way Area. Reasonable maximum exposure (RME) concentrations for sediments would be less than the corresponding EPA Region IX preliminary remediation goals (PRG) for residential soils, and the maximum COPC concentrations in sediment are less than the Region IX PRGs for industrial soils (EPA 2000). Because of these considerations, potential exposures to, and risks associated with, sediments (for example, for recreational visitors) are expected to be lower than those for the other scenarios evaluated in the HHRA.

Potential human health effects from exposure to TPH mixtures detected in soil and groundwater were evaluated by considering the benzene, toluene, ethylbenzene, and total xylenes (BTEX) and PAH components to represent the toxic components of those mixtures. Consequently, TPH-dr, TPH in the gasoline range (TPH-gr), and TPH-mr were not retained as COPCs for the HHRA.

3.0 EXPOSURE ASSESSMENT

EPA identifies three components to an exposure assessment: (1) characterizing the exposure setting, (2) identifying exposure pathways, and (3) quantifying exposures. The exposure setting characterization includes a discussion of current and future land use. The identification of potentially complete exposure pathways includes a discussion of exposed populations, exposure pathways that may be complete, exposure scenarios, and potential receptors. The quantification of exposures includes the development of EPCs and chemical intake estimates for hypothetical exposure scenarios.

3.1 EXPOSURE SETTING AND LAND USE

The exposure setting at the site, including information on the physical setting, geology, hydrogeology, surface water, and climate, is described in detail in Appendix E of this RI report. The site consists of an approximately 32-acre upland area, including existing Buildings 491, 589, 593, 641, and 643 and the tidal wetland along Mare Island Strait (Figure 2-1 and Table 2-1 in Volume I of the RI report). The area also includes a portion of an adjacent mudflat that is located in a former wharf area. The collective use of the

area was for ship construction, primarily during World War II. The entire site, including the existing buildings, is not currently in use; however, occasionally material is stored on the southern portion of the area.

The upland area of the site is largely unpaved, except for some asphalt-paved access roads and asphalt-paved areas of varying condition that possibly were used for parking. Some areas appear to be unpaved but are covered with asphalt rubble, which represents a former paved surface.

Buildings 589, 593, and 643 consist of concrete-block walls on a concrete slab foundation (Figure 2-1 in Volume I of the RI report). Building 589 contains floor drains and Building 593 contains concrete-plugged wall drains. A concrete vault containing soil residue is present on the southeastern side of Building 589. Also, two catch basins are located in the existing foundation of former Building 585. Building 491, a sentry house, is located at the former main entrance of Mare Island. Building 641, a former fire station, is located near the intersection of Causeway Street and Railroad Avenue, at the southernmost site boundary. Several concrete foundation slabs are present in various portions of the site (specifically, former Buildings 585 and 587 and structures R and Z). Numerous partially buried train and crane tracks are present across the site. A portion of the site near the northwestern site boundary is fenced. Pipelines for the following utilities are present at the site: sanitary sewer, fresh water, and natural gas (Figure 2-1 in Volume I of the RI report).

A small portion of the site extends across Railroad Avenue into Investigation Area A1. All of the site is located within the North Light-Industry Area according to the Mare Island final reuse plan (City of Vallejo 1994). The expected reuse of the site would include light industrial and warehouse purposes as part of an overall industrial park. Domestic sanitary sewer pump station 2 is located adjacent to the site at "I" Street and Railroad Avenue; but is outside of the site study included in this HHRA.

3.2 EXPOSURE PATHWAYS

Mechanisms by which exposures may occur are called exposure pathways. EPA (1989) describes exposure pathways in terms of four primary components:

- A source and mechanism of chemical release
- A retention or transport medium (or media in cases involving media transfer of chemicals)
- A point of human (receptor) contact with the contaminated medium (known as the exposure point)
- An exposure route (such as ingestion) at the contact point

All four of these components must be present for a potential exposure pathway to be considered complete and for exposure to occur.

3.2.1 Chemical Sources, Release Mechanisms, and Transport Media

The soil and groundwater at the site are the sources of release for the COPCs. The COPCs detected are both volatile (selected organic compounds) and nonvolatile (metals and selected organic compounds). The COPCs will adsorb to soil, and some are soluble in water. These varying properties indicate that several release mechanisms may be applicable. COPCs in soil could be released to air via volatilization, and then migrate into the breathing zone. Nonvolatile COPCs sorbed to soil particles might be released to air if the soil particles are suspended in air as dust. For the site, groundwater was not considered to be potable; therefore, direct exposure to groundwater is not considered a complete exposure pathway. Groundwater is evaluated as a potential source that could adversely affect breathing zone air through volatilization to vadose zone soil, then through migration into the breathing zone.

Soil, groundwater, and air are retention or transport media for the COPCs. In general, chemicals sorbed to soil particles might be released to air through volatilization or if the soil particles are suspended in air as dust. Chemicals dissolved in groundwater may volatilize to the vadose zone of the subsurface and eventually be released to the air. Sediment samples were collected from the intertidal mudflat area along the northeastern side of the site; however, no point of human contact is evident from potential chemical releases from the sediment.

3.2.2 Potential Receptors

The entire site, including the existing buildings, is not currently in use, with the exception of the occasional storage of material on the southern portion of the area. Consequently, there are no exposed populations under the current land-use setting. Under a future land-use setting, the potential exposed populations for the site may include construction workers during redevelopment construction and commercial and industrial workers following redevelopment. Future use of this area is unlikely to include residential development according to the proposed future reuse designated in the Mare Island final reuse plan (City of Vallejo 1994). Although residential development is not anticipated at the site, residential exposure scenarios were included in the HHRA to evaluate potential future land-use options outside of that proposed for the site. Recreational use of the site could occur, but possible recreational exposure was not evaluated quantitatively in this HHRA because exposures described by the scenarios evaluated are generally much greater than recreational exposures.

On the basis of these considerations, construction worker, commercial/industrial worker, and resident exposure scenarios were used in this evaluation. For each of these, two different sets of exposure assumptions were used to characterize a RME scenario and a central tendency exposure (CTE) scenario. Separate resident scenarios were used to address different childhood and adult exposure issues.

This assessment uses unique scenario- and site-specific assumptions as well as generic assumptions to address the specific issues raised by the nature and distribution of the COPCs at the site and the needs of this HHRA. The assumptions are intended to be conservative (overestimating actual exposure), instead of accurate, in order to account for the uncertainties associated with them. Similarly, other assumptions might be reasonable and justifiable for use in this or other exposure assessments, and the assumptions used in this analysis may not be applicable for other analyses.

3.2.3 Exposure Points

"Exposure point" describes a location or area, often hypothetical, at which humans might come in contact with one or more contaminated environmental media. The identification of exposure points is based on present and future activity patterns for a given area and on the relationship of these activities to the distribution of contaminants in soil. As noted in Section 3.1, the distribution of contaminants in soil does not indicate a clear localization of contaminants. Contaminants in groundwater are limited to concentrations near sample quantitation limits. The exact configuration of the site under future land reuse has not been defined yet; however, most of the area probably will be covered by buildings, parking areas, or landscaping. For purposes of this HHRA, the site evaluated as a single exposure point.

3.2.4 Exposure Routes

Potential uptake routes for the COPCs at the Former North Building Ways Area are inhalation, ingestion, and direct dermal contact. Consequently, the exposure pathways considered to be complete for each of the hypothetical exposure scenarios are:

- Incidental ingestion of soil
- Direct dermal contact with soil
- Inhalation of airborne particulates as dust
- Inhalation of VOCs released directly from soil
- Inhalation of VOCs from groundwater released from soil

This HHRA includes a residential exposure scenario, even though the proposed future reuse of the Former North Building Ways Area makes it unlikely that exposures to COPCs will occur in a residential setting. Exposure is even less likely to occur as the result of ingestion of produce grown in contaminated soil because only a small fraction of the population consumes substantial quantities of homegrown produce and chemical contamination is not widespread. Additionally, the uncertainties associated with evaluation exposure via homegrown produce are very high. Accordingly, an assessment of potential exposure via homegrown produce is presented in Attachment J4 and is not discussed further in this appendix.

Potential exposures were evaluated under two hypothetical site configurations. The unchanged configuration incorporates current or potential future land-use conditions with potential contaminant exposures derived from soil within the 0 to 3-foot-bgs interval. The modified configuration incorporates future land-use considerations, such as the potential that soil at a depth of 10 feet may be excavated or regraded. As discussed in Section 3.2.2 of the RI report, groundwater at the Former North Building Ways Area is not potable because of low pumping rates and TDS concentrations. Accordingly, there is no point of direct human contact with associated with potential domestic or other water use. Although construction workers or others may come into direct dermal contact with groundwater during excavation activities, such exposure, if any, is expected to be infrequent, of short duration, and involve only small quantities of contaminated groundwater. Dermal exposure to groundwater was not, therefore, considered a complete pathway in this HHRA. Although direct contact with water is not anticipated, indirect exposure to volatile compounds may occur if vapors are released from groundwater to breathing zone air. This pathway was evaluated for both current and future site configurations.

Under both site configurations, the following assumptions were made: the site will be unpaved, soil will be exposed, and no structures will be present for all complete exposure pathways except inhalation of VOCs released directly from soil and VOCs in groundwater released from soil. Potential exposures to VOCs in outdoor air were evaluated for the construction worker scenarios, while potential exposures to VOCs in indoor air were evaluated for the residential and the commercial/industrial worker scenarios. Potential construction exposures are likely only under the modified site configuration, so the construction worker scenario did not include the unchanged site configuration.

The selection of exposure pathways for each scenario for each site configuration is summarized in Table J-8 and presented on Figure J-1. Table J-8 is presented in the standardized format specified by EPA (1998a).

3.3 EXPOSURE POINT CONCENTRATIONS

In risk assessments, EPCs are the chemical concentrations to which exposures are assumed to occur. Soil concentrations were used as EPCs of COPCs in soil for the site. The soil concentration terms represent the chemical concentrations in soil used to calculate chemical intake estimates for the soil ingestion and dermal contact pathways. The EPCs of COPCs in air were modeled from the soil concentration terms and the groundwater concentration terms. Table J-7 summarizes the EPCs for soil and groundwater for the RME and CTE scenarios.

Volatile COPCs may be released as vapors from soil or groundwater and diffuse through the pore spaces in subsurface soil and into the air indoors and outdoors, where exposure might occur. EPCs for VOCs that may be released to the air from soil or groundwater were estimated using chemical-specific volatilization factors (VF) and corresponding soil and groundwater concentration terms. The VFs were developed using a set of equations developed by the American Society for Testing and Materials (ASTM) to describe VOC vapor releases from groundwater and diffusion into indoor and outdoor air (ASTM 1996). The VFs represent a ratio of the concentrations of VOCs in air that might result from a concentration of VOCs in soil or groundwater. The development and use of the VFs is presented in detail in Attachment J1.

VFs were developed for COPCs with a molecular weight of less than 200 grams per mole and a Henry's Law constant greater than 1×10^{-5} atmosphere-cubic meter per mole (EPA 2000). Table J-9 presents the values for the variables used in the volatilization model to develop the VFs. Table J-10 presents the VFs for each soil interval and for groundwater.

Because naphthalene was detected at a depth of 9.5 feet bgs (below the shallow groundwater at the site), the potential volatilization of naphthalene from soil was evaluated differently than other COPCs. Because the shallow groundwater above the soil sample represents a dominant resistance layer that prevents a complete soil-to-air exposure pathway, a soil VF was not applied to the soil concentration. Because naphthalene was detected in a shallow grab groundwater sample collected at the same location as the soil sample, the evaluation of the potential volatilization of naphthalene was conducted using the groundwater data and associated groundwater VFs to estimate EPCs in air.

In order to derive the EPCs in air from particulates, a particulate emission factor (PEF) term (EPA 2000) was applied to the soil concentration terms. The concentrations of COPCs adsorbed to respirable particulates were estimated using the EPA default PEF equal to 1.316×10^{9} cubic meters per kilogram

(EPA 2000). Inhalation of airborne particulates was considered for all exposure scenarios that provide direct access to exposed (uncovered) soil for all chemicals.

Regardless of the media, the arithmetic mean was used as the concentration term for the CTE case, and the 95 percent upper confidence limit (UCL_{95}) was used as the concentration term for the RME case. In both cases, if either the arithmetic mean or UCL_{95} exceeded the maximum detected concentration, the maximum concentration was used as the concentration term. Further discussion of the development of the concentration terms is presented in Attachment J2 of this HHRA.

3.4 CHEMICAL INTAKE ESTIMATES

Estimates of exposure (chemical daily intake) are based on the COPC exposure point concentrations (Section 3.3) and scenario-specific assumptions and intake variable values. A chemical daily intake is an estimate of the amount of chemical that might be taken into the human body. These chemical daily intakes were used to estimate potential cancer risks and risk of adverse noncancer health effects.

A chemical intake is expressed as milligrams of chemical per kilogram body weight per day (mg/kg-day) and is calculated for both RME and CTE scenarios. EPA-derived exposure algorithms were used to estimate the chemical intakes for each route of exposure. Equation 3-1 presents a generic equation for calculating chemical intake as follows (EPA 1989):

$$I = \frac{C \times CR \times EF \times ED}{BW \times AT} \tag{3-1}$$

where:

- I = Intake, which is the amount of chemical at the exchange boundary (mg/kg-day).
- C = Chemical concentration, which is the EPC (for example, mg/kg for soil and milligrams per cubic meter in air).
- CR = Contact rate, which is the amount of contaminated medium contacted per unit of time or event and may be the ingestion rate, inhalation rate, or dermal contact rate (for example, 50 mg/day for the ingestion rate of soil).
- EF = Exposure frequency, which is the rate at which the exposure occurs (for example, 250 days per year).
- ED = Exposure duration, which is the number of years for which contact with the contaminated medium is assumed to occur (for example, 25 years).

BW = Body weight, which is the average body weight of a hypothetical receptor over the exposure period (for example, 70 kilograms).

AT = Averaging time, which is the period over which exposure is averaged (days). For cancer-related exposures, the averaging time is 25,550 days based on a lifetime exposure of 70 years (average life expectancy). For noncancer-related exposures, the averaging time is equal to the exposure duration multiplied by the number of days in 1 year (for example, 365 days).

The exposure variable values used in the pathway-specific equations are based on a series of reported and assumed factors regarding current and potential land-use patterns at the site. Exposure variables also account for a number of physiological factors such as daily breathing rate and surface area of exposed skin.

The exposure variables used for this evaluation are consistent with DTSC and EPA guidance. These exposure variable values were generally obtained from DTSC (1992) and EPA (1989) risk assessment guidance. If values were not available from these sources, EPA's "Exposure Factors Handbook" (EPA 1997b) or other sources were used.

Exposure variables used to estimate the chemical daily intakes for both the CTE and RME cases for each hypothetical exposure scenario are presented in Table J-11. The pathway-specific equations for estimating chemical daily intakes and the exposure variables for each scenario are also included in Table J-11. Table J-11 is presented in the standardized format specified by EPA (1998a). The chemical-specific soil dermal absorption factors used in the calculation of the chemical intake estimates are presented in Table J-12.

4.0 TOXICITY ASSESSMENT

The toxicity assessment for the HHRA included the identification of the toxicity values (RfD and SFs) used to characterize noncancer health effects and cancer risk, respectively, and discusses the toxicity assessment for lead. Tables J-13 through J-18 present the toxicity values used for the site. Tables J-13 through J-18 are presented in the standardized format specified by EPA (1998a) for risk assessments. Where route-specific toxicity values were not available, route-to-route extrapolation was used to derive toxicity values for organic compounds, but not for metals. The order of preference and approach for selecting toxicity values was established in the Mare Island risk assessment work plan (PRC 1995a) and during subsequent discussions with the regulatory agencies.

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
45	Site, total, ambient, and incremental risks	Section 2.5.1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Sections 3.5.1 to 3.5.8. Tetra Tech EM Inc. September 22, 2008.

3.5.1 Risk Assessment Approach

The objective of the HHRA is to provide a basis for risk management decisions about cancer risks and risk of adverse noncancer health effects associated with potential human exposures to contaminants in soil and groundwater at the FNBW Area. The HHRA considers a baseline case; that is, a case in which no remedy is implemented for existing contamination and potential receptors could be exposed to concentrations of contaminants currently at the site. In the development of estimates of cancer risk and risk of adverse noncancer health effects, the HHRA used a four-step process:

- Step 1 - Data Evaluation and Selection of Chemicals of Potential Concern (COPC). Data evaluation and selection of COPCs included an evaluation of spatial distribution of chemicals and identification of applicable data to carry forward in the remaining steps of the HHRA process. Spatial distribution of chemical concentrations was reviewed to identify patterns, including potential localization of chemicals. This information was incorporated into the selection of COPCs as well as the exposure assessment (Step 2). Analytical chemical data included in the data evaluation were soil, residue, sediment, and groundwater results from the RI, the PCB basewide study, and the offshore ERA. A subset of the site chemistry data that met EPA data quality requirements for the HHRA was used to select site-specific COPCs. Appendix C presents the data validation for the FNBW Area data. Based on the discussion in the exposure assessment portion of the HHRA, no complete exposure pathways are identified for the tidal wetland portion of the FNBW Area. Consequently, only the data from the upland portion of the FNBW Area were considered further in the subsequent steps of the HHRA process.

- Step 2 - Exposure Assessment. The exposure assessment characterized the nature and magnitude of potential exposures to COPCs at the site. Specifically, it included preparing a description of the current and future exposure setting and land use, identifying potential exposure scenarios and complete exposure pathways, identifying hypothetical exposure points, estimating exposure point concentrations, and estimating hypothetical chemical intakes.

- Step 3 - Toxicity Assessment. The toxicity assessment consisted of compiling toxicity values (slope factors [SF], reference doses [RfD], and soil lead screening concentrations) for COPCs and brief summaries of their basis.

- Step 4 - Risk Characterization. Site-related health risks were characterized using potential excess lifetime cancer risk estimates and hazard indices (HI) for adverse noncancer health effects associated with potential upperbound exposure to COPCs at the site. Uncertainties associated with the overall risk assessment were also identified.

3.5.2 Data Evaluation and Selection of Chemicals of Potential Concern

Chemical data used in this evaluation included those derived from samples collected from soil and groundwater at the FNBW Area. As described in Section 3.3, TPH, VOCs, SVOCs (including PAHs), pesticides, PCBs, and metals were detected in soil and groundwater (Tables 3-2 and 3-4). In general, except for TPH, which was detected in shallow soil throughout the site, very few detections of contaminants were found, and no point sources of detected contaminants in soil and groundwater are known or inferred by the data.

Although chemicals were detected in sediment and residue samples, these data were not used to select COPCs or quantify potential exposure in the HHRA. Sediment samples were collected from the tidal wetland area along the northeastern side of the site, but potential exposure to sediments was not quantified in the HHRA, because chemical concentrations in sediments were low, exposure is unlikely, and exposure is expected to be limited if it does occur. One residue sample was also collected from the site, but the residue was removed during subsequent maintenance actions. Accordingly, sediment and residue samples were not included in the data set used for the HHRA.

The HHRA included an evaluation of potential exposures under an unchanged configuration (assuming no change or redevelopment at the FNBW Area) and under a modified site configuration (assuming future regrading or excavation). Because of the distribution of contaminants in soil, the 0- to 3-foot bgs soil interval was considered to be "surface" soil under the unchanged site configuration. A potential also exists for soil to be regraded or excavated to a depth of 10 feet bgs during redevelopment activities; therefore, the 0- to 10-foot soil depth interval was evaluated under a modified site configuration.

COPCs were selected for the two soil depth intervals using a three-step process. First, preliminary lists of all analytes detected in one or more samples collected from the 0- to 3-foot and 0- to 10-foot-bgs intervals were prepared. The combined list of COPCs for both depth intervals is shown on Tables J-1 and J-2 of Appendix J; therefore, the frequency of detection column was left blank if a chemical was not detected for that depth interval. Second, elements considered to be essential human nutrients (calcium, iron, magnesium, potassium, and sodium) were eliminated as COPCs. Third, an ambient analysis was conducted. Metals with maximum detected concentrations less than the 95th percentile of the ambient distribution were eliminated as COPCs. As part of the ambient analysis, the Wilcoxon rank sum test (a nonparametric statistical test) was used to identify and eliminate any remaining metals for which measured concentrations were not significantly different than ambient levels. All other metals (including metals for which ambient levels have not be characterized) and other constituents detected in one or more samples were retained as COPCs. In general, the highest concentrations of constituents in soil were generally found in the upper 3 feet of soil across the site.

Available groundwater data were limited to analyses of grab groundwater samples, and these data were used to assess human health risk. Uncertainties associated with the use of grab groundwater data instead of higher quality groundwater data from monitoring wells is discussed

in Appendix J, Table J-120. Constituents detected in groundwater were limited to VOCs, SVOCs (including PAHs), and TPH-dr/mr. With the exception of acetone, a common laboratory contaminant, detections of most of the chemicals in groundwater were randomly distributed, with most detections near sample quantitation or reporting limits. The source of some constituents appears to be related to past shipbuilding activities. All chemicals detected in groundwater were selected as COPCs.

Potential human health effects from exposure to TPH mixtures detected in soil and groundwater were evaluated by considering the benzene, toluene, ethylbenzene, total xylenes, and PAH components to represent the toxic components of those mixtures. TPH-gr, TPH-dr, and TPH-mr were therefore not retained as COPCs for the HHRA. COPCs included in the HHRA for the site included metals, VOCs, SVOCs (including PAHs), and organochlorine pesticides and PCBs.

3.5.3 Exposure Assessment

The HHRA exposure assessment included three components: (1) characterization of exposure setting, (2) characterization of potential exposure pathways, and (3) quantitation and calculation of potential exposure.

3.5.3.1 Setting

The FNBW Area was previously used for assembling ships; however, none of the site, including existing buildings, is currently in use, with the exception of the occasional storage of material on the southern portion of the site. Under the current reuse plan for Mare Island, the designated reuse of the FNBW Area is as a light industrial area, while the wetland portion of the site will remain open space (City of Vallejo 1994).

3.5.3.2 Exposure Pathways

EPA describes exposure pathways in terms of four primary components: (1) a source and mechanism of chemical release, (2) a retention or transport medium or media, (3) a point of human contact with the contaminated medium, and (4) an exposure route at the contact point. All four of these components must be present for a potential exposure pathway to be considered complete and for exposure to occur. Chemicals detected in soil and groundwater were considered to be the source of chemical release and retention and transport media for COPCs. Mechanisms for chemical release include volatilization of VOCs from soil or water into air and sorption of chemicals to soil particles and subsequent release into the air.

Under future land use, potentially exposed populations at the FNBW Area include commercial and industrial workers and construction workers. As specified in the Mare Island final reuse plan, the future use of the upland area is light industrial and the wetland portions of IA A2 is designated as open land (City of Vallejo 1994). However, a residential scenario was included in the HHRA to provide a basis for evaluating the need for institutional controls. Accordingly,

three potential exposure scenarios were evaluated further in the HHRA: (1) commercial and industrial worker scenario, (2) construction worker scenario, and (3) residential scenario.

For purposes of the HHRA, exposure pathways considered as complete for the commercial and industrial worker, construction worker, and residential scenarios include incidental ingestion of soil, direct dermal contact with soil, inhalation of airborne particulates as dust, inhalation of VOCs released directly from soil, and inhalation of VOCs released from groundwater and migrating through soil. An additional, separate evaluation assuming potential exposure of residents to COPCs via homegrown produce was presented in Attachment J3 of Appendix J.

Exposures were conservatively estimated assuming the area will remain largely unpaved (that is, direct exposure to soil exists). However, much of the area is likely to be covered by buildings, pavement, and landscaping under future reuse, and therefore exposures and corresponding risks presented in this HHRA are likely overestimated. Exposure and risk estimates are representative of the upper limit of potential exposures and risks that could be incurred, regardless of future land reuse. Upper bounds to possible exposure point concentrations for soil, groundwater, and air were developed to estimate potential chemical intakes. The HHRA evaluates central tendency exposure (CTE) and reasonable maximum exposure (RME) scenarios for both the unchanged (0 to 3 feet bgs interval) and modified (0 to 10 feet bgs interval) site configurations evaluated in the HHRA. The commercial and industrial worker and residential exposure scenarios addressed both configurations, while the construction worker scenario was evaluated using only the modified site configuration.

3.5.4 Toxicity Assessment

Verified RfDs and SFs for the characterization of risk of adverse noncancer health effects and cancer risk, respectively, were compiled for the HHRA. Because hexavalent chromium was not detected in soil, the chromium reported in soil was considered to be trivalent chromium, which is not considered to be a carcinogen. The potential for human health effects from exposure to lead was evaluated using a conservative soil lead screening concentration developed using DTSC's LeadSpread model. The screening concentration of 210 mg/kg is based on measured lead-in-air and drinking water concentrations at Mare Island; a target blood-lead concentration of 10 microgram per deciliter (µg/dL) of whole blood; and the point of departure for risk management, which is a 0.01 risk of exceeding this value (that is, using a target of 10 µg/dL for 99th percentile exposures) (DTSC 1999).

3.5.5 Risk Characterization

The HHRA developed four different sets of risk estimates for each exposure scenario evaluated:

- **Site Cancer Risk and Site HI** – operationally defined in this HHRA as the cancer risk or HI from exposure to all COPCs identified at a site. Site risk or HI includes (1) risk or HI from all metal COPCs and (2) risk or HI from all detected organic analytes. For metals, the ambient risk or HI has not been subtracted from the risk estimate.

- **Total Cancer Risk and Total HI** – operationally defined as the cancer risk or HI from exposure to all analytes detected at a site. This total risk or HI includes (1) risk or HI from all detected metals and (2) risk or HI from all detected organic analytes.

- **Ambient Cancer Risk and Ambient HI** – operationally defined as the cancer risk or HI from exposure to ambient concentrations of metals at a site. Ambient risk or HI is the risk or HI from those detected metals for which ambient limits have been established.

- **Incremental Cancer Risk and Incremental HI** – operationally defined as the cancer risk or HI attributable to chemical releases at a site. Incremental risk or HI includes (1) risk or HI from metals present at concentrations greater than ambient and (2) risk or HI from all detected organic analytes. The ambient risk or HI of metal COPCs has been subtracted from the risk estimate or HI.

Because the RME scenario results represent an upper-bound limit of potential exposures and associated risks, this section summarizes the results of the RME scenario only. The results of the CTE scenario are presented in the HHRA (Appendix J).

For the unchanged site configuration (0 to 3-foot-bgs interval), potential exposures for the commercial/industrial worker scenario and the residential scenario were evaluated. Potential exposures for the construction worker scenario were evaluated only for the modified site configuration. The four cancer risk estimates and HIs for each exposure scenario are presented in the following table.

Unchanged Site Configuration (0 to 3 feet bgs interval)
RME Cancer Risk Estimates and Hazard Indices

	Cancer Risk				Hazard Index			
Scenario	**Ambient**	**Total**	**Site**	**Incremental**	**Ambient**	**Total**	**Site**	**Incremental**
Resident	2E-05	3E-05	1E-05	1E-05	8E-01	2E+00	1E+00	1E+00
Commercial Worker	3E-06	7E-06	4E-06	4E-06	5E-02	4E-01	3E-01	4E-01

Note:
RME Reasonable maximum exposure

For the unchanged site configuration (0 to 3 feet bgs interval), all of the cancer risk estimates are within the risk management range. The chemicals with substantial contributions to cancer risk estimates exceeding 10^{-6} are benzo(a)pyrene, other PAHs and pentachlorophenol (for all of the risk estimates); arsenic and cadmium were associated with substantial contributions to the ambient and total risk estimates. The site, incremental, and ambient HIs did not exceed 1; only the total HI for the residential scenario exceeded 1. The chemicals with substantial contributions to the residential HI are arsenic, copper and zinc; however, no chemical-specific HIs exceeded 0.7.

For the modified site configuration (0 to 10 foot-bgs interval), the four cancer risk estimates and HIs for the three scenarios are presented in the following table.

Modified Site Configuration (0 to 10 feet bgs interval)
RME Cancer Risk Estimates and Hazard Indices

Scenario	Cancer Risk				Hazard Index			
	Ambient	Total	Site	Incremental	Ambient	Total	Site	Incremental
Resident	2E-05	3E-05	1E-05	1E-05	9E-01	2E+00	2E+00	2E+00
Commercial Worker	3E-06	7E-06	3E-06	3E-06	5E-02	5E-01	4E-01	4E-01
Construction Worker	4E-07	9E-07	6E-07	5E-07	1E-01	6E-01	2E-01	4E-01

Note:
RME Reasonable maximum exposure

All of the cancer risk estimates are within or below the risk management range. The chemicals with substantial contributions to cancer risk estimates exceeding 10^{-6} are PAHs (for all of the risk estimates); arsenic and cadmium were associated with substantial contributions to the ambient and total risk estimates. The total, site, and incremental HIs exceed 1 for the residential scenario only; the other HIs do not exceed 1. In addition, none of the site segregated target organ HIs for the residential scenario exceeded 1.

The potential for health effects from exposure to lead was addressed by comparing the concentrations of lead detected with a Mare Island-specific residential PRG of 210 mg/kg. The RME concentration in soil was 171 mg/kg for the 0 to 3-foot-bgs interval (unchanged site configuration) and 147 mg/kg for the 0 to 10-foot-bgs interval (modified site configuration), indicating that exposure to lead in soil is expected to be without adverse health effects. In addition, the RME lead concentrations in soil for the two site configurations are less than the EPA Region 9 PRG of 750 mg/kg, which is considered protective of the fetus of a woman exposed to lead in a nonresidential setting, including commercial/industrial exposures (EPA 1998b, 2000).

3.5.6 Uncertainty Evaluation

Uncertainties associated with general risk assessment methodologies and their implementation in the HHRA contributes to conservative overestimates of risk. Also, several unique uncertainties

are associated with the site HHRA that significantly affect the HHRA results. The inclusion of exposures to and risks from PAHs at ambient levels in soil at the FNBW Area contributed to the elevated excess cancer risk estimates. The average detected benzo(a)pyrene concentration was well below the ambient screening level of 0.62 mg/kg (Section 3.3.1.1) (CARB and OEHHA 1994). Benzo(a)pyrene distribution does not correlate well with the distribution of TPH and is below the ambient concentration, so its presence appears to represent background conditions at Mare Island and may not be associated with specific hydrocarbon sources at the site. In addition, the inclusion of a residential exposure scenario is also conservative because the planned future reuse is specified as light industrial and open space (City of Vallejo 1994).

3.5.7 Discussion

The National Oil and Hazardous Substances Pollution Contingency Plan states that, "for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upperbound lifetime cancer risk to an individual between 10^{-4} and 10^{-6}" (Title 40 of the *Code of Federal Regulations* 300.430, EPA 1990b). For purposes of this risk assessment, the range between 1×10^{-4} and 1×10^{-6} is referred to as the risk management range, and risks below 10^{-6} are considered to be insignificant. Risks above 10^{-4} indicate the need for further evaluation or remediation (EPA 1991). An HI that does not exceed a value of 1 indicates that the exposure is without appreciable risk of adverse noncancer health effects.

3.5.8 Risk Management Considerations

Although a few of the excess cancer risk estimates for the residential scenario were within the risk management range, risk estimates exceeding 1×10^{-6} are associated with PAH concentrations in soil that are less than the ambient screening level of 0.62 mg/kg (CARB and OEHHA 1994). Consequently, excess cancer risk associated with PAHs are considered representative of ambient conditions at Mare Island.

3.6 Summary of Onshore and Offshore Ecological Risk Assessments

ERAs have been completed for onshore and offshore areas at Mare Island as part of the IRP (Tetra Tech 2002a, 2002b). In addition, a screening-level ERA was completed for upland and tidal wetland habitats in the onshore areas of the FNBW in IA A2 as part of this RI (Appendix M). The ERA for offshore areas was completed in 2002 for the intertidal mudflat and open water areas of Mare Island Strait, which borders the site. Additional samples will be collected in the offshore areas (including locations adjacent to IA A2) during fall 2008 as part of the IA K RI. A description of the tidal wetland, intertidal mudflat, and open water habitats is presented in Section 3.2.4. The goals, scope, results, and conclusions of the onshore and offshore area ERAs as they pertain to the FNBW Area are summarized in Sections 3.6.1 and 3.6.2. Section 3.6.3 presents a summary of the fate and transport of chemicals (specifically PAHs and TPH) from onshore to offshore areas. Section 3.6.4 provides a summary of the results of the supplemental ecological evaluation for the FNBW Area; the supplemental ecological evaluation is presented in Appendix M of this RI.

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
46	Cancer risks and noncancer hazards	Section 2.5.1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix J, Sections 5.1 through 5.4. Tetra Tech EM Inc. September 22, 2008.

site-related sources; and by ingestion of water, food, and air from background sources.

Version 7 of DTSC's LeadSpread model (DTSC 1999c) was used to develop a Mare Island-specific residential soil PRG of 210 mg/kg to protect children exposed to lead in a residential setting. The residential PRG uses a childhood exposure scenario, a target blood-lead concentration of 10 µg/dL identified by EPA (2001) and DTSC (1999c), and the 99th-percentile blood lead level. The site-specific considerations used with the LeadSpread model are:

- Lead in air: The concentration of lead in air from ambient sources is assumed to be 0.01 µg/m^3, which is the average concentration of lead measured at the Vallejo-Tuolumne air quality monitoring station in Solano County in 2000 (Cal/EPA 2001).
- Lead in water: The City of Vallejo provides drinking water to Mare Island. Lead is not detected in City of Vallejo drinking water, so the concentration of lead in water is assumed to equal 2.5 micrograms per liter (µg/L), one-half of the analytical detection limit (5 µg/L) (City of Vallejo 2001a, 2001b).

Default values were used for the other LeadSpread exposure assumptions.

5.0 RISK CHARACTERIZATION

The risk characterization includes an estimate of the potential excess lifetime cancer risks and a HI characterizing the risk of adverse noncancer health effects attributable to potential exposure to COPCs in soil and groundwater for the commercial/industrial worker, resident, and construction worker exposure scenarios. The cancer risk estimates and HIs for potential exposure to the soil and groundwater COPCs for RME and CTE for these three scenarios for each complete exposure pathway are presented in Tables J-19 through J-118. The tables are the standardized format specified by EPA (1998a).

The methodology employed for the risk characterization is presented in Sections 5.1, 5.2, and 5.3. Section 5.4 summarizes the results of the lead evaluation, and Section 5.5 summarizes the results of the risk assessment. Risk characterization for the unchanged site configuration and the modified site configuration are discussed in Sections 5.5.1 and 5.5.2, respectively.

5.1 CANCER RISK CALCULATION METHODOLOGY

Cancer risks associated with exposure to COPCs classified as carcinogens are characterized as the incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to potential carcinogens (EPA 1989). This estimated excess risk is expressed as a unitless probability.

For example, a cancer risk of 1×10^{-6} indicates an individual has a one-in-one million probability of developing cancer during a 70-year lifetime as a result of the assumed exposure conditions.

For COPCs that are classified as carcinogens, the cancer risks resulting from exposure to site COPCs are estimated using the following three steps:

First, to derive a cancer risk estimate for a single chemical and pathway, the chemical intake is multiplied by the chemical-specific SF:

$$Chemical - Specific\ \ Cancer\ Risk \quad = \quad Intake \quad (mg/kg/day) \times SF\ (mg/kg/day)^{-1} \qquad (5\text{-}1)$$

Second, to estimate the cancer risk associated with exposure to multiple carcinogens for a single exposure pathway, the individual chemical cancer risks are assumed to be additive, as follows:

$$Pathway - Specific\ \ Cancer\ Risk = \sum\ Chemical - Specific\ Cancer\ Risk \qquad (5\text{-}2)$$

Third, pathway-specific risks are then summed to estimate multi-chemical, multi-pathway cancer risk. The site cancer risk estimates are discussed in the context of the risk management range of 10^{-4} to 10^{-6} described in Section 3.5.7 of the RI report.

5.2 NONCANCER HEALTH EFFECTS CALCULATION METHODOLOGY

The potential for exposure to result in noncancer adverse health effects is evaluated by comparing the intake estimate with an RfD. When calculated for a single chemical, this comparison yields a ratio termed the HQ:

$$Chemical\text{-}Specific\ Hazard\ Quotient \quad = \quad \frac{Intake\ (mg/kg\text{-}day)}{RfD\ (mg/kg\text{-}day)} \qquad (5\text{-}3)$$

To evaluate the potential for noncancer, adverse health effects from exposure to multiple chemicals, the HQs for all chemicals are summed, yielding an HI as follows:

$$Pathway\text{ - }Specific\ Hazard\ Index \quad = \sum Chemical\text{ - }specific\ HQ \qquad (5\text{-}4)$$

Pathway-specific HIs are then summed to estimate a total HI for each scenario. The total HI reflects an assumption, generally considered to be conservative, that the effects of the different chemicals are

additive. When the total HI exceeds 1, further evaluation in the form of a segregation of HI analysis was performed to determine whether noncancer health hazards are a concern at the area (EPA 1989). This analysis was performed because the noncancer adverse health effects of chemicals with different target organs are generally not additive. The COPCs were grouped according to the target organ that would be affected by levels of exposure corresponding to the lowest adverse effects (that is, the critical effects) levels identified by EPA. The target organs for each chemical are noted in Tables J-13 and J-14. If any one segregated HI exceeds 1, it indicates the potential for adverse noncancer health effects (EPA 1989). A segregated HI of less than 1 indicates little or no potential for adverse noncancer health effects.

For the resident scenarios, the HIs for the child resident scenario are higher than those of the adult resident scenario due to the lower body weight and higher soil ingestion rate used for the child scenarios in the calculation of chemical daily intakes. Although adult resident scenario HIs were calculated, the HI discussions for the resident scenario presented in the subsequent sections only refer to the results for the child resident scenario.

5.3 SITE, TOTAL, AMBIENT, AND INCREMENTAL RISK ESTIMATES

This HHRA presents four different sets of risk estimates for each exposure scenario evaluated:

- **Site Cancer Risk and Site HI** – operationally defined in this HHRA as the cancer risk or HI from exposure to all COPCs identified at a site. Site risk or HI includes (1) risk or HI from all metal COPCs and (2) risk or HI from all detected organic analytes. For metals, the ambient risk or HI has not been subtracted from the risk estimate. Site HIs are the only HIs for which segregation based on target organs was performed.

- **Total Cancer Risk and Total HI** – operationally defined as the cancer risk or HI from exposure to all analytes detected at a site. This total risk or HI includes (1) risk or HI from all detected metals and (2) risk from all detected organic analytes. Segregation of HIs based on target organ was not performed for total HIs.

- **Ambient Cancer Risk and Ambient HI** – operationally defined as the cancer risk or HI from exposure to ambient concentrations of metals at a site. Ambient risk or HI is the risk or HI from those detected metals for which ambient limits have been established. Segregation of HIs based on target organ was not performed for ambient HIs.

- **Incremental Cancer Risk and Incremental HI** – operationally defined as the cancer risk or HI attributable to chemical releases at a site. Incremental risk or HI includes (1) risk or HI from metals present at concentrations greater than ambient and (2) risk or HI from all detected organic analytes. The ambient risk or HI of metal COPCs has been subtracted from the risk estimate or HI. Segregation of HIs based on target organ was not performed for incremental HIs.

These definitions and the approach for calculating the risk estimates were developed specifically for Mare Island in consultation with EPA and DTSC (TtEMI 2001). The approach for calculating these different risk estimates is described in Attachment J3. The primary differences in the risk estimates are as follows:

- Chemicals selected for evaluation
- EPCs used to estimate the cancer risks and HIs

Site risk and incremental risk represent the risks from potential exposures to COPCs only. (COPCs are defined in Section 2.0.) Total risk represents the risk from exposure to all detected analytes. That is, total risk includes risks associated with (1) chemicals present as a result of site-related activities and (2) chemicals (metals) present because they occur naturally in the environment but are not related to site activities. The ambient risk estimate represents the risk from exposure to 14 of the 15 metals for which ambient limits have been developed at Mare Island. (Lead is excluded from the total risk estimates because cancer risk estimates and HQs were not prepared for this metal, as described in Section 5.4.) In addition, iron was excluded because of the considerations presented in Section 2.2.1. The incremental risk estimate is the difference between total risk and ambient risk estimates:

$$\text{Incremental Risk} = \text{Total Risk} - \text{Ambient Risk} \qquad (5\text{-}5)$$

The EPCs used for the site risk and total risk estimates are the lesser of the UCL_{95} and maximum concentration detected at the site for both organic and inorganic chemicals. The EPCs used for the ambient risk estimate depend on whether the metal was selected as a COPC at the Former North Building Ways Area. For metals present at ambient concentrations only, the EPC is the lesser of the UCL_{95} and maximum detected concentration. That is, the EPC represents the ambient conditions measured at the Former North Building Ways Area. For metal COPCs, which by definition are present at the Former North Building Ways Area at concentrations above ambient levels, the site-specific ambient concentration is unknown. For these metals, the ambient limit (95th percentile of the ambient data set) for Mare Island was used. Accordingly, the EPCs used for the incremental risk estimate are therefore equal to the EPC used for the total risk estimate minus the EPC used for the ambient risk estimate. In cases where this results in a negative number, the incremental risk is assigned a value of zero.

5.4 EVALUATION OF LEAD

The potential for health effects from exposure to lead was addressed by comparing the concentrations of lead detected with the EPA Region IX industrial PRG of 750 mg/kg, the EPA Region IX residential PRG of 400 mg/kg (EPA 2000), and a Mare Island-specific residential PRG of 210 mg/kg. The RME

concentration in soil was 171 mg/kg for the 0 to 3-foot-bgs interval and 147 mg/kg for the 0 to 10-foot-bgs interval. Because of the relatively low concentrations of lead in soil, the results of the lead evaluation are not discussed further in the risk characterization. Although the RI report lists the 1998 Region IX PRGs (EPA 1998b) as comparison criteria, this HHRA uses the 2000 Region IX PRGs, which is consistent with the PRG-derived toxicity value references used in this HHRA.

5.5 RISK ASSESSMENT RESULTS

This section provides a brief summary of the four cancer risk estimates and HIs for the different exposure scenarios used for each site configurations. Tables J-19 through J-119 present the detailed site cancer risk estimates and HQs and HIs, including chemical- and pathway-specific contributions, in the format required by "Risk Assessment Guidance for Superfund, Part D" (EPA 1998a). Table J-120 summarizes the results of the risk assessment, presenting the site cancer risk estimates and HIs for each of the RME exposure scenarios for both site configurations. Attachment J3 presents the detailed ambient, total, and incremental cancer risk estimates and HQs and HIs, including chemical- and pathway-specific contributions. The evaluation of lead and iron are excluded from these cancer risk estimates and HIs because the methods for evaluating health risks of lead and iron do not produce cancer risk estimates or HIs. Both RME and CTE cases were evaluated for each scenario, but this section discusses only the results of the RME case to simplify the discussion because the RME case typically provide the basis for risk management decisions.

5.5.1 Unchanged Site Configuration

For the unchanged site configuration (0 to 3-foot-bgs interval), potential exposures for the commercial/industrial worker scenario and the resident scenario were evaluated. The four cancer risk estimates and HIs for each exposure case are presented in the following table.

Scenario	Cancer Risk				Hazard Index			
	Ambient	Total	Site	Incremental	Ambient	Total	Site	Incremental
Resident	2E-05	3E-05	1E-05	1E-05	8E-01	2E+00	1E+00	1E+00
Commercial Worker	3E-06	7E-06	4E-06	4E-06	5E-02	4E-01	3E-01	4E-01

All of the cancer risk estimates are within the risk management range. The chemicals associated with substantial contributions to incremental cancer risk estimates exceeding 10^{-6} are benzo(a)pyrene, other PAHs, and pentachlorophenol (for all of the risk estimates); arsenic and cadmium were associated with substantial contributions to the ambient and total values. The site, incremental, and ambient HIs did not

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
47	COPCs	Section 2.5.1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix J, Table J-7. Tetra Tech EM Inc. September 22, 2008.

TABLE J-7

EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
METALS												
BARIUM	mg/kg	9.65E+01	1.10E+02	4.74E+02		mg/kg	1.10E+02	95UCL-T	a	9.65E+01	mean-T	a
COBALT	mg/kg	1.17E+01	1.33E+01	3.48E+01		mg/kg	1.33E+01	95UCL-T	a	1.17E+01	mean-T	a
LEAD	mg/kg	1.11E+02	1.71E+02	9.68E+02		mg/kg	1.71E+02	95UCL-T	a	1.11E+02	mean-T	a
MOLYBDENUM	mg/kg	2.82E-01	3.60E-01	6.80E+00		mg/kg	3.60E-01	95UCL-T	a	2.82E-01	mean-T	a
SELENIUM	mg/kg	5.25E-01	6.02E-01	1.80E+00		mg/kg	6.02E-01	95UCL-T	a	5.25E-01	mean-T	a
SILVER	mg/kg	3.01E-01	4.56E-01	5.78E+00		mg/kg	4.56E-01	95UCL-T	a	3.01E-01	mean-T	a
THALLIUM	mg/kg	3.96E-01	4.29E-01	1.60E+00		mg/kg	4.29E-01	95UCL-T	a	3.96E-01	mean-T	a
TIN	mg/kg	1.53E+01	2.39E+01	4.06E+01		mg/kg	2.39E+01	95UCL-T	a	1.53E+01	mean-T	a
TITANIUM	mg/kg	4.41E+03	5.16E+03	6.75E+03		mg/kg	5.16E+03	95UCL-N	b	4.41E+03	mean-N	b
VOLATILE ORGANIC COMPOUNDS												
CARBON DISULFIDE	mg/kg	2.00E-03	2.00E-03	2.00E-03		mg/kg	2.00E-03	max	c	2.00E-03	max	c
TOLUENE	mg/kg	5.59E-03	5.82E-03	8.00E-03		mg/kg	5.82E-03	95UCL	c	5.59E-03	mean	c
XYLENE (TOTAL)	mg/kg	4.00E-03	4.00E-03	4.00E-03		mg/kg	4.00E-03	max	c	4.00E-03	max	c
SEMIVOLATILE ORGANIC COMPOUNDS												
1,2,4-TRICHLOROBENZENE	mg/kg	3.70E-02	3.70E-02	3.70E-02		mg/kg	3.70E-02	max	c	3.70E-02	max	c
2-METHYLNAPHTHALENE	mg/kg	2.24E-01	2.40E-01	2.40E-01		mg/kg	2.40E-01	95UCL	c	2.24E-01	mean	c
ANTHRACENE	mg/kg	1.50E-01	1.50E-01	1.50E-01		mg/kg	1.50E-01	max	a	1.50E-01	max	a
BENZO(A)ANTHRACENE	mg/kg	2.06E-01	2.46E-01	3.40E-01		mg/kg	2.46E-01	95UCL-T	a	2.06E-01	mean-T	a
BENZO(A)PYRENE	mg/kg	2.02E-01	2.50E-01	2.90E-01		mg/kg	2.50E-01	95UCL-T	a	2.02E-01	mean-T	a
BENZO(B)FLUORANTHENE	mg/kg	2.15E-01	2.61E-01	6.20E-01		mg/kg	2.61E-01	95UCL-T	a	2.15E-01	mean-T	a
BENZO(G,H,I)PERYLENE	mg/kg	2.10E-01	2.47E-01	2.50E-01		mg/kg	2.47E-01	95UCL-T	a	2.10E-01	mean-T	a
BENZO(K)FLUORANTHENE	mg/kg	2.19E-01	2.60E-01	5.50E-01		mg/kg	2.60E-01	95UCL-T	a	2.19E-01	mean-T	a
BIS(2-ETHYLHEXYL)PHTHALATE	mg/kg	1.29E-01	1.76E-01	1.40E+00		mg/kg	1.76E-01	95UCL	c	1.29E-01	mean	c
CARBAZOLE	mg/kg	7.30E-02	7.30E-02	7.30E-02		mg/kg	7.30E-02	max	c	7.30E-02	max	c
CHRYSENE	mg/kg	1.93E-01	2.42E-01	7.80E-01		mg/kg	2.42E-01	95UCL-T	a	1.93E-01	mean-T	a
DIBENZ(A,H)ANTHRACENE	mg/kg	6.00E-02	6.00E-02	6.00E-02		mg/kg	6.00E-02	max	a	6.00E-02	max	a
FLUORANTHENE	mg/kg	2.06E-01	2.80E-01	9.60E-01		mg/kg	2.80E-01	95UCL-T	a	2.06E-01	mean-T	a
FLUORENE	mg/kg	8.20E-02	8.20E-02	8.20E-02		mg/kg	8.20E-02	max	c	8.20E-02	max	c
INDENO(1,2,3-CD)PYRENE	mg/kg	1.40E-01	1.40E-01	1.40E-01		mg/kg	1.40E-01	max	a	1.40E-01	max	a
PENTACHLOROPHENOL	mg/kg	5.00E-01	5.00E-01	5.00E-01		mg/kg	5.00E-01	max	c	5.00E-01	max	c
PHENANTHRENE	mg/kg	2.28E-01	2.88E-01	4.90E-01		mg/kg	2.88E-01	95UCL-T	a	2.28E-01	mean-T	a
PYRENE	mg/kg	1.86E-01	2.52E-01	5.50E-01		mg/kg	2.52E-01	95UCL-T	a	1.86E-01	mean-T	a
PESTICIDE/POLYCHLORINATED BIPHENYLS												
4,4'-DDD	mg/kg	2.91E-03	3.39E-03	2.40E-01		mg/kg	3.39E-03	95UCL-T	a	2.91E-03	mean-T	a
4,4'-DDE	mg/kg	2.55E-03	2.87E-03	3.70E-02		mg/kg	2.87E-03	95UCL-T	a	2.55E-03	mean-T	a
4,4'-DDT	mg/kg	9.11E-03	1.20E-02	2.10E-01		mg/kg	1.20E-02	95UCL-T	a	9.11E-03	mean-T	a
ALDRIN	mg/kg	9.90E-04	1.00E-03	1.50E-03		mg/kg	1.00E-03	95UCL	c	9.90E-04	mean	c

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
ALPHA-BHC	mg/kg	3.56E-03	4.77E-03	3.70E-02		mg/kg	4.77E-03	95UCL-T	a	3.56E-03	mean-T	a
ALPHA-CHLORDANE	mg/kg	2.36E-03	2.92E-03	2.60E-02		mg/kg	2.92E-03	95UCL-T	a	2.36E-03	mean-T	a
AROCLOR-1254	mg/kg	1.10E-02	1.42E-02	1.70E-01		mg/kg	1.42E-02	95UCL	c	1.10E-02	mean	c
AROCLOR-1260	mg/kg	3.89E-02	5.10E-02	5.70E-01		mg/kg	5.10E-02	95UCL-T	a	3.89E-02	mean-T	a
BETA-BHC	mg/kg	1.46E-03	1.64E-03	1.40E-02		mg/kg	1.64E-03	95UCL-T	a	1.46E-03	mean-T	a
DELTA-BHC	mg/kg	1.12E-03	1.20E-03	8.00E-03		mg/kg	1.20E-03	95UCL-T	a	1.12E-03	mean-T	a
DIELDRIN	mg/kg	2.04E-03	2.15E-03	6.10E-03		mg/kg	2.15E-03	95UCL-T	a	2.04E-03	mean-T	a
ENDOSULFAN I	mg/kg	1.13E-03	1.21E-03	5.00E-03		mg/kg	1.21E-03	95UCL-T	a	1.13E-03	mean-T	a
ENDOSULFAN II	mg/kg	1.89E-03	1.94E-03	3.60E-03		mg/kg	1.94E-03	95UCL	c	1.89E-03	mean	c
ENDOSULFAN SULFATE	mg/kg	2.40E-03	2.65E-03	2.00E-02		mg/kg	2.65E-03	95UCL-T	a	2.40E-03	mean-T	a
ENDRIN	mg/kg	1.96E-03	2.03E-03	4.00E-03		mg/kg	2.03E-03	95UCL-T	a	1.96E-03	mean-T	a
ENDRIN ALDEHYDE	mg/kg	3.15E-03	3.61E-03	3.80E-02		mg/kg	3.61E-03	95UCL-T	a	3.15E-03	mean-T	a
ENDRIN KETONE	mg/kg	2.48E-03	2.72E-03	1.40E-02		mg/kg	2.72E-03	95UCL-T	a	2.48E-03	mean-T	a
GAMMA-BHC	mg/kg	1.64E-03	1.89E-03	1.40E-02		mg/kg	1.89E-03	95UCL-T	a	1.64E-03	mean-T	a
GAMMA-CHLORDANE	mg/kg	2.27E-03	2.81E-03	3.40E-02		mg/kg	2.81E-03	95UCL-T	a	2.27E-03	mean-T	a
HEPTACHLOR	mg/kg	2.00E-04	2.30E-04	5.00E-03		mg/kg	2.30E-04	95UCL-T	a	2.00E-04	mean-T	a
HEPTACHLOR EPOXIDE	mg/kg	2.90E-04	3.40E-04	4.00E-03		mg/kg	3.40E-04	95UCL-T	a	2.90E-04	mean-T	a
METHOXYCHLOR	mg/kg	9.51E-03	9.79E-03	1.80E-02		mg/kg	9.79E-03	95UCL	c	9.51E-03	mean	c

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Outdoor Air/Dust

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
METALS												
BARIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	8.33E-08	NA	NA	7.33E-08	NA	NA
COBALT	mg/m^3	NA	NA	NA	NA	mg/m^3	1.01E-08	NA	NA	8.89E-09	NA	NA
LEAD	mg/m^3	NA	NA	NA	NA	mg/m^3	1.30E-07	NA	NA	8.47E-08	NA	NA
MOLYBDENUM	mg/m^3	NA	NA	NA	NA	mg/m^3	2.74E-10	NA	NA	2.14E-10	NA	NA
SELENIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	4.58E-10	NA	NA	3.99E-10	NA	NA
SILVER	mg/m^3	NA	NA	NA	NA	mg/m^3	3.47E-10	NA	NA	2.29E-10	NA	NA
THALLIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	3.26E-10	NA	NA	3.01E-10	NA	NA
TIN	mg/m^3	NA	NA	NA	NA	mg/m^3	1.82E-08	NA	NA	1.16E-08	NA	NA
TITANIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	3.92E-06	NA	NA	3.35E-06	NA	NA
VOLATILE ORGANIC COMPOUNDS												
CARBON DISULFIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.52E-12	NA	NA	1.52E-12	NA	NA
TOLUENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.42E-12	NA	NA	4.25E-12	NA	NA
XYLENE (TOTAL)	mg/m^3	NA	NA	NA	NA	mg/m^3	3.04E-12	NA	NA	3.04E-12	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS												
1,2,4-TRICHLOROBENZENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.81E-11	NA	NA	2.81E-11	NA	NA
2-METHYLNAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.82E-10	NA	NA	1.70E-10	NA	NA
ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.14E-10	NA	NA	1.14E-10	NA	NA
BENZO(A)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.87E-10	NA	NA	1.57E-10	NA	NA
BENZO(A)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.90E-10	NA	NA	1.53E-10	NA	NA
BENZO(B)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.98E-10	NA	NA	1.63E-10	NA	NA
BENZO(G,H,I)PERYLENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.88E-10	NA	NA	1.59E-10	NA	NA
BENZO(K)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.97E-10	NA	NA	1.67E-10	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.33E-10	NA	NA	9.79E-11	NA	NA

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Outdoor Air/Dust

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
CARBAZOLE	mg/m^3	NA	NA	NA	NA	mg/m^3	5.55E-11	NA	NA	5.55E-11	NA	NA
CHRYSENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.84E-10	NA	NA	1.47E-10	NA	NA
DIBENZ(A,H)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.56E-11	NA	NA	4.56E-11	NA	NA
FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.13E-10	NA	NA	1.57E-10	NA	NA
FLUORENE	mg/m^3	NA	NA	NA	NA	mg/m^3	6.23E-11	NA	NA	6.23E-11	NA	NA
INDENO(1,2,3-CD)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.06E-10	NA	NA	1.06E-10	NA	NA
PENTACHLOROPHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	3.80E-10	NA	NA	3.80E-10	NA	NA
PHENANTHRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.19E-10	NA	NA	1.74E-10	NA	NA
PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.91E-10	NA	NA	1.42E-10	NA	NA
PESTICIDE/POLYCHLORINATED BIPHENYLS												
4,4'-DDD	mg/m^3	NA	NA	NA	NA	mg/m^3	2.58E-12	NA	NA	2.21E-12	NA	NA
4,4'-DDE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.18E-12	NA	NA	1.94E-12	NA	NA
4,4'-DDT	mg/m^3	NA	NA	NA	NA	mg/m^3	9.13E-12	NA	NA	6.92E-12	NA	NA
ALDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	7.60E-13	NA	NA	7.52E-13	NA	NA
ALPHA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	3.62E-12	NA	NA	2.71E-12	NA	NA
ALPHA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.22E-12	NA	NA	1.79E-12	NA	NA
AROCLOR-1254	mg/m^3	NA	NA	NA	NA	mg/m^3	1.08E-11	NA	NA	8.37E-12	NA	NA
AROCLOR-1260	mg/m^3	NA	NA	NA	NA	mg/m^3	3.88E-11	NA	NA	2.95E-11	NA	NA
BETA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	1.25E-12	NA	NA	1.11E-12	NA	NA
DELTA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	9.12E-13	NA	NA	8.51E-13	NA	NA
DIELDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	1.63E-12	NA	NA	1.55E-12	NA	NA
ENDOSULFAN I	mg/m^3	NA	NA	NA	NA	mg/m^3	9.19E-13	NA	NA	8.59E-13	NA	NA
ENDOSULFAN II	mg/m^3	NA	NA	NA	NA	mg/m^3	1.47E-12	NA	NA	1.44E-12	NA	NA
ENDOSULFAN SULFATE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.01E-12	NA	NA	1.82E-12	NA	NA

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Outdoor Air/Dust

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
ENDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	1.54E-12	NA	NA	1.49E-12	NA	NA
ENDRIN ALDEHYDE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.74E-12	NA	NA	2.39E-12	NA	NA
ENDRIN KETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.07E-12	NA	NA	1.88E-12	NA	NA
GAMMA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	1.44E-12	NA	NA	1.25E-12	NA	NA
GAMMA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.14E-12	NA	NA	1.72E-12	NA	NA
HEPTACHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	1.75E-13	NA	NA	1.52E-13	NA	NA
HEPTACHLOR EPOXIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.58E-13	NA	NA	2.20E-13	NA	NA
METHOXYCHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	7.44E-12	NA	NA	7.23E-12	NA	NA

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
METALS												
BARIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
COBALT	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
LEAD	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
MOLYBDENUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
SELENIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
SILVER	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
THALLIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
TIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
TITANIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
VOLATILE ORGANIC COMPOUNDS												
CARBON DISULFIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.30E-02	NA	NA	2.30E-02	NA	NA
TOLUENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.56E-02	NA	NA	2.46E-02	NA	NA
XYLENE (TOTAL)	mg/m^3	NA	NA	NA	NA	mg/m^3	1.63E-03	NA	NA	1.63E-03	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS												
1,2,4-TRICHLOROBENZENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.52E-02	NA	NA	4.52E-02	NA	NA
2-METHYLNAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.78E-01	NA	NA	1.66E-01	NA	NA
ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.74E-03	NA	NA	2.74E-03	NA	NA
BENZO(A)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(A)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(B)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(G,H,I)PERYLENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(K)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BIS(2-ETHYLHEXYL)PHTHALATE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
CARBAZOLE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
CHRYSENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
DIBENZ(A,H)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
FLUORENE	mg/m^3	NA	NA	NA	NA	mg/m^3	3.40E-03	NA	NA	3.40E-03	NA	NA
INDENO(1,2,3-CD)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
PENTACHLOROPHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
PHENANTHRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	NA
PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	9.61E-04	NA	NA	7.11E-04	NA	NA
PESTICIDE/POLYCHLORINATED BIPHENYLS												
4,4'-DDD	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
4,4'-DDE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
4,4'-DDT	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ALDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ALPHA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ALPHA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
AROCLOR-1254	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
AROCLOR-1260	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BETA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
DELTA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
DIELDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDOSULFAN I	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDOSULFAN II	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
ENDOSULFAN SULFATE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDRIN ALDEHYDE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDRIN KETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
GAMMA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
GAMMA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
HEPTACHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
HEPTACHLOR EPOXIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
METHOXYCHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC

TABLE J-7

EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
METALS												
BARIUM	mg/kg	9.67E+01	1.09E+02	4.74E+02		mg/kg	1.09E+02	95UCL-T	a	9.67E+01	mean-T	a
COBALT	mg/kg	1.15E+01	1.29E+01	3.48E+01		mg/kg	1.29E+01	95UCL-T	a	1.15E+01	mean-T	a
COPPER	mg/kg	5.99E+01	7.13E+01	6.84E+02		mg/kg	7.13E+01	95UCL-T	a	5.99E+01	mean-T	a
LEAD	mg/kg	9.96E+01	1.47E+02	9.68E+02		mg/kg	1.47E+02	95UCL-T	a	9.96E+01	mean-T	a
MOLYBDENUM	mg/kg	2.99E-01	3.81E-01	6.80E+00		mg/kg	3.81E-01	95UCL-T	a	2.99E-01	mean-T	a
SELENIUM	mg/kg	5.18E-01	5.90E-01	1.80E+00		mg/kg	5.90E-01	95UCL-T	a	5.18E-01	mean-T	a
SILVER	mg/kg	5.63E-01	9.22E-01	5.78E+00		mg/kg	9.22E-01	95UCL-T	a	5.63E-01	mean-T	a
THALLIUM	mg/kg	4.14E-01	4.51E-01	1.60E+00		mg/kg	4.51E-01	95UCL-T	a	4.14E-01	mean-T	a
TIN	mg/kg	1.40E+01	1.78E+01	4.06E+01		mg/kg	1.78E+01	95UCL-T	a	1.40E+01	mean-T	a
TITANIUM	mg/kg	4.25E+03	4.77E+03	6.75E+03		mg/kg	4.77E+03	95UCL-N	b	4.25E+03	mean-N	b
VOLATILE ORGANIC COMPOUNDS												
2-BUTANONE	mg/kg	7.48E-03	8.66E-03	1.70E-02		mg/kg	8.66E-03	95UCL	c	7.48E-03	mean	c
ACETONE	mg/kg	1.71E-02	2.34E-02	2.80E-01		mg/kg	2.34E-02	95UCL-T	a	1.71E-02	mean-T	a
CARBON DISULFIDE	mg/kg	5.00E-03	5.00E-03	5.00E-03		mg/kg	5.00E-03	max	a	5.00E-03	max	a
TOLUENE	mg/kg	6.11E-03	6.37E-03	8.00E-03		mg/kg	6.37E-03	95UCL	c	6.11E-03	mean	c
XYLENE (TOTAL)	mg/kg	4.00E-03	4.00E-03	4.00E-03		mg/kg	4.00E-03	max	c	4.00E-03	max	c
SEMIVOLATILE ORGANIC COMPOUNDS												
1,2,4-TRICHLOROBENZENE	mg/kg	3.70E-02	3.70E-02	3.70E-02		mg/kg	3.70E-02	max	c	3.70E-02	max	c
2-METHYLNAPHTHALENE	mg/kg	2.35E-01	2.40E-01	2.40E-01		mg/kg	2.40E-01	95UCL	c	2.35E-01	mean	c
ACENAPHTHENE	mg/kg	2.00E-02	2.00E-02	2.00E-02		mg/kg	2.00E-02	max	c	2.00E-02	max	c
ANTHRACENE	mg/kg	1.50E-01	1.50E-01	1.56E-01		mg/kg	1.50E-01	max	a	1.50E-01	max	a
BENZO(A)ANTHRACENE	mg/kg	2.17E-01	2.48E-01	3.40E-01		mg/kg	2.48E-01	95UCL-T	a	2.17E-01	mean-T	a
BENZO(A)PYRENE	mg/kg	2.02E-01	2.35E-01	2.90E-01		mg/kg	2.35E-01	95UCL-T	a	2.02E-01	mean-T	a
BENZO(B)FLUORANTHENE	mg/kg	2.16E-01	2.49E-01	6.20E-01		mg/kg	2.49E-01	95UCL-T	a	2.16E-01	mean-T	a
BENZO(G,H,I)PERYLENE	mg/kg	2.08E-01	2.37E-01	2.50E-01		mg/kg	2.37E-01	95UCL-T	a	2.08E-01	mean-T	a
BENZO(K)FLUORANTHENE	mg/kg	2.32E-01	2.59E-01	5.50E-01		mg/kg	2.59E-01	95UCL-T	a	2.32E-01	mean-T	a
BIS(2-ETHYLHEXYL)PHTHALATE	mg/kg	1.19E-01	1.44E-01	1.40E+00		mg/kg	1.44E-01	95UCL	c	1.19E-01	mean	c
CARBAZOLE	mg/kg	7.30E-02	7.30E-02	7.30E-02		mg/kg	7.30E-02	max	c	7.30E-02	max	c
CHRYSENE	mg/kg	2.04E-01	2.43E-01	7.80E-01		mg/kg	2.43E-01	95UCL-T	a	2.04E-01	mean-T	a
DIBENZ(A,H)ANTHRACENE	mg/kg	6.00E-02	6.00E-02	6.00E-02		mg/kg	6.00E-02	max	a	6.00E-02	max	a
FLUORANTHENE	mg/kg	1.83E-01	2.23E-01	9.60E-01		mg/kg	2.23E-01	95UCL-T	a	1.83E-01	mean-T	a
FLUORENE	mg/kg	8.20E-02	8.20E-02	8.20E-02		mg/kg	8.20E-02	max	c	8.20E-02	max	c
INDENO(1,2,3-CD)PYRENE	mg/kg	1.40E-01	1.40E-01	1.40E-01		mg/kg	1.40E-01	max	a	1.40E-01	max	a
NAPHTHALENE	mg/kg	2.40E-01	2.40E-01	2.40E-01		mg/kg	2.40E-01	max	c	2.40E-01	max	c
PENTACHLOROPHENOL	mg/kg	5.00E-01	5.00E-01	5.00E-01		mg/kg	5.00E-01	max	c	5.00E-01	max	c
PHENANTHRENE	mg/kg	2.28E-01	2.65E-01	4.90E-01		mg/kg	2.65E-01	95UCL-T	a	2.28E-01	mean-T	a

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
PYRENE	mg/kg	1.71E-01	2.05E-01	5.50E-01		mg/kg	2.05E-01	95UCL-T	a	1.71E-01	mean-T	a
PESTICIDE/POLYCHLORINATED BIPHENYLS												
4,4'-DDD	mg/kg	2.86E-03	3.30E-03	2.40E-01		mg/kg	3.30E-03	95UCL-T	a	2.86E-03	mean-T	a
4,4'-DDE	mg/kg	2.54E-03	2.82E-03	3.70E-02		mg/kg	2.82E-03	95UCL-T	a	2.54E-03	mean-T	a
4,4'-DDT	mg/kg	8.46E-03	1.10E-02	2.10E-01		mg/kg	1.10E-02	95UCL-T	a	8.46E-03	mean-T	a
ALDRIN	mg/kg	1.01E-03	1.03E-03	1.50E-03		mg/kg	1.03E-03	95UCL	c	1.01E-03	mean	c
ALPHA-BHC	mg/kg	3.33E-03	4.35E-03	3.70E-02		mg/kg	4.35E-03	95UCL-T	a	3.33E-03	mean-T	a
ALPHA-CHLORDANE	mg/kg	2.26E-03	2.74E-03	2.60E-02		mg/kg	2.74E-03	95UCL-T	a	2.26E-03	mean-T	a
AROCLOR-1254	mg/kg	1.10E-02	1.40E-02	1.70E-01		mg/kg	1.40E-02	95UCL	c	1.10E-02	mean	c
AROCLOR-1260	mg/kg	3.79E-02	4.89E-02	5.70E-01		mg/kg	4.89E-02	95UCL-T	a	3.79E-02	mean-T	a
BETA-BHC	mg/kg	1.44E-03	1.61E-03	1.40E-02		mg/kg	1.61E-03	95UCL-T	a	1.44E-03	mean-T	a
DELTA-BHC	mg/kg	1.13E-03	1.21E-03	8.00E-03		mg/kg	1.21E-03	95UCL-T	a	1.13E-03	mean-T	a
DIELDRIN	mg/kg	2.07E-03	2.17E-03	6.10E-03		mg/kg	2.17E-03	95UCL-T	a	2.07E-03	mean-T	a
ENDOSULFAN I	mg/kg	1.14E-03	1.21E-03	5.00E-03		mg/kg	1.21E-03	95UCL-T	a	1.14E-03	mean-T	a
ENDOSULFAN II	mg/kg	1.92E-03	1.97E-03	3.60E-03		mg/kg	1.97E-03	95UCL	c	1.92E-03	mean	c
ENDOSULFAN SULFATE	mg/kg	2.40E-03	2.63E-03	2.00E-02		mg/kg	2.63E-03	95UCL-T	a	2.40E-03	mean-T	a
ENDRIN	mg/kg	1.98E-03	2.05E-03	4.00E-03		mg/kg	2.05E-03	95UCL-T	a	1.98E-03	mean-T	a
ENDRIN ALDEHYDE	mg/kg	3.09E-03	3.49E-03	3.80E-02		mg/kg	3.49E-03	95UCL-T	a	3.09E-03	mean-T	a
ENDRIN KETONE	mg/kg	2.47E-03	2.69E-03	1.40E-02		mg/kg	2.69E-03	95UCL-T	a	2.47E-03	mean-T	a
GAMMA-BHC (LINDANE)	mg/kg	1.61E-03	1.83E-03	1.40E-02		mg/kg	1.83E-03	95UCL-T	a	1.61E-03	mean-T	a
GAMMA-CHLORDANE	mg/kg	2.18E-03	2.65E-03	3.40E-02		mg/kg	2.65E-03	95UCL-T	a	2.18E-03	mean-T	a
HEPTACHLOR	mg/kg	2.00E-04	2.30E-04	5.00E-03		mg/kg	2.30E-04	95UCL-T	a	2.00E-04	mean-T	a
HEPTACHLOR EPOXIDE	mg/kg	2.80E-04	3.30E-04	4.00E-03		mg/kg	3.30E-04	95UCL-T	a	2.80E-04	mean-T	a
METHOXYCHLOR	mg/kg	9.68E-03	9.97E-03	1.80E-02		mg/kg	9.97E-03	95UCL	c	9.68E-03	mean	c

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Outdoor/Dust

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
METALS												
BARIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	8.31E-08	NA	NA	7.35E-08	NA	NA
COBALT	mg/m^3	NA	NA	NA	NA	mg/m^3	9.84E-09	NA	NA	8.70E-09	NA	NA
COPPER	mg/m^3	NA	NA	NA	NA	mg/m^3	5.42E-08	NA	NA	4.55E-08	NA	NA
LEAD	mg/m^3	NA	NA	NA	NA	mg/m^3	1.12E-07	NA	NA	7.57E-08	NA	NA
MOLYBDENUM	mg/m^3	NA	NA	NA	NA	mg/m^3	2.90E-10	NA	NA	2.28E-10	NA	NA
SELENIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	4.49E-10	NA	NA	3.94E-10	NA	NA
SILVER	mg/m^3	NA	NA	NA	NA	mg/m^3	7.01E-10	NA	NA	4.28E-10	NA	NA
THALLIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	3.43E-10	NA	NA	3.15E-10	NA	NA
TIN	mg/m^3	NA	NA	NA	NA	mg/m^3	1.35E-08	NA	NA	1.07E-08	NA	NA
TITANIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	3.62E-06	NA	NA	3.23E-06	NA	NA
VOLATILE ORGANIC COMPOUNDS												
2-BUTANONE	mg/m^3	NA	NA	NA	NA	mg/m^3	6.58E-12	NA	NA	5.68E-12	NA	NA
ACETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.78E-11	NA	NA	1.30E-11	NA	NA
CARBON DISULFIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	3.80E-12	NA	NA	3.80E-12	NA	NA
TOLUENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.84E-12	NA	NA	4.64E-12	NA	NA
XYLENE (TOTAL)	mg/m^3	NA	NA	NA	NA	mg/m^3	3.04E-12	NA	NA	3.04E-12	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS												
1,2,4-TRICHLOROBENZENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.81E-11	NA	NA	2.81E-11	NA	NA
2-METHYLNAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.82E-10	NA	NA	1.79E-10	NA	NA
ACENAPHTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.52E-11	NA	NA	1.52E-11	NA	NA
ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.14E-10	NA	NA	1.14E-10	NA	NA
BENZO(A)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.89E-10	NA	NA	1.65E-10	NA	NA
BENZO(A)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.79E-10	NA	NA	1.53E-10	NA	NA

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Outdoor/Dust

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
BENZO(B)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.89E-10	NA	NA	1.64E-10	NA	NA
BENZO(G,H,I)PERYLENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.80E-10	NA	NA	1.58E-10	NA	NA
BENZO(K)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.97E-10	NA	NA	1.77E-10	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.10E-10	NA	NA	9.02E-11	NA	NA
CARBAZOLE	mg/m^3	NA	NA	NA	NA	mg/m^3	5.55E-11	NA	NA	5.55E-11	NA	NA
CHRYSENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.85E-10	NA	NA	1.55E-10	NA	NA
DIBENZ(A,H)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.56E-11	NA	NA	4.56E-11	NA	NA
FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.69E-10	NA	NA	1.39E-10	NA	NA
FLUORENE	mg/m^3	NA	NA	NA	NA	mg/m^3	6.23E-11	NA	NA	6.23E-11	NA	NA
INDENO(1,2,3-CD)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.06E-10	NA	NA	1.06E-10	NA	NA
NAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.82E-10	NA	NA	1.82E-10	NA	NA
PENTACHLOROPHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	3.80E-10	NA	NA	3.80E-10	NA	NA
PHENANTHRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.01E-10	NA	NA	1.74E-10	NA	NA
PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.56E-10	NA	NA	1.30E-10	NA	NA
PESTICIDE/POLYCHLORINATED BIPHENYLS												
4,4'-DDD	mg/m^3	NA	NA	NA	NA	mg/m^3	2.51E-12	NA	NA	2.17E-12	NA	NA
4,4'-DDE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.14E-12	NA	NA	1.93E-12	NA	NA
4,4'-DDT	mg/m^3	NA	NA	NA	NA	mg/m^3	8.32E-12	NA	NA	6.43E-12	NA	NA
ALDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	7.83E-13	NA	NA	7.67E-13	NA	NA
ALPHA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	3.31E-12	NA	NA	2.53E-12	NA	NA
ALPHA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.08E-12	NA	NA	1.72E-12	NA	NA
AROCLOR-1254	mg/m^3	NA	NA	NA	NA	mg/m^3	1.06E-11	NA	NA	8.37E-12	NA	NA
AROCLOR-1260	mg/m^3	NA	NA	NA	NA	mg/m^3	3.72E-11	NA	NA	2.88E-11	NA	NA
BETA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	1.22E-12	NA	NA	1.09E-12	NA	NA

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Outdoor/Dust

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
DELTA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	9.19E-13	NA	NA	8.59E-13	NA	NA
DIELDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	1.65E-12	NA	NA	1.57E-12	NA	NA
ENDOSULFAN I	mg/m^3	NA	NA	NA	NA	mg/m^3	9.19E-13	NA	NA	8.66E-13	NA	NA
ENDOSULFAN II	mg/m^3	NA	NA	NA	NA	mg/m^3	1.50E-12	NA	NA	1.46E-12	NA	NA
ENDOSULFAN SULFATE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.00E-12	NA	NA	1.82E-12	NA	NA
ENDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	1.56E-12	NA	NA	1.50E-12	NA	NA
ENDRIN ALDEHYDE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.65E-12	NA	NA	2.35E-12	NA	NA
ENDRIN KETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.04E-12	NA	NA	1.88E-12	NA	NA
GAMMA-BHC (LINDANE)	mg/m^3	NA	NA	NA	NA	mg/m^3	1.39E-12	NA	NA	1.22E-12	NA	NA
GAMMA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.01E-12	NA	NA	1.66E-12	NA	NA
HEPTACHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	1.75E-13	NA	NA	1.52E-13	NA	NA
HEPTACHLOR EPOXIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.51E-13	NA	NA	2.13E-13	NA	NA
METHOXYCHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	7.58E-12	NA	NA	7.36E-12	NA	NA

TABLE J-7

EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
METALS												
BARIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
COBALT	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
COPPER	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
LEAD	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
MOLYBDENUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
SELENIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
SILVER	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
THALLIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
TIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
TITANIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
VOLATILE ORGANIC COMPOUNDS												
2-BUTANONE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.98E-04	NA	NA	1.71E-04	NA	NA
ACETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.76E-04	NA	NA	3.48E-04	NA	NA
CARBON DISULFIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	5.75E-02	NA	NA	5.75E-02	NA	NA
TOLUENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.80E-02	NA	NA	2.69E-02	NA	NA
XYLENE (TOTAL)	mg/m^3	NA	NA	NA	NA	mg/m^3	1.63E-03	NA	NA	1.63E-03	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS												
1,2,4-TRICHLOROBENZENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.52E-02	NA	NA	4.52E-02	NA	NA
2-METHYLNAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.78E-01	NA	NA	1.74E-01	NA	NA
ACENAPHTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.31E-02	NA	NA	1.31E-02	NA	NA
ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.74E-03	NA	NA	2.74E-03	NA	NA
BENZO(A)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(A)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(B)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
BENZO(G,H,I)PERYLENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(K)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BIS(2-ETHYLHEXYL)PHTHALATE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
CARBAZOLE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
CHRYSENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
DIBENZ(A,H)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
FLUORENE	mg/m^3	NA	NA	NA	NA	mg/m^3	3.40E-03	NA	NA	3.40E-03	NA	NA
INDENO(1,2,3-CD)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
NAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	5.18E-03	NA	NA	5.18E-03	NA	NA
PENTACHLOROPHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
PHENANTHRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.87E-03	NA	NA	4.20E-03	NA	NA
PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	7.83E-04	NA	NA	6.52E-04	NA	NA
PESTICIDE/POLYCHLORINATED BIPHENYLS												
4,4'-DDD	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
4,4'-DDE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
4,4'-DDT	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ALDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ALPHA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ALPHA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
AROCLOR-1254	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
AROCLOR-1260	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BETA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
DELTA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
DIELDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDOSULFAN I	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDOSULFAN II	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDOSULFAN SULFATE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDRIN ALDEHYDE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDRIN KETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
GAMMA-BHC (LINDANE)	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
GAMMA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
HEPTACHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
HEPTACHLOR EPOXIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
METHOXYCHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Outdoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
METALS												
BARIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
COBALT	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
COPPER	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
LEAD	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
MOLYBDENUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
SELENIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
SILVER	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
THALLIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
TIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
TITANIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
VOLATILE ORGANIC COMPOUNDS												
2-BUTANONE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.85E-07	NA	NA	1.60E-07	NA	NA
ACETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.47E-07	NA	NA	3.26E-07	NA	NA
CARBON DISULFIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	5.40E-05	NA	NA	5.40E-05	NA	NA
TOLUENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.62E-05	NA	NA	2.52E-05	NA	NA
XYLENE (TOTAL)	mg/m^3	NA	NA	NA	NA	mg/m^3	1.52E-06	NA	NA	1.52E-06	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS												
1,2,4-TRICHLOROBENZENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.23E-05	NA	NA	4.23E-05	NA	NA
2-METHYLNAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.67E-04	NA	NA	1.63E-04	NA	NA
ACENAPHTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.22E-05	NA	NA	1.22E-05	NA	NA
ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.57E-06	NA	NA	2.57E-06	NA	NA
BENZO(A)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(A)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(B)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Outdoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
BENZO(G,H,I)PERYLENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(K)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BIS(2-ETHYLHEXYL)PHTHALATE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
CARBAZOLE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
CHRYSENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
DIBENZ(A,H)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
FLUORENE	mg/m^3	NA	NA	NA	NA	mg/m^3	3.18E-06	NA	NA	3.18E-06	NA	NA
INDENO(1,2,3-CD)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
NAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.84E-06	NA	NA	4.84E-06	NA	NA
PENTACHLOROPHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
PHENANTHRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.55E-06	NA	NA	3.93E-06	NA	NA
PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	7.33E-07	NA	NA	6.10E-07	NA	NA
PESTICIDE/POLYCHLORINATED BIPHENYLS												
4,4'-DDD	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
4,4'-DDE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
4,4'-DDT	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ALDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ALPHA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ALPHA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
AROCLOR-1254	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
AROCLOR-1260	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BETA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
DELTA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Outdoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
DIELDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDOSULFAN I	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDOSULFAN II	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDOSULFAN SULFATE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDRIN ALDEHYDE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDRIN KETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
GAMMA-BHC (LINDANE)	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
GAMMA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
HEPTACHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
HEPTACHLOR EPOXIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
METHOXYCHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED AND UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Groundwater
Exposure Point:	Groundwater

Chemical of Potential Concern	Units	Mean	95% UCL of	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
VOLATILE ORGANIC COMPOUNDS												
1,2-DICHLOROETHANE	mg/L	2.80E-04	3.30E-04	7.0E-04		mg/L	3.30E-04	95UCL	c	2.80E-04	mean	c
2-BUTANONE	mg/L	9.42E-03	1.98E-02	1.1E-01		mg/L	1.98E-02	95UCL	c	9.42E-03	mean	c
4-METHYL-2-PENTANONE	mg/L	8.00E-04	8.00E-04	8.0E-04		mg/L	8.00E-04	max	c	8.00E-04	max	c
ACETONE	mg/L	6.84E-02	8.79E-02	1.8E-01		mg/L	8.79E-02	95UCL-N	b	6.84E-02	mean-N	b
CHLOROMETHANE	mg/L	7.00E-04	7.00E-04	7.0E-04		mg/L	7.00E-04	max	c	7.00E-04	max	c
ETHYLBENZENE	mg/L	7.00E-04	7.00E-04	7.0E-04		mg/L	7.00E-04	max	c	7.00E-04	max	c
TOLUENE	mg/L	8.30E-04	1.00E-03	1.0E-03		mg/L	1.00E-03	95UCL-T	a	8.30E-04	mean-T	a
XYLENE (TOTAL)	mg/L	1.26E-03	1.54E-03	4.0E-03		mg/L	1.54E-03	95UCL-T	a	1.26E-03	mean-T	a
SEMIVOLATILE ORGANIC COMPOUNDS												
1,3-DICHLOROBENZENE	mg/L	9.00E-04	9.00E-04	9.0E-04		mg/L	9.00E-04	max	c	9.00E-04	max	c
2,4-DICHLOROPHENOL	mg/L	2.00E-03	2.00E-03	2.0E-03		mg/L	2.00E-03	max	a	2.00E-03	max	a
4-METHYLPHENOL	mg/L	6.00E-03	6.00E-03	6.0E-03		mg/L	6.00E-03	max	c	6.00E-03	max	c
ACENAPHTHENE	mg/L	2.00E-03	2.00E-03	2.0E-03		mg/L	2.00E-03	max	c	2.00E-03	max	c
BENZO(B)FLUORANTHENE	mg/L	2.00E-03	2.00E-03	2.0E-03		mg/L	2.00E-03	max	c	2.00E-03	max	c
BIS(2-ETHYLHEXYL)PHTHALATE	mg/L	4.92E-03	7.85E-03	2.8E-02		mg/L	7.85E-03	95UCL	c	4.92E-03	mean	c
CARBAZOLE	mg/L	2.00E-03	2.00E-03	2.0E-03		mg/L	2.00E-03	max	c	2.00E-03	max	c
FLUORANTHENE	mg/L	4.00E-03	4.00E-03	4.0E-03		mg/L	4.00E-03	max	c	4.00E-03	max	c
N-NITROSODIPHENYLAMINE (1)	mg/L	8.83E-03	1.32E-02	1.9E-02		mg/L	1.32E-02	95UCL	c	8.83E-03	mean	c
NAPHTHALENE	mg/L	2.00E-03	2.00E-03	2.0E-03		mg/L	2.00E-03	max	c	2.00E-03	max	c
PHENANTHRENE	mg/L	2.00E-03	2.00E-03	2.0E-03		mg/L	2.00E-03	max	c	2.00E-03	max	c
PHENOL	mg/L	2.00E-03	2.00E-03	2.0E-03		mg/L	2.00E-03	max	c	2.00E-03	max	c
PYRENE	mg/L	8.39E-03	1.10E-02	1.1E-02		mg/L	1.10E-02	95UCL	c	8.39E-03	mean	c

TABLE J-7

EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED AND UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
VOLATILE ORGANIC COMPOUNDS												
1,2-DICHLOROETHANE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.02E-05	NA	NA	8.69E-06	NA	NA
2-BUTANONE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.23E-04	NA	NA	1.06E-04	NA	NA
4-METHYL-2-PENTANONE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.41E-05	NA	NA	1.41E-05	NA	NA
ACETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	9.67E-04	NA	NA	7.53E-04	NA	NA
CHLOROMETHANE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.36E-05	NA	NA	1.36E-05	NA	NA
ETHYLBENZENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.62E-05	NA	NA	1.62E-05	NA	NA
TOLUENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.55E-05	NA	NA	2.12E-05	NA	NA
XYLENE (TOTAL)	mg/m^3	NA	NA	NA	NA	mg/m^3	3.35E-05	NA	NA	2.74E-05	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS												
1,3-DICHLOROBENZENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.10E-05	NA	NA	2.10E-05	NA	NA
2,4-DICHLOROPHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
4-METHYLPHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ACENAPHTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(B)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BIS(2-ETHYLHEXYL)PHTHALATE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
CARBAZOLE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
N-NITROSODIPHENYLAMINE (1)	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
NAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.32E-05	NA	NA	4.32E-05	NA	NA
PHENANTHRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.60E-05	NA	NA	1.60E-05	NA	NA
PHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.93E-05	NA	NA	2.24E-05	NA	NA

TABLE J-7

EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED AND UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Outdoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
VOLATILE ORGANIC COMPOUNDS												
1,2-DICHLOROETHANE	mg/m^3	NA	NA	NA	NA	mg/m^3	9.56E-09	NA	NA	8.11E-09	NA	NA
2-BUTANONE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.08E-07	NA	NA	9.90E-08	NA	NA
4-METHYL-2-PENTANONE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.32E-08	NA	NA	1.32E-08	NA	NA
ACETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	9.06E-07	NA	NA	7.05E-07	NA	NA
CHLOROMETHANE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.27E-08	NA	NA	1.27E-08	NA	NA
ETHYLBENZENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.51E-08	NA	NA	1.51E-08	NA	NA
TOLUENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.38E-08	NA	NA	1.98E-08	NA	NA
XYLENE (TOTAL)	mg/m^3	NA	NA	NA	NA	mg/m^3	3.13E-08	NA	NA	2.56E-08	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS												
1,3-DICHLOROBENZENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.96E-08	NA	NA	1.96E-08	NA	NA
2,4-DICHLOROPHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
4-METHYLPHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ACENAPHTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(B)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BIS(2-ETHYLHEXYL)PHTHALATE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
CARBAZOLE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
N-NITROSODIPHENYLAMINE (1)	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
NAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.03E-08	NA	NA	4.03E-08	NA	NA
PHENANTHRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.50E-08	NA	NA	1.50E-08	NA	NA
PHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.74E-08	NA	NA	2.09E-08	NA	NA

Notes:
a = Data are log-normally distributed
b = Data are normally distributed
c = Data not tested for distribution
T = Log transformed data
N = Normal data
max = maximum value
bgs = Below ground surface

EPC = Exposure point concentration
ft. = Foot
mg/l = Milligrams per liter
mg/m^3 = Milligrams per cubic meter
NA = EPC derived from soil exposure point concentrations using a volatilization factor
VOC = Volatile Organic Compound

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
48	HHRA results	Section 2.5.1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix J, Tables J-1 through J-120. Tetra Tech EM Inc. September 22, 2008.

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J-2 OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN – SOIL, 0 TO 10-FOOT-BGS INTERVAL

J-3 OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN – GROUNDWATER

J-4 BACKGROUND CONCENTRATIONS OF METALS CONSIDERED TO BE ESSENTIAL NUTRIENTS

J-5 AMBIENT METAL LEVELS IN FILL SOIL

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J-14 EPA TABLE 5.2 - NON-CANCER TOXICITY DATA – INHALATION

J-15 EPA TABLE 5.3 - NON-CANCER TOXICITY DATA – SPECIAL CASE CHEMICALS

J-16 EPA TABLE 6.1 - CANCER TOXICITY DATA – ORAL/DERMAL

J-17 EPA TABLE 6.2 - CANCER TOXICITY DATA – INHALATION

J-18 EPA TABLE 6.3 - CANCER TOXICITY DATA – SPECIAL CASE CHEMICALS

J-19 EPA TABLE U.8.1.RME, CALCULATION OF CANCER RISKS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-20 EPA TABLE U.8.2.RME, CALCULATION OF CANCER RISKS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-21 EPA TABLE U.8.3.RME, CALCULATION OF CANCER RISKS, UNCHANGED SITE CONFIGURATION, GROUNDWATER MEDIUM, AIR EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-22 EPA TABLE U.8.1.CTE, CALCULATION OF CANCER RISKS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

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J-23 EPA TABLE U.8.2.CTE, CALCULATION OF CANCER RISKS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-24 EPA TABLE U.8.3.CTE, CALCULATION OF CANCER RISKS, UNCHANGED SITE CONFIGURATION, GROUNDWATER MEDIUM, AIR EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-25 EPA TABLE U.7.1.RME, CALCULATION OF NON-CANCER HAZARDS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-26 EPA TABLE U.7.2.RME, CALCULATION OF NON-CANCER HAZARDS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-27 EPA TABLE U.7.3.RME, CALCULATION OF NON-CANCER HAZARDS, UNCHANGED SITE CONFIGURATION, GROUNDWATER MEDIUM, AIR EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-28 EPA TABLE U.7.1.CTE, CALCULATION OF NON-CANCER HAZARDS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-29 EPA TABLE U.7.2.CTE, CALCULATION OF NON-CANCER HAZARDS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-30 EPA TABLE U.7.3.CTE, CALCULATION OF NON-CANCER HAZARDS, UNCHANGED SITE CONFIGURATION, GROUNDWATER MEDIUM, AIR EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-31 EPA TABLE U.9.1.RME, RECEPTOR SUMMARY, UNCHANGED SITE CONFIGURATION, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-32 EPA TABLE U.9.1.CTE, RECEPTOR SUMMARY, UNCHANGED SITE CONFIGURATION, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-33 EPA TABLE U.10.1.RME, RISK ASSESSMENT SUMMARY, UNCHANGED SITE CONFIGURATION, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-34 EPA TABLE U.10.1.CTE, RISK ASSESSMENT SUMMARY, UNCHANGED SITE CONFIGURATION, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-35 EPA TABLE U.8.4.RME, CALCULATION OF CANCER RISKS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, RESIDENTIAL, ADULT

J-36 EPA TABLE U.8.5.RME, CALCULATION OF CANCER RISKS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-37 EPA TABLE U.8.6.RME, CALCULATION OF CANCER RISKS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, ADULT

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J-38 EPA TABLE U.8.7.RME, CALCULATION OF CANCER RISKS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-39 EPA TABLE U.8.8.RME, CALCULATION OF CANCER RISKS, UNCHANGED SITE CONFIGURATION, GROUNDWATER MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, ADULT

J-40 EPA TABLE U.8.9.RME, CALCULATION OF CANCER RISKS, UNCHANGED SITE CONFIGURATION, GROUNDWATER MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-41 EPA TABLE U.8.4.CTE, CALCULATION OF CANCER RISKS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, RESIDENTIAL, ADULT

J-42 EPA TABLE U.8.5.CTE, CALCULATION OF CANCER RISKS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-43 EPA TABLE U.8.6.CTE, CALCULATION OF CANCER RISKS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, ADULT

J-44 EPA TABLE U.8.7.CTE, CALCULATION OF CANCER RISKS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-45 EPA TABLE U.8.8.CTE, CALCULATION OF CANCER RISKS, UNCHANGED SITE CONFIGURATION, GROUNDWATER MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, ADULT

J-46 EPA TABLE U.8.9.CTE, CALCULATION OF CANCER RISKS, UNCHANGED SITE CONFIGURATION, GROUNDWATER MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-47 EPA TABLE U.7.4.RME, CALCULATION OF NON-CANCER HAZARDS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, RESIDENTIAL, ADULT

J-48 EPA TABLE U.7.5.RME, CALCULATION OF NON-CANCER HAZARDS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-49 EPA TABLE U.7.6.RME, CALCULATION OF NON-CANCER HAZARDS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, ADULT

J-50 EPA TABLE U.7.7.RME, CALCULATION OF NON-CANCER HAZARDS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-51 EPA TABLE U.7.8.RME, CALCULATION OF NON-CANCER HAZARDS, UNCHANGED SITE CONFIGURATION, GROUNDWATER MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, ADULT

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J-52 EPA TABLE U.7.9.RME, CALCULATION OF NON-CANCER HAZARDS, UNCHANGED SITE CONFIGURATION, GROUNDWATER MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, CHILD

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J-54 EPA TABLE U.7.5.CTE, CALCULATION OF NON-CANCER HAZARDS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-55 EPA TABLE U.7.6.CTE, CALCULATION OF NON-CANCER HAZARDS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, ADULT

J-56 EPA TABLE U.7.7.CTE, CALCULATION OF NON-CANCER HAZARDS, UNCHANGED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-57 EPA TABLE U.7.8.CTE, CALCULATION OF NON-CANCER HAZARDS, UNCHANGED SITE CONFIGURATION, GROUNDWATER MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, ADULT

J-58 EPA TABLE U.7.9.CTE, CALCULATION OF NON-CANCER HAZARDS, UNCHANGED SITE CONFIGURATION, GROUNDWATER MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-59 EPA TABLE U.9.2.RME, RECEPTOR SUMMARY, UNCHANGED SITE CONFIGURATION, RESIDENTIAL, ADULT

J-60 EPA TABLE U.9.3.RME, RECEPTOR SUMMARY, UNCHANGED SITE CONFIGURATION, RESIDENTIAL, CHILD

J-61 EPA TABLE U.9.2.CTE, RECEPTOR SUMMARY, UNCHANGED SITE CONFIGURATION, RESIDENTIAL, ADULT

J-62 EPA TABLE U.9.3.CTE, RECEPTOR SUMMARY, UNCHANGED SITE CONFIGURATION, RESIDENTIAL, CHILD

J-63 EPA TABLE U.10.2.RME, RISK ASSESSMENT SUMMARY, UNCHANGED SITE CONFIGURATION, RESIDENTIAL, ADULT

J-64 EPA TABLE U.10.3.RME, RISK ASSESSMENT SUMMARY, UNCHANGED SITE CONFIGURATION, RESIDENTIAL, CHILD

J-65 EPA TABLE U.10.2.CTE, RISK ASSESSMENT SUMMARY, UNCHANGED SITE CONFIGURATION, RESIDENTIAL, ADULT

J-66 EPA TABLE U.10.3.CTE, RISK ASSESSMENT SUMMARY, UNCHANGED SITE CONFIGURATION, RESIDENTIAL, CHILD

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J-67 EPA TABLE M.8.10.RME, CALCULATION OF CANCER RISKS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-68 EPA TABLE M.8.11.RME, CALCULATION OF CANCER RISKS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-69 EPA TABLE M.8.10.CTE, CALCULATION OF CANCER RISKS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-70 EPA TABLE M.8.11.CTE, CALCULATION OF CANCER RISKS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-71 EPA TABLE M.7.10.RME, CALCULATION OF NON-CANCER HAZARDS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-72 EPA TABLE M.7.11.RME, CALCULATION OF NON-CANCER HAZARDS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-73 EPA TABLE M.7.10.CTE, CALCULATION OF NON-CANCER HAZARDS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-74 EPA TABLE M.7.11.CTE, CALCULATION OF NON-CANCER HAZARDS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-75 EPA TABLE M.9.4.RME, RECEPTOR SUMMARY, MODIFIED SITE CONFIGURATION, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-76 EPA TABLE M.9.4.CTE, RECEPTOR SUMMARY, MODIFIED SITE CONFIGURATION, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-77 EPA TABLE M.10.4.RME, RISK ASSESSMENT SUMMARY, MODIFIED SITE CONFIGURATION, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-78 EPA TABLE M.10.4.CTE, RISK ASSESSMENT SUMMARY, MODIFIED SITE CONFIGURATION, COMMERCIAL/INDUSTRIAL WORKER, ADULT

J-79 EPA TABLE M.8.12.RME, CALCULATION OF CANCER RISKS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, RESIDENTIAL, ADULT

J-80 EPA TABLE M.8.13.RME, CALCULATION OF CANCER RISKS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-81 EPA TABLE M.8.14.RME, CALCULATION OF CANCER RISKS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, ADULT

TABLES (Continued)

Table

J-82 EPA TABLE M.8.15.RME, CALCULATION OF CANCER RISKS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-83 EPA TABLE M.8.12.CTE, CALCULATION OF CANCER RISKS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, RESIDENTIAL, ADULT

J-84 EPA TABLE M.8.13.CTE, CALCULATION OF CANCER RISKS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-85 EPA TABLE M.8.14.CTE, CALCULATION OF CANCER RISKS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, ADULT

J-86 EPA TABLE M.8.15.CTE, CALCULATION OF CANCER RISKS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-87 EPA TABLE M.7.12.RME, CALCULATION OF NON-CANCER HAZARDS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, RESIDENTIAL, ADULT

J-88 EPA TABLE M.7.13.RME, CALCULATION OF NON-CANCER HAZARDS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-89 EPA TABLE M.7.14.RME, CALCULATION OF NON-CANCER HAZARDS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, ADULT

J-90 EPA TABLE M.7.15.RME, CALCULATION OF NON-CANCER HAZARDS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-91 EPA TABLE M.7.12.CTE, CALCULATION OF NON-CANCER HAZARDS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, RESIDENTIAL, ADULT

J-92 EPA TABLE M.7.13.CTE, CALCULATION OF NON-CANCER HAZARDS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-93 EPA TABLE M.7.14.CTE, CALCULATION OF NON-CANCER HAZARDS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, ADULT

J-94 EPA TABLE M.7.15.CTE, CALCULATION OF NON-CANCER HAZARDS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, RESIDENTIAL, CHILD

J-95 EPA TABLE M.9.5.RME, RECEPTOR SUMMARY, MODIFIED SITE CONFIGURATION, RESIDENTIAL, ADULT

J-96 EPA TABLE M.9.6.RME, RECEPTOR SUMMARY, MODIFIED SITE CONFIGURATION, RESIDENTIAL, CHILD

J-97 EPA TABLE M.9.5.CTE, RECEPTOR SUMMARY, MODIFIED SITE CONFIGURATION, RESIDENTIAL, ADULT

J-98 EPA TABLE M.9.6.CTE, RECEPTOR SUMMARY, MODIFIED SITE CONFIGURATION, RESIDENTIAL, CHILD

TABLES (Continued)

Table

J-99 EPA TABLE M.10.5.RME, RISK ASSESSMENT SUMMARY, MODIFIED SITE CONFIGURATION, RESIDENTIAL, ADULT

J-100 EPA TABLE M.10.6.RME, RISK ASSESSMENT SUMMARY, MODIFIED SITE CONFIGURATION, RESIDENTIAL, CHILD

J-101 EPA TABLE M.10.5.CTE, RISK ASSESSMENT SUMMARY, MODIFIED SITE CONFIGURATION, RESIDENTIAL, ADULT

J-102 EPA TABLE M.10.6.CTE, RISK ASSESSMENT SUMMARY, MODIFIED SITE CONFIGURATION, RESIDENTIAL, CHILD

J-103 EPA TABLE M.8.16.RME, CALCULATION OF CANCER RISKS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, CONSTRUCTION WORKER, ADULT

J-104 EPA TABLE M.8.17.RME, CALCULATION OF CANCER RISKS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, CONSTRUCTION WORKER, ADULT

J-105 EPA TABLE M.8.18.RME, CALCULATION OF CANCER RISKS, MODIFIED SITE CONFIGURATION, GROUNDWATER MEDIUM, AIR EXPOSURE MEDIUM, CONSTRUCTION WORKER, ADULT

J-106 EPA TABLE M.8.16.CTE, CALCULATION OF CANCER RISKS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, CONSTRUCTION WORKER, ADULT

J-107 EPA TABLE M.8.17.CTE, CALCULATION OF CANCER RISKS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, CONSTRUCTION WORKER, ADULT

J-108 EPA TABLE M.8.18.CTE, CALCULATION OF CANCER RISKS, MODIFIED SITE CONFIGURATION, GROUNDWATER MEDIUM, AIR EXPOSURE MEDIUM, CONSTRUCTION WORKER, ADULT

J-109 EPA TABLE M.7.16.RME, CALCULATION OF NON-CANCER HAZARDS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, CONSTRUCTION WORKER, ADULT

J-110 EPA TABLE M.7.17.RME, CALCULATION OF NON-CANCER HAZARDS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, CONSTRUCTION WORKER, ADULT

J-111 EPA TABLE M.7.18.RME, CALCULATION OF NON-CANCER HAZARDS, MODIFIED SITE CONFIGURATION, GROUNDWATER MEDIUM, AIR EXPOSURE MEDIUM, CONSTRUCTION WORKER, ADULT

J-112 EPA TABLE M.7.16.CTE, CALCULATION OF NON-CANCER HAZARDS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, SOIL EXPOSURE MEDIUM, CONSTRUCTION WORKER, ADULT

TABLES (Continued)

Table

J-113 EPA TABLE M.7.17.CTE, CALCULATION OF NON-CANCER HAZARDS, MODIFIED SITE CONFIGURATION, SOIL MEDIUM, AIR EXPOSURE MEDIUM, CONSTRUCTION WORKER, ADULT

J-114 EPA TABLE M.7.18.CTE, CALCULATION OF NON-CANCER HAZARDS, MODIFIED SITE CONFIGURATION, GROUNDWATER MEDIUM, AIR EXPOSURE MEDIUM, CONSTRUCTION WORKER, ADULT

J-115 EPA TABLE M.9.7.RME, RECEPTOR SUMMARY, MODIFIED SITE CONFIGURATION, CONSTRUCTION WORKER, ADULT

J-116 EPA TABLE M.9.7.CTE, RECEPTOR SUMMARY, MODIFIED SITE CONFIGURATION, CONSTRUCTION WORKER, ADULT

J-117 EPA TABLE M.10.7.RME, RISK ASSESSMENT SUMMARY, MODIFIED SITE CONFIGURATION, CONSTRUCTION WORKER, ADULT

J-118 EPA TABLE M.10.7.CTE, RISK ASSESSMENT SUMMARY, MODIFIED SITE CONFIGURATION, CONSTRUCTION WORKER, ADULT

J-119 SUMMARY OF UNCERTAINTIES

J-120 SUMMARY OF HUMAN HEALTH RISKS

TABLE J-1

EPA TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact

CAS Number	Chemical	(1) Concentration	Minimum Qualifier	Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background (2) Value	Screening (3) Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (4)
	METALS															
7429-90-5	ALUMINUM	7470		25400		mg/kg	FNBWSS016	5/5	NL	25400	35000	NA	NA	NA	No	BKG
7440-36-0	ANTIMONY	5.4		10.485		mg/kg	FNBWGB001	2/15	1.9-10	10.485	8.5	NA	NA	NA	No	BKG - W
7440-38-2	ARSENIC	2.0		25.1		mg/kg	FNBWSS003	4/5	1.1-1.1	25.1	36	NA	NA	NA	No	BKG
7440-39-3	BARIUM	87.9		474		mg/kg	FNBWSS012	5/5	NL	474	NA	NA	NA	NA	Yes	NBKG
7440-41-7	BERYLLIUM	0.25		1.6		mg/kg	FNBWSS073	5/5	NL	1.6	0.9	NA	NA	NA	No	BKG - W
7440-43-9	CADMIUM			3.8	J	mg/kg	FNBWSS063			3.8	5.2	NA	NA	NA	No	BKG
7440-70-2	CALCIUM	1860		42100	J	mg/kg	FNBWSS058	15/15	NL	42100	NA	NA	NA	NA	No	NUT
7440-47-3	CHROMIUM	12.6		439.611		mg/kg	FNBWGB004	15/15	NL	439.611	140	NA	NA	NA	No	BKG - W
7440-48-4	COBALT	4.9		34.8	J	mg/kg	FNBWSS038	5/15	10-10	34.8	NA	NA	NA	NA	Yes	NBKG
7440-50-8	COPPER	13.0		684	J	mg/kg	FNBWSS007	13/15	10-16	684	120	NA	NA	NA	No	BKG - W
7439-89-6	IRON	11000		130000	J	mg/kg	FNBWGB009	15/15	NL	130000	NA	NA	NA	NA	No	NUT
7439-92-1	LEAD	1.4		968	J	mg/kg	FNBWGB001	13/15	10-10	968	59	NA	NA	NA	Yes	ABKG
7439-95-4	MAGNESIUM	3670		15700		mg/kg	FNBWSS016	5/5	NL	15700	NA	NA	NA	NA	No	NUT
7439-96-5	MANGANESE	157		1470		mg/kg	FNBWSS012	15/15	NL	1470	1600	NA	NA	NA	No	BKG
7439-97-6	MERCURY	0.18		10.2	J	mg/kg	FNBWGB005	2/5	0.11-0.12	10.2	2	NA	NA	NA	No	BKG
7439-98-7	MOLYBDENUM	0.81		6.8	J	mg/kg	FNBWGB009	2/5	0.62-0.72	6.8	NA	NA	NA	NA	Yes	NBKG
7440-02-0	NICKEL	8.1		169	J	mg/kg	FNBWGB009	14/15	10-10	169	130	NA	NA	NA	No	BKG - W
7440-09-7	POTASSIUM	1030		21030		mg/kg	FNBWGB004	15/15	NL	21030	NA	NA	NA	NA	No	NUT
7782-49-2	SELENIUM			1.8		mg/kg	FNBWGB009			1.8	NA	NA	NA	NA	Yes	NBKG
7440-22-4	SILVER	0.80		5.776	J	mg/kg	FNBWGB004	2/15	0.43-10	5.776	NA	NA	NA	NA	Yes	NBKG
7440-23-5	SODIUM	115		3450	J	mg/kg	FNBWSS003	3/5	97-114	3450	NA	NA	NA	NA	No	NUT
7440-28-0	THALLIUM			1.6		mg/kg	FNBWSS016			1.6	DL	NA	NA	NA	Yes	NBKG
7440-31-5	TIN	6.5		40.605		mg/kg	FNBWGB004	10/10	NL	40.605	NA	NA	NA	NA	Yes	NBKG
7440-32-6	TITANIUM	2780		6750		mg/kg	FNBWGB009	10/10	NL	6750	NA	NA	NA	NA	Yes	NBKG
7440-62-2	VANADIUM	22.1		290.853		mg/kg	FNBWGB009	15/15	NL	290.853	190	NA	NA	NA	No	BKG - W
7440-66-6	ZINC	35.1		1980		mg/kg	FNBWSS073	15/15	NL	1980	230	NA	NA	NA	No	BKG - W
	VOLATILE ORGANIC COMPOUNDS															
75-15-0	CARBON DISULFIDE	0.002		0.002	J	mg/kg	FNBWGB004	1/21	0.01-0.012	0.002	NA	NA	NA	NA	Yes	NBKG
108-88-3	TOLUENE	0.002		0.008	J	mg/kg	FNBWGB013	2/21	0.01-0.012	0.008	NA	NA	NA	NA	Yes	NBKG
1330-20-7	XYLENE (TOTAL)	0.004		0.004	J	mg/kg	FNBWGB013	1/21	0.01-0.012	0.004	NA	NA	NA	NA	Yes	NBKG
	SEMIVOLATILE ORGANIC COMPOUNDS															
	1,2,4-TRICHLOROBENZENE			0.037	J	mg/kg	FNBWSS052			0.037	NA	NA	NA	NA	Yes	
91-57-6	2-METHYLNAPHTHALENE	0.02		0.24	J	mg/kg	FNBWSS041	3/34	0.33-1.9	0.24	NA	NA	NA	NA	Yes	NBKG
120-12-7	ANTHRACENE	0.004		0.15	J	mg/kg	FNBWGB011	1/34	0.33-1.9	0.15	NA	NA	NA	NA	Yes	NBKG
56-55-3	BENZO(A)ANTHRACENE	0.03		0.34	J	mg/kg	FNBWGB011	5/33	0.33-1.4	0.34	NA	NA	NA	NA	Yes	NBKG
50-32-8	BENZO(A)PYRENE	0.02		0.29	J	mg/kg	FNBWGB011	4/27	0.33-1.9	0.29	NA	NA	NA	NA	Yes	NBKG
205-99-2	BENZO(B)FLUORANTHENE	0.02		0.62	J	mg/kg	FNBWGB008	7/27	0.33-0.67	0.62	NA	NA	NA	NA	Yes	NBKG
191-24-2	BENZO(G,H,I)PERYLENE	0.04		0.25	J	mg/kg	FNBWGB015	2/27	0.33-1.9	0.25	NA	NA	NA	NA	Yes	NBKG
207-08-9	BENZO(K)FLUORANTHENE	0.02		0.55	J	mg/kg	FNBWGB011	2/27	0.33-1.9	0.55	NA	NA	NA	NA	Yes	NBKG
84-74-2	BIS(2-ETHYLHEXYL)PHTHALATE	1		1.4		mg/kg	FNBWGB016	1/34	0.33-0.73	1.4	NA	NA	NA	NA	Yes	NBKG
86-74-8	CARBZOLE			0.073	J	mg/kg	FNBWGB011			0.073	NA	NA	NA	NA	Yes	NBKG

TABLE J-1

EPA TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact

CAS Number	Chemical	Minimum (1) Concentration	Minimum Qualifier	Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background (2) Value	Screening (3) Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (4)
218-01-9	CHRYSENE	0.02		0.78	J	mg/kg	FNBWSS041	15/34	0.34-0.67	0.78	NA	NA	NA	NA	Yes	NBKG
53-70-3	DIBENZ(A,H)ANTHRACENE			0.06	J	mg/kg	FNBWGB008			0.06	NA	NA	NA	NA	Yes	NBKG
206-44-0	FLUORANTHENE	0.02		0.96		mg/kg	FNBWGB011	10/34	0.33-1.4	0.96	NA	NA	NA	NA	Yes	NBKG
86-73-7	FLUORENE	0.08		0.082	J	mg/kg	FNBWSS041	1/34	0.33-1.9	0.082	NA	NA	NA	NA	Yes	NBKG
193-39-5	INDENO(1,2,3-CD)PYRENE	0.02		0.14	J	mg/kg	FNBWGB015	1/27	0.33-1.9	0.14	NA	NA	NA	NA	Yes	NBKG
87-86-5	PENTACHLOROPHENOL	0.2		0.5	J	mg/kg	FNBWGB023	2/31	0.87-4.7	0.5	NA	NA	NA	NA	Yes	NBKG
85-01-8	PHENANTHRENE	0.006		0.49	J	mg/kg	FNBWGB011	5/34	0.33-1.9	0.49	NA	NA	NA	NA	Yes	NBKG
129-00-0	PYRENE	0.2		0.55	J	mg/kg	FNBWGB011	14/34	0.34-1.4	0.55	NA	NA	NA	NA	Yes	NBKG
	PESTICIDES/PCBS															
72-54-8	4,4'-DDD			0.24		mg/kg	FNBWSS005			0.24	NA	NA	NA	NA	Yes	NBKG
72-55-9	4,4'-DDE			0.037		mg/kg	FNBWSS005			0.037	NA	NA	NA	NA	Yes	NBKG
50-29-3	4,4'-DDT	0.003		0.21		mg/kg	FNBWSS005	3/9	0.004-0.004	0.21	NA	NA	NA	NA	Yes	NBKG
309-00-2	ALDRIN			0.0015	J	mg/kg	FNBWSS011			0.0015	NA	NA	NA	NA	Yes	NBKG
319-84-6	ALPHA-BHC	0.002		0.037	J	mg/kg	FNBWGB029	1/9	0.002-0.002	0.037	NA	NA	NA	NA	Yes	NBKG
5103-71-9	ALPHA-CHLORDANE	0.001		0.026		mg/kg	FNBWSS020	3/9	0.002-0.002	0.026	NA	NA	NA	NA	Yes	NBKG
11097-69-1	AROCLOR-1254			0.17		mg/kg	FNBWSS033			0.17	NA	NA	NA	NA	Yes	NBKG
11096-82-5	AROCLOR-1260	0.01		0.57		mg/kg	FNBWGB014	5/9	0.017-0.019	0.57	NA	NA	NA	NA	Yes	NBKG
319-85-7	BETA-BHC			0.014	J	mg/kg	FNBWGB029			0.014	NA	NA	NA	NA	Yes	NBKG
319-86-8	DELTA-BHC			0.008	J	mg/kg	FNBWGB029			0.008	NA	NA	NA	NA	Yes	NBKG
60-57-1	DIELDRIN			0.0061	J	mg/kg	FNBWSS018			0.0061	NA	NA	NA	NA	Yes	NBKG
959-98-8	ENDOSULFAN I			0.005	J	mg/kg	FNBWSS046			0.005	NA	NA	NA	NA	Yes	NBKG
33213-65-9	ENDOSULFAN II			0.0036	J	mg/kg	FNBWSS009			0.0036	NA	NA	NA	NA	Yes	NBKG
1031-07-8	ENDOSULFAN SULFATE			0.02	J	mg/kg	FNBWSS009			0.02	NA	NA	NA	NA	Yes	NBKG
72-20-8	ENDRIN	0.004		0.004	J	mg/kg	FNBWSS047	1/9	0.004-0.004	0.004	NA	NA	NA	NA	Yes	NBKG
7421-93-4	ENDRIN ALDEHYDE	0.04		0.038		mg/kg	FNBWGB014	1/9	0.004-0.004	0.038	NA	NA	NA	NA	Yes	NBKG
53494-70-5	ENDRIN KEYTONE			0.014	J	mg/kg	FNBWGB005			0.014	NA	NA	NA	NA	Yes	NBKG
58-89-9	GAMMA-BHC (LINDANE)			0.014	J	mg/kg	FNBWGB029			0.014	NA	NA	NA	NA	Yes	NBKG
5103-74-2	GAMMA-CHLORDANE	0.002		0.034		mg/kg	FNBWSS020	2/9	0.002-0.002	0.034	NA	NA	NA	NA	Yes	NBKG
76-44-8	HEPTACHLOR			0.005	J	mg/kg	FNBWSS020			0.005	NA	NA	NA	NA	Yes	NBKG
1024-57-3	HEPTACHLOR EPOXIDE			0.004	J	mg/kg	FNBWGB009			0.004	NA	NA	NA	NA	Yes	NBKG
72-43-5	METHOXYCHLOR			0.018	J	mg/kg	FNBWSS009			0.018	NA	NA	NA	NA	Yes	NBKG
	TOTAL PETROLEUM HYDROCARBONS															
8006-61-9	GASOLINE RANGE	2		1.5	Y	mg/kg	FNBWGB012	1/15	0.5-0.7	1.5	NA	NA	NA	NA	Yes	TCO
NA	DIESEL RANGE	810		7800	Y	mg/kg	FNBWGB012	16/40	1-810	7800	NA	NA	NA	NA	Yes	TCO

TABLE J-1

EPA TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact

CAS Number	Chemical	Minimum (1) Concentration	Minimum Qualifier	Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background (2) Value	Screening (3) Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (4)
NA	MOTOR OIL RANGE	65		12000	Y	mg/kg	FNBWGB009	34/40	5.9-65	12000	NA	NA	NA	NA	Yes	TCO

(1) Minimum/maximum detected concentration.
(2) N/A - Refer to supporting information for background discussion.
Background values derived 95 UCL Ambient Limits (PRC 1995b)
(3) No Screening Toxicity Values Used
(4) Rationale Codes Selection Reason:
Deletion Reason:

Above Background Levels (ABKG)
Background Levels (BKG)
No Background Levels (NBKG)
Essential Nutrient (NUT)
Toxic Components Only (TCO)
Background Levels by Wilcoxon Rank Sum Test (BKG - W)

Definitions:
N/A = Not Applicable
NL = No Limit
COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
PCB = Polychlorinated Biphenyl

TABLE J-2

EPA TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact

CAS Number	Chemical	Minimum (1) Concentration	Minimum Qualifier	Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background (2) Value	Screening (3) Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (4)
	METALS															
7429-90-5	ALUMINUM	1940		29100		mg/kg	FNBWGB013	79/79	NL	29100	35000	NA	NA	NA	No	BKG
7440-36-0	ANTIMONY	0.35		10.485		mg/kg	FNBWGB001	63/88	0.65-10	10.485	8.5	NA	NA	NA	No	BKG - W
7440-38-2	ARSENIC	0.47		25.1		mg/kg	FNBWSS003	69/79	0.24-3.8	25.1	36	NA	NA	NA	No	BKG
7440-39-3	BARIUM	13.0		474		mg/kg	FNBWSS012	79/79	NL	474	NA	NA	NA	NA	Yes	ABKG
7440-41-7	BERYLLIUM	0.022		1.6		mg/kg	FNBWSS073	61/79	0.0095-0.23	1.6	0.9	NA	NA	NA	No	BKG - W
7440-43-9	CADMIUM	0.056		3.8	J	mg/kg	FNBWSS063	6/95	0.033-10	3.8	5.2	NA	NA	NA	No	BKG
7440-70-2	CALCIUM	228		42100	J	mg/kg	FNBWSS058	95/95	NL	42100	NA	NA	NA	NA	No	NUT
7440-47-3	CHROMIUM	3.1		439.611		mg/kg	FNBWGB004	95/95	NL	439.611	140	NA	NA	NA	No	BKG - W
7440-48-4	COBALT	4.0		34.8	J	mg/kg	FNBWSS038	78/95	0.6-10	34.8	NA	NA	NA	NA	Yes	ABKG
7440-50-8	COPPER	1.6		684	J	mg/kg	FNBWSS007	93/95	10-16	684	120	NA	NA	NA	Yes	ABKG
7439-89-6	IRON	1460		130000	J	mg/kg	FNBWGB009	95/95	NL	130000	NA	NA	NA	NA	No	NUT
7439-92-1	LEAD	1.2		968	J	mg/kg	FNBWGB001	92/95	0.18-10	968	59	NA	NA	NA	Yes	ABKG
7439-95-4	MAGNESIUM	327		15700		mg/kg	FNBWSS016	79/79	NL	15700	NA	NA	NA	NA	No	NUT
7439-96-5	MANGANESE	28.5		1470		mg/kg	FNBWSS012	95/95	NL	1470	1600	NA	NA	NA	No	BKG
7439-97-6	MERCURY	0.087		10.2	J	mg/kg	FNBWGB005	63/79	0.04-0.25	10.2	2	NA	NA	NA	No	BKG
7439-98-7	MOLYBDENUM	0.17		6.8	J	mg/kg	FNBWGB009	19/79	0.11-1.5	6.8	NA	NA	NA	NA	Yes	ABKG
7440-02-0	NICKEL	1.9		169	J	mg/kg	FNBWGB009	95/96	10-10	169	130	NA	NA	NA	No	BKG - W
7440-09-7	POTASSIUM	242		23200		mg/kg	FNBWGB006	95/95	NL	23200	NA	NA	NA	NA	No	NUT
7782-49-2	SELENIUM	0.39		1.8		mg/kg	FNBWGB009	44/75	0.36-0.93	1.8	NA	NA	NA	NA	Yes	ABKG
7440-22-4	SILVER	0.16		5.776	J	mg/kg	FNBWGB004	4/95	0.093-10	5.776	NA	NA	NA	NA	Yes	ABKG
7440-23-5	SODIUM	62.3		3450	J	mg/kg	FNBWSS003	32/59	36-114	3450	NA	NA	NA	NA	No	NUT
7440-31-5	TIN	0.56		40.605		mg/kg	FNBWGB004	11/79	0.5-1.7	40.605	NA	NA	NA	NA	Yes	ABKG
7440-28-0	THALLIUM	6.5		1.6		mg/kg	FNBWSS016	16/16	NL	1.6	DL	NA	NA	NA	Yes	ABKG
7440-32-6	TITANIUM	2400		6750		mg/kg	FNBWGB009	16/16	NL	6750	NA	NA	NA	NA	Yes	ABKG
7440-62-2	VANADIUM	3.0		290.853		mg/kg	FNBWGB009	95/95	NL	290.853	190	NA	NA	NA	No	BKG - W
7440-66-6	ZINC	7.8		1980		mg/kg	FNBWSS073	95/95	NL	1980	230	NA	NA	NA	No	BKG - W
	VOLATILE ORGANIC COMPOUNDS															
78-93-3	2-BUTANONE	0.01		0.017	J	mg/kg	FNBWGB030	2/58	0.01-0.069	0.017	NA	NA	NA	NA	Yes	NBKG
67-64-1	ACETONE	0.08		0.28		mg/kg	FNBWGB016	5/58	0.01-0.088	0.28	NA	NA	NA	NA	Yes	NBKG
75-15-0	CARBON DISULFIDE	0.002		0.005	J	mg/kg	FNBWGB004	6/58	0.01-0.018	0.005	NA	NA	NA	NA	Yes	NBKG
108-88-3	TOLUENE	0.002		0.008	J	mg/kg	FNBWGB013	2/58	0.01-0.018	0.008	NA	NA	NA	NA	Yes	NBKG
1330-20-7	XYLENE (TOTAL)	0.004		0.004	J	mg/kg	FNBWGB013	1/58	0.01-0.018	0.004	NA	NA	NA	NA	Yes	NBKG
	SEMIVOLATILE ORGANIC COMPOUNDS															
120-82-1	1,2,4-TRICHLOROBENZENE	0.04		0.037	J	mg/kg	FNBWSS052	1/90	0.33-1.9	0.037	NA	NA	NA	NA	Yes	NBKG
91-57-6	2-METHYLNAPHTHALENE	0.02		0.24	J	mg/kg	FNBWSS041	3/90	0.33-1.9	0.24	NA	NA	NA	NA	Yes	NBKG
83-32-9	ACENAPHTHENE	0.02		0.02	J	mg/kg	FNBWGB001	1/90	0.33-1.9	0.02	NA	NA	NA	NA	Yes	NBKG
120-12-7	ANTHRACENE	0.004		0.15	J	mg/kg	FNBWGB011	4/89	0.33-1.9	0.15	NA	NA	NA	NA	Yes	NBKG
56-55-3	BENZO(A)ANTHRACENE	0.03		0.34	J	mg/kg	FNBWGB011	18/88	0.33-1.4	0.34	NA	NA	NA	NA	Yes	NBKG
50-32-8	BENZO(A)PYRENE	0.02		0.29	J	mg/kg	FNBWGB011	25/82	0.33-1.9	0.29	NA	NA	NA	NA	Yes	NBKG
205-99-2	BENZO(B)FLUORANTHENE	0.02		0.62	J	mg/kg	FNBWGB008	24/82	0.33-0.89	0.62	NA	NA	NA	NA	Yes	NBKG
191-24-2	BENZO(G,H,I)PERYLENE	0.03		0.25	J	mg/kg	FNBWGB015	17/82	0.33-1.9	0.25	NA	NA	NA	NA	Yes	NBKG

TABLE J-2

EPA TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact

CAS Number	Chemical	Minimum (1) Concentration	Minimum Qualifier	Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background (2) Value	Screening (3) Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (4)
207-08-9	BENZO(K)FLUORANTHENE	0.02		0.55	J	mg/kg	FNBWGB011	8/82	0.33-1.9	0.55	NA	NA	NA	NA	Yes	NBKG
84-74-2	BIS(2-ETHYLHEXYL)PHTHALATE	1		1.4		mg/kg	FNBWGB016	1/90	0.13-0.73	1.4	NA	NA	NA	NA	Yes	NBKG
86-74-8	CARBAZOLE	0.02		0.073	J	mg/kg	FNBWGB011	2/90	0.33-1.9	0.073	NA	NA	NA	NA	Yes	NBKG
218-01-9	CHRYSENE	0.02		0.78	J	mg/kg	FNBWSS041	36/90	0.34-0.89	0.78	NA	NA	NA	NA	Yes	NBKG
53-70-3	DIBENZ(A,H)ANTHRACENE	0.03		0.06	J	mg/kg	FNBWGB008	4/82	0.33-1.9	0.06	NA	NA	NA	NA	Yes	NBKG
206-44-0	FLUORANTHENE	0.02		0.96		mg/kg	FNBWGB011	40/90	0.33-1.4	0.96	NA	NA	NA	NA	Yes	NBKG
86-73-7	FLUORENE	0.08		0.082	J	mg/kg	FNBWSS041	1/90	0.33-1.9	0.082	NA	NA	NA	NA	Yes	NBKG
193-39-5	INDENO(1,2,3-CD)PYRENE	0.02		0.14	J	mg/kg	FNBWGB015	13/82	0.33-1.9	0.14	NA	NA	NA	NA	Yes	NBKG
91-20-3	NAPHTHALENE	0.2		0.24	J	mg/kg	FNBWGB001	1/90	0.33-1.9	0.24	NA	NA	NA	NA	Yes	NBKG
87-86-5	PENTACHLOROPHENOL	0.2		0.5	J	mg/kg	FNBWGB023	2/83	0.83-4.7	0.5	NA	NA	NA	NA	Yes	NBKG
85-01-8	PHENANTHRENE	0.006		0.49	J	mg/kg	FNBWGB011	15/90	0.33-1.9	0.49	NA	NA	NA	NA	Yes	NBKG
129-00-0	PYRENE	0.02		0.55	J	mg/kg	FNBWGB011	47/89	0.34-1.4	0.55	NA	NA	NA	NA	Yes	NBKG
	PESTICIDES/PCBS															
72-54-8	4,4'-DDD	0.002		0.24		mg/kg	FNBWSS005	19/84	0.003-0.005	0.24	NA	NA	NA	NA	Yes	NBKG
72-55-9	4,4'-DDE	0.002		0.037		mg/kg	FNBWSS005	11/84	0.003-0.005	0.037	NA	NA	NA	NA	Yes	NBKG
50-29-3	4,4'-DDT	0.002		0.21		mg/kg	FNBWSS005	55/85	0.003-0.005	0.21	NA	NA	NA	NA	Yes	NBKG
309-00-2	ALDRIN	0.002		0.0015	J	mg/kg	FNBWSS011	1/84	0.017-0.003	0.0015	NA	NA	NA	NA	Yes	NBKG
319-84-6	ALPHA-BHC	0.001		0.037	J	mg/kg	FNBWGB029	25/84	0.0017-0.00	0.037	NA	NA	NA	NA	Yes	NBKG
5103-71-9	ALPHA-CHLORDANE	0.001		0.026		mg/kg	FNBWSS020	35/84	0.0018-0.00	0.026	NA	NA	NA	NA	Yes	NBKG
11097-69-1	AROCLOR-1254	0.2		0.17		mg/kg	FNBWSS033	1/87	0.013-0.067	0.17	NA	NA	NA	NA	Yes	NBKG
11096-82-5	AROCLOR-1260	0.01		0.57		mg/kg	FNBWGB014	41/87	0.016-0.024	0.57	NA	NA	NA	NA	Yes	NBKG
319-85-7	BETA-BHC	0.002		0.014	J	mg/kg	FNBWGB029	13/84	0.0017-0.00	0.014	NA	NA	NA	NA	Yes	NBKG
319-86-8	DELTA-BHC	0.001		0.008	J	mg/kg	FNBWGB029	11/84	0.0017-0.00	0.008	NA	NA	NA	NA	Yes	NBKG
60-57-1	DIELDRIN	0.002		0.0061	J	mg/kg	FNBWSS018	7/84	0.003-0.005	0.0061	NA	NA	NA	NA	Yes	NBKG
959-98-8	ENDOSULFAN I	0.001		0.005	J	mg/kg	FNBWSS046	10/84	0.0017-0.00	0.005	NA	NA	NA	NA	Yes	NBKG
33213-65-9	ENDOSULFAN II	0.004		0.0036	J	mg/kg	FNBWSS009	1/85	0.003-0.005	0.0036	NA	NA	NA	NA	Yes	NBKG
1031-07-8	ENDOSULFAN SULFATE	0.002		0.02	J	mg/kg	FNBWSS009	13/85	0.003-0.005	0.02	NA	NA	NA	NA	Yes	NBKG
72-20-8	ENDRIN	0.002		0.004	J	mg/kg	FNBWSS047	7/84	0.003-0.005	0.004	NA	NA	NA	NA	Yes	NBKG
7421-93-4	ENDRIN ALDEHYDE	0.002		0.038		mg/kg	FNBWGB014	30/84	0.003-0.005	0.038	NA	NA	NA	NA	Yes	NBKG
53494-70-5	ENDRIN KETONE	0.002		0.014	J	mg/kg	FNBWGB005	18/84	0.003-0.005	0.014	NA	NA	NA	NA	Yes	NBKG
58-89-9	GAMMA-BHC (LINDANE)	0.002		0.014	J	mg/kg	FNBWGB029	19/84	0.0017-0.00	0.014	NA	NA	NA	NA	Yes	NBKG
5103-74-2	GAMMA-CHLORDANE	0.001		0.034		mg/kg	FNBWSS020	29/84	0.0018-0.00	0.034	NA	NA	NA	NA	Yes	NBKG
76-44-8	HEPTACHLOR	0.0004		0.005	J	mg/kg	FNBWSS020	4/84	0.003-0.005	0.005	NA	NA	NA	NA	Yes	NBKG
1024-57-3	HEPTACHLOR EPOXIDE	0.0004		0.004	J	mg/kg	FNBWGB009	12/84	0.003-0.005	0.004	NA	NA	NA	NA	Yes	NBKG
72-43-5	METHOXYCHLOR	0.007		0.018	J	mg/kg	FNBWSS009	3/85	0.013-0.027	0.018	NA	NA	NA	NA	Yes	NBKG
	TOTAL PETROLEUM HYDROCARBONS															
8006-61-9	GASOLINE RANGE	0.8		1.5	Y	mg/kg	FNBWGB012	2/104	0.47-2	1.5	NA	NA	NA	NA	Yes	TCO
NA	DIESEL RANGE	2		7800	Y	mg/kg	FNBWGB012	31/159	1-810	7800	NA	NA	NA	NA	Yes	TCO

TABLE J-2

EPA TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact

CAS Number	Chemical	Minimum Concentration (1)	Minimum Qualifier	Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value (2)	Screening Toxicity Value (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (4)
NA	MOTOR OIL RANGE	7		12000	Y	mg/kg	FNBWGB009	127/159	5.9-94	12000	NA	NA	NA	NA	Yes	TCO

(1) Minimum/maximum detected concentration.
(2) N/A - Refer to supporting information for background discussion.
Background values derived 95 UCL Ambient Limits (PRC 1995b)
(3) No Screening Toxicity Values Used
(4) Rationale Codes Selection Reason:
Deletion Reason:

Above Background Levels (ABKG)
Background Levels (BKG)
No Background Levels (NBKG)
Essential Nutrient (NUT)
Toxic Components Only (TCO)
Background Levels by Wilcoxon Rank Sum Test (BKG - W)

Definitions:
N/A = Not Applicable
NL = No Limit
COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
PCB = Polychlorinated Biphenyl
DL = Detection Limit

TABLE J-3

EPA TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor/Outdoor Air

CAS Number	Chemical	Minimum (1) Concentration	Minimum Qualifier	Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background (2) Value	Screening (3) Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale fo (4) Contaminant Deletion or Selection
	VOLATILE ORGANIC COMPOUNDS															
107-06-6	1,2-DICHLOROETHANE	0.01		0.7	J	UG/L	FNBWGB025	1/18	0.0005-0.0008	0.7	NA	NA	NA	NA	Yes	NBKG
78-93-3	2-BUTANONE	0.08		110		UG/L	FNBWSD029	2/18	0.002-0.015	110	NA	NA	NA	NA	Yes	NBKG
108-10-1	4-METHYL-2-PENTANONE	0.002		0.8	J	UG/L	FNBWGB001	1/18	0.002-0.003	0.8	NA	NA	NA	NA	Yes	NBKG
67-64-1	ACETONE	0.002		180		UG/L	FNBWGB025	16/18	0.007-0.008	180	NA	NA	NA	NA	Yes	NBKG
74-87-3	CHLOROMETHANE	0.004		0.7	J	UG/L	FNBWGB025	1/18	0.002-0.003	0.7	NA	NA	NA	NA	Yes	NBKG
100-41-4	ETHYLBENZENE	0.0003		0.7	J	UG/L	FNBWGB017	3/18	0.002-0.003	0.7	NA	NA	NA	NA	Yes	NBKG
108-88-3	TOLUENE	0.04		1	J	UG/L	FNBWGB017	7/18	0.002-0.002	1	NA	NA	NA	NA	Yes	NBKG
1330-20-7	XYLENE (TOTAL)	0.02		4		UG/L	FNBWGB017	4/18	0.002-0.003	4	NA	NA	NA	NA	Yes	NBKG
	SEMIVOLATILE ORGANIC COMPOUNDS															
541-73-1	1,3-DICHLOROBENZENE	0.004		0.9	J	UG/L	FNBWGB001	3/18	0.005-0.05	0.9	NA	NA	NA	NA	Yes	NBKG
120-83-2	2,4-DICHLOROPHENOL	0.03		2	J	UG/L	FNBWGB001	5/18	0.01-0.1	2	NA	NA	NA	NA	Yes	NBKG
106-44-5	4-METHYLPHENOL	0.02		6	J	UG/L	FNBWGB018	3/18	0.01-0.1	6	NA	NA	NA	NA	Yes	NBKG
83-32-9	ACENAPHTHENE	0.02		2	J	UG/L	FNBWGB019	1/18	0.01-0.1	2	NA	NA	NA	NA	Yes	NBKG
205-99-2	BENZO(B)FLUORANTHENE	0.03		2	J	UG/L	FNBWGB018	1/18	0.01-0.1	2	NA	NA	NA	NA	Yes	NBKG
103-21-1	BIS(2-ETHYLHEXYL)PHTHALATE	0.02		28		UG/L	FNBWGB015	1/18	0.004-0.04	28	NA	NA	NA	NA	Yes	NBKG
86-74-8	CARBAZOLE	1		2	J	UG/L	FNBWGB018	1/18	0.01-0.1	2	NA	NA	NA	NA	Yes	NBKG
206-44-0	FLUORANTHENE	0.02		4	J	UG/L	FNBWGB018	1/18	0.01-0.1	4	NA	NA	NA	NA	Yes	NBKG
86-30-6	N-NITROSODIPHENYLAMINE (1)	0.02		19	J	UG/L	FNBWGB018	1/17	0.01-0.1	19	NA	NA	NA	NA	Yes	NBKG
91-20-3	NAPHTHALENE	0.03		2	J	UG/L	FNBWGB019	1/18	0.01-0.1	2	NA	NA	NA	NA	Yes	NBKG
85-01-8	PHENANTHRENE	0.02		2	J	UG/L	FNBWGB018	2/18	0.01-0.1	2	NA	NA	NA	NA	Yes	NBKG
108-95-2	PHENOL	0.08		2	J	UG/L	FNBWGB004	2/18	0.01-0.1	2	NA	NA	NA	NA	Yes	NBKG
129-00-0	PYRENE	0.02		11	J	UG/L	FNBWGB018	1/18	0.01-0.1	11	NA	NA	NA	NA	Yes	NBKG
	TOTAL PETROLEUM HYDROCARBONS															
NA	DIESEL RANGE	0.2		0.6	Y	MG/L	FNBWGB018	4/18	0.09-0.1	0.6	NA	NA	NA	NA	Yes	TCO
NA	MOTOR OIL RANGE	0.2		2	Y	MG/L	FNBWGB016	4/18	0.5-0.6	2	NA	NA	NA	NA	Yes	TCO

(1) Minimum/maximum detected concentration.
(2) N/A - Refer to supporting information for background discussion.
No Background values for groundwater
(3) No Screening Toxicity Values Used
(4) Rationale Codes Selection Reason:
Deletion Reason:

Above Background Levels (ABKG)
Background Levels (BKG)
No Background Levels (NBKG)
Essential Nutrient (NUT)
Toxic Components Only (TCO)

Definitions: N/A = Not Applicable
COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered

TABLE J-4

BACKGROUND CONCENTRATIONS OF METALS CONSIDERED TO BE ESSENTIAL NUTRIENTS FORMER NORTH BUILDING WAYS AREA, MARE ISLAND

Essential Nutrient	Maximum Concentration at Former North Building Ways Area (mg/kg)	Common Range in United States (mg/kg)
Calcium	42,100	100 to 320,000[a]
Iron	130,000	7,000 to 550,000[b]
Magnesium	15,700	50 to >100,000[a]
Potassium	23,200	50 to 63,000[a]
Sodium	3,450	<500 to 100,000[a]

Notes:

a Value from Shacklette and Boerngen (1984)

b Value from Lindsay (1979)

< Less than

> Greater than

mg/kg Milligram per kilogram

TABLE J-5

AMBIENT METAL CONCENTRATIONS IN FILL SOIL
MARE ISLAND

Metal	95th Percentile - Ambient Limit (mg/kg)
Aluminum	35000
Antimony	8.5
Arsenic	36
Beryllium	0.9
Cadmium	5.2
Chromium	140
Copper	120
Lead	59
Manganese	1600
Mercury	2
Nickel	130
Thallium	At Detection Limit
Vanadium	190
Zinc	230

Source:
Technical Memorandum, Estimation of Ambient Metal Concentrations in Soil (PRC 1995b)

mg/kg Milligrams per kilogram

TABLE J-6

METALS ELIMINATED AS CHEMICALS OF POTENTIAL CONCERN BASED ON COMPARISON WITH AMBIENT LEVELS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND

Metals Eliminated from the 0-to-3 Foot Below Ground Surface Soil Interval Data Set - Maximum Concentration Less than Ambient Level	**Metals Eliminated from the 0-to-10 Feet Below Ground Surface Soil Interval Data Set - Maximum Concentration Less than Ambient Level**
Aluminum	Aluminum
Arsenic	Arsenic
Cadmium	Cadmium
Manganese	Manganese
Metals Eliminated from the 0-to-3 Foot Below Ground Surface Soil Interval Data Set - Wilcoxon Rank Sum Test Results	**Metals Eliminated from the 0-to-10 Feet Below Ground Surface Soil Interval Data Set - Wilcoxon Rank Sum Test Results**
Antimony	Antimony
Beryllium	Beryllium
Chromium	Chromium
Copper	Mercury
Mercury	Nickel
Nickel	Vanadium
Vanadium	Zinc
Zinc	

TABLE J-7

EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
METALS												
BARIUM	mg/kg	9.65E+01	1.10E+02	4.74E+02		mg/kg	1.10E+02	95UCL-T	a	9.65E+01	mean-T	a
COBALT	mg/kg	1.17E+01	1.33E+01	3.48E+01		mg/kg	1.33E+01	95UCL-T	a	1.17E+01	mean-T	a
LEAD	mg/kg	1.11E+02	1.71E+02	9.68E+02		mg/kg	1.71E+02	95UCL-T	a	1.11E+02	mean-T	a
MOLYBDENUM	mg/kg	2.82E-01	3.60E-01	6.80E+00		mg/kg	3.60E-01	95UCL-T	a	2.82E-01	mean-T	a
SELENIUM	mg/kg	5.25E-01	6.02E-01	1.80E+00		mg/kg	6.02E-01	95UCL-T	a	5.25E-01	mean-T	a
SILVER	mg/kg	3.01E-01	4.56E-01	5.78E+00		mg/kg	4.56E-01	95UCL-T	a	3.01E-01	mean-T	a
THALLIUM	mg/kg	3.96E-01	4.29E-01	1.60E+00		mg/kg	4.29E-01	95UCL-T	a	3.96E-01	mean-T	a
TIN	mg/kg	1.53E+01	2.39E+01	4.06E+01		mg/kg	2.39E+01	95UCL-T	a	1.53E+01	mean-T	a
TITANIUM	mg/kg	4.41E+03	5.16E+03	6.75E+03		mg/kg	5.16E+03	95UCL-N	b	4.41E+03	mean-N	b
VOLATILE ORGANIC COMPOUNDS												
CARBON DISULFIDE	mg/kg	2.00E-03	2.00E-03	2.00E-03		mg/kg	2.00E-03	max	c	2.00E-03	max	c
TOLUENE	mg/kg	5.59E-03	5.82E-03	8.00E-03		mg/kg	5.82E-03	95UCL	c	5.59E-03	mean	c
XYLENE (TOTAL)	mg/kg	4.00E-03	4.00E-03	4.00E-03		mg/kg	4.00E-03	max	c	4.00E-03	max	c
SEMIVOLATILE ORGANIC COMPOUNDS												
1,2,4-TRICHLOROBENZENE	mg/kg	3.70E-02	3.70E-02	3.70E-02		mg/kg	3.70E-02	max	c	3.70E-02	max	c
2-METHYLNAPHTHALENE	mg/kg	2.24E-01	2.40E-01	2.40E-01		mg/kg	2.40E-01	95UCL	c	2.24E-01	mean	c
ANTHRACENE	mg/kg	1.50E-01	1.50E-01	1.50E-01		mg/kg	1.50E-01	max	a	1.50E-01	max	a
BENZO(A)ANTHRACENE	mg/kg	2.06E-01	2.46E-01	3.40E-01		mg/kg	2.46E-01	95UCL-T	a	2.06E-01	mean-T	a
BENZO(A)PYRENE	mg/kg	2.02E-01	2.50E-01	2.90E-01		mg/kg	2.50E-01	95UCL-T	a	2.02E-01	mean-T	a
BENZO(B)FLUORANTHENE	mg/kg	2.15E-01	2.61E-01	6.20E-01		mg/kg	2.61E-01	95UCL-T	a	2.15E-01	mean-T	a
BENZO(G,H,I)PERYLENE	mg/kg	2.10E-01	2.47E-01	2.50E-01		mg/kg	2.47E-01	95UCL-T	a	2.10E-01	mean-T	a
BENZO(K)FLUORANTHENE	mg/kg	2.19E-01	2.60E-01	5.50E-01		mg/kg	2.60E-01	95UCL-T	a	2.19E-01	mean-T	a
BIS(2-ETHYLHEXYL)PHTHALATE	mg/kg	1.29E-01	1.76E-01	1.40E+00		mg/kg	1.76E-01	95UCL	c	1.29E-01	mean	c
CARBAZOLE	mg/kg	7.30E-02	7.30E-02	7.30E-02		mg/kg	7.30E-02	max	c	7.30E-02	max	c
CHRYSENE	mg/kg	1.93E-01	2.42E-01	7.80E-01		mg/kg	2.42E-01	95UCL-T	a	1.93E-01	mean-T	a
DIBENZ(A,H)ANTHRACENE	mg/kg	6.00E-02	6.00E-02	6.00E-02		mg/kg	6.00E-02	max	a	6.00E-02	max	a
FLUORANTHENE	mg/kg	2.06E-01	2.80E-01	9.60E-01		mg/kg	2.80E-01	95UCL-T	a	2.06E-01	mean-T	a
FLUORENE	mg/kg	8.20E-02	8.20E-02	8.20E-02		mg/kg	8.20E-02	max	c	8.20E-02	max	c
INDENO(1,2,3-CD)PYRENE	mg/kg	1.40E-01	1.40E-01	1.40E-01		mg/kg	1.40E-01	max	a	1.40E-01	max	a
PENTACHLOROPHENOL	mg/kg	5.00E-01	5.00E-01	5.00E-01		mg/kg	5.00E-01	max	c	5.00E-01	max	c
PHENANTHRENE	mg/kg	2.28E-01	2.88E-01	4.90E-01		mg/kg	2.88E-01	95UCL-T	a	2.28E-01	mean-T	a
PYRENE	mg/kg	1.86E-01	2.52E-01	5.50E-01		mg/kg	2.52E-01	95UCL-T	a	1.86E-01	mean-T	a
PESTICIDE/POLYCHLORINATED BIPHENYLS												
4,4'-DDD	mg/kg	2.91E-03	3.39E-03	2.40E-01		mg/kg	3.39E-03	95UCL-T	a	2.91E-03	mean-T	a
4,4'-DDE	mg/kg	2.55E-03	2.87E-03	3.70E-02		mg/kg	2.87E-03	95UCL-T	a	2.55E-03	mean-T	a
4,4'-DDT	mg/kg	9.11E-03	1.20E-02	2.10E-01		mg/kg	1.20E-02	95UCL-T	a	9.11E-03	mean-T	a
ALDRIN	mg/kg	9.90E-04	1.00E-03	1.50E-03		mg/kg	1.00E-03	95UCL	c	9.90E-04	mean	c

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
ALPHA-BHC	mg/kg	3.56E-03	4.77E-03	3.70E-02		mg/kg	4.77E-03	95UCL-T	a	3.56E-03	mean-T	a
ALPHA-CHLORDANE	mg/kg	2.36E-03	2.92E-03	2.60E-02		mg/kg	2.92E-03	95UCL-T	a	2.36E-03	mean-T	a
AROCLOR-1254	mg/kg	1.10E-02	1.42E-02	1.70E-01		mg/kg	1.42E-02	95UCL	c	1.10E-02	mean	c
AROCLOR-1260	mg/kg	3.89E-02	5.10E-02	5.70E-01		mg/kg	5.10E-02	95UCL-T	a	3.89E-02	mean-T	a
BETA-BHC	mg/kg	1.46E-03	1.64E-03	1.40E-02		mg/kg	1.64E-03	95UCL-T	a	1.46E-03	mean-T	a
DELTA-BHC	mg/kg	1.12E-03	1.20E-03	8.00E-03		mg/kg	1.20E-03	95UCL-T	a	1.12E-03	mean-T	a
DIELDRIN	mg/kg	2.04E-03	2.15E-03	6.10E-03		mg/kg	2.15E-03	95UCL-T	a	2.04E-03	mean-T	a
ENDOSULFAN I	mg/kg	1.13E-03	1.21E-03	5.00E-03		mg/kg	1.21E-03	95UCL-T	a	1.13E-03	mean-T	a
ENDOSULFAN II	mg/kg	1.89E-03	1.94E-03	3.60E-03		mg/kg	1.94E-03	95UCL	c	1.89E-03	mean	c
ENDOSULFAN SULFATE	mg/kg	2.40E-03	2.65E-03	2.00E-02		mg/kg	2.65E-03	95UCL-T	a	2.40E-03	mean-T	a
ENDRIN	mg/kg	1.96E-03	2.03E-03	4.00E-03		mg/kg	2.03E-03	95UCL-T	a	1.96E-03	mean-T	a
ENDRIN ALDEHYDE	mg/kg	3.15E-03	3.61E-03	3.80E-02		mg/kg	3.61E-03	95UCL-T	a	3.15E-03	mean-T	a
ENDRIN KETONE	mg/kg	2.48E-03	2.72E-03	1.40E-02		mg/kg	2.72E-03	95UCL-T	a	2.48E-03	mean-T	a
GAMMA-BHC	mg/kg	1.64E-03	1.89E-03	1.40E-02		mg/kg	1.89E-03	95UCL-T	a	1.64E-03	mean-T	a
GAMMA-CHLORDANE	mg/kg	2.27E-03	2.81E-03	3.40E-02		mg/kg	2.81E-03	95UCL-T	a	2.27E-03	mean-T	a
HEPTACHLOR	mg/kg	2.00E-04	2.30E-04	5.00E-03		mg/kg	2.30E-04	95UCL-T	a	2.00E-04	mean-T	a
HEPTACHLOR EPOXIDE	mg/kg	2.90E-04	3.40E-04	4.00E-03		mg/kg	3.40E-04	95UCL-T	a	2.90E-04	mean-T	a
METHOXYCHLOR	mg/kg	9.51E-03	9.79E-03	1.80E-02		mg/kg	9.79E-03	95UCL	c	9.51E-03	mean	c

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Outdoor Air/Dust

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
METALS												
BARIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	8.33E-08	NA	NA	7.33E-08	NA	NA
COBALT	mg/m^3	NA	NA	NA	NA	mg/m^3	1.01E-08	NA	NA	8.89E-09	NA	NA
LEAD	mg/m^3	NA	NA	NA	NA	mg/m^3	1.30E-07	NA	NA	8.47E-08	NA	NA
MOLYBDENUM	mg/m^3	NA	NA	NA	NA	mg/m^3	2.74E-10	NA	NA	2.14E-10	NA	NA
SELENIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	4.58E-10	NA	NA	3.99E-10	NA	NA
SILVER	mg/m^3	NA	NA	NA	NA	mg/m^3	3.47E-10	NA	NA	2.29E-10	NA	NA
THALLIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	3.26E-10	NA	NA	3.01E-10	NA	NA
TIN	mg/m^3	NA	NA	NA	NA	mg/m^3	1.82E-08	NA	NA	1.16E-08	NA	NA
TITANIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	3.92E-06	NA	NA	3.35E-06	NA	NA
VOLATILE ORGANIC COMPOUNDS												
CARBON DISULFIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.52E-12	NA	NA	1.52E-12	NA	NA
TOLUENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.42E-12	NA	NA	4.25E-12	NA	NA
XYLENE (TOTAL)	mg/m^3	NA	NA	NA	NA	mg/m^3	3.04E-12	NA	NA	3.04E-12	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS												
1,2,4-TRICHLOROBENZENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.81E-11	NA	NA	2.81E-11	NA	NA
2-METHYLNAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.82E-10	NA	NA	1.70E-10	NA	NA
ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.14E-10	NA	NA	1.14E-10	NA	NA
BENZO(A)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.87E-10	NA	NA	1.57E-10	NA	NA
BENZO(A)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.90E-10	NA	NA	1.53E-10	NA	NA
BENZO(B)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.98E-10	NA	NA	1.63E-10	NA	NA
BENZO(G,H,I)PERYLENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.88E-10	NA	NA	1.59E-10	NA	NA
BENZO(K)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.97E-10	NA	NA	1.67E-10	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.33E-10	NA	NA	9.79E-11	NA	NA

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Outdoor Air/Dust

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
CARBAZOLE	mg/m^3	NA	NA	NA	NA	mg/m^3	5.55E-11	NA	NA	5.55E-11	NA	NA
CHRYSENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.84E-10	NA	NA	1.47E-10	NA	NA
DIBENZ(A,H)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.56E-11	NA	NA	4.56E-11	NA	NA
FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.13E-10	NA	NA	1.57E-10	NA	NA
FLUORENE	mg/m^3	NA	NA	NA	NA	mg/m^3	6.23E-11	NA	NA	6.23E-11	NA	NA
INDENO(1,2,3-CD)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.06E-10	NA	NA	1.06E-10	NA	NA
PENTACHLOROPHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	3.80E-10	NA	NA	3.80E-10	NA	NA
PHENANTHRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.19E-10	NA	NA	1.74E-10	NA	NA
PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.91E-10	NA	NA	1.42E-10	NA	NA
PESTICIDE/POLYCHLORINATED BIPHENYLS												
4,4'-DDD	mg/m^3	NA	NA	NA	NA	mg/m^3	2.58E-12	NA	NA	2.21E-12	NA	NA
4,4'-DDE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.18E-12	NA	NA	1.94E-12	NA	NA
4,4'-DDT	mg/m^3	NA	NA	NA	NA	mg/m^3	9.13E-12	NA	NA	6.92E-12	NA	NA
ALDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	7.60E-13	NA	NA	7.52E-13	NA	NA
ALPHA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	3.62E-12	NA	NA	2.71E-12	NA	NA
ALPHA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.22E-12	NA	NA	1.79E-12	NA	NA
AROCLOR-1254	mg/m^3	NA	NA	NA	NA	mg/m^3	1.08E-11	NA	NA	8.37E-12	NA	NA
AROCLOR-1260	mg/m^3	NA	NA	NA	NA	mg/m^3	3.88E-11	NA	NA	2.95E-11	NA	NA
BETA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	1.25E-12	NA	NA	1.11E-12	NA	NA
DELTA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	9.12E-13	NA	NA	8.51E-13	NA	NA
DIELDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	1.63E-12	NA	NA	1.55E-12	NA	NA
ENDOSULFAN I	mg/m^3	NA	NA	NA	NA	mg/m^3	9.19E-13	NA	NA	8.59E-13	NA	NA
ENDOSULFAN II	mg/m^3	NA	NA	NA	NA	mg/m^3	1.47E-12	NA	NA	1.44E-12	NA	NA
ENDOSULFAN SULFATE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.01E-12	NA	NA	1.82E-12	NA	NA

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Outdoor Air/Dust

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
ENDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	1.54E-12	NA	NA	1.49E-12	NA	NA
ENDRIN ALDEHYDE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.74E-12	NA	NA	2.39E-12	NA	NA
ENDRIN KETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.07E-12	NA	NA	1.88E-12	NA	NA
GAMMA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	1.44E-12	NA	NA	1.25E-12	NA	NA
GAMMA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.14E-12	NA	NA	1.72E-12	NA	NA
HEPTACHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	1.75E-13	NA	NA	1.52E-13	NA	NA
HEPTACHLOR EPOXIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.58E-13	NA	NA	2.20E-13	NA	NA
METHOXYCHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	7.44E-12	NA	NA	7.23E-12	NA	NA

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
METALS												
BARIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
COBALT	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
LEAD	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
MOLYBDENUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
SELENIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
SILVER	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
THALLIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
TIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
TITANIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
VOLATILE ORGANIC COMPOUNDS												
CARBON DISULFIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.30E-02	NA	NA	2.30E-02	NA	NA
TOLUENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.56E-02	NA	NA	2.46E-02	NA	NA
XYLENE (TOTAL)	mg/m^3	NA	NA	NA	NA	mg/m^3	1.63E-03	NA	NA	1.63E-03	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS												
1,2,4-TRICHLOROBENZENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.52E-02	NA	NA	4.52E-02	NA	NA
2-METHYLNAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.78E-01	NA	NA	1.66E-01	NA	NA
ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.74E-03	NA	NA	2.74E-03	NA	NA
BENZO(A)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(A)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(B)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(G,H,I)PERYLENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(K)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BIS(2-ETHYLHEXYL)PHTHALATE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
CARBAZOLE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
CHRYSENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
DIBENZ(A,H)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
FLUORENE	mg/m^3	NA	NA	NA	NA	mg/m^3	3.40E-03	NA	NA	3.40E-03	NA	NA
INDENO(1,2,3-CD)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
PENTACHLOROPHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
PHENANTHRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	NA
PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	9.61E-04	NA	NA	7.11E-04	NA	NA
PESTICIDE/POLYCHLORINATED BIPHENYLS												
4,4'-DDD	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
4,4'-DDE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
4,4'-DDT	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ALDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ALPHA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ALPHA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
AROCLOR-1254	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
AROCLOR-1260	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BETA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
DELTA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
DIELDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDOSULFAN I	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDOSULFAN II	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC

TABLE J-7

EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
ENDOSULFAN SULFATE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDRIN ALDEHYDE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDRIN KETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
GAMMA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
GAMMA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
HEPTACHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
HEPTACHLOR EPOXIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
METHOXYCHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC

TABLE J-7

EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
METALS												
BARIUM	mg/kg	9.67E+01	1.09E+02	4.74E+02		mg/kg	1.09E+02	95UCL-T	a	9.67E+01	mean-T	a
COBALT	mg/kg	1.15E+01	1.29E+01	3.48E+01		mg/kg	1.29E+01	95UCL-T	a	1.15E+01	mean-T	a
COPPER	mg/kg	5.99E+01	7.13E+01	6.84E+02		mg/kg	7.13E+01	95UCL-T	a	5.99E+01	mean-T	a
LEAD	mg/kg	9.96E+01	1.47E+02	9.68E+02		mg/kg	1.47E+02	95UCL-T	a	9.96E+01	mean-T	a
MOLYBDENUM	mg/kg	2.99E-01	3.81E-01	6.80E+00		mg/kg	3.81E-01	95UCL-T	a	2.99E-01	mean-T	a
SELENIUM	mg/kg	5.18E-01	5.90E-01	1.80E+00		mg/kg	5.90E-01	95UCL-T	a	5.18E-01	mean-T	a
SILVER	mg/kg	5.63E-01	9.22E-01	5.78E+00		mg/kg	9.22E-01	95UCL-T	a	5.63E-01	mean-T	a
THALLIUM	mg/kg	4.14E-01	4.51E-01	1.60E+00		mg/kg	4.51E-01	95UCL-T	a	4.14E-01	mean-T	a
TIN	mg/kg	1.40E+01	1.78E+01	4.06E+01		mg/kg	1.78E+01	95UCL-T	a	1.40E+01	mean-T	a
TITANIUM	mg/kg	4.25E+03	4.77E+03	6.75E+03		mg/kg	4.77E+03	95UCL-N	b	4.25E+03	mean-N	b
VOLATILE ORGANIC COMPOUNDS												
2-BUTANONE	mg/kg	7.48E-03	8.66E-03	1.70E-02		mg/kg	8.66E-03	95UCL	c	7.48E-03	mean	c
ACETONE	mg/kg	1.71E-02	2.34E-02	2.80E-01		mg/kg	2.34E-02	95UCL-T	a	1.71E-02	mean-T	a
CARBON DISULFIDE	mg/kg	5.00E-03	5.00E-03	5.00E-03		mg/kg	5.00E-03	max	a	5.00E-03	max	a
TOLUENE	mg/kg	6.11E-03	6.37E-03	8.00E-03		mg/kg	6.37E-03	95UCL	c	6.11E-03	mean	c
XYLENE (TOTAL)	mg/kg	4.00E-03	4.00E-03	4.00E-03		mg/kg	4.00E-03	max	c	4.00E-03	max	c
SEMIVOLATILE ORGANIC COMPOUNDS												
1,2,4-TRICHLOROBENZENE	mg/kg	3.70E-02	3.70E-02	3.70E-02		mg/kg	3.70E-02	max	c	3.70E-02	max	c
2-METHYLNAPHTHALENE	mg/kg	2.35E-01	2.40E-01	2.40E-01		mg/kg	2.40E-01	95UCL	c	2.35E-01	mean	c
ACENAPHTHENE	mg/kg	2.00E-02	2.00E-02	2.00E-02		mg/kg	2.00E-02	max	c	2.00E-02	max	c
ANTHRACENE	mg/kg	1.50E-01	1.50E-01	1.56E-01		mg/kg	1.50E-01	max	a	1.50E-01	max	a
BENZO(A)ANTHRACENE	mg/kg	2.17E-01	2.48E-01	3.40E-01		mg/kg	2.48E-01	95UCL-T	a	2.17E-01	mean-T	a
BENZO(A)PYRENE	mg/kg	2.02E-01	2.35E-01	2.90E-01		mg/kg	2.35E-01	95UCL-T	a	2.02E-01	mean-T	a
BENZO(B)FLUORANTHENE	mg/kg	2.16E-01	2.49E-01	6.20E-01		mg/kg	2.49E-01	95UCL-T	a	2.16E-01	mean-T	a
BENZO(G,H,I)PERYLENE	mg/kg	2.08E-01	2.37E-01	2.50E-01		mg/kg	2.37E-01	95UCL-T	a	2.08E-01	mean-T	a
BENZO(K)FLUORANTHENE	mg/kg	2.32E-01	2.59E-01	5.50E-01		mg/kg	2.59E-01	95UCL-T	a	2.32E-01	mean-T	a
BIS(2-ETHYLHEXYL)PHTHALATE	mg/kg	1.19E-01	1.44E-01	1.40E+00		mg/kg	1.44E-01	95UCL	c	1.19E-01	mean	c
CARBAZOLE	mg/kg	7.30E-02	7.30E-02	7.30E-02		mg/kg	7.30E-02	max	c	7.30E-02	max	c
CHRYSENE	mg/kg	2.04E-01	2.43E-01	7.80E-01		mg/kg	2.43E-01	95UCL-T	a	2.04E-01	mean-T	a
DIBENZ(A,H)ANTHRACENE	mg/kg	6.00E-02	6.00E-02	6.00E-02		mg/kg	6.00E-02	max	a	6.00E-02	max	a
FLUORANTHENE	mg/kg	1.83E-01	2.23E-01	9.60E-01		mg/kg	2.23E-01	95UCL-T	a	1.83E-01	mean-T	a
FLUORENE	mg/kg	8.20E-02	8.20E-02	8.20E-02		mg/kg	8.20E-02	max	c	8.20E-02	max	c
INDENO(1,2,3-CD)PYRENE	mg/kg	1.40E-01	1.40E-01	1.40E-01		mg/kg	1.40E-01	max	a	1.40E-01	max	a
NAPHTHALENE	mg/kg	2.40E-01	2.40E-01	2.40E-01		mg/kg	2.40E-01	max	c	2.40E-01	max	c
PENTACHLOROPHENOL	mg/kg	5.00E-01	5.00E-01	5.00E-01		mg/kg	5.00E-01	max	c	5.00E-01	max	c
PHENANTHRENE	mg/kg	2.28E-01	2.65E-01	4.90E-01		mg/kg	2.65E-01	95UCL-T	a	2.28E-01	mean-T	a

TABLE J-7

EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
PYRENE	mg/kg	1.71E-01	2.05E-01	5.50E-01		mg/kg	2.05E-01	95UCL-T	a	1.71E-01	mean-T	a
PESTICIDE/POLYCHLORINATED BIPHENYLS												
4,4'-DDD	mg/kg	2.86E-03	3.30E-03	2.40E-01		mg/kg	3.30E-03	95UCL-T	a	2.86E-03	mean-T	a
4,4'-DDE	mg/kg	2.54E-03	2.82E-03	3.70E-02		mg/kg	2.82E-03	95UCL-T	a	2.54E-03	mean-T	a
4,4'-DDT	mg/kg	8.46E-03	1.10E-02	2.10E-01		mg/kg	1.10E-02	95UCL-T	a	8.46E-03	mean-T	a
ALDRIN	mg/kg	1.01E-03	1.03E-03	1.50E-03		mg/kg	1.03E-03	95UCL	c	1.01E-03	mean	c
ALPHA-BHC	mg/kg	3.33E-03	4.35E-03	3.70E-02		mg/kg	4.35E-03	95UCL-T	a	3.33E-03	mean-T	a
ALPHA-CHLORDANE	mg/kg	2.26E-03	2.74E-03	2.60E-02		mg/kg	2.74E-03	95UCL-T	a	2.26E-03	mean-T	a
AROCLOR-1254	mg/kg	1.10E-02	1.40E-02	1.70E-01		mg/kg	1.40E-02	95UCL	c	1.10E-02	mean	c
AROCLOR-1260	mg/kg	3.79E-02	4.89E-02	5.70E-01		mg/kg	4.89E-02	95UCL-T	a	3.79E-02	mean-T	a
BETA-BHC	mg/kg	1.44E-03	1.61E-03	1.40E-02		mg/kg	1.61E-03	95UCL-T	a	1.44E-03	mean-T	a
DELTA-BHC	mg/kg	1.13E-03	1.21E-03	8.00E-03		mg/kg	1.21E-03	95UCL-T	a	1.13E-03	mean-T	a
DIELDRIN	mg/kg	2.07E-03	2.17E-03	6.10E-03		mg/kg	2.17E-03	95UCL-T	a	2.07E-03	mean-T	a
ENDOSULFAN I	mg/kg	1.14E-03	1.21E-03	5.00E-03		mg/kg	1.21E-03	95UCL-T	a	1.14E-03	mean-T	a
ENDOSULFAN II	mg/kg	1.92E-03	1.97E-03	3.60E-03		mg/kg	1.97E-03	95UCL	c	1.92E-03	mean	c
ENDOSULFAN SULFATE	mg/kg	2.40E-03	2.63E-03	2.00E-02		mg/kg	2.63E-03	95UCL-T	a	2.40E-03	mean-T	a
ENDRIN	mg/kg	1.98E-03	2.05E-03	4.00E-03		mg/kg	2.05E-03	95UCL-T	a	1.98E-03	mean-T	a
ENDRIN ALDEHYDE	mg/kg	3.09E-03	3.49E-03	3.80E-02		mg/kg	3.49E-03	95UCL-T	a	3.09E-03	mean-T	a
ENDRIN KETONE	mg/kg	2.47E-03	2.69E-03	1.40E-02		mg/kg	2.69E-03	95UCL-T	a	2.47E-03	mean-T	a
GAMMA-BHC (LINDANE)	mg/kg	1.61E-03	1.83E-03	1.40E-02		mg/kg	1.83E-03	95UCL-T	a	1.61E-03	mean-T	a
GAMMA-CHLORDANE	mg/kg	2.18E-03	2.65E-03	3.40E-02		mg/kg	2.65E-03	95UCL-T	a	2.18E-03	mean-T	a
HEPTACHLOR	mg/kg	2.00E-04	2.30E-04	5.00E-03		mg/kg	2.30E-04	95UCL-T	a	2.00E-04	mean-T	a
HEPTACHLOR EPOXIDE	mg/kg	2.80E-04	3.30E-04	4.00E-03		mg/kg	3.30E-04	95UCL-T	a	2.80E-04	mean-T	a
METHOXYCHLOR	mg/kg	9.68E-03	9.97E-03	1.80E-02		mg/kg	9.97E-03	95UCL	c	9.68E-03	mean	c

TABLE J-7

EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Outdoor/Dust

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
METALS												
BARIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	8.31E-08	NA	NA	7.35E-08	NA	NA
COBALT	mg/m^3	NA	NA	NA	NA	mg/m^3	9.84E-09	NA	NA	8.70E-09	NA	NA
COPPER	mg/m^3	NA	NA	NA	NA	mg/m^3	5.42E-08	NA	NA	4.55E-08	NA	NA
LEAD	mg/m^3	NA	NA	NA	NA	mg/m^3	1.12E-07	NA	NA	7.57E-08	NA	NA
MOLYBDENUM	mg/m^3	NA	NA	NA	NA	mg/m^3	2.90E-10	NA	NA	2.28E-10	NA	NA
SELENIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	4.49E-10	NA	NA	3.94E-10	NA	NA
SILVER	mg/m^3	NA	NA	NA	NA	mg/m^3	7.01E-10	NA	NA	4.28E-10	NA	NA
THALLIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	3.43E-10	NA	NA	3.15E-10	NA	NA
TIN	mg/m^3	NA	NA	NA	NA	mg/m^3	1.35E-08	NA	NA	1.07E-08	NA	NA
TITANIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	3.62E-06	NA	NA	3.23E-06	NA	NA
VOLATILE ORGANIC COMPOUNDS												
2-BUTANONE	mg/m^3	NA	NA	NA	NA	mg/m^3	6.58E-12	NA	NA	5.68E-12	NA	NA
ACETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.78E-11	NA	NA	1.30E-11	NA	NA
CARBON DISULFIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	3.80E-12	NA	NA	3.80E-12	NA	NA
TOLUENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.84E-12	NA	NA	4.64E-12	NA	NA
XYLENE (TOTAL)	mg/m^3	NA	NA	NA	NA	mg/m^3	3.04E-12	NA	NA	3.04E-12	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS												
1,2,4-TRICHLOROBENZENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.81E-11	NA	NA	2.81E-11	NA	NA
2-METHYLNAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.82E-10	NA	NA	1.79E-10	NA	NA
ACENAPHTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.52E-11	NA	NA	1.52E-11	NA	NA
ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.14E-10	NA	NA	1.14E-10	NA	NA
BENZO(A)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.89E-10	NA	NA	1.65E-10	NA	NA
BENZO(A)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.79E-10	NA	NA	1.53E-10	NA	NA

TABLE J-7

EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Outdoor/Dust

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
BENZO(B)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.89E-10	NA	NA	1.64E-10	NA	NA
BENZO(G,H,I)PERYLENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.80E-10	NA	NA	1.58E-10	NA	NA
BENZO(K)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.97E-10	NA	NA	1.77E-10	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.10E-10	NA	NA	9.02E-11	NA	NA
CARBAZOLE	mg/m^3	NA	NA	NA	NA	mg/m^3	5.55E-11	NA	NA	5.55E-11	NA	NA
CHRYSENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.85E-10	NA	NA	1.55E-10	NA	NA
DIBENZ(A,H)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.56E-11	NA	NA	4.56E-11	NA	NA
FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.69E-10	NA	NA	1.39E-10	NA	NA
FLUORENE	mg/m^3	NA	NA	NA	NA	mg/m^3	6.23E-11	NA	NA	6.23E-11	NA	NA
INDENO(1,2,3-CD)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.06E-10	NA	NA	1.06E-10	NA	NA
NAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.82E-10	NA	NA	1.82E-10	NA	NA
PENTACHLOROPHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	3.80E-10	NA	NA	3.80E-10	NA	NA
PHENANTHRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.01E-10	NA	NA	1.74E-10	NA	NA
PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.56E-10	NA	NA	1.30E-10	NA	NA
PESTICIDE/POLYCHLORINATED BIPHENYLS												
4,4'-DDD	mg/m^3	NA	NA	NA	NA	mg/m^3	2.51E-12	NA	NA	2.17E-12	NA	NA
4,4'-DDE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.14E-12	NA	NA	1.93E-12	NA	NA
4,4'-DDT	mg/m^3	NA	NA	NA	NA	mg/m^3	8.32E-12	NA	NA	6.43E-12	NA	NA
ALDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	7.83E-13	NA	NA	7.67E-13	NA	NA
ALPHA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	3.31E-12	NA	NA	2.53E-12	NA	NA
ALPHA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.08E-12	NA	NA	1.72E-12	NA	NA
AROCLOR-1254	mg/m^3	NA	NA	NA	NA	mg/m^3	1.06E-11	NA	NA	8.37E-12	NA	NA
AROCLOR-1260	mg/m^3	NA	NA	NA	NA	mg/m^3	3.72E-11	NA	NA	2.88E-11	NA	NA
BETA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	1.22E-12	NA	NA	1.09E-12	NA	NA

TABLE J-7

EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Outdoor/Dust

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
DELTA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	9.19E-13	NA	NA	8.59E-13	NA	NA
DIELDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	1.65E-12	NA	NA	1.57E-12	NA	NA
ENDOSULFAN I	mg/m^3	NA	NA	NA	NA	mg/m^3	9.19E-13	NA	NA	8.66E-13	NA	NA
ENDOSULFAN II	mg/m^3	NA	NA	NA	NA	mg/m^3	1.50E-12	NA	NA	1.46E-12	NA	NA
ENDOSULFAN SULFATE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.00E-12	NA	NA	1.82E-12	NA	NA
ENDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	1.56E-12	NA	NA	1.50E-12	NA	NA
ENDRIN ALDEHYDE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.65E-12	NA	NA	2.35E-12	NA	NA
ENDRIN KETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.04E-12	NA	NA	1.88E-12	NA	NA
GAMMA-BHC (LINDANE)	mg/m^3	NA	NA	NA	NA	mg/m^3	1.39E-12	NA	NA	1.22E-12	NA	NA
GAMMA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.01E-12	NA	NA	1.66E-12	NA	NA
HEPTACHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	1.75E-13	NA	NA	1.52E-13	NA	NA
HEPTACHLOR EPOXIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.51E-13	NA	NA	2.13E-13	NA	NA
METHOXYCHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	7.58E-12	NA	NA	7.36E-12	NA	NA

TABLE J-7

EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
METALS												
BARIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
COBALT	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
COPPER	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
LEAD	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
MOLYBDENUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
SELENIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
SILVER	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
THALLIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
TIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
TITANIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
VOLATILE ORGANIC COMPOUNDS												
2-BUTANONE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.98E-04	NA	NA	1.71E-04	NA	NA
ACETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.76E-04	NA	NA	3.48E-04	NA	NA
CARBON DISULFIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	5.75E-02	NA	NA	5.75E-02	NA	NA
TOLUENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.80E-02	NA	NA	2.69E-02	NA	NA
XYLENE (TOTAL)	mg/m^3	NA	NA	NA	NA	mg/m^3	1.63E-03	NA	NA	1.63E-03	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS												
1,2,4-TRICHLOROBENZENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.52E-02	NA	NA	4.52E-02	NA	NA
2-METHYLNAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.78E-01	NA	NA	1.74E-01	NA	NA
ACENAPHTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.31E-02	NA	NA	1.31E-02	NA	NA
ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.74E-03	NA	NA	2.74E-03	NA	NA
BENZO(A)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(A)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(B)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
BENZO(G,H,I)PERYLENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(K)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BIS(2-ETHYLHEXYL)PHTHALATE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
CARBAZOLE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
CHRYSENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
DIBENZ(A,H)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
FLUORENE	mg/m^3	NA	NA	NA	NA	mg/m^3	3.40E-03	NA	NA	3.40E-03	NA	NA
INDENO(1,2,3-CD)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
NAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	5.18E-03	NA	NA	5.18E-03	NA	NA
PENTACHLOROPHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
PHENANTHRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.87E-03	NA	NA	4.20E-03	NA	NA
PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	7.83E-04	NA	NA	6.52E-04	NA	NA
PESTICIDE/POLYCHLORINATED BIPHENYLS												
4,4'-DDD	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
4,4'-DDE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
4,4'-DDT	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ALDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ALPHA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ALPHA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
AROCLOR-1254	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
AROCLOR-1260	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BETA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
DELTA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
DIELDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDOSULFAN I	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDOSULFAN II	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDOSULFAN SULFATE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDRIN ALDEHYDE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDRIN KETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
GAMMA-BHC (LINDANE)	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
GAMMA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
HEPTACHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
HEPTACHLOR EPOXIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
METHOXYCHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Outdoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
METALS												
BARIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
COBALT	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
COPPER	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
LEAD	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
MOLYBDENUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
SELENIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
SILVER	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
THALLIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
TIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
TITANIUM	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
VOLATILE ORGANIC COMPOUNDS												
2-BUTANONE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.85E-07	NA	NA	1.60E-07	NA	NA
ACETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.47E-07	NA	NA	3.26E-07	NA	NA
CARBON DISULFIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	5.40E-05	NA	NA	5.40E-05	NA	NA
TOLUENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.62E-05	NA	NA	2.52E-05	NA	NA
XYLENE (TOTAL)	mg/m^3	NA	NA	NA	NA	mg/m^3	1.52E-06	NA	NA	1.52E-06	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS												
1,2,4-TRICHLOROBENZENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.23E-05	NA	NA	4.23E-05	NA	NA
2-METHYLNAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.67E-04	NA	NA	1.63E-04	NA	NA
ACENAPHTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.22E-05	NA	NA	1.22E-05	NA	NA
ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.57E-06	NA	NA	2.57E-06	NA	NA
BENZO(A)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(A)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(B)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Outdoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
BENZO(G,H,I)PERYLENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(K)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BIS(2-ETHYLHEXYL)PHTHALATE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
CARBAZOLE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
CHRYSENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
DIBENZ(A,H)ANTHRACENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
FLUORENE	mg/m^3	NA	NA	NA	NA	mg/m^3	3.18E-06	NA	NA	3.18E-06	NA	NA
INDENO(1,2,3-CD)PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
NAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.84E-06	NA	NA	4.84E-06	NA	NA
PENTACHLOROPHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
PHENANTHRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.55E-06	NA	NA	3.93E-06	NA	NA
PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	7.33E-07	NA	NA	6.10E-07	NA	NA
PESTICIDE/POLYCHLORINATED BIPHENYLS												
4,4'-DDD	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
4,4'-DDE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
4,4'-DDT	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ALDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ALPHA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ALPHA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
AROCLOR-1254	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
AROCLOR-1260	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BETA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
DELTA-BHC	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Outdoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
DIELDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDOSULFAN I	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDOSULFAN II	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDOSULFAN SULFATE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDRIN	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDRIN ALDEHYDE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ENDRIN KETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
GAMMA-BHC (LINDANE)	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
GAMMA-CHLORDANE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
HEPTACHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
HEPTACHLOR EPOXIDE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
METHOXYCHLOR	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC

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EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED AND UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Groundwater
Exposure Point:	Groundwater

Chemical of Potential Concern	Units	Mean	95% UCL of	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
VOLATILE ORGANIC COMPOUNDS												
1,2-DICHLOROETHANE	mg/L	2.80E-04	3.30E-04	7.0E-04		mg/L	3.30E-04	95UCL	c	2.80E-04	mean	c
2-BUTANONE	mg/L	9.42E-03	1.98E-02	1.1E-01		mg/L	1.98E-02	95UCL	c	9.42E-03	mean	c
4-METHYL-2-PENTANONE	mg/L	8.00E-04	8.00E-04	8.0E-04		mg/L	8.00E-04	max	c	8.00E-04	max	c
ACETONE	mg/L	6.84E-02	8.79E-02	1.8E-01		mg/L	8.79E-02	95UCL-N	b	6.84E-02	mean-N	b
CHLOROMETHANE	mg/L	7.00E-04	7.00E-04	7.0E-04		mg/L	7.00E-04	max	c	7.00E-04	max	c
ETHYLBENZENE	mg/L	7.00E-04	7.00E-04	7.0E-04		mg/L	7.00E-04	max	c	7.00E-04	max	c
TOLUENE	mg/L	8.30E-04	1.00E-03	1.0E-03		mg/L	1.00E-03	95UCL-T	a	8.30E-04	mean-T	a
XYLENE (TOTAL)	mg/L	1.26E-03	1.54E-03	4.0E-03		mg/L	1.54E-03	95UCL-T	a	1.26E-03	mean-T	a
SEMIVOLATILE ORGANIC COMPOUNDS												
1,3-DICHLOROBENZENE	mg/L	9.00E-04	9.00E-04	9.0E-04		mg/L	9.00E-04	max	c	9.00E-04	max	c
2,4-DICHLOROPHENOL	mg/L	2.00E-03	2.00E-03	2.0E-03		mg/L	2.00E-03	max	a	2.00E-03	max	a
4-METHYLPHENOL	mg/L	6.00E-03	6.00E-03	6.0E-03		mg/L	6.00E-03	max	c	6.00E-03	max	c
ACENAPHTHENE	mg/L	2.00E-03	2.00E-03	2.0E-03		mg/L	2.00E-03	max	c	2.00E-03	max	c
BENZO(B)FLUORANTHENE	mg/L	2.00E-03	2.00E-03	2.0E-03		mg/L	2.00E-03	max	c	2.00E-03	max	c
BIS(2-ETHYLHEXYL)PHTHALATE	mg/L	4.92E-03	7.85E-03	2.8E-02		mg/L	7.85E-03	95UCL	c	4.92E-03	mean	c
CARBAZOLE	mg/L	2.00E-03	2.00E-03	2.0E-03		mg/L	2.00E-03	max	c	2.00E-03	max	c
FLUORANTHENE	mg/L	4.00E-03	4.00E-03	4.0E-03		mg/L	4.00E-03	max	c	4.00E-03	max	c
N-NITROSODIPHENYLAMINE (1)	mg/L	8.83E-03	1.32E-02	1.9E-02		mg/L	1.32E-02	95UCL	c	8.83E-03	mean	c
NAPHTHALENE	mg/L	2.00E-03	2.00E-03	2.0E-03		mg/L	2.00E-03	max	c	2.00E-03	max	c
PHENANTHRENE	mg/L	2.00E-03	2.00E-03	2.0E-03		mg/L	2.00E-03	max	c	2.00E-03	max	c
PHENOL	mg/L	2.00E-03	2.00E-03	2.0E-03		mg/L	2.00E-03	max	c	2.00E-03	max	c
PYRENE	mg/L	8.39E-03	1.10E-02	1.1E-02		mg/L	1.10E-02	95UCL	c	8.39E-03	mean	c

TABLE J-7

EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED AND UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
VOLATILE ORGANIC COMPOUNDS												
1,2-DICHLOROETHANE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.02E-05	NA	NA	8.69E-06	NA	NA
2-BUTANONE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.23E-04	NA	NA	1.06E-04	NA	NA
4-METHYL-2-PENTANONE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.41E-05	NA	NA	1.41E-05	NA	NA
ACETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	9.67E-04	NA	NA	7.53E-04	NA	NA
CHLOROMETHANE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.36E-05	NA	NA	1.36E-05	NA	NA
ETHYLBENZENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.62E-05	NA	NA	1.62E-05	NA	NA
TOLUENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.55E-05	NA	NA	2.12E-05	NA	NA
XYLENE (TOTAL)	mg/m^3	NA	NA	NA	NA	mg/m^3	3.35E-05	NA	NA	2.74E-05	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS												
1,3-DICHLOROBENZENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.10E-05	NA	NA	2.10E-05	NA	NA
2,4-DICHLOROPHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
4-METHYLPHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ACENAPHTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(B)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BIS(2-ETHYLHEXYL)PHTHALATE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
CARBAZOLE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
N-NITROSODIPHENYLAMINE (1)	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
NAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.32E-05	NA	NA	4.32E-05	NA	NA
PHENANTHRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.60E-05	NA	NA	1.60E-05	NA	NA
PHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.93E-05	NA	NA	2.24E-05	NA	NA

TABLE J-7

EPA TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
FORMER NORTH BUILDING WAYS AREA MODIFIED AND UNCHANGED SITE CONFIGURATION

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Outdoor Air/VOCs

Chemical of Potential Concern	Units	Mean	95% UCL	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency Exposure		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
VOLATILE ORGANIC COMPOUNDS												
1,2-DICHLOROETHANE	mg/m^3	NA	NA	NA	NA	mg/m^3	9.56E-09	NA	NA	8.11E-09	NA	NA
2-BUTANONE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.08E-07	NA	NA	9.90E-08	NA	NA
4-METHYL-2-PENTANONE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.32E-08	NA	NA	1.32E-08	NA	NA
ACETONE	mg/m^3	NA	NA	NA	NA	mg/m^3	9.06E-07	NA	NA	7.05E-07	NA	NA
CHLOROMETHANE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.27E-08	NA	NA	1.27E-08	NA	NA
ETHYLBENZENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.51E-08	NA	NA	1.51E-08	NA	NA
TOLUENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.38E-08	NA	NA	1.98E-08	NA	NA
XYLENE (TOTAL)	mg/m^3	NA	NA	NA	NA	mg/m^3	3.13E-08	NA	NA	2.56E-08	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS												
1,3-DICHLOROBENZENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.96E-08	NA	NA	1.96E-08	NA	NA
2,4-DICHLOROPHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
4-METHYLPHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
ACENAPHTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BENZO(B)FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
BIS(2-ETHYLHEXYL)PHTHALATE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
CARBAZOLE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
FLUORANTHENE	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
N-NITROSODIPHENYLAMINE (1)	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
NAPHTHALENE	mg/m^3	NA	NA	NA	NA	mg/m^3	4.03E-08	NA	NA	4.03E-08	NA	NA
PHENANTHRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	1.50E-08	NA	NA	1.50E-08	NA	NA
PHENOL	mg/m^3	NA	NA	NA	NA	mg/m^3	--	NA	Not a VOC	--	NA	Not a VOC
PYRENE	mg/m^3	NA	NA	NA	NA	mg/m^3	2.74E-08	NA	NA	2.09E-08	NA	NA

Notes:
a = Data are log-normally distributed
b = Data are normally distributed
c = Data not tested for distribution
T = Log transformed data
N = Normal data
max = maximum value
bgs = Below ground surface

EPC = Exposure point concentration
ft. = Foot
mg/l = Milligrams per liter
mg/m^3 = Milligrams per cubic meter
NA = EPC derived from soil exposure point concentrations using a volatilization factor
VOC = Volatile Organic Compound

TABLE J-8

EPA TABLE 1
SELECTION OF EXPOSURE PATHWAYS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On Site/ Off Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current	Soil / Groundwater	Soil / Groundwater	The Site Soils and Shallow Groundwater	None	None	None	On Site	None	No current receptors other than environmental investigation personnel
Future	Soil	Soil	The Site Surface Soils - Unchanged Site Configuration	Hypothetical Residental	Adult	Incidental Ingestion	On Site	Quant.	Although the Site is located within the North Light Industry Area (City of Vallejo 1994) and reuse is limited to light industrial/warehouse purposes, residential re-use was addressed to support other land use options.
						Dermal Contact	On Site	Quant.	Although the Site is located within the North Light Industry Area (City of Vallejo 1994) and reuse is limited to light industrial/warehouse purposes, residential re-use was addressed to support other land use options.
						Inhalation of Particulates	On Site	Quant.	Although the Site is located within the North Light Industry Area (City of Vallejo 1994) and reuse is limited to light industrial/warehouse purposes, residential re-use was addressed to support other land use options.
						Inhalation of Volatiles	On Site	Quant.	Although the Site is located within the North Light Industry Area (City of Vallejo 1994) and reuse is limited to light industrial/warehouse purposes, residential re-use was addressed to support other land use options.
					Child	Incidental Ingestion	On Site	Quant.	Although the Site is located within the North Light Industry Area (City of Vallejo 1994) and reuse is limited to light industrial/warehouse purposes, residential re-use was addressed to support other land use options.
						Dermal Contact	On Site	Quant.	Although the Site is located within the North Light Industry Area (City of Vallejo 1994) and reuse is limited to light industrial/warehouse purposes, residential re-use was addressed to support other land use options.
						Inhalation of Particulates	On Site	Quant.	Although the Site is located within the North Light Industry Area (City of Vallejo 1994) and reuse is limited to light industrial/warehouse purposes, residential re-use was addressed to support other land use options.
						Inhalation of Volatiles	On Site	Quant.	Although the Site is located within the North Light Industry Area (City of Vallejo 1994) and reuse is limited to light industrial/warehouse purposes, residential re-use was addressed to support other land use options.
				Commercial / Industrial Worker	Adult	Incidental Ingestion	On Site	Quant.	Commercial use of the Site is consistent with planned future re-use (City of Vallejo 1994)
						Dermal Contact	On Site	Quant.	Commercial use of the Site is consistent with planned future re-use (City of Vallejo 1994)
						Inhalation of Particulates	On Site	Quant.	Commercial use of the Site is consistent with planned future re-use (City of Vallejo 1994)

TABLE J-8

EPA TABLE 1
SELECTION OF EXPOSURE PATHWAYS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On Site/ Off Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Future	Soil	Soil	The Site Surface Soils - Unchanged Site Configuration	Commercial / Industrial Worker	Adult	Inhalation of Volatiles	On Site	Quant.	Commercial use of the Site is consistent with planned future re-use (City of Vallejo 1994). Volatile organic compounds have been detected in soils
	Soil	Produce	Homegrown Produce	Hypothetical Residental	Adult	Ingestion	On Site	Qual.	This exposure pathway is considered to be overestimate of potential exposures for an unlikely receptor
					Child	Ingestion	On Site	Qual.	This exposure pathway is considered to be overestimate of potential exposures for an unlikely receptor
	Soil	Soil	The Site Soils from 0 to 10 feet below ground surface - Modified Site Configuration	Hypothetical Residental	Adult	Incidental Ingestion	On Site	Quant.	Although the Site is located within the North Light Industry Area (City of Vallejo 1994) and reuse is limited to light industrial/warehouse purposes, residential re-use was addressed to support other land use options.
						Dermal Contact	On Site	Quant.	Although the Site is located within the North Light Industry Area (City of Vallejo 1994) and reuse is limited to light industrial/warehouse purposes, residential re-use was addressed to support other land use options.
						Inhalation of Particulates	On Site	Quant.	Although the Site is located within the North Light Industry Area (City of Vallejo 1994) and reuse is limited to light industrial/warehouse purposes, residential re-use was addressed to support other land use options.
						Inhalation of Volatiles	On Site	Quant.	Although the Site is located within the North Light Industry Area (City of Vallejo 1994) and reuse is limited to light industrial/warehouse purposes, residential re-use was addressed to support other land use options.
					Child	Incidental Ingestion	On Site	Quant.	Although the Site is located within the North Light Industry Area (City of Vallejo 1994) and reuse is limited to light industrial/warehouse purposes, residential re-use was addressed to support other land use options.
						Dermal Contact	On Site	Quant.	Although the Site is located within the North Light Industry Area (City of Vallejo 1994) and reuse is limited to light industrial/warehouse purposes, residential re-use was addressed to support other land use options.
						Inhalation of Particulates	On Site	Quant.	Although the Site is located within the North Light Industry Area (City of Vallejo 1994) and reuse is limited to light industrial/warehouse purposes, residential re-use was addressed to support other land use options.
						Inhalation of Volatiles	On Site	Quant.	Although the Site is located within the North Light Industry Area (City of Vallejo 1994) and reuse is limited to light industrial/warehouse purposes, residential re-use was addressed to support other land use options.

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EPA TABLE 1
SELECTION OF EXPOSURE PATHWAYS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On Site/ Off Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Future	Soil	Soil	The Site Soils from 0 to 10 feet below ground surface - Modified Site Configuration	Commercial / Industrial Worker	Adult	Incidental Ingestion	On Site	Quant.	Commercial use of the Site is consistent with planned future re-use (City of Vallejo 1994) and Potential changes in site grade may result in deeper interval becoming the new "surface".
						Dermal Contact	On Site	Quant.	Commercial use of the Site is consistent with planned future re-use (City of Vallejo 1994) and Potential changes in site grade may result in deeper interval becoming the new "surface".
						Inhalation of Particulates	On Site	Quant.	Commercial use of the Site is consistent with planned future re-use (City of Vallejo 1994) and Potential changes in site grade may result in deeper interval becoming the new "surface".
						Inhalation of Volatiles	On Site	Quant.	Commercial use of the Site is consistent with planned future re-use (City of Vallejo 1994) and Potential changes in site grade may result in deeper interval becoming the new "surface".
				Construction Worker	Adult	Incidental Ingestion	On Site	Quant.	Reuse of the the Site will require construction.
						Dermal Contact	On Site	Quant.	Reuse of the the Site will require construction.
						Inhalation of Particulates	On Site	Quant.	Reuse of the the Site will require construction.
						Inhalation of Volatiles	On Site	Quant.	Reuse of the the Site will require construction.
				Construction Worker	Adult	Incidental Ingestion	On Site	Quant.	Current site configuration requires construction for re-use as commercial area
						Dermal Contact	On Site	Quant.	Current site configuration requires construction for re-use as commercial area
						Inhalation of Particulates	On Site	Quant.	Current site configuration requires construction for re-use as commercial area
						Inhalation of Volatiles	On Site	Quant.	Current site configuration requires construction for re-use as commercial area
	Soil	Produce	Homegrown Produce	Hypothetical Residental	Adult	Ingestion	On Site	Quant.	
					Child	Ingestion	On Site	Quant.	
	Groundwater	Groundwater	The Site Tap Water from Shallow Groundwater	Hypothetical Residental	Adult	Ingestion	On Site	Qual.	Drinking water is assumed to be supplied from off-site source,
						Dermal Contact	On Site	Qual.	Drinking water is assumed to be supplied from off-site source,
					Child	Ingestion	On Site	Qual.	Drinking water is assumed to be supplied from off-site source,
						Dermal Contact	On Site	Qual.	Drinking water is assumed to be supplied from off-site source,

TABLE J-8

EPA TABLE 1
SELECTION OF EXPOSURE PATHWAYS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On Site/ Off Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Future	Groundwater	Groundwater	The Site Tap Water from Shallow Groundwater	Commercial / Industrial Worker	Adult	Ingestion	On Site	Qual.	Drinking water is assumed to be supplied from off-site source,
				Construction Worker	Adult	Ingestion	On Site	Qual.	Drinking water is assumed to be supplied from off-site source,
				Construction Worker	Adult	Ingestion	On Site	None	Drinking water supply is from off-site source, not from shallow groundwater
		Air	The Site Indoor Air	Hypothetical Residental	Adult	Inhalation of Volatiles from Showering	On Site	Qual.	Drinking water is assumed to be supplied from off-site source,
						Inhalation of Volatiles	On Site	Qual.	Drinking water is assumed to be supplied from off-site source,
					Child	Inhalation of Volatiles from Showering	On Site	Qual.	Drinking water is assumed to be supplied from off-site source,
						Inhalation of Volatiles	On Site	Qual.	Drinking water is assumed to be supplied from off-site source,
				Commercial / Industrial Worker	Adult	Inhalation of Volatiles	On Site	Qual.	Drinking water is assumed to be supplied from off-site source,

Notes:

Qual. = Qualitative
Quant. = Quantitative

TABLE J-9

VOLATILIZATION MODEL PARAMETER ASSUMPTIONS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND

Model Variable	Abbreviation	Vadose Zone Soil 0 to 3 feet	Vadose Zone Soil 0 to 10 feet	Groundwater	Units
Depth (length) to vapor source	Lgw	60.96	60.96	91.44	cm
Exchange rate (indoor air)	ER	0.00014	0.00014	0.00014	L/sec
Enclosed space volume/infiltration area (indoor air)	Lb	200	200	200	cm
Areal fraction of cracks in foundation (indoor air)	n	1	1	1	cm^2-cracks/cm^2-total area
Slab crack thickness (indoor air)	Lcrk	1E-99	1E-99	1E-99	cm
Conversion factor	CFactor	1000	1000	1000	
Air-filled soil porosity (vadose)	theta-as	0.26	0.26	0.26	cm^3-air/cm^3-soil
Total soil porosity (vadose)	theta-t (vad)	0.38	0.38	0.38	cm^3-air/cm^3-soil
Water-filled soil porosity (vadose)	theta-ws	0.12	0.12	0.12	cm^3-water/cm^3-soil
Air-filled soil porosity (crack - indoor air)	theta-acrk	0.02	0.02	0.02	cm^3-air/cm^3-total volume
Total soil porosity (crack - indoor air)	theta-t (crk)	0.03	0.03	0.03	cm^3/cm^3-total volume
Water-filled soil porosity (crack - indoor air))	theta-wcrk	0.01	0.01	0.01	cm^3-air/cm^3-soil
Soil porosity, air-filled, capillary zone	Theta-acap	0.26	0.26	0	cm^3-air/cm^3-soil
Total soil porosity (capillary zone)	theta-t (cap)	0.38	0.38	0.38	cm^3/cm^3-soil
Soil porosity, water-filled, capillary zone	Theta-wcap			0.38	cm^3-water/cm^3-soil
Height of capillary fringe	hc	0	0	15	cm
Height of vadose zone	hv	60.96	60.96	76.44	cm
Mixing zone height - outdoor air	s	200	200	200	cm
Wind velocity - outdoor air	U	225	225	225	cm/sec
Width of emission area (outdoors, parallel to wind direction)	W	1500	1500	1500	cm

Notes:
cm = Centimeters
cm3 = Cubic centimeters
L = Liters
sec = Seconds

TABLE J-10

VOLATILIZATION FACTORS USED TO CALCULATE EXPOSURE POINT CONCENTRATIONS AND INTAKES
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND

Chemical of Potential Concern	Volatilization Factor Outdoor Air	Volatilization Factor Indoor Air
VOLATILE ORGANIC COMPOUNDS - SOIL 0 TO 3 FEET		
CARBON DISULFIDE	2.37E-03	2.53E+00
TOLUENE	9.06E-04	9.68E-01
XYLENE (TOTAL)	8.37E-05	8.97E-02
SEMIVOLATILE ORGANIC COMPOUNDS - SOIL 0 TO 3 FEET		
1,2,4-TRICHLOROBENZENE	2.51E-04	2.69E-01
2-METHYLNAPHTHALENE	1.53E-04	1.63E-01
ANTHRACENE	3.77E-06	4.02E-03
FLUORENE	8.53E-06	9.11E-03
PHENANTHRENE	3.78E-06	4.04E-03
PYRENE	7.85E-07	8.39E-04
VOLATILE ORGANIC COMPOUNDS - SOIL 0 TO 10 FEET		
2-BUTANONE	4.71E-06	5.02E-03
ACETONE	4.20E-06	4.48E-03
CARBON DISULFIDE	2.37E-03	2.53E+00
TOLUENE	9.06E-04	9.68E-01
XYLENE (TOTAL)	8.37E-05	8.97E-02
SEMIVOLATILE ORGANIC COMPOUNDS - SOIL 0 TO 10 FEET		
1,2,4-TRICHLOROBENZENE	2.51E-04	2.69E-01
2-METHYLNAPHTHALENE	1.53E-04	1.63E-01
ACENAPHTHENE	1.35E-04	1.44E-01
ANTHRACENE	3.77E-06	4.02E-03
FLUORENE	8.53E-06	9.11E-03
NAPHTHALENE*	4.43E-06	4.75E-03
PHENANTHRENE	3.78E-06	4.04E-03
PYRENE	7.85E-07	8.39E-04
VOLATILE ORGANIC COMPOUNDS - GROUNDWATER		
1,2-DICHLOROETHANE	6.37E-06	6.83E-03
2-BUTANONE	2.31E-06	2.47E-03
4-METHYL-2-PENTANONE	3.62E-06	3.88E-03
ACETONE	2.27E-06	2.42E-03
CHLOROMETHANE	3.98E-06	4.27E-03
ETHYLBENZENE	4.76E-06	5.10E-03
TOLUENE	5.24E-06	5.61E-03
XYLENE (TOTAL)	4.47E-06	4.79E-03
SEMIVOLATILE ORGANIC COMPOUNDS - GROUNDWATER		
1,3-DICHLOROBENZENE	4.78E-06	5.12E-03
NAPHTHALENE	4.43E-06	4.75E-03
PHENANTHRENE	1.65E-06	1.76E-03
PYRENE	5.49E-07	5.87E-04

Notes:

* = The single detection of naphthalene in 0-to-10 foot-bgs interval (at 9.5 feet bgs) is below shallow groundwater, so the groundwater volatilization factors were used.

bgs = Below ground surface

TABLE J-11

EPA TABLE 4
VALUES USED FOR DAILY INTAKE CALCULATIONS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Surface and Subsurface Soil
Receptor Population:	Resident
Receptor Age:	Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CTE Value	CTE Rationale/ Reference	Intake Equation/Model Name
Ingestion	CS	Contaminant Concentration in Soil	mg/kg	See Table 7	a	See Table 7	a	Chronic Daily Intake (CDI) (mg/kg-day) = CS x IR x CF x FI x EF x ED x 1/BW x 1/AT
	IR-S	Soil Ingestion Rate	mg/day	100	b, c	50	d	
	CF	Conversion Factor	kg/mg	1.00E-06	--	1.00E-06	--	
	FI	Fraction Ingested	unitless	1	e	1	e	
	EF	Exposure Frequency	days/year	350	b, c	350	b, c	
	ED	Exposure Duration	years	24	b, c, f	7	f, g	
	BW	Body Weight	kg	70	b, c	70	b, c	
	AT-N	Averaging Time (Non-Cancer)	days	8,760	g	2,555	g	
	AT-C	Averaging Time (Cancer)	days	25,550	g	25,550	g	
Dermal	CS	Contaminant Concentration in Soil	mg/kg	See Table 7	a	See Table 7	a	CDI (mg/kg-day) = CS x CF x SA x AF x ABS x EF x ED x 1/BW x 1/AT
	CF	Conversion Factor	kg/mg	1.00E-06	--	1.00E-06	--	
	SA	Skin Surface Area Available for Contact	cm^2	5,700	j, k	5,000	d	
	AF	Soil to Skin Adherence Factor	mg/cm^2	0.07	j, k	0.07	j, k	
	ABS	Absorption Factor	unitless	See Table 12		See Table 12		
	EF	Exposure Frequency	days/years	350	b, c	350	b, c	
	ED	Exposure Duration	years	24	b, c, f	7	f, g	
	BW	Body Weight	kg	70	b, c	70	b, c	
	AT-N	Averaging Time (Non-Cancer)	days	8,760	g	2,555	g	
	AT-C	Averaging Time (Cancer)	days	25,550	g	25,550	g	

TABLE J-11

EPA TABLE 4
VALUES USED FOR DAILY INTAKE CALCULATIONS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Air
Exposure Point:	Particulates/Vapors
Receptor Population:	Resident
Receptor Age:	Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CTE Value	CTE Rationale/ Reference	Intake Equation/Model Name
Inhalation	CA	Contaminant Concentration in Air	mg/m^3	See Table 7	a	See Table 7	a	Chronic Daily Intake (mg/kg-day) = CA x IR x EF x ED x 1/BW x 1/AT
	IR	Inhalation Rate	m^3/day	20.00	c, m	13.30	d	
	EF	Exposure Frequency	days/year	350	b, c	350	b, c	
	ED	Exposure Duration	years	24	b, c, f	7	b,c, f	
	BW	Body Weight	kg	70	b, c	70	b, c	
	AT-N	Averaging Time (Non-Cancer)	days	8,760	g	2,555	g	
	AT-C	Averaging Time (Cancer)	days	25,550	g	25,550	g	

TABLE J-11

EPA TABLE 4
VALUES USED FOR DAILY INTAKE CALCULATIONS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Surface and Subsurface Soil
Receptor Population:	Resident
Receptor Age:	Child

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CTE Value	CTE Rationale/ Reference	Intake Equation/Model Name
Ingestion	CS	Contaminant Concentration in Soil	mg/kg	See Table 7	a	See Table 7	a	Chronic Daily Intake (CDI) (mg/kg-day) = CS x IR x CF x FI x EF x ED x 1/BW x 1/AT
	IR-S	Soil Ingestion Rate	mg/day	200	b, c	100	d	
	CF	Conversion Factor	kg/mg	1.00E-06	--	1.00E-06	--	
	FI	Fraction Ingested	unitless	1	e	1	e	
	EF	Exposure Frequency	days/year	350	b, c	350	b, c	
	ED	Exposure Duration	years	6	b, c, f	2	f, g	
	BW	Body Weight	kg	15	b, c	15	e	
	AT-N	Averaging Time (Non-Cancer)	days	2190	g	730	g	
	AT-C	Averaging Time (Cancer)	days	25,550	g	25,550	g	
Dermal	CS	Contaminant Concentration in Soil	mg/kg	See Table 7	a	See Table 7	a	CDI (mg/kg-day) = CS x CF x SA x AF x ABS x EF x ED x 1/BW x 1/AT
	CF	Conversion Factor	kg/mg	1.00E-06	--	1.00E-06	--	
	SA	Skin Surface Area Available for Contact	cm^2	2,900	j	2,900	j	
	AF	Soil to Skin Adherence Factor	mg/cm^2	0.2	j, k	0.2	j, k	
	ABS	Absorption Factor	unitless	See Table 12		See Table 12		
	EF	Exposure Frequency	days/years	350	b, c	350	b, c	
	ED	Exposure Duration	years	6	b, c, f	2	f, g	
	BW	Body Weight	kg	15	b, c	15	b, c	
	AT-N	Averaging Time (Non-Cancer)	days	2,190	g	730	g	
	AT-C	Averaging Time (Cancer)	days	25,550	g	25,550	g	

TABLE J-11

EPA TABLE 4
VALUES USED FOR DAILY INTAKE CALCULATIONS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Air
Exposure Point:	Particulates/Vapors
Receptor Population:	Resident
Receptor Age:	Child

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CTE Value	CTE Rationale/ Reference	Intake Equation/Model Name
Inhalation	CA	Contaminant Concentration in Air	mg/m^3	See Table 7	a	See Table 7	a	Chronic Daily Intake (mg/kg-day) = CA x IR x EF x ED x 1/BW x 1/AT
	IR	Inhalation Rate	m^3/day	10.00	c, m	8.30	d	
	EF	Exposure Frequency	days/year	350	b, c	350	b, c	
	ED	Exposure Duration	years	6	b, c, f	2	f, g	
	BW	Body Weight	kg	15	b, c	15	b, c	
	AT-N	Averaging Time (Non-Cancer)	days	2,190	g	730	g	
	AT-C	Averaging Time (Cancer)	days	25,550	g	25,550	g	

TABLE J-11

EPA TABLE 4
VALUES USED FOR DAILY INTAKE CALCULATIONS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Surface and Subsurface Soil
Receptor Population:	Commercial/Industrial Worker
Receptor Age:	Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CTE Value	CTE Rationale/ Reference	Intake Equation/Model Name
Ingestion	CS	Contaminant Concentration in Soil	mg/kg	See Table 7	a	See Table 7	a	Chronic Daily Intake (CDI) (mg/kg-day) = CS x IR x CF x FI x EF x ED x 1/BW x 1/AT
	IR-S	Soil Ingestion Rate	mg/day	50	b, c	50	b, c	
	CF	Conversion Factor	kg/mg	1.00E-06	--	1.00E-06	--	
	FI	Fraction Ingested	unitless	1	e	1	e	
	EF	Exposure Frequency	days/year	250	b, c	250	b, c	
	ED	Exposure Duration	years	25	b, c	4.5	h	
	BW	Body Weight	kg	70	b, c	70	b, c	
	AT-N	Averaging Time (Non-Cancer)	days	9,125	g	1,643	g	
	AT-C	Averaging Time (Cancer)	days	25,550	g	25,550	g	
Dermal	CS	Contaminant Concentration in Soil	mg/kg	See Table 7	a	See Table 7	a	CDI (mg/kg-day) = CS x CF x SA x AF x ABS x EF x ED x 1/BW x 1/AT
	CF	Conversion Factor	kg/mg	1.00E-06	--	1.00E-06	--	
	SA	Skin Surface Area Available for Contact	cm^2	5,700	j	3,300	k	
	AF	Soil to Skin Adherence Factor	mg/cm^2	0.2	k, l	0.2	k, l	
	ABS	Absorption Factor	unitless	See Table 12		See Table 12		
	EF	Exposure Frequency	days/years	250	b, c	250	b, c	
	ED	Exposure Duration	years	25	b, c	4.5	h	
	BW	Body Weight	kg	70	b, c	70	b, c	
	AT-N	Averaging Time (Non-Cancer)	days	9,125	g	1,643	g	
	AT-C	Averaging Time (Cancer)	days	25,550	g	25,550	g	

TABLE J-11

EPA TABLE 4
VALUES USED FOR DAILY INTAKE CALCULATIONS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Air
Exposure Point:	Particulates/Vapors
Receptor Population:	Commercial/Industrial Worker
Receptor Age:	Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CTE Value	CTE Rationale/ Reference	Intake Equation/Model Name
Inhalation	CA	Contaminant Concentration in Air	mg/m^3	See Table 7	a	See Table 7	a	Chronic Daily Intake (mg/kg-day) = CA x IR x EF x ED x 1/BW x 1/AT
	IR	Inhalation Rate	m^3/day	20.00	b, c	10.40	d	
	EF	Exposure Frequency	days/year	250	b, c	250	b, c	
	ED	Exposure Duration	years	25	b, c	4.5	h	
	BW	Body Weight	kg	70	b, c	70	b, c	
	AT-N	Averaging Time (Non-Cancer)	days	9,125	g	1,643	g	
	AT-C	Averaging Time (Cancer)	days	25,550	g	25,550	g	

TABLE J-11

EPA TABLE 4
VALUES USED FOR DAILY INTAKE CALCULATIONS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Subsurface Soil
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CTE Value	CTE Rationale/ Reference	Intake Equation/Model Name
Ingestion	CS	Contaminant Concentration in Soil	mg/kg	See Table 7	a	See Table 7	a	Chronic Daily Intake (CDI) (mg/kg-day) = CS x IR x CF x FI x EF x ED x 1/BW x 1/AT
	IR-S	Soil Ingestion Rate	mg/day	100	e	100	e	
	CF	Conversion Factor	kg/mg	1.00E-06	--	1.00E-06	--	
	FI	Fraction Ingested	unitless	1	e	1	e	
	EF	Exposure Frequency	days/year	250	b, c	90	e	
	ED	Exposure Duration	years	1	i	1	i	
	BW	Body Weight	kg	70	b, c	70	b, c	
	AT-N	Averaging Time (Non-Cancer)	days	365	g	365	g	
	AT-C	Averaging Time (Cancer)	days	25,550	g	25,550	g	
Dermal	CS	Contaminant Concentration in Soil	mg/kg	See Table 7	a	See Table 7	a	CDI (mg/kg-day) = CS x CF x SA x AF x ABS x EF x ED x 1/BW x 1/AT
	CF	Conversion Factor	kg/mg	1.00E-06	--	1.00E-06	--	
	SA	Skin Surface Area Available for Contact	cm^2	5,700	j	3,300	k	
	AF	Soil to Skin Adherence Factor	mg/cm^2	0.8	l	0.8	l	
	ABS	Absorption Factor	unitless	See Table 12		See Table 12		
	EF	Exposure Frequency	days/years	250	b, c	90	e	
	ED	Exposure Duration	years	1	i	1	i	
	BW	Body Weight	kg	70	b, c	70	b, c	
	AT-N	Averaging Time (Non-Cancer)	days	365	g	365	g	
	AT-C	Averaging Time (Cancer)	days	25,550	g	25,550	g	

TABLE J-11

EPA TABLE 4
VALUES USED FOR DAILY INTAKE CALCULATIONS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Air
Exposure Point:	Particulates/Vapors
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CTE Value	CTE Rationale/ Reference	Intake Equation/Model Name
Inhalation	CA	Contaminant Concentration in Air	mg/m^3	See Table 7	a	See Table 7	a	Chronic Daily Intake (mg/kg-day) = CA x IR x EF x ED x 1/BW x 1/AT
	IR	Inhalation Rate	m^3/day	20.00	b, c	10.40	d	
	EF	Exposure Frequency	days/year	250	b, c	90	e	
	ED	Exposure Duration	years	1	i	1	i	
	BW	Body Weight	kg	70	b, c	70	b, c	
	AT-N	Averaging Time (Non-Cancer)	days	365	g	365	g	
	AT-C	Averaging Time (Cancer)	days	25,550	g	25,550	g	

TABLE J-11

EPA TABLE 4
VALUES USED FOR DAILY INTAKE CALCULATIONS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Vapors
Receptor Population:	Resident
Receptor Age:	Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CTE Value	CTE Rationale/ Reference	Intake Equation/Model Name
Inhalation	CA	Contaminant Concentration in Air	mg/m^3	See Table 7	a	See Table 7	a	Chronic Daily Intake (mg/kg-day) = CA x IR x EF x ED x 1/BW x 1/AT
	IR	Inhalation Rate	m^3/day	20.00	c, m	13.30	d	
	EF	Exposure Frequency	days/year	350	b, c	350	b, c	
	ED	Exposure Duration	years	24	b, c, f	7	b, c, f	
	BW	Body Weight	kg	70	b, c	70	b, c	
	AT-N	Averaging Time (Non-Cancer)	days	8,760	g	2,555	g	
	AT-C	Averaging Time (Cancer)	days	25,550	g	25,550	g	

TABLE J-11

EPA TABLE 4
VALUES USED FOR DAILY INTAKE CALCULATIONS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Vapors
Receptor Population:	Resident
Receptor Age:	Child

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CTE Value	CTE Rationale/ Reference	Intake Equation/Model Name
Inhalation	CA	Contaminant Concentration in Air	mg/m^3	See Table 7	a	See Table 7	a	Chronic Daily Intake (mg/kg-day) = CA x IR x EF x ED x 1/BW x 1/AT
	IR	Inhalation Rate	m^3/day	10.00	c, m	8.30	d	
	EF	Exposure Frequency	days/year	350	b, c	350	b, c	
	ED	Exposure Duration	years	6	b, c, f	2	f, g	
	BW	Body Weight	kg	15	b, c	15	b, c	
	AT-N	Averaging Time (Non-Cancer)	days	2,190	g	730	g	
	AT-C	Averaging Time (Cancer)	days	25,550	g	25,550	g	

TABLE J-11

EPA TABLE 4
VALUES USED FOR DAILY INTAKE CALCULATIONS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Vapors
Receptor Population:	Commercial/Industrial Worker
Receptor Age:	Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CTE Value	CTE Rationale/ Reference	Intake Equation/Model Name
Inhalation	CA	Contaminant Concentration in Air	mg/m^3	See Table 7	a	See Table 7	a	Chronic Daily Intake (mg/kg-day) = CA x IR x EF x ED x 1/BW x 1/AT
	IR	Inhalation Rate	m^3/day	20.00	b, c	10.40	d	
	EF	Exposure Frequency	days/year	250	b, c	250	b, c	
	ED	Exposure Duration	years	25	b, c	4.5	h	
	BW	Body Weight	kg	70	b, c	70	b, c	
	AT-N	Averaging Time (Non-Cancer)	days	9,125	g	1,643	g	
	AT-C	Averaging Time (Cancer)	days	25,550	g	25,550	g	

TABLE J-11

EPA TABLE 4
VALUES USED FOR DAILY INTAKE CALCULATIONS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Vapors
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CTE Value	CTE Rationale/ Reference	Intake Equation/Model Name
Inhalation	CA	Contaminant Concentration in Air	mg/m^3	See Table 7	a	See Table 7	a	Chronic Daily Intake (mg/kg-day) = CA x IR x EF x ED x 1/BW x 1/AT
	IR	Inhalation Rate	m^3/day	20.00	b, c	10.40	d	
	EF	Exposure Frequency	days/year	250	b, c	90	e	
	ED	Exposure Duration	years	1	i	1	i	
	BW	Body Weight	kg	70	b, c	70	b, c	
	AT-N	Averaging Time (Non-Cancer)	days	365	g	365	g	
	AT-C	Averaging Time (Cancer)	days	25,550	g	25,550	g	

Sources:

a	Air exposure point concentrations for dust and volatile chemicals are calculated as discussed in the text
b	California Department of Toxic Substances Control (DTSC). 1992. Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and Permitted Facilities. Office of the Science Advisor. Sacramento, California. July
c	U.S. Environmental Protection Agency (EPA). 1991. Memorandum Regarding the Human Health Evaluation Manual, Supplemental Guidance: Standard Default Exposure Factors. From Timothy Fields, Jr. Acting Director, Office of Solid Waste and Emergency Response. To Distribution. March 25
d	EPA. 1997b. Exposure Factors Handbook. Volume I. EPA/600/P-95/002Fa. Office of Research and Development. Augus
e	Value based on professional judgement
f	Cancer risk is summed for adult and child residential receptors
g	EPA. 1989. Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A), Interim Final. EPA Office of Emergency and Remedial Response. EPA/540/1-89/002. December
h	U.S. Department of Commerce. 1994. Statistical Abstract of the United States. Bureau of the Census. 114th Edition
i	DTSC 2000 "Draft Memorandum Regarding the Guidance for the Dermal Exposure Pathway." From Stephen M. DiZio, Ph.D., Michael J. Wade, Ph.D., DABT, and Deborah J. Oudiz, Ph.D. To Human and Ecological Risk Division. January 7.
j	DTSC. 1999a. Facsimile Regarding Exposure Parameters for Installation Restoration Site 08, Mare Island. From Michael Wade, Senior Toxicologist, Human and Ecological Risk Division. To Lynne Haroun, Risk Assessor, TtEMI. November 10
k	EPA. 1999. Memorandum Regarding Region 9 Preliminary Remediation Goals (PRGs), 1999. From Stanford J. Smucker, Regional Toxicologist. To PRG Table Mailing List. October 1
l	DTSC. 1999. Record of telephone conversation regarding exposure parameters for a construction worker. Between Lynne Haroun, Risk Assessor, TtEMI, and Michael Wade, Senior Toxicologist, Human and Ecological Risk Division. December 20.
m	DTSC. 1994. Preliminary Endangerment Assessment Guidance Manual. January
RME	Reasonable maximum exposure
CTE	Central tendency exposure
kg	Kilogram
mg	Milligram
m^3	Cubic meter
cm^2	Square centimeter

TABLE J-12

SOIL DERMAL ABSORPTION FACTORS USED TO CALCULATE INTAKES
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND

Chemical of Potential Concern	Soil Dermal Absorption Factor[a]
METAL	
ALUMINUM	1.00E-02
ANTIMONY	1.00E-02
ARSENIC	3.00E-02
BARIUM	1.00E-02
BERYLLIUM	1.00E-02
CADMIUM	1.00E-03
CHROMIUM	1.00E-02
COBALT	1.00E-02
COPPER	1.00E-02
LEAD	1.00E-02
MANGANESE	1.00E-02
MERCURY	1.00E-02
MOLYBDENUM	1.00E-02
NICKEL	1.00E-02
SELENIUM	1.00E-02
SILVER	1.00E-02
THALLIUM	1.00E-02
TIN	1.00E-02
TITANIUM	1.00E-02
VANADIUM	1.00E-02
ZINC	1.00E-02
VOLATILE ORGANIC COMPOUNDS	
2-BUTANONE	1.00E-01
ACETONE	1.00E-01
CARBON DISULFIDE	1.00E-01
TOLUENE	1.00E-01
XYLENE (TOTAL)	1.00E-01
SEMIVOLATILE ORGANIC COMPOUNDS	
1,2,4-TRICHLOROBENZENE	1.00E-01
2-METHYLNAPHTHALENE	1.50E-01
ACENAPHTHENE	1.50E-01
ANTHRACENE	1.50E-01
BENZO(A)ANTHRACENE	1.50E-01
BENZO(A)PYRENE	1.50E-01
BENZO(B)FLUORANTHENE	1.50E-01
BENZO(G,H,I)PERYLENE	1.50E-01
BENZO(K)FLUORANTHENE	1.50E-01
BIS(2-ETHYLHEXYL)PHTHALATE	1.00E-01
CARBAZOLE	1.00E-01
CHRYSENE	1.50E-01
DIBENZ(A,H)ANTHRACENE	1.50E-01
FLUORANTHENE	1.50E-01

TABLE J-12

SOIL DERMAL ABSORPTION FACTORS USED TO CALCULATE INTAKES
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND

Chemical of Potential Concern	Soil Dermal Absorption Factor[a]
FLUORENE	1.50E-01
INDENO(1,2,3-CD)PYRENE	1.50E-01
NAPHTHALENE	1.50E-01
PENTACHLOROPHENOL	2.50E-01
PHENANTHRENE	1.50E-01
PYRENE	1.50E-01
PESTICIDE/POLYCHLORINATED BIPHENYLS	
4,4'-DDD	5.00E-02
4,4'-DDE	5.00E-02
4,4'-DDT	5.00E-02
ALDRIN	5.00E-02
ALPHA-BHC	5.00E-02
ALPHA-CHLORDANE	5.00E-02
AROCLOR-1254	1.50E-01
AROCLOR-1260	1.50E-01
BETA-BHC	5.00E-02
DELTA-BHC	5.00E-02
DIELDRIN	5.00E-02
ENDOSULFAN I	5.00E-02
ENDOSULFAN II	5.00E-02
ENDOSULFAN SULFATE	5.00E-02
ENDRIN	5.00E-02
ENDRIN ALDEHYDE	5.00E-02
ENDRIN KETONE	5.00E-02
GAMMA-BHC (LINDANE)	5.00E-02
GAMMA-CHLORDANE	5.00E-02
HEPTACHLOR	5.00E-02
HEPTACHLOR EPOXIDE	5.00E-02
METHOXYCHLOR	5.00E-02

Notes:
a Values from DTSC 1994

TABLE J-13

EPA TABLE 5.1
NONCANCER TOXICITY DATA -- ORAL/DERMAL
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern[a]	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor	Adjusted Dermal RfD	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors[b]	Sources of RfD[c]: Target Organ	Dates of RfD: Target Organ
Metals										
Barium	Chronic	7.00E-02	mg/kg-day	100%	7.00E-02	mg/kg-day	No adverse effect	3	IRIS	2001
Cobalt	Chronic	6.00E-02	mg/kg-day	100%	6.00E-02	mg/kg-day	--	--	NCEA	2000
Copper	Chronic	3.70E-02	mg/kg-day	100%	3.70E-02	mg/kg-day	GI System	--	HEAST	1997
Lead	Chronic	--	--	--	--	--	--	--	--	--
Molybdenum	Chronic	5.00E-03	mg/kg-day	100%	5.00E-03	mg/kg-day	Kidney	30	IRIS	2001
Selenium	Chronic	5.00E-03	mg/kg-day	100%	5.00E-03	mg/kg-day	CNS/PNS, Liver, Skin, Blood	3	IRIS	2001
Silver	Chronic	5.00E-03	mg/kg-day	100%	5.00E-03	mg/kg-day	Skin	3	IRIS	2001
Thallium	Chronic	7.00E-05	mg/kg-day	100%	7.00E-05	mg/kg-day	No adverse effect	3000	IRIS[d]	2001
Tin	Chronic	6.00E-01	mg/kg-day	100%	6.00E-01	mg/kg-day	Liver, Kidney	100	HEAST	1997
Titanium	Chronic	--	--	--	--	--	--	--	--	--
Zinc	Chronic	3.00E-01	mg/kg-day	100%	3.00E-01	mg/kg-day	Blood	3	IRIS	2001
Volatile Organic Compounds										
Acetone	Chronic	1.00E-01	mg/kg-day	100%	1.00E-01	mg/kg-day	Liver, Kidney	1000	IRIS	2001
2-Butanone	Chronic	6.00E-01	mg/kg-day	100%	6.00E-01	mg/kg-day	Reproductive System	3000	IRIS	2001
Carbon disulfide	Chronic	1.00E-01	mg/kg-day	100%	1.00E-01	mg/kg-day	Reproductive System	100	IRIS	2001
Chloromethane	Chronic	2.60E-02	mg/kg-day	100%	2.60E-02	mg/kg-day	CNS/PNS	1000	R	--
1,2-Dichloroethane	Chronic	3.00E-02	mg/kg-day	100%	3.00E-02	mg/kg-day	--	--	NCEA	2000
Ethylbenzene	Chronic	1.00E-01	mg/kg-day	100%	1.00E-01	mg/kg-day	Liver, Kidney	1000	IRIS	2001
4-methyl-2-pentanone	Chronic	8.00E-02	mg/kg-day	100%	8.00E-02	mg/kg-day	Liver, Kidney	3000	HEAST[q]	1997
Toluene	Chronic	2.00E-01	mg/kg-day	100%	2.00E-01	mg/kg-day	Liver, Kidney	1000	IRIS	2001
1,2,4-Trichlorobenzene	Chronic	1.00E-02	mg/kg-day	100%	1.00E-02	mg/kg-day	Adrenal	1000	IRIS	2001
Xylene (total)	Chronic	2.00E+00	mg/kg-day	100%	2.00E+00	mg/kg-day	Whole body (weight), CNS/PNS	100	IRIS	2001
Semivolatile Organic Compounds										
Acenaphthene	Chronic	6.00E-02	mg/kg-day	100%	6.00E-02	mg/kg-day	Liver	3000	IRIS	2001
Anthracene	Chronic	3.00E-01	mg/kg-day	100%	3.00E-01	mg/kg-day	No observed effect	3000	IRIS	2001
Benzo(a)anthracene	Chronic	3.00E-01	mg/kg-day	100%	3.00E-01	mg/kg-day	No observed effect	3000	IRIS[e]	2001
Benzo(a)pyrene	Chronic	3.00E-02	mg/kg-day	100%	3.00E-02	mg/kg-day	Kidney	3000	IRIS[f]	2001
Benzo(b)fluoranthene	Chronic	4.00E-02	mg/kg-day	100%	4.00E-02	mg/kg-day	Liver, Kidney, Blood	3000	IRIS[g]	2001
Benzo(g,h,i)perylene	Chronic	3.00E-02	mg/kg-day	100%	3.00E-02	mg/kg-day	Kidney	3000	IRIS[f]	2001
Benzo(k)fluoranthene	Chronic	4.00E-02	mg/kg-day	100%	4.00E-02	mg/kg-day	Liver, Kidney, Blood	3000	IRIS[g]	2001
Benzoic acid	Chronic	4.00E+00	mg/kg-day	100%	4.00E+00	mg/kg-day	No adverse effect	1	IRIS	2001

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EPA TABLE 5.1
NONCANCER TOXICITY DATA -- ORAL/DERMAL
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern[a]	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor	Adjusted Dermal RfD	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors[b]	Sources of RfD[c]: Target Organ	Dates of RfD: Target Organ
Bis(2-ethylhexyl)phthalate	Chronic	2.00E-02	mg/kg-day	100%	2.00E-02	mg/kg-day	Liver	1000	IRIS	2001
Carbazole	Chronic	2.50E-02	mg/kg-day	100%	2.50E-02	mg/kg-day	Whole body (weight), Liver, Kidney	100	IRIS[h]	2001
Chrysene	Chronic	3.00E-01	mg/kg-day	100%	3.00E-01	mg/kg-day	No observed effect	3000	IRIS[e]	2001
Dibenz(a,h)anthracene	Chronic	3.00E-01	mg/kg-day	100%	3.00E-01	mg/kg-day	No observed effect	3000	IRIS[e]	2001
1,3-Dichlorobenzene	Chronic	9.00E-04	mg/kg-day	100%	9.00E-04	mg/kg-day	--	--	NCEA	2000
2,4-Dichlorophenol	Chronic	3.00E-03	mg/kg-day	100%	3.00E-03	mg/kg-day	Immune System	100	IRIS	2001
Fluoranthene	Chronic	4.00E-02	mg/kg-day	100%	4.00E-02	mg/kg-day	Liver, Kidney, Blood	3000	IRIS	2001
Fluorene	Chronic	4.00E-02	mg/kg-day	100%	4.00E-02	mg/kg-day	Blood	3000	IRIS	2001
Indeno(1,2,3-cd)pyrene	Chronic	4.00E-02	mg/kg-day	100%	4.00E-02	mg/kg-day	Liver, Kidney, Blood	3000	IRIS[g]	2001
Isophorone	Chronic	2.00E-01	mg/kg-day	100%	2.00E-01	mg/kg-day	No observed effect	1000	IRIS	2001
2-Methylnaphthalene	Chronic	3.00E-01	mg/kg-day	100%	3.00E-01	mg/kg-day	No observed effect	3000	IRIS[e]	2001
4-Methylphenol	Chronic	5.00E-03	mg/kg-day	100%	5.00E-03	mg/kg-day	CNS/PNS, Respiratory System	1000	HEAST	1997
Naphthalene	Chronic	2.00E-02	mg/kg-day	100%	2.00E-02	mg/kg-day	Whole body	3000	IRIS	2001
N-Nitroso-diphenylamine	Chronic	--	--	--	--	--	--	--	--	--
Pentachlorophenol	Chronic	3.00E-02	mg/kg-day	100%	3.00E-02	mg/kg-day	Liver, Kidney	100	IRIS	2001
Phenanthrene	Chronic	3.00E-01	mg/kg-day	100%	3.00E-01	mg/kg-day	No observed effect	3000	IRIS[e]	2001
Phenol	Chronic	6.00E-01	mg/kg-day	100%	6.00E-01	mg/kg-day	Reproductive System	100	IRIS	2001
Pyrene	Chronic	3.00E-02	mg/kg-day	100%	3.00E-02	mg/kg-day	Kidney	3000	IRIS	2001
Pesticides/Polychlorinated Biphenyls										
Aldrin	Chronic	3.00E-05	mg/kg-day	100%	3.00E-05	mg/kg-day	Liver	1000	IRIS	2001
alpha-BHC	Chronic	3.00E-04	mg/kg-day	100%	3.00E-04	mg/kg-day	Liver, kidney	1000	IRIS[i]	2001
alpha-chlordane	Chronic	5.00E-04	mg/kg-day	100%	5.00E-04	mg/kg-day	Liver	300	IRIS[j]	2001
Aroclor-1254	Chronic	2.00E-05	mg/kg-day	100%	2.00E-05	mg/kg-day	Immune System	300	IRIS	2001
Aroclor-1260	Chronic	2.00E-05	mg/kg-day	100%	2.00E-05	mg/kg-day	Immune System	300	IRIS[k]	2001
beta-BHC	Chronic	3.00E-04	mg/kg-day	100%	3.00E-04	mg/kg-day	Liver, Kidney	1000	IRIS[i]	2001
4,4'-DDD	Chronic	5.00E-04	mg/kg-day	100%	5.00E-04	mg/kg-day	Liver	100	IRIS[l]	2001
4,4'-DDE	Chronic	5.00E-04	mg/kg-day	100%	5.00E-04	mg/kg-day	Liver	100	IRIS[l]	2001
4,4'-DDT	Chronic	5.00E-04	mg/kg-day	100%	5.00E-04	mg/kg-day	Liver	100	IRIS	2001
delta-BHC	Chronic	3.00E-04	mg/kg-day	100%	3.00E-04	mg/kg-day	Liver, Kidney	1000	IRIS[i]	2001
Dieldrin	Chronic	5.00E-05	mg/kg-day	100%	5.00E-05	mg/kg-day	Liver	100	IRIS	2001

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EPA TABLE 5.1
NONCANCER TOXICITY DATA -- ORAL/DERMAL
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern[a]	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor	Adjusted Dermal RfD	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors[b]	Sources of RfD[c]: Target Organ	Dates of RfD: Target Organ
Endosulfan (I and II)	Chronic	6.00E-03	mg/kg-day	100%	6.00E-03	mg/kg-day	Whole body (weight), Kidney, Blood	100	IRIS[m]	2001
Endosulfan sulfate	Chronic	6.00E-03	mg/kg-day	100%	6.00E-03	mg/kg-day	Whole body (weight), Kidney, Blood	100	IRIS[m]	2001
Endrin	Chronic	3.00E-04	mg/kg-day	100%	3.00E-04	mg/kg-day	Liver, CNS/PNS	100	IRIS	2001
Endrin aldehyde	Chronic	3.00E-04	mg/kg-day	100%	3.00E-04	mg/kg-day	Liver, CNS/PNS	100	IRIS[n]	2001
Endrin ketone	Chronic	3.00E-04	mg/kg-day	100%	3.00E-04	mg/kg-day	Liver, CNS/PNS	100	IRIS[n]	2001
gamma-BHC (Lindane)	Chronic	3.00E-04	mg/kg-day	100%	3.00E-04	mg/kg-day	Liver, Kidney	1000	IRIS	2001
gamma-Chlordane	Chronic	5.00E-04	mg/kg-day	100%	5.00E-04	mg/kg-day	Liver	300	IRIS[j]	2001
Heptachlor	Chronic	5.00E-04	mg/kg-day	100%	5.00E-04	mg/kg-day	Liver	300	IRIS	2001
Heptachlor epoxide	Chronic	1.30E-05	mg/kg-day	100%	1.30E-05	mg/kg-day	Liver	1000	IRIS	2001
Methoxychlor	Chronic	5.00E-03	mg/kg-day	100%	5.00E-03	mg/kg-day	Reproductive System	1000	IRIS	2001
Metals										
Barium	Subchronic	7.00E-02	mg/kg-day	100%	7.00E-02	mg/kg-day	Cardiovascular system	3	HEAST	1997
Cobalt	Subchronic	6.00E-02	mg/kg-day	100%	6.00E-02	mg/kg-day	--	--	C	--
Copper	Subchronic	3.70E-02	mg/kg-day	100%	3.70E-02	mg/kg-day	GI System	--	HEAST	1997
Lead	Subchronic	--	--	--	--	--	--	--	--	--
Molybdenum	Subchronic	5.00E-03	mg/kg-day	100%	5.00E-03	mg/kg-day	Kidney	30	C	--
Selenium	Subchronic	5.00E-03	mg/kg-day	100%	5.00E-03	mg/kg-day	Whole body	3	C	--
Silver	Subchronic	5.00E-03	mg/kg-day	100%	5.00E-03	mg/kg-day	Skin	3	C	--
Thallium	Subchronic	7.00E-04	mg/kg-day	100%	7.00E-04	mg/kg-day	Liver, Blood, Other	300	HEAST[d]	1997
Tin	Subchronic	6.00E-01	mg/kg-day	100%	6.00E-01	mg/kg-day	Liver, Kidney	100	HEAST	1997
Titanium	Subchronic	--	--	--	--	--	--	--	--	--
Zinc	Subchronic	3.00E-01	mg/kg-day	100%	3.00E-01	mg/kg-day	Blood	3	HEAST	1997
Volatile Organic Compounds										
Acetone	Subchronic	1.00E+00	mg/kg-day	100%	1.00E+00	mg/kg-day	Liver, Kidney	100	HEAST	1997
2-Butanone	Subchronic	2.00E+00	mg/kg-day	100%	2.00E+00	mg/kg-day	Reproductive System	1000	HEAST	1997
Carbon disulfide	Subchronic	1.00E-01	mg/kg-day	100%	1.00E-01	mg/kg-day	Reproductive System	100	HEAST	1997
Chloromethane	Subchronic	8.60E-02	mg/kg-day	100%	8.60E-02	mg/kg-day	--	--	R	--
1,2-Dichloroethane	Subchronic	3.00E-02	mg/kg-day	100%	3.00E-02	mg/kg-day	--	--	C	--
Ethylbenzene	Subchronic	1.00E+00	mg/kg-day	100%	1.00E+00	mg/kg-day	Liver, Kidney	100	IRIS[o]	2001
2-Hexanone (methyl butyl ketone)	Subchronic	--	--	--	--	--	--	--	--	--
4-methyl-2-pentanone	Subchronic	8.00E-01	mg/kg-day	100%	8.00E-01	mg/kg-day	Liver, Kidney	300	HEAST	1997
Toluene	Subchronic	2.00E+00	mg/kg-day	100%	2.00E+00	mg/kg-day	Liver, Kidney	100	HEAST	1997
1,2,4-Trichlorobenzene	Subchronic	1.00E-02	mg/kg-day	100%	1.00E-02	mg/kg-day	Adrenal	1000	HEAST	1997

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EPA TABLE 5.1
NONCANCER TOXICITY DATA -- ORAL/DERMAL
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern[a]	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor	Adjusted Dermal RfD	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors[b]	Sources of RfD[c]: Target Organ	Dates of RfD: Target Organ
Xylene (total)	Subchronic	2.00E+00	mg/kg-day	100%	2.00E+00	mg/kg-day	Whole body	100	C	--
Semivolatile Organic Compounds										
Acenaphthene	Subchronic	6.00E-01	mg/kg-day	100%	6.00E-01	mg/kg-day	Liver	300	HEAST	1997
Anthracene	Subchronic	3.00E+00	mg/kg-day	100%	3.00E+00	mg/kg-day	No observed effect	300	HEAST	1997
Benzo(a)anthracene	Subchronic	3.00E+00	mg/kg-day	100%	3.00E+00	mg/kg-day	No observed effect	300	HEAST[e]	1997
Benzo(a)pyrene	Subchronic	3.00E-01	mg/kg-day	100%	3.00E-01	mg/kg-day	Kidney	300	HEAST[f]	1997
Benzo(b)fluoranthene	Subchronic	4.00E-01	mg/kg-day	100%	4.00E-01	mg/kg-day	Liver, Kidney, Blood	300	HEAST[g]	1997
Benzo(g,h,i)perylene	Subchronic	3.00E-01	mg/kg-day	100%	3.00E-01	mg/kg-day	Kidney	300	HEAST[f]	1997
Benzo(k)fluoranthene	Subchronic	4.00E-01	mg/kg-day	100%	4.00E-01	mg/kg-day	Liver, Kidney, Blood	300	HEAST[g]	1997
Bis(2-ethylhexyl)phthalate	Subchronic	2.00E-02	mg/kg-day	100%	2.00E-02	mg/kg-day	Liver	1000	C	--
Carbazole	Subchronic	2.50E-02	mg/kg-day	100%	2.50E-02	mg/kg-day	Whole body (weight), Liver, Kidney	100	HEAST[h]	1997
Chrysene	Subchronic	3.00E+00	mg/kg-day	100%	3.00E+00	mg/kg-day	No observed effect	300	HEAST[e]	1997
Dibenz(a,h)anthracene	Subchronic	3.00E+00	mg/kg-day	100%	3.00E+00	mg/kg-day	No observed effect	300	HEAST[e]	1997
1,3-Dichlorobenzene	Subchronic	9.00E-04	mg/kg-day	100%	9.00E-04	mg/kg-day	--	--	C	--
2,4-Dichlorophenol	Subchronic	3.00E-03	mg/kg-day	100%	3.00E-03	mg/kg-day	Immune System	100	HEAST	1997
Fluoranthene	Subchronic	4.00E-01	mg/kg-day	100%	4.00E-01	mg/kg-day	Liver, Kidney, Blood	300	HEAST	1997
Fluorene	Subchronic	4.00E-01	mg/kg-day	100%	4.00E-01	mg/kg-day	Blood	300	HEAST	1997
Indeno(1,2,3-cd)pyrene	Subchronic	4.00E-01	mg/kg-day	100%	4.00E-01	mg/kg-day	Liver, Kidney, Blood	300	HEAST[g]	1997
Isophorone	Subchronic	2.00E+00	mg/kg-day	100%	2.00E+00	mg/kg-day	Kidney	100	HEAST	1997
2-Methylnaphthalene	Subchronic	3.00E+00	mg/kg-day	100%	3.00E+00	mg/kg-day	No observed effect	300	HEAST[e]	1997
4-Methylphenol	Subchronic	5.00E-03	mg/kg-day	100%	5.00E-03	mg/kg-day	CNS/PNS, Respiratory System, Other	1000	HEAST	1997
Naphthalene	Subchronic	2.00E-01	mg/kg-day	100%	2.00E-01	mg/kg-day	Whole body	300	IRIS[o]	2001
N-Nitroso-diphenylamine	Subchronic	--	--	--	--	--	--	--	--	--
Pentachlorophenol	Subchronic	3.00E-02	mg/kg-day	100%	3.00E-02	mg/kg-day	Reproductive System	100	HEAST	1997
Phenanthrene	Subchronic	3.00E+00	mg/kg-day	100%	3.00E+00	mg/kg-day	No observed effect	300	HEAST[e]	1997
Phenol	Subchronic	6.00E-01	mg/kg-day	100%	6.00E-01	mg/kg-day	Reproductive System	100	HEAST	1997
Pyrene	Subchronic	3.00E-01	mg/kg-day	100%	3.00E-01	mg/kg-day	Kidney	300	HEAST	1997
Pesticides/Polychlorinated Biphenyls										
Aldrin	Subchronic	3.00E-05	mg/kg-day	100%	3.00E-05	mg/kg-day	Liver	1000	HEAST	1997
alpha-BHC	Subchronic	3.00E-03	mg/kg-day	100%	3.00E-03	mg/kg-day	Liver, Kidney	100	HEAST[i]	1997
Aroclor-1254	Subchronic	5.00E-05	mg/kg-day	100%	5.00E-05	mg/kg-day	Immune System	100	HEAST	1997

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EPA TABLE 5.1
NONCANCER TOXICITY DATA -- ORAL/DERMAL
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern[a]	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor	Adjusted Dermal RfD	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors[b]	Sources of RfD[c]: Target Organ	Dates of RfD: Target Organ
Aroclor-1260	Subchronic	5.00E-05	mg/kg-day	100%	5.00E-05	mg/kg-day	Immune System	100	HEAST[k]	1997
Aroclor-1268	Subchronic	5.00E-05	mg/kg-day	100%	5.00E-05	mg/kg-day	Immune System	100	HEAST[k]	1997
beta-BHC	Subchronic	3.00E-03	mg/kg-day	100%	3.00E-03	mg/kg-day	Liver, Kidney	100	HEAST[i]	1997
4,4'-DDD	Subchronic	5.00E-04	mg/kg-day	100%	5.00E-04	mg/kg-day	Liver	100	HEAST[l]	1997
4,4'-DDE	Subchronic	5.00E-04	mg/kg-day	100%	5.00E-04	mg/kg-day	Liver	100	HEAST[l]	1997
4,4'-DDT	Subchronic	5.00E-04	mg/kg-day	100%	5.00E-04	mg/kg-day	Liver	100	HEAST	1997
delta-BHC	Subchronic	3.00E-03	mg/kg-day	100%	3.00E-03	mg/kg-day	Liver, Kidney	100	HEAST[i]	1997
Dieldrin	Subchronic	5.00E-05	mg/kg-day	100%	5.00E-05	mg/kg-day	Liver	100	HEAST	1997
Endosulfan (I and II)	Subchronic	6.0E-03	mg/kg-day	100%	6.0E-03	mg/kg-day	Whole body (weight), Kidney, Blood	100	HEAST[m]	1997
Endosulfan sulfate	Subchronic	6.0E-03	mg/kg-day	100%	6.0E-03	mg/kg-day	Whole body (weight), Kidney, Blood	100	HEAST[m]	1997
Endrin	Subchronic	3.00E-04	mg/kg-day	100%	3.00E-04	mg/kg-day	Liver, CNS/PNS	100	HEAST	1997
Endrin aldehyde	Subchronic	3.00E-04	mg/kg-day	100%	3.00E-04	mg/kg-day	Liver, CNS/PNS	100	HEAST[n]	1997
Endrin ketone	Subchronic	3.00E-04	mg/kg-day	100%	3.00E-04	mg/kg-day	Liver, CNS/PNS	100	HEAST[n]	1997
gamma-BHC (Lindane)	Subchronic	3.00E-03	mg/kg-day	100%	3.00E-03	mg/kg-day	Liver, Kidney	100	HEAST	1997
gamma-Chlordane	Subchronic	6.00E-05	mg/kg-day	100%	6.00E-05	mg/kg-day	Liver	1000	HEAST[j]	1997
Heptachlor	Subchronic	5.00E-04	mg/kg-day	100%	5.00E-04	mg/kg-day	Liver	300	HEAST	1997
Heptachlor epoxide	Subchronic	1.30E-05	mg/kg-day	100%	1.30E-05	mg/kg-day	Liver	1000	HEAST	1997

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EPA TABLE 5.1
NONCANCER TOXICITY DATA -- ORAL/DERMAL
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern[a]	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor	Adjusted Dermal RfD	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors[b]	Sources of RfD[c]: Target Organ	Dates of RfD: Target Organ
Methoxychlor	Subchronic	5.00E-03	mg/kg-day	100%	5.00E-03	mg/kg-day	Reproductive System	1000	HEAST	1997

Notes:

a	Includes all chemicals of potential concern at IR17/Building 503 Area
b	The use of uncertainty factors to derive the RfD is described in the text.
c	RfDs from IRIS (EPA 2001), NCEA (as provided in EPA 2000), HEAST (EPA 1997a), and Cal/EPA (1994)
d	RfD for thallium was calculated from the RfD for thallium sulfate using a molecular weight conversion factor.
e	RfD for anthracene
f	RfD for pyrene
g	RfD for fluoranthene
h	RfD for diphenylamine
i	RfD for gamma-BHC
j	RfD for chlordane
k	RfD for Aroclor-1254
l	RfD for 4,4-DDT
m	RfD for endosulfan
n	RfD for endrin
o	The subchronic RfD was assumed to be 10 times higher than the chronic RfD because an uncertainty factor of 10 was used by EPA (1999) for extrapolation from subchronic to chronic exposures for the chronic RfD.
p	RfD for 4-methyl-2-pentanone
q	As published in EPA Region 9 PRG Table (2000)
--	No value available
ATSDR	Agency for Toxic Substances and Disease Registry
C	Indicates the chronic RfD was adopted as the subchronic RfD
CNS	Central nervous system
EPA-9	U.S. Environmental Protection Agency, Region 9
GI	Gastrointestinal
HEAST	Health Effects Assessment Summary Tables
IRIS	Integrated Risk Information System
mg/kg-day	Milligrams per kilogram per day
NCEA	National Center for Environmental Assessment
Other	All other toxicological endpoints
PCB	Polychlorinated biphenyl
PNS	Peripheral nervous system
R	Route-to-route extrapolation
RfD	Reference dose

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EPA TABLE 5.2
NONCANCER TOXICITY DATA -- INHALATION
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern[a]	Chronic/ Subchronic	Value Inhalation RfC	Units	Adjusted Inhalation RfD[b]	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors[c]	Sources of RfC:RfD[d]: Target Organ	Dates
Metals									
Barium	Chronic	5.00E-04	mg/m^3	1.00E-04	mg/kg-day	Reproductive System	1000	HEAST[e]	1997
Cobalt	Chronic	5.00E-06	mg/m^3	1.43E-06	mg/kg-day	Respiratory System	--	Cal EPA	1997
Copper	Chronic	2.00E-05	mg/m^3	5.71E-06	mg/kg-day	Respiratory System	--	Cal EPA	1997
Lead	Chronic	--	--	--	--	--	--	--	--
Molybdenum	Chronic	--	--	--	--	--	--	--	--
Selenium	Chronic	8.00E-05	mg/m^3	2.29E-05	mg/kg-day	Respiratory System	--	Cal EPA	1997
Silver	Chronic	2.00E-02	mg/m^3	5.71E-03	mg/kg-day	Skin	--	Cal EPA	1997
Thallium	Chronic	--	--	--	--	--	--	--	--
Tin	Chronic	--	--	--	--	--	--	--	--
Titanium	Chronic	--	--	--	--	--	--	--	--
Zinc	Chronic	9.00E-04	mg/m^3	2.60E-04	mg/kg-day	Respiratory/Immune System	--	Cal EPA	1997
Volatile Organic Compounds									
Acetone	Chronic	--	--	1.00E-01	mg/kg-day	Liver, Kidney	1000	R	--
2-Butanone	Chronic	1.00E+00	mg/m^3	2.90E-01	mg/kg-day	Reproductive System	3000	IRIS[f]	2001
Carbon disulfide	Chronic	7.00E-01	mg/m^3	2.00E-01	mg/kg-day	CNS/PNS	30	IRIS	2001
Chloromethane	Chronic	9.00E-02	mg/m^3	2.60E-02	mg/kg-day	CNS/PNS	1000	IRIS	2001
1,2-Dichloroethane	Chronic	--	--	1.40E-03	mg/kg-day	--	--	NCEA	2000
Ethylbenzene	Chronic	1.00E+00	mg/m^3	2.86E-01	mg/kg-day	Reproductive System	300	IRIS	2001
4-methyl-2-pentanone	Chronic	--	mg/m^3	2.30E-02	mg/kg-day	Liver, Kidney	1000	HEAST[e]	1997
Toluene	Chronic	4.00E-01	mg/m^3	1.14E-01	mg/kg-day	CNS/PNS	300	IRIS	2001
1,2,4-Trichlorobenzene	Chronic	2.00E-01	mg/m^3	5.71E-02	mg/kg-day	Liver	1000	HEAST	1997
Xylene (total)	Chronic	--	--	2.00E-01	mg/kg-day	--	--	IRIS[g]	2001
Semivolatile Organic Compounds									
Acenaphthene	Chronic	--	--	6.00E-02	mg/kg-day	Liver	3000	R	--
Anthracene	Chronic	--	--	3.00E-01	mg/kg-day	No observed effect	3000	R	--
Benzo(a)anthracene	Chronic	--	--	3.00E-01	mg/kg-day	No observed effect	3000	R[h]	--
Benzo(a)pyrene	Chronic	--	--	3.00E-02	mg/kg-day	Kidney	3000	R[i]	--

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EPA TABLE 5.2
NONCANCER TOXICITY DATA -- INHALATION
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern[a]	Chronic/ Subchronic	Value Inhalation RfC	Units	Adjusted Inhalation RfD[b]	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors[c]	Sources of RfC:RfD[d]: Target Organ	Dates
Benzo(b)fluoranthene	Chronic	--	--	4.00E-02	mg/kg-day	Liver, Kidney, Blood	3000	R[j]	--
Benzo(g,h,i)perylene	Chronic	--	--	3.00E-02	mg/kg-day	Kidney	3000	R[i]	--
Benzo(k)fluoranthene	Chronic	--	--	4.00E-02	mg/kg-day	Liver, Kidney, Blood	3000	R[j]	--
Benzoic acid	Chronic	--	--	4.00E+00	mg/kg-day	No adverse effect	1	R	--
Bis(2-ethylhexyl)phthalate	Chronic	--	--	2.00E-02	mg/kg-day	Liver	1000	R	--
Carbazole	Chronic	--	--	2.50E-02	mg/kg-day	Whole body (weight), Liver, Kidney	100	R[k]	--
Chrysene	Chronic	--	--	3.00E-01	mg/kg-day	No observed effect	3000	R[h]	--
Dibenz(a,h)anthracene	Chronic	--	--	3.00E-01	mg/kg-day	No observed effect	3000	R[h]	--
1,3-Dichlorobenzene	Chronic	--	--	9.00E-04	mg/kg-day	--	--	NCEA	2000
2,4-Dichlorophenol	Chronic	--	--	3.00E-03	mg/kg-day	Immune System	100	R	--
Fluoranthene	Chronic	--	--	4.00E-02	mg/kg-day	Liver, Kidney, Blood	3000	R	--
Fluorene	Chronic	--	--	4.00E-02	mg/kg-day	Blood	3000	R	--
Indeno(1,2,3-cd)pyrene	Chronic	--	--	4.00E-02	mg/kg-day	Liver, Kidney, Blood	3000	R	--
Isophorone	Chronic	--	--	5.71E-01	mg/kg-day	Kidney	--	Cal/EPA	1997
2-Methylnaphthalene	Chronic	--	--	3.00E-01	mg/kg-day	No observed effect	3000	R[h]	--
4-Methylphenol	Chronic	--	--	5.00E-03	mg/kg-day	CNS/PNS, Respiratory System	1000	R	--
Naphthalene	Chronic	3.00E-03	mg/m^3	8.57E-04	mg/kg-day	Respiratory System	3000	IRIS	2001
N-Nitroso-diphenylamine	Chronic	--	--	--	--	--	--	--	--
Pentachlorophenol	Chronic	--	--	3.00E-02	mg/kg-day	Liver, Kidney	100	R	--
Phenanthrene	Chronic	--	--	3.00E-01	mg/kg-day	No observed effect	3000	R[h]	--
Phenol	Chronic	--	--	6.00E-01	mg/kg-day	Reproductive System	100	R	--
Pyrene	Chronic	--	--	3.00E-02	mg/kg-day	Kidney	3000	R	--
Pesticides/Polychlorinated Biphenyls									
Aldrin	Chronic	--	--	3.00E-05	mg/kg-day	Liver	1000	R	--
alpha-BHC	Chronic	--	--	3.00E-04	mg/kg-day	Liver, Kidney	1000	R[l]	--
alpha-Chlordane	Chronic	7.00E-04	mg/m^3	2.00E-04	mg/kg-day	Liver	1000	IRIS[m]	2001
Aroclor-1254	Chronic	--	--	2.00E-05	mg/kg-day	Immune System	300	R	--

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EPA TABLE 5.2
NONCANCER TOXICITY DATA -- INHALATION
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern[a]	Chronic/ Subchronic	Value Inhalation RfC	Units	Adjusted Inhalation RfD[b]	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors[c]	Sources of RfC:RfD[d]: Target Organ	Dates
Aroclor-1260	Chronic	--	--	2.00E-05	mg/kg-day	Immune System	300	R[n]	--
beta-BHC	Chronic	--	--	3.00E-04	mg/kg-day	Liver, Kidney	1000	R[l]	--
4,4'-DDD	Chronic	--	--	5.00E-04	mg/kg-day	Liver	100	R[o]	--
4,4'-DDE	Chronic	--	--	5.00E-04	mg/kg-day	Liver	100	R[o]	--
4,4'-DDT	Chronic	--	--	5.00E-04	mg/kg-day	Liver	100	R	--
delta-BHC	Chronic	--	--	3.00E-04	mg/kg-day	Liver, Kidney	1000	R[l]	--
Dieldrin	Chronic	--	--	5.00E-05	mg/kg-day	Liver	100	R	--
Endosulfan (I and II)	Chronic	--	--	6.00E-03	mg/kg-day	Whole body (weight), Kidney, Blood	100	R[p]	--
Endosulfan sulfate	Chronic	--	--	6.00E-03	mg/kg-day	Whole body (weight), Kidney, Blood	100	R[p]	--
Endrin	Chronic	--	--	3.00E-04	mg/kg-day	Liver, CNS/PNS	100	R	--
Endrin aldehyde	Chronic	--	--	3.00E-04	mg/kg-day	Liver, CNS/PNS	100	R[q]	--
Endrin ketone	Chronic	--	--	3.00E-04	mg/kg-day	Liver, CNS/PNS	100	R[q]	--
gamma-BHC (Lindane)	Chronic	--	--	3.00E-04	mg/kg-day	Liver, Kidney	1000	R	--
gamma-Chlordane	Chronic	7.00E-04	mg/m^3	2.00E-04	mg/kg-day	Liver	1000	IRIS[m]	2001
Heptachlor	Chronic	--	--	5.00E-04	mg/kg-day	Liver	300	R	--
Heptachlor epoxide	Chronic	--	--	1.30E-05	mg/kg-day	Liver	1000	R	--
Methoxychlor	Chronic	--	--	5.00E-03	mg/kg-day	Reproductive System	1000	R	--
Metals									
Barium	Subchronic	5.00E-03	mg/m^3	1.00E-03	mg/kg-day	Reproductive System	100	HEAST[e]	1997
Cobalt	Subchronic	5.00E-06	mg/m^3	1.43E-06	mg/kg-day	Respiratory System	--	C	1997
Copper	Subchronic	2.00E-05	mg/m^3	5.71E-06	mg/kg-day	Respiratory System	--	C	1997
Lead	Subchronic	--	--	--	--	--	--	--	--
Molybdenum	Subchronic	--	--	--	--	--	--	--	--
Selenium	Subchronic	8.00E-05	mg/m^3	2.29E-05	mg/kg-day	Respiratory System	--	C	1997
Silver	Subchronic	2.00E-02	mg/m^3	5.71E-03	mg/kg-day	Skin	--	C	1997
Thallium	Subchronic	--	--	--	--	--	--	--	--
Tin	Subchronic	--	--	--	--	--	--	--	--

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EPA TABLE 5.2
NONCANCER TOXICITY DATA -- INHALATION
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern[a]	Chronic/ Subchronic	Value Inhalation RfC	Units	Adjusted Inhalation RfD[b]	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors[c]	Sources of RfC:RfD[d]: Target Organ	Dates
Titanium	Subchronic	--	--	--	--	--	--	--	--
Zinc	Subchronic	9.00E-04	mg/m^3	2.60E-04	mg/kg-day	Respiratory/Immune System	--	C	--
Volatile Organic Compounds									
Acetone	Subchronic	--	--	1.00E+00	mg/kg-day	Liver, Kidney	100	R	--
2-Butanone	Subchronic	1.00E+00	mg/m^3	2.86E-01	mg/kg-day	Reproductive System	3000	HEAST	1997
Carbon disulfide	Subchronic	7.00E-01	mg/m^3	2.00E-01	mg/kg-day	CNS/PNS	30	HEAST	1997
Chloromethane	Subchronic	--	--	8.60E-02	mg/kg-day	--	--	NCEA	2001
1,2-Dichloroethane	Subchronic	--	--	1.40E-03	mg/kg-day	--	--	C	--
Ethylbenzene	Subchronic	1.00E+00	mg/m^3	2.86E-01	mg/kg-day	Reproductive System	300	C	--
4-methyl-2-pentanone	Subchronic	8.00E-01	mg/m^3	2.00E-01	mg/kg-day	Liver, Kidney	100	HEAST[e]	1997
Toluene	Subchronic	4.00E-01	mg/m^3	1.14E-01	mg/kg-day	CNS/PNS	300	C	--
Xylene (total)	Subchronic	--	--	2.00E+00	mg/kg-day	Whole body	100	R	--
Semivolatile Organic Compounds									
Acenaphthene	Subchronic	--	--	6.00E-01	mg/kg-day	Liver	300	R	--
Anthracene	Subchronic	--	--	3.00E+00	mg/kg-day	No observed effect	300	R	--
Benzo(a)anthracene	Subchronic	--	--	3.00E+00	mg/kg-day	No observed effect	300	R[h]	--
Benzo(a)pyrene	Subchronic	--	--	3.00E-01	mg/kg-day	Kidney	300	R[i]	--
Benzo(b)fluoranthene	Subchronic	--	--	4.00E-01	mg/kg-day	Liver, Kidney, Blood	300	R[j]	--
Benzo(g,h,i)perylene	Subchronic	--	--	3.00E-01	mg/kg-day	Kidney	300	R[i]	--
Benzo(k)fluoranthene	Subchronic	--	--	4.00E-01	mg/kg-day	Liver, Kidney, Blood	300	R[j]	--
Bis(2-ethylhexyl)phthalate	Subchronic	--	--	2.00E-02	mg/kg-day	Liver	1000	R	--
Carbazole	Subchronic	--	--	2.50E-02	mg/kg-day	Whole body (weight), Liver, Kidney	100	R[k]	--
Chrysene	Subchronic	--	--	3.00E+00	mg/kg-day	No observed effect	300	R[h]	--
Dibenz(a,h)anthracene	Subchronic	--	--	3.00E+00	mg/kg-day	No observed effect	300	R[h]	--
1,3-Dichlorobenzene	Subchronic	--	--	9.00E-04	mg/kg-day	--	--	R	--
2,4-Dichlorophenol	Subchronic	--	--	3.00E-03	mg/kg-day	Immune System	100	R	--
Fluoranthene	Subchronic	--	--	4.00E-01	mg/kg-day	Liver, Kidney, Blood	300	R	--

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EPA TABLE 5.2
NONCANCER TOXICITY DATA -- INHALATION
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern[a]	Chronic/ Subchronic	Value Inhalation RfC	Units	Adjusted Inhalation RfD[b]	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors[c]	Sources of RfC:RfD[d]: Target Organ	Dates
Fluorene	Subchronic	--	--	4.00E-01	mg/kg-day	Blood	300	R	--
Indeno(1,2,3-cd)pyrene	Subchronic	--	--	4.00E-01	mg/kg-day	Liver, Kidney, Blood	300	R	--
Isophorone	Subchronic	--	--	2.00E+00	mg/kg-day	Kidney	100	R	--
2-Methylnaphthalene	Subchronic	--	--	3.00E+00	mg/kg-day	No observed effect	300	R[h]	--
4-Methylphenol	Subchronic	--	--	5.00E-03	mg/kg-day	CNS/PNS	1000	R	--
Naphthalene	Subchronic	3.00E-03	mg/m^3	8.57E-04	mg/kg-day	Respiratory System	3000	C	--
N-Nitroso-diphenylamine	Subchronic	--	--	--	--	--	--	--	--
Pentachlorophenol	Subchronic	--	--	3.00E-02	mg/kg-day	Reproductive System	100	R	--
Phenanthrene	Subchronic	--	--	3.00E+00	mg/kg-day	No observed effect	300	R[h]	--
Phenol	Subchronic	--	--	6.00E-01	mg/kg-day	Reproductive System	100	R	--
Pyrene	Subchronic	--	--	3.00E-01	mg/kg-day	Kidney	300	R	--
1,2,4-Trichlorobenzene	Subchronic	2.00E+00	mg/m^3	5.71E-01	mg/kg-day	Whole body	100	HEAST	1997
Pesticides/Polychlorinated Biphenyls									
Aldrin	Subchronic	--	--	3.00E-05	mg/kg-day	Liver	1000	R	--
alpha-BHC	Subchronic	--	--	3.00E-03	mg/kg-day	Liver, Kidney	100	R[l]	--
alpha-Chlordane	Subchronic	7.00E-03	mg/m^3	2.00E-03	mg/kg-day	Liver	100	IRIS[m,r]	2001
Aroclor-1254	Subchronic	--	--	5.00E-05	mg/kg-day	Immune System	100	R	--
Aroclor-1260	Subchronic	--	--	5.00E-05	mg/kg-day	Immune System	100	R[n]	--
beta-BHC	Subchronic	--	--	3.00E-03	mg/kg-day	Liver, Kidney	100	R[l]	--
4,4'-DDD	Subchronic	--	--	5.00E-04	mg/kg-day	Liver	100	R[o]	--
4,4'-DDE	Subchronic	--	--	5.00E-04	mg/kg-day	Liver	100	R[o]	--
4,4'-DDT	Subchronic	--	--	5.00E-04	mg/kg-day	Liver	100	R	--
delta-BHC	Subchronic	--	--	3.00E-03	mg/kg-day	Liver, Kidney	100	R[l]	--
Dieldrin	Subchronic	--	--	5.00E-05	mg/kg-day	Liver	100	R	--
Endosulfan (I and II)	Subchronic	--	--	6.00E-03	mg/kg-day	Whole body (weight), Kidney, Blood	100	R[p]	--
Endosulfan sulfate	Subchronic	--	--	6.00E-03	mg/kg-day	Whole body (weight), Kidney, Blood	100	R[p]	--
Endrin	Subchronic	--	--	3.00E-04	mg/kg-day	Liver, CNS/PNS	100	R	--

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EPA TABLE 5.2
NONCANCER TOXICITY DATA -- INHALATION
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern[a]	Chronic/ Subchronic	Value Inhalation RfC	Units	Adjusted Inhalation RfD[b]	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors[c]	Sources of RfC:RfD[d]: Target Organ	Dates
Endrin aldehyde	Subchronic	--	--	3.00E-04	mg/kg-day	Liver, CNS/PNS	100	R[q]	--
Endrin ketone	Subchronic	--	--	3.00E-04	mg/kg-day	Liver, CNS/PNS	100	R[q]	--
gamma-BHC (Lindane)	Subchronic	--	--	3.00E-03	mg/kg-day	Liver, Kidney	100	R	--
gamma-Chlordane	Subchronic	7.00E-03	mg/m^3	2.00E-03	mg/kg-day	Liver	100	IRIS[m,r]	2001
Heptachlor	Subchronic	--	--	5.00E-04	mg/kg-day	Liver	300	R	--
Heptachlor epoxide	Subchronic	--	--	1.30E-05	mg/kg-day	Liver	1000	R	--
Methoxychlor	Subchronic	--	--	5.00E-03	mg/kg-day	Reproductive System	1000	R	--

Notes:

a	Includes all chemicals of potential concern at IR17/Building 503 Area
b	Adjustment for RfC to RfD is based upon multiplication by 20 cubic meters/day and dividing by 70 kilograms, unless noted otherwise
c	The use of uncertainty factors to derive the RfD is described in the text.
d	RfDs from IRIS (EPA 2001), NCEA (as provided in EPA 2000), HEAST (EPA 1997a), and Cal/EPA (1994)
e	Adjustment for RfC to RfD is based upon dose conversions by HEAST
f	Includes a modifying factor of 3
g	RfD listed by EPA (2001), but reportedly withdrawn from IRIS or HEAST
h	RfD for anthracene
i	RfD for pyrene
j	RfD for fluoranthene
k	RfD for diphenylamine
l	RfD for gamma-BHC
m	RfD for chlordane
n	RfD for Aroclor-1254
o	RfD for 4,4'-DDT
p	RfD for endosulfan
q	RfD for endrin
r	The subchronic RfD was assumed to be 10 times higher than the chronic RfD because an uncertainty factor of 10 was used by EPA (1999) for extrapolation from subchronic to chronic exposures for the chronic RfD.

--	Not available
ATSDR	Agency for Toxic Substances and Disease Registry
C	Indicates the chronic RfD was adopted as the subchronic RfD.
Cal/EPA	California Environmental Protection Agency
CNS	Central nervous system
DTSC	Department of Toxic Substances Control
EPA-9	U.S. Environmental Protection Agency, Region 9
GI	Gastrointestinal
HEAST	Health Assessment Summary Tables
IRIS	Integrated Risk Information System
mg/kg-day	Milligrams per kilogram per day
mg/m3	Milligrams per cubic meter
NCEA	National Center for Environmental Assessment
OEHHA	Office of Environmental Health Hazard Assessment
PNS	Peripheral nervous system
R	Route-to-route extrapolation.
RfC	Reference concentration
RfD	Reference dose

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EPA TABLE 5.3
NONCANCER TOXICITY DATA -- SPECIAL CASE CHEMICALS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND

Chemical of Potential Concern	Chronic/ Subchronic	Value	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of Primary Target Organ	Date (MM/DD/YY)
None	NA	NA	NA	NA	NA	NA	NA

Notes:

MM/DD/Year Month/Day/Year
NA Not Applicable

TABLE J-16

EPA TABLE 6.1
CANCER TOXICITY DATA -- ORAL/DERMAL
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern [a]	Oral Cancer Slope Factor [b]	Oral to Dermal Adjustment Factor	Adjusted Dermal Cancer Slope Factor	Units	Weight of Evidence[c]/ Cancer Guideline Description	Source[d]	Date
Metals							
Barium	NA	NA	NA	NA	D	IRIS	2001
Cobalt	--	--	--	--	--	--	--
Copper	NA	NA	NA	NA	D	IRIS	2001
Lead	--	--	--	--	B2	IRIS	2001
Molybdenum	--	--	--	--	--	--	--
Selenium	NA	NA	NA	NA	D	IRIS	2001
Silver	NA	NA	NA	NA	D	IRIS	2001
Thallium	NA	NA	NA	NA	D	IRIS[e]	2001
Tin	--	--	--	--	--	--	--
Titanium	--	--	--	--	--	--	--
Zinc	NA	NA	NA	NA	D	IRIS	2001
Volatile Organic Compounds							
Acetone	NA	NA	NA	NA	D	IRIS	2001
2-Butanone	NA	NA	NA	NA	D	IRIS	2001
Carbon disulfide	--	--	--	--	--	--	--
Chloromethane	NA	NA	NA	NA	D	IRIS	2001
1,2-Dichloroethane	9.10E-02	100%	9.10E-02	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	2001
Ethylbenzene	NA	NA	NA	NA	D	IRIS	2001
4-methyl-2-pentanone	--	--	--	--	--	--	--
Toluene	NA	NA	NA	NA	D	IRIS	2001
1,2,4-Trichlorobenzene	NA	NA	NA	NA	D	IRIS	2001
Xylene (total)	NA	NA	NA	NA	D	IRIS	2001
Semivolatile Organic Compounds							
Acenaphthene	--	--	--	--	--	--	--
Anthracene	NA	NA	NA	NA	D	IRIS	2001
Benzo(a)anthracene	1.20E+00	100%	1.20E+00	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
Benzo(a)pyrene	1.20E+01	100%	1.20E+01	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
Benzo(b)fluoranthene	1.20E+00	100%	1.20E+00	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
Benzo(g,h,i)perylene	NA	NA	NA	NA	D	IRIS	2001
Benzo(k)fluoranthene	1.20E+00	100%	1.20E+00	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
Benzoic acid	NA	NA	NA	NA	D	IRIS	2001

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EPA TABLE 6.1
CANCER TOXICITY DATA -- ORAL/DERMAL
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern [a]	Oral Cancer Slope Factor [b]	Oral to Dermal Adjustment Factor	Adjusted Dermal Cancer Slope Factor	Units	Weight of Evidence[c]/ Cancer Guideline Description	Source[d]	Date
Bis(2-ethylhexyl)phthalate	1.40E-02	100%	1.40E-02	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	2001
Carbazole	2.00E-02	100%	2.00E-02	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 1997)	HEAST	1997
Chrysene	1.20E-01	100%	1.20E-01	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
Dibenz(a,h)anthracene	4.10E+00	100%	4.10E+00	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
1,3-Dichlorobenzene	NA	NA	NA	NA	D	IRIS	2001
2,4-Dichlorophenol	--	--	--	--	--	--	--
Fluoranthene	NA	NA	NA	NA	D	IRIS	2001
Fluorene	NA	NA	NA	NA	D	IRIS	2001
Indeno(1,2,3-cd)pyrene	1.20E+00	100%	1.20E+00	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
Isophorone	9.50E-04	100%	9.50E-04	$(mg/kg\text{-}day)^{-1}$	C	IRIS	2001
2-Methylnaphthalene	--	--	--	--	--	--	--
4-Methylphenol	--	--	--	--	C	IRIS	2001
Naphthalene	--	--	--	--	C	IRIS	2001
N-Nitroso-diphenylamine	9.00E-03	100%	9.00E-03	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
Pentachlorophenol	1.20E-01	100%	1.20E-01	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	2001
Phenanthrene	NA	NA	NA	NA	D	IRIS	2001
Phenol	NA	NA	NA	NA	D	IRIS	2001
Pyrene	NA	NA	NA	NA	D	IRIS	2001
Pesticides/Polychlorinated Biphenyls							
Aldrin	1.7E+01	100%	1.7E+01	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	2001
alpha-BHC	6.3E+00	100%	6.3E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	2001
alpha-chlordane	1.20E+00	100%	1.20E+00	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA[f]	1994
Aroclor-1254	2.0E+00	100%	2.0E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS[g]	2001
Aroclor-1260	2.0E+00	100%	2.0E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS[g]	2001
beta-BHC	1.80E+00	100%	1.80E+00	$(mg/kg\text{-}day)^{-1}$	C	IRIS	2001
4,4'-DDD	2.40E-01	100%	2.40E-01	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	2001
4,4'-DDE	3.40E-01	100%	3.40E-01	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	2001
4,4'-DDT	3.40E-01	100%	3.40E-01	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	2001
delta-BHC	NA	NA	NA	NA	D	IRIS	2001
Dieldrin	1.60E+01	100%	1.60E+01	$(mg/kg\text{-}day)^{-1}$	B2	IRIS, Cal EPA	2001, 1994
Endosulfan (I and II)	--	--	--	--	--	--	--

TABLE J-16

EPA TABLE 6.1
CANCER TOXICITY DATA -- ORAL/DERMAL
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern [a]	Oral Cancer Slope Factor [b]	Oral to Dermal Adjustment Factor	Adjusted Dermal Cancer Slope Factor	Units	Weight of Evidence[c]/ Cancer Guideline Description	Source[d]	Date
Endosulfan sulfate	--	--	--	--	--	--	--
Endrin	NA	NA	NA	NA	D	IRIS	2001
Endrin aldehyde	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-BHC (Lindane)	1.30E+00	100%	1.30E+00	$(mg/kg\text{-}day)^{-1}$	B2-C	HEAST	1997
gamma-Chlordane	1.20E+00	100%	1.20E+00	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA[f]	1994
Heptachlor	5.70E+00	100%	5.70E+00	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
Heptachlor epoxide	1.30E+01	100%	1.30E+01	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
Methoxychlor	NA	NA	NA	NA	D	IRIS	2001

Notes:

a	Includes all chemicals of potential concern at IR17/Building 503 Area
b	Listed Slope factor is the highest of the values from the sources listed in footnote d.
c	Carcinogenic weight-of-evidence is a qualitative designation for potential carcinogens.
d	Slope factors from IRIS (EPA 2001), Cal/EPA (1994), NCEA (as provided by EPA 1999) and HEAST (EPA 1997a).
e	Weight of evidence for thallic oxide
f	Slope factor for chlordane
g	Upper bound slope factor of the higher risk and persistence tier for polychlorinated biphenyls.
--	No value available
Cal/EPA	California Environmental Protection Agency
$(mg/kg\text{-}day)^{-1}$	1/(milligrams per kilogram per day)
NCEA	National Center for Environmental Assessment
NE	Not evaluated as a possible human carcinogen by IRIS
NA	Not applicable because chemical is not considered a human carcinogen
EPA	United States Environmental Protection Agency
HEAST	Health Effects Assessment Summary Tables
IRIS	Integrated Risk Information System

EPA Weight-of-Evidence Classification:

A - Human carcinogen
B1 - Probable human carcinogen - indicates that limited human data are available
B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans
C - Possible human carcinogen
D - Not classifiable as to human carcinogenicity

TABLE J-17

EPA TABLE 6.2
CANCER TOXICITY DATA -- INHALATION
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern [a]	Unit Risk	Units	Adjustment[b]	Inhalation Cancer Slope Factor[c]	Units	Weight of Evidence[d]/ Cancer Guideline Description	Source[e]	Date
Metals								
Barium	NA	NA	NA	NA	NA	D	IRIS	2001
Cobalt	--	--	--	--	--	--	--	--
Copper	NA	NA	NA	NA	NA	D	IRIS	2001
Lead	--	--	--	--	--	B2	IRIS	2001
Molybdenum	--	--	--	--	--	--	--	--
Selenium	NA	NA	NA	NA	NA	D	IRIS	2001
Silver	NA	NA	NA	NA	NA	D	IRIS	2001
Thallium	NA	NA	NA	NA	NA	D	IRIS[f]	2001
Tin	--	--	--	--	--	--	--	--
Titanium	--	--	--	--	--	--	--	--
Zinc	NA	NA	NA	NA	NA	D	IRIS	2001
Volatile Organic Compounds								
Acetone	NA	NA	NA	NA	NA	D	IRIS	2001
2-Butanone	NA	NA	NA	NA	NA	D	IRIS	2001
Carbon disulfide	--	--	--	--	--	--	--	--
Chloromethane	NA	NA	NA	NA	NA	D	IRIS	2001
1,2-Dichloroethane	2.60E-05	$(ug/m^3)^{-1}$	3500	9.10E-02	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	2001
Ethylbenzene	NA	NA	NA	NA	NA	D	IRIS	2001
4-methyl-2-pentanone	--	--	--	--	--	--	--	--
Toluene	NA	NA	NA	NA	NA	D	IRIS	2001
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	D	IRIS	2001
Xylene (total)	NA	NA	NA	NA	NA	D	IRIS	2001
Semivolatile Organic Compounds								
Acenaphthene	--	--	--	--	--	--	--	--
Anthracene	NA	NA	NA	NA	NA	D	IRIS	2001
Benzo(a)anthracene	1.11E-03	$(ug/m^3)^{-1}$	3500 x 0.1 (PEF)	3.90E-01	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
Benzo(a)pyrene	1.11E-03	$(ug/m^3)^{-1}$	(Cal EPA 1994)[g]	3.90E+00	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994

TABLE J-17

EPA TABLE 6.2
CANCER TOXICITY DATA -- INHALATION
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern [a]	Unit Risk	Units	Adjustment[b]	Inhalation Cancer Slope Factor[c]	Units	Weight of Evidence[d]/ Cancer Guideline Description	Source[e]	Date
Benzo(b)fluoranthene	1.11E-03	$(ug/m^3)^{-1}$	3500 x 0.1 (PEF)	3.90E-01	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	D	IRIS	2001
Benzo(k)fluoranthene	1.11E-03	$(ug/m^3)^{-1}$	3500 x 0.1 (PEF)	3.90E-01	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
Benzoic acid	NA	NA	NA	NA	NA	D	IRIS	2001
Bis(2-ethylhexyl)phthalate	2.40E-06	$(ug/m^3)^{-1}$	(Cal EPA 1994)[g]	8.40E-03	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
Carbazole	--	--	--	2.00E-02	$(mg/kg\text{-}day)^{-1}$	B2	R	--
Chrysene	1.11E-03	$(ug/m^3)^{-1}$	3500 x 0.01 (PEF)	3.90E-02	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
Dibenz(a,h)anthracene	1.16E-03	$(ug/m^3)^{-1}$	(Cal EPA 1994)[g]	4.10E+00	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	D	IRIS	2001
2,4-Dichlorophenol	--	--	--	--	--	--	--	--
Fluoranthene	NA	NA	NA	NA	NA	D	IRIS	2001
Fluorene	NA	NA	NA	NA	NA	D	IRIS	2001
Indeno(1,2,3-cd)pyrene	1.11E-03	$(ug/m^3)^{-1}$	3500 x 0.1 (PEF)	3.90E-01	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 1999)	Cal EPA	1994
Isophorone	--	--	--	9.50E-04	$(mg/kg\text{-}day)^{-1}$	C	R	--
2-Methylnaphthalene	--	--	--	--	--	--	--	--
4-Methylphenol	--	--	--	--	--	C	IRIS	2001
Naphthalene	--	--	--	--	--	C	IRIS	2001
N-Nitroso-diphenylamine	2.60E-06	$(ug/m^3)^{-1}$	(Cal EPA 1994)[g]	9.00E-03	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 1999)	Cal EPA	1994
Pentachlorophenol	--	--	--	1.20E-01	$(mg/kg\text{-}day)^{-1}$	B2	R	--
Phenanthrene	NA	NA	NA	NA	NA	D	IRIS	2001
Phenol	NA	NA	NA	NA	NA	D	IRIS	2001
Pyrene	NA	NA	NA	NA	NA	D	IRIS	2001
Pesticides/Polychlorinated Biphenyls								
Aldrin	4.90E-03	$(ug/m^3)^{-1}$	3500	1.72E+01	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	2001
alpha-BHC	1.80E-03	$(ug/m^3)^{-1}$	3500	6.30E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	2001
alpha-chlordane	3.40E-04	$(ug/m^3)^{-1}$	(Cal EPA 1994)[g]	1.20E+00	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA[h]	1994
Aroclor-1254	--	--	--	2.0E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS[i]	2001
Aroclor-1260	--	--	--	2.0E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS[i]	2001

TABLE J-17

EPA TABLE 6.2
CANCER TOXICITY DATA -- INHALATION
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern [a]	Unit Risk	Units	Adjustment[b]	Inhalation Cancer Slope Factor[c]	Units	Weight of Evidence[d]/ Cancer Guideline Description	Source[e]	Date
beta-BHC	5.30E-04	$(ug/m^3)^{-1}$	3500	1.86E+00	$(mg/kg\text{-}day)^{-1}$	C	IRIS	2001
4,4'-DDD	6.90E-05	$(ug/m^3)^{-1}$	(Cal EPA 1994)[g]	2.40E-01	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
4,4'-DDE	9.70E-05	$(ug/m^3)^{-1}$	(Cal EPA 1994)[g]	3.40E-01	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
4,4'-DDT	9.70E-05	$(ug/m^3)^{-1}$	3500	3.40E-01	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
delta-BHC	NA	NA	NA	NA	NA	D	IRIS	2001
Dieldrin	4.60E-03	$(ug/m^3)^{-1}$	3500	1.60E+01	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	2001
Endosulfan (I and II)	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--
Endrin	NA	NA	NA	NA	NA	D	IRIS	2001
Endrin aldehyde	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
gamma-BHC (Lindane)	--	--	--	1.30E+00	$(mg/kg\text{-}day)^{-1}$	B2-C	R	--
gamma-Chlordane	3.40E-04	$(ug/m^3)^{-1}$	(Cal EPA 1994)[g]	1.20E+00	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA[h]	1994
Heptachlor	1.60E-03	$(ug/m^3)^{-1}$	(Cal EPA 1994)[g]	5.70E+00	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994
Heptachlor epoxide	3.70E-03	$(ug/m^3)^{-1}$	(Cal EPA 1994)[g]	1.30E+01	$(mg/kg\text{-}day)^{-1}$	B2 (IRIS 2001)	Cal EPA	1994

TABLE J-17

EPA TABLE 6.2
CANCER TOXICITY DATA -- INHALATION
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Chemical of Potential Concern [a]	Unit Risk	Units	Adjustment[b]	Inhalation Cancer Slope Factor[c]	Units	Weight of Evidence[d]/ Cancer Guideline Description	Source[e]	Date
Methoxychlor	NA	NA	NA	NA	NA	D	IRIS	2001

Notes:

a	Includes all chemicals of potential concern at IR17/Building 503 Area.
b	Adjustment is 3500 based upon (unit risk x 70 kilograms x 1/20 cubic meters per day x 1000 micrograms per milligram)
c	Listed Slope factor is the highest of the values from the sources listed in footnote d.
d	Carcinogenic weight-of-evidence is a qualitative designation for potential carcinogens.
e	Slope factors from IRIS (EPA 2001), Cal/EPA (1994), NCEA (as provided by EPA 1999) and HEAST (EPA 1997a).
f	Weight of evidence for thallic oxide
g	The conversion between the potency slope and unit risk value is performed using the following equation: Potency Slope x 2.86E-04 = Unit Risk (Cal EPA 1994)
h	Slope factor for chlordane
i	Upper bound slope factor of the high risk and persistence tier for polychlorinated biphenyls.
$(ug/m^3)^{-1}$	l/(micrograms per cubic meters)
$(mg/kg\text{-}day)^{-1}$	l/(milligrams per kilogram per day)
NA	Not applicable because chemical is not considered a human carcinogen
Cal/EPA	California Environmental Protection Agency
EPA	United States Environmental Protection Agency
HEAST	Health Effects Assessment Summary Tables
IRIS	Integrated Risk Information System
R	Route-to-route extrapolation.
--	No value available
OEHHA	Office of Environmental Health Hazard Assessment
PEF	Cal EPA OEHHA potency equivalency factor toxicity weighting scheme for polyaromatic hydrocarbons with
NCEA	National Center for Environmental Assessment

EPA Weight-of-Evidence Classification:

A - Human carcinogen
B1 - Probable human carcinogen - indicates that limited human data are available
B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans
C - Possible human carcinogen
D - Not classifiable as to human carcinogenicity

TABLE J-18

EPA TABLE 6.3
CANCER TOXICITY DATA -- SPECIAL CASE CHEMICALS
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND

Chemical of Potential Concern	Value	Units	Source	Date MM/DD/YY
None	NA	NA	NA	NA

MM/DD/YY Month/Day/Year
NA Not Applicable

TABLE J-19

EPA TABLE U.8.1.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	**METALS**										
	BARIUM	1.10E+02	mg/kg	1.10E+02	mg/kg	M	1.92E-05	mg/kg-day	--	--	--
	COBALT	1.33E+01	mg/kg	1.33E+01	mg/kg	M	2.33E-06	mg/kg-day	--	--	--
	LEAD	1.71E+02	mg/kg	1.71E+02	mg/kg	M	2.99E-05	mg/kg-day	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	3.60E-01	mg/kg	M	6.29E-08	mg/kg-day	--	--	--
	SELENIUM	6.02E-01	mg/kg	6.02E-01	mg/kg	M	1.05E-07	mg/kg-day	--	--	--
	SILVER	4.56E-01	mg/kg	4.56E-01	mg/kg	M	7.97E-08	mg/kg-day	--	--	--
	THALLIUM	4.29E-01	mg/kg	4.29E-01	mg/kg	M	7.50E-08	mg/kg-day	--	--	--
	TIN	2.39E+01	mg/kg	2.39E+01	mg/kg	M	4.18E-06	mg/kg-day	--	--	--
	TITANIUM	5.16E+03	mg/kg	5.16E+03	mg/kg	M	9.02E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	3.49E-10	mg/kg-day	--	--	--
	TOLUENE	5.82E-03	mg/kg	5.82E-03	mg/kg	M	1.02E-09	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	6.99E-10	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	6.46E-09	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	4.19E-08	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	2.62E-08	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	2.46E-01	mg/kg	M	4.30E-08	mg/kg-day	1.2E+00	mg/kg-day-1	5.2E-08
	BENZO(A)PYRENE	2.50E-01	mg/kg	2.50E-01	mg/kg	M	4.37E-08	mg/kg-day	1.2E+01	mg/kg-day-1	5.2E-07
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	2.61E-01	mg/kg	M	4.56E-08	mg/kg-day	1.2E+00	mg/kg-day-1	5.5E-08
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	2.47E-01	mg/kg	M	4.32E-08	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	2.60E-01	mg/kg	M	4.54E-08	mg/kg-day	1.2E+00	mg/kg-day-1	5.4E-08
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	1.76E-01	mg/kg	M	3.07E-08	mg/kg-day	1.4E-02	mg/kg-day-1	4.3E-10
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	1.28E-08	mg/kg-day	2.0E-02	mg/kg-day-1	2.6E-10

TABLE J-19

EPA TABLE U.8.1.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	CHRYSENE	2.42E-01	mg/kg	2.42E-01	mg/kg	M	4.22E-08	mg/kg-day	1.2E-01	mg/kg-day-1	5.1E-09
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	1.05E-08	mg/kg-day	4.1E+00	mg/kg-day-1	4.3E-08
	FLUORANTHENE	2.80E-01	mg/kg	2.80E-01	mg/kg	M	4.89E-08	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	1.43E-08	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	2.45E-08	mg/kg-day	1.2E+00	mg/kg-day-1	2.9E-08
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	8.74E-08	mg/kg-day	1.2E-01	mg/kg-day-1	1.0E-08
	PHENANTHRENE	2.88E-01	mg/kg	2.88E-01	mg/kg	M	5.03E-08	mg/kg-day	--	--	--
	PYRENE	2.52E-01	mg/kg	2.52E-01	mg/kg	M	4.40E-08	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.39E-03	mg/kg	3.39E-03	mg/kg	M	5.92E-10	mg/kg-day	2.4E-01	mg/kg-day-1	1.4E-10
	4,4'-DDE	2.87E-03	mg/kg	2.87E-03	mg/kg	M	5.01E-10	mg/kg-day	3.4E-01	mg/kg-day-1	1.7E-10
	4,4'-DDT	1.20E-02	mg/kg	1.20E-02	mg/kg	M	2.10E-09	mg/kg-day	3.4E-01	mg/kg-day-1	7.1E-10
	ALDRIN	1.00E-03	mg/kg	1.00E-03	mg/kg	M	1.75E-10	mg/kg-day	1.7E+01	mg/kg-day-1	3.0E-09
	ALPHA-BHC	4.77E-03	mg/kg	4.77E-03	mg/kg	M	8.33E-10	mg/kg-day	6.3E+00	mg/kg-day-1	5.3E-09
	ALPHA-CHLORDANE	2.92E-03	mg/kg	2.92E-03	mg/kg	M	5.10E-10	mg/kg-day	1.2E+00	mg/kg-day-1	6.1E-10
	AROCLOR-1254	1.42E-02	mg/kg	1.42E-02	mg/kg	M	2.48E-09	mg/kg-day	2.0E+00	mg/kg-day-1	5.0E-09
	AROCLOR-1260	5.10E-02	mg/kg	5.10E-02	mg/kg	M	8.92E-09	mg/kg-day	2.0E+00	mg/kg-day-1	1.8E-08
	BETA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	2.87E-10	mg/kg-day	1.8E+00	mg/kg-day-1	5.2E-10
	DELTA-BHC	1.20E-03	mg/kg	1.20E-03	mg/kg	M	2.10E-10	mg/kg-day	--	--	--
	DIELDRIN	2.15E-03	mg/kg	2.15E-03	mg/kg	M	3.76E-10	mg/kg-day	1.6E+01	mg/kg-day-1	6.0E-09
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	2.11E-10	mg/kg-day	--	--	--
	ENDOSULFAN II	1.94E-03	mg/kg	1.94E-03	mg/kg	M	3.39E-10	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	4.63E-10	mg/kg-day	--	--	--
	ENDRIN	2.03E-03	mg/kg	2.03E-03	mg/kg	M	3.55E-10	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	3.61E-03	mg/kg	M	6.31E-10	mg/kg-day	--	--	--

TABLE J-19

EPA TABLE U.8.1.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDRIN KETONE	2.72E-03	mg/kg	2.72E-03	mg/kg	M	4.75E-10	mg/kg-day	--	--	--
	GAMMA-BHC	1.89E-03	mg/kg	1.89E-03	mg/kg	M	3.30E-10	mg/kg-day	1.3E+00	mg/kg-day-1	4.3E-10
	GAMMA-CHLORDANE	4.77E-03	mg/kg	4.77E-03	mg/kg	M	8.33E-10	mg/kg-day	1.2E+00	mg/kg-day-1	1.0E-09
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	4.02E-11	mg/kg-day	5.7E+00	mg/kg-day-1	2.3E-10
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	3.40E-04	mg/kg	M	5.94E-11	mg/kg-day	1.3E+01	mg/kg-day-1	7.7E-10
	METHOXYCHLOR	9.79E-03	mg/kg	9.79E-03	mg/kg	M	1.71E-09	mg/kg-day	--	--	--
Dermal	**METALS**										
	BARIUM	1.10E+02	mg/kg	1.10E+02	mg/kg	M	4.37E-06	mg/kg-day	--	--	--
	COBALT	1.33E+01	mg/kg	1.33E+01	mg/kg	M	5.31E-07	mg/kg-day	--	--	--
	LEAD	1.71E+02	mg/kg	1.71E+02	mg/kg	M	6.83E-06	mg/kg-day	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	3.60E-01	mg/kg	M	1.43E-08	mg/kg-day	--	--	--
	SELENIUM	6.02E-01	mg/kg	6.02E-01	mg/kg	M	2.40E-08	mg/kg-day	--	--	--
	SILVER	4.56E-01	mg/kg	4.56E-01	mg/kg	M	1.82E-08	mg/kg-day	--	--	--
	THALLIUM	4.29E-01	mg/kg	4.29E-01	mg/kg	M	1.71E-08	mg/kg-day	--	--	--
	TIN	2.39E+01	mg/kg	2.39E+01	mg/kg	M	9.52E-07	mg/kg-day	--	--	--
	TITANIUM	5.16E+03	mg/kg	5.16E+03	mg/kg	M	2.06E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	7.97E-10	mg/kg-day	--	--	--
	TOLUENE	5.82E-03	mg/kg	5.82E-03	mg/kg	M	2.32E-09	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.59E-09	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.47E-08	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.43E-07	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	8.96E-08	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	2.46E-01	mg/kg	M	1.47E-07	mg/kg-day	1.2E+00	mg/kg-day-1	1.8E-07

TABLE J-19

EPA TABLE U.8.1.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BENZO(A)PYRENE	2.50E-01	mg/kg	2.50E-01	mg/kg	M	1.50E-07	mg/kg-day	1.2E+01	mg/kg-day-1	1.8E-06
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	2.61E-01	mg/kg	M	1.56E-07	mg/kg-day	1.2E+00	mg/kg-day-1	1.9E-07
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	2.47E-01	mg/kg	M	1.48E-07	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	2.60E-01	mg/kg	M	1.55E-07	mg/kg-day	1.2E+00	mg/kg-day-1	1.9E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	1.76E-01	mg/kg	M	6.99E-08	mg/kg-day	1.4E-02	mg/kg-day-1	9.8E-10
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	2.91E-08	mg/kg-day	2.0E-02	mg/kg-day-1	5.8E-10
	CHRYSENE	2.42E-01	mg/kg	2.42E-01	mg/kg	M	1.44E-07	mg/kg-day	1.2E-01	mg/kg-day-1	1.7E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	3.59E-08	mg/kg-day	4.1E+00	mg/kg-day-1	1.5E-07
	FLUORANTHENE	2.80E-01	mg/kg	2.80E-01	mg/kg	M	1.67E-07	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	4.90E-08	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	8.37E-08	mg/kg-day	1.2E+00	mg/kg-day-1	1.0E-07
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	4.98E-07	mg/kg-day	1.2E-01	mg/kg-day-1	6.0E-08
	PHENANTHRENE	2.88E-01	mg/kg	2.88E-01	mg/kg	M	1.72E-07	mg/kg-day	--	--	--
	PYRENE	2.52E-01	mg/kg	2.52E-01	mg/kg	M	1.51E-07	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.39E-03	mg/kg	3.39E-03	mg/kg	M	6.75E-10	mg/kg-day	2.4E-01	mg/kg-day-1	1.6E-10
	4,4'-DDE	2.87E-03	mg/kg	2.87E-03	mg/kg	M	5.72E-10	mg/kg-day	3.4E-01	mg/kg-day-1	1.9E-10
	4,4'-DDT	1.20E-02	mg/kg	1.20E-02	mg/kg	M	2.39E-09	mg/kg-day	3.4E-01	mg/kg-day-1	8.1E-10
	ALDRIN	1.00E-03	mg/kg	1.00E-03	mg/kg	M	1.99E-10	mg/kg-day	1.7E+01	mg/kg-day-1	3.4E-09
	ALPHA-BHC	4.77E-03	mg/kg	4.77E-03	mg/kg	M	9.50E-10	mg/kg-day	6.3E+00	mg/kg-day-1	6.0E-09
	ALPHA-CHLORDANE	2.92E-03	mg/kg	2.92E-03	mg/kg	M	5.82E-10	mg/kg-day	1.2E+00	mg/kg-day-1	7.0E-10
	AROCLOR-1254	1.42E-02	mg/kg	1.42E-02	mg/kg	M	8.49E-09	mg/kg-day	2.0E+00	mg/kg-day-1	1.7E-08
	AROCLOR-1260	5.10E-02	mg/kg	5.10E-02	mg/kg	M	3.05E-08	mg/kg-day	2.0E+00	mg/kg-day-1	6.1E-08
	BETA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	3.27E-10	mg/kg-day	1.8E+00	mg/kg-day-1	5.9E-10
	DELTA-BHC	1.20E-03	mg/kg	1.20E-03	mg/kg	M	2.39E-10	mg/kg-day	--	--	--

TABLE J-19

EPA TABLE U.8.1.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	DIELDRIN	2.15E-03	mg/kg	2.15E-03	mg/kg	M	4.28E-10	mg/kg-day	1.6E+01	mg/kg-day-1	6.9E-09
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	2.41E-10	mg/kg-day	--	--	--
	ENDOSULFAN II	1.94E-03	mg/kg	1.94E-03	mg/kg	M	3.86E-10	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	5.28E-10	mg/kg-day	--	--	--
	ENDRIN	2.03E-03	mg/kg	2.03E-03	mg/kg	M	4.04E-10	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	3.61E-03	mg/kg	M	7.19E-10	mg/kg-day	--	--	--
	ENDRIN KETONE	2.72E-03	mg/kg	2.72E-03	mg/kg	M	5.42E-10	mg/kg-day	--	--	--
	GAMMA-BHC	1.89E-03	mg/kg	1.89E-03	mg/kg	M	3.76E-10	mg/kg-day	1.3E+00	mg/kg-day-1	4.9E-10
	GAMMA-CHLORDANE	2.81E-03	mg/kg	2.81E-03	mg/kg	M	5.60E-10	mg/kg-day	1.2E+00	mg/kg-day-1	6.7E-10
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	4.58E-11	mg/kg-day	5.7E+00	mg/kg-day-1	2.6E-10
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	3.40E-04	mg/kg	M	6.77E-11	mg/kg-day	1.3E+01	mg/kg-day-1	8.8E-10
	METHOXYCHLOR	9.79E-03	mg/kg	9.79E-03	mg/kg	M	1.95E-09	mg/kg-day	--	--	--
										Total Risk Across All Direct Contact Exposure Routes/Pathways - Soil	3.6E-06

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

-- = No value available

TABLE J-20

EPA TABLE U.8.2.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation-Dust	**METALS**										
	BARIUM	1.10E+02	mg/kg	8.33E-08	mg/m^3	R	5.82E-09	mg/kg-day	--	--	--
	COBALT	1.33E+01	mg/kg	1.01E-08	mg/m^3	R	7.07E-10	mg/kg-day	--	--	--
	LEAD	1.71E+02	mg/kg	1.30E-07	mg/m^3	R	9.10E-09	mg/kg-day	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	2.74E-10	mg/m^3	R	1.91E-11	mg/kg-day	--	--	--
	SELENIUM	6.02E-01	mg/kg	4.58E-10	mg/m^3	R	3.20E-11	mg/kg-day	--	--	--
	SILVER	4.56E-01	mg/kg	3.47E-10	mg/m^3	R	2.42E-11	mg/kg-day	--	--	--
	THALLIUM	4.29E-01	mg/kg	3.26E-10	mg/m^3	R	2.28E-11	mg/kg-day	--	--	--
	TIN	2.39E+01	mg/kg	1.82E-08	mg/m^3	R	1.27E-09	mg/kg-day	--	--	--
	TITANIUM	5.16E+03	mg/kg	3.92E-06	mg/m^3	R	2.74E-07	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	1.52E-12	mg/m^3	R	1.06E-13	mg/kg-day	--	--	--
	TOLUENE	5.82E-03	mg/kg	4.42E-12	mg/m^3	R	3.09E-13	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	2.12E-13	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	1.97E-12	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	1.27E-11	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	7.97E-12	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	1.87E-10	mg/m^3	R	1.31E-11	mg/kg-day	3.9E-01	mg/kg-day	5.1E-12
	BENZO(A)PYRENE	2.50E-01	mg/kg	1.90E-10	mg/m^3	R	1.33E-11	mg/kg-day	3.9E+00	mg/kg-day	5.2E-11
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	1.98E-10	mg/m^3	R	1.38E-11	mg/kg-day	3.9E-01	mg/kg-day	5.4E-12
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	1.88E-10	mg/m^3	R	1.31E-11	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	1.97E-10	mg/m^3	R	1.38E-11	mg/kg-day	3.9E-01	mg/kg-day	5.4E-12
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	1.33E-10	mg/m^3	R	9.32E-12	mg/kg-day	8.4E-03	mg/kg-day	7.8E-14
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	3.88E-12	mg/kg-day	2.0E-02	mg/kg-day	7.8E-14

TABLE J-20

EPA TABLE U.8.2.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	CHRYSENE	2.42E-01	mg/kg	1.84E-10	mg/m^3	R	1.28E-11	mg/kg-day	3.9E-02	mg/kg-day	5.0E-13
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	3.19E-12	mg/kg-day	4.1E+00	mg/kg-day	1.3E-11
	FLUORANTHENE	2.80E-01	mg/kg	2.13E-10	mg/m^3	R	1.49E-11	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	4.35E-12	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	7.44E-12	mg/kg-day	3.9E-01	mg/kg-day	2.9E-12
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	2.66E-11	mg/kg-day	1.2E-01	mg/kg-day	3.2E-12
	PHENANTHRENE	2.88E-01	mg/kg	2.19E-10	mg/m^3	R	1.53E-11	mg/kg-day	--	--	--
	PYRENE	2.52E-01	mg/kg	1.91E-10	mg/m^3	R	1.34E-11	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.39E-03	mg/kg	2.58E-12	mg/m^3	R	1.80E-13	mg/kg-day	2.4E-01	mg/kg-day	4.3E-14
	4,4'-DDE	2.87E-03	mg/kg	2.18E-12	mg/m^3	R	1.52E-13	mg/kg-day	3.4E-01	mg/kg-day	5.2E-14
	4,4'-DDT	1.20E-02	mg/kg	9.13E-12	mg/m^3	R	6.38E-13	mg/kg-day	3.4E-01	mg/kg-day	2.2E-13
	ALDRIN	1.00E-03	mg/kg	7.60E-13	mg/m^3	R	5.31E-14	mg/kg-day	1.7E+01	mg/kg-day	9.1E-13
	ALPHA-BHC	4.77E-03	mg/kg	3.62E-12	mg/m^3	R	2.53E-13	mg/kg-day	6.3E+00	mg/kg-day	1.6E-12
	ALPHA-CHLORDANE	2.92E-03	mg/kg	2.22E-12	mg/m^3	R	1.55E-13	mg/kg-day	1.2E+00	mg/kg-day	1.9E-13
	AROCLOR-1254	1.42E-02	mg/kg	1.08E-11	mg/m^3	R	7.54E-13	mg/kg-day	2.0E+00	mg/kg-day	1.5E-12
	AROCLOR-1260	5.10E-02	mg/kg	3.88E-11	mg/m^3	R	2.71E-12	mg/kg-day	2.0E+00	mg/kg-day	5.4E-12
	BETA-BHC	1.64E-03	mg/kg	1.25E-12	mg/m^3	R	8.71E-14	mg/kg-day	1.9E+00	mg/kg-day	1.6E-13
	DELTA-BHC	1.20E-03	mg/kg	9.12E-13	mg/m^3	R	6.37E-14	mg/kg-day	--	--	--
	DIELDRIN	2.15E-03	mg/kg	1.63E-12	mg/m^3	R	1.14E-13	mg/kg-day	1.6E+01	mg/kg-day	1.8E-12
	ENDOSULFAN I	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	6.43E-14	mg/kg-day	--	--	--
	ENDOSULFAN II	1.94E-03	mg/kg	1.47E-12	mg/m^3	R	1.03E-13	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	2.01E-12	mg/m^3	R	1.41E-13	mg/kg-day	--	--	--
	ENDRIN	2.03E-03	mg/kg	1.54E-12	mg/m^3	R	1.08E-13	mg/kg-day	--	--	--

TABLE J-20

EPA TABLE U.8.2.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	2.74E-12	mg/m^3	R	1.92E-13	mg/kg-day	--	--	--
	ENDRIN KETONE	2.72E-03	mg/kg	2.07E-12	mg/m^3	R	1.44E-13	mg/kg-day	--	--	--
	GAMMA-BHC	1.89E-03	mg/kg	1.44E-12	mg/m^3	R	1.00E-13	mg/kg-day	1.3E+00	mg/kg-day	1.3E-13
	GAMMA-CHLORDANE	4.77E-03	mg/kg	2.14E-12	mg/m^3	R	1.49E-13	mg/kg-day	1.2E+00	mg/kg-day	1.8E-13
	HEPTACHLOR	2.30E-04	mg/kg	1.75E-13	mg/m^3	R	1.22E-14	mg/kg-day	5.7E+00	mg/kg-day	7.0E-14
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	2.58E-13	mg/m^3	R	1.81E-14	mg/kg-day	1.3E+01	mg/kg-day	2.3E-13
	METHOXYCHLOR	9.79E-03	mg/kg	7.44E-12	mg/m^3	R	5.20E-13	mg/kg-day	--	--	--
Inhalation VOCs	**METALS**										
	BARIUM	1.10E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COBALT	1.33E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	LEAD	1.71E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SELENIUM	6.02E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SILVER	4.56E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	THALLIUM	4.29E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TIN	2.39E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TITANIUM	5.16E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	2.30E-02	mg/m^3	R	1.61E-03	mg/kg-day	--	--	--
	TOLUENE	5.82E-03	mg/kg	2.56E-02	mg/m^3	R	1.79E-03	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	1.14E-04	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	3.16E-03	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.78E-01	mg/m^3	R	1.24E-02	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	1.92E-04	mg/kg-day	--	--	--

TABLE J-20

EPA TABLE U.8.2.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	BENZO(A)PYRENE	2.50E-01	mg/kg	--	mg/m^3	R	--	--	3.9E+00	mg/kg-day	--
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	--	mg/m^3	R	--	--	8.4E-03	mg/kg-day	--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day	--
	CHRYSENE	2.42E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-02	mg/kg-day	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	4.1E+00	mg/kg-day	--
	FLUORANTHENE	2.80E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	2.37E-04	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	1.2E-01	mg/kg-day	--
	PHENANTHRENE	2.88E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	PYRENE	2.52E-01	mg/kg	9.61E-04	mg/m^3	R	6.72E-05	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.39E-03	mg/kg	--	mg/m^3	R	--	--	2.4E-01	mg/kg-day	--
	4,4'-DDE	2.87E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	mg/kg-day	--
	4,4'-DDT	1.20E-02	mg/kg	--	mg/m^3	R	--	--	3.4E-01	mg/kg-day	--
	ALDRIN	1.00E-03	mg/kg	--	mg/m^3	R	--	--	1.7E+01	mg/kg-day	--
	ALPHA-BHC	4.77E-03	mg/kg	--	mg/m^3	R	--	--	6.3E+00	mg/kg-day	--
	ALPHA-CHLORDANE	2.92E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	mg/kg-day	--
	AROCLOR-1254	1.42E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	mg/kg-day	--
	AROCLOR-1260	5.10E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	mg/kg-day	--

TABLE J-20

EPA TABLE U.8.2.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BETA-BHC	1.64E-03	mg/kg	--	mg/m^3	R	--	--	1.9E+00	mg/kg-day	--
	DELTA-BHC	1.20E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	DIELDRIN	2.15E-03	mg/kg	--	mg/m^3	R	--	--	1.6E+01	mg/kg-day	--
	ENDOSULFAN I	1.21E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN II	1.94E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN	2.03E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN KETONE	2.72E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	GAMMA-BHC	1.89E-03	mg/kg	--	mg/m^3	R	--	--	1.3E+00	mg/kg-day	--
	GAMMA-CHLORDANE	2.81E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	mg/kg-day	--
	HEPTACHLOR	2.30E-04	mg/kg	--	mg/m^3	R	--	--	5.7E+00	mg/kg-day	--
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	--	mg/m^3	R	--	--	1.3E+01	mg/kg-day	--
	METHOXYCHLOR	9.79E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--

Total Risk Across All Air Exposure Routes/Pathways - Soil	1.0E-10
Total Risk Across All Direct Contact Exposure Routes/Pathways - Soil	3.6E-06
Total Risk Across All Exposure Routes/Pathways - Soil	**3.6E-06**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

-- = No value available

VOC = Volatile organic compound

TABLE J-21

EPA TABLE U.8.3.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation VOCs	**VOLATILE ORGANIC COMPOUNDS**										
	1,2-DICHLOROETHANE	3.30E-04	mg/L	1.02E-05	mg/m^3	R	7.16E-07	mg/kg-day	9.1E-02	mg/kg-day-1	6.5E-08
	2-BUTANONE	1.98E-02	mg/L	2.23E-04	mg/m^3	R	1.56E-05	mg/kg-day	--	--	--
	4-METHYL-2-PENTANONE	8.00E-04	mg/L	1.41E-05	mg/m^3	R	9.86E-07	mg/kg-day	--	--	--
	ACETONE	8.79E-02	mg/L	9.67E-04	mg/m^3	R	6.76E-05	mg/kg-day	--	--	--
	CHLOROMETHANE	7.00E-04	mg/L	1.36E-05	mg/m^3	R	9.49E-07	mg/kg-day	--	--	--
	ETHYLBENZENE	7.00E-04	mg/L	1.62E-05	mg/m^3	R	1.13E-06	mg/kg-day	--	--	--
	TOLUENE	1.00E-03	mg/L	2.55E-05	mg/m^3	R	1.78E-06	mg/kg-day	--	--	--
	XYLENE (TOTAL)	1.54E-03	mg/L	3.35E-05	mg/m^3	R	2.34E-06	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,3-DICHLOROBENZENE	9.00E-04	mg/L	2.10E-05	mg/m^3	R	1.46E-06	mg/kg-day	--	--	--
	2,4-DICHLOROPHENOL	2.00E-03	mg/L	--		R	--	--	--	--	--
	4-METHYLPHENOL	6.00E-03	mg/L	--		R	--	--	--	--	--
	ACENAPHTHENE	2.00E-03	mg/L	--		R	--	--	--	--	--
	BENZO(B)FLUORANTHENE	2.00E-03	mg/L	--		R	--	--	3.9E-01	mg/kg-day-1	--
	BIS(2-ETHYLHEXYL)PHTHALATE	7.85E-03	mg/L	--		R	--	--	8.4E-03	mg/kg-day-1	--
	CARBAZOLE	2.00E-03	mg/L	--		R	--	--	2.0E-02	mg/kg-day-1	--
	FLUORANTHENE	4.00E-03	mg/L	--		R	--	--	--	--	--
	N-NITROSODIPHENYLAMINE (1)	1.32E-02	mg/L	--		R	--	--	9.0E-03	mg/kg-day-1	--
	NAPHTHALENE	2.00E-03	mg/L	4.32E-05	mg/m^3	R	3.02E-06	mg/kg-day	--	--	--
	PHENANTHRENE	2.00E-03	mg/L	1.60E-05	mg/m^3	R	1.12E-06	mg/kg-day	--	--	--
	PHENOL	2.00E-03	mg/L	--		R	--	--	--	--	--
	PYRENE	1.10E-02	mg/L	2.93E-05	mg/m^3	R	2.05E-06	mg/kg-day	--	--	--
										Total Risk Across All Air Exposure Routes/Pathways - Groundwater	6.51E-08

TABLE J-21

EPA TABLE U.8.3.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
										Total Risk Across All Exposure Routes/Pathways - Soil	3.58E-06
										Total Risk Across All Exposure Routes/Pathways - Soil and Groundwater	**3.65E-06**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/L = Milligrams per liter

mg/m^3 = Milligrams per cubic meter

-- = No value available

TABLE J-22

EPA TABLE U.8.1.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	**METALS**										
	BARIUM	9.65E+01	mg/kg	9.65E+01	mg/kg	M	3.03E-06	mg/kg-day	--	--	--
	COBALT	1.17E+01	mg/kg	1.17E+01	mg/kg	M	3.68E-07	mg/kg-day	--	--	--
	LEAD	1.11E+02	mg/kg	1.11E+02	mg/kg	M	3.51E-06	mg/kg-day	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	2.82E-01	mg/kg	M	8.85E-09	mg/kg-day	--	--	--
	SELENIUM	5.25E-01	mg/kg	5.25E-01	mg/kg	M	1.65E-08	mg/kg-day	--	--	--
	SILVER	3.01E-01	mg/kg	3.01E-01	mg/kg	M	9.46E-09	mg/kg-day	--	--	--
	THALLIUM	3.96E-01	mg/kg	3.96E-01	mg/kg	M	1.24E-08	mg/kg-day	--	--	--
	TIN	1.53E+01	mg/kg	1.53E+01	mg/kg	M	4.80E-07	mg/kg-day	--	--	--
	TITANIUM	4.41E+03	mg/kg	4.41E+03	mg/kg	M	1.39E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	6.29E-11	mg/kg-day	--	--	--
	TOLUENE	5.59E-03	mg/kg	5.59E-03	mg/kg	M	1.76E-10	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.26E-10	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.16E-09	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	2.24E-01	mg/kg	M	7.04E-09	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	4.72E-09	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	6.48E-09	mg/kg-day	1.2E+00	mg/kg-day-1	7.8E-09
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	6.35E-09	mg/kg-day	1.2E+01	mg/kg-day-1	7.6E-08
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	2.15E-01	mg/kg	M	6.75E-09	mg/kg-day	1.2E+00	mg/kg-day-1	8.1E-09
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	2.10E-01	mg/kg	M	6.59E-09	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	2.19E-01	mg/kg	M	6.90E-09	mg/kg-day	1.2E+00	mg/kg-day-1	8.3E-09
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	1.29E-01	mg/kg	M	4.05E-09	mg/kg-day	1.4E-02	mg/kg-day-1	5.7E-11
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	2.30E-09	mg/kg-day	2.0E-02	mg/kg-day-1	4.6E-11
	CHRYSENE	1.93E-01	mg/kg	1.93E-01	mg/kg	M	6.07E-09	mg/kg-day	1.2E-01	mg/kg-day-1	7.3E-10
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	1.89E-09	mg/kg-day	4.1E+00	mg/kg-day-1	7.7E-09
	FLUORANTHENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	6.48E-09	mg/kg-day	--	--	--

TABLE J-22

EPA TABLE U.8.1.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	2.58E-09	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	4.40E-09	mg/kg-day	1.2E+00	mg/kg-day-1	5.3E-09
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	1.57E-08	mg/kg-day	1.2E-01	mg/kg-day-1	1.9E-09
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	7.18E-09	mg/kg-day	--	--	--
	PYRENE	1.86E-01	mg/kg	1.86E-01	mg/kg	M	5.87E-09	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.91E-03	mg/kg	2.91E-03	mg/kg	M	9.15E-11	mg/kg-day	2.4E-01	mg/kg-day-1	2.2E-11
	4,4'-DDE	2.55E-03	mg/kg	2.55E-03	mg/kg	M	8.02E-11	mg/kg-day	3.4E-01	mg/kg-day-1	2.7E-11
	4,4'-DDT	9.11E-03	mg/kg	9.11E-03	mg/kg	M	2.87E-10	mg/kg-day	3.4E-01	mg/kg-day-1	9.7E-11
	ALDRIN	9.90E-04	mg/kg	9.90E-04	mg/kg	M	3.11E-11	mg/kg-day	1.7E+01	mg/kg-day-1	5.3E-10
	ALPHA-BHC	3.56E-03	mg/kg	3.56E-03	mg/kg	M	1.12E-10	mg/kg-day	6.3E+00	mg/kg-day-1	7.1E-10
	ALPHA-CHLORDANE	2.36E-03	mg/kg	2.36E-03	mg/kg	M	7.42E-11	mg/kg-day	1.2E+00	mg/kg-day-1	8.9E-11
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	3.46E-10	mg/kg-day	2.0E+00	mg/kg-day-1	6.9E-10
	AROCLOR-1260	3.89E-02	mg/kg	3.89E-02	mg/kg	M	1.22E-09	mg/kg-day	2.0E+00	mg/kg-day-1	2.4E-09
	BETA-BHC	1.46E-03	mg/kg	1.46E-03	mg/kg	M	4.59E-11	mg/kg-day	1.8E+00	mg/kg-day-1	8.3E-11
	DELTA-BHC	1.12E-03	mg/kg	1.12E-03	mg/kg	M	3.52E-11	mg/kg-day	--	--	--
	DIELDRIN	2.04E-03	mg/kg	2.04E-03	mg/kg	M	6.42E-11	mg/kg-day	1.6E+01	mg/kg-day-1	1.0E-09
	ENDOSULFAN I	1.13E-03	mg/kg	1.13E-03	mg/kg	M	3.55E-11	mg/kg-day	--	--	--
	ENDOSULFAN II	1.89E-03	mg/kg	1.89E-03	mg/kg	M	5.94E-11	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	7.55E-11	mg/kg-day	--	--	--
	ENDRIN	1.96E-03	mg/kg	1.96E-03	mg/kg	M	6.16E-11	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	3.15E-03	mg/kg	M	9.91E-11	mg/kg-day	--	--	--
	ENDRIN KETONE	2.48E-03	mg/kg	2.48E-03	mg/kg	M	7.80E-11	mg/kg-day	--	--	--
	GAMMA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	5.16E-11	mg/kg-day	1.3E+00	mg/kg-day-1	6.7E-11
	GAMMA-CHLORDANE	2.27E-03	mg/kg	2.27E-03	mg/kg	M	7.14E-11	mg/kg-day	1.2E+00	mg/kg-day-1	8.6E-11
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	6.29E-12	mg/kg-day	5.7E+00	mg/kg-day-1	3.6E-11
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	2.90E-04	mg/kg	M	9.12E-12	mg/kg-day	1.3E+01	mg/kg-day-1	1.2E-10
	METHOXYCHLOR	9.51E-03	mg/kg	9.51E-03	mg/kg	M	2.99E-10	mg/kg-day	--	--	--

TABLE J-22

EPA TABLE U.8.1.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	**METALS**										
	BARIUM	9.65E+01	mg/kg	9.65E+01	mg/kg	M	4.00E-07	mg/kg-day	--	--	--
	COBALT	1.17E+01	mg/kg	1.17E+01	mg/kg	M	4.86E-08	mg/kg-day	--	--	--
	LEAD	1.11E+02	mg/kg	1.11E+02	mg/kg	M	4.63E-07	mg/kg-day	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	2.82E-01	mg/kg	M	1.17E-09	mg/kg-day	--	--	--
	SELENIUM	5.25E-01	mg/kg	5.25E-01	mg/kg	M	2.18E-09	mg/kg-day	--	--	--
	SILVER	3.01E-01	mg/kg	3.01E-01	mg/kg	M	1.25E-09	mg/kg-day	--	--	--
	THALLIUM	3.96E-01	mg/kg	3.96E-01	mg/kg	M	1.64E-09	mg/kg-day	--	--	--
	TIN	1.53E+01	mg/kg	1.53E+01	mg/kg	M	6.33E-08	mg/kg-day	--	--	--
	TITANIUM	4.41E+03	mg/kg	4.41E+03	mg/kg	M	1.83E-05	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	8.30E-11	mg/kg-day	--	--	--
	TOLUENE	5.59E-03	mg/kg	5.59E-03	mg/kg	M	2.32E-10	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.66E-10	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.54E-09	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	2.24E-01	mg/kg	M	1.39E-08	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	9.34E-09	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	1.28E-08	mg/kg-day	1.2E+00	mg/kg-day-1	1.5E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	1.26E-08	mg/kg-day	1.2E+01	mg/kg-day-1	1.5E-07
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	2.15E-01	mg/kg	M	1.34E-08	mg/kg-day	1.2E+00	mg/kg-day-1	1.6E-08
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	2.10E-01	mg/kg	M	1.31E-08	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	2.19E-01	mg/kg	M	1.37E-08	mg/kg-day	1.2E+00	mg/kg-day-1	1.6E-08
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	1.29E-01	mg/kg	M	5.35E-09	mg/kg-day	1.4E-02	mg/kg-day-1	7.5E-11
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	3.03E-09	mg/kg-day	2.0E-02	mg/kg-day-1	6.1E-11
	CHRYSENE	1.93E-01	mg/kg	1.93E-01	mg/kg	M	1.20E-08	mg/kg-day	1.2E-01	mg/kg-day-1	1.4E-09
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	3.74E-09	mg/kg-day	4.1E+00	mg/kg-day-1	1.5E-08
	FLUORANTHENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	1.28E-08	mg/kg-day	--	--	--

TABLE J-22

EPA TABLE U.8.1.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	5.11E-09	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	8.72E-09	mg/kg-day	1.2E+00	mg/kg-day-1	1.0E-08
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	5.19E-08	mg/kg-day	1.2E-01	mg/kg-day-1	6.2E-09
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	1.42E-08	mg/kg-day	--	--	--
	PYRENE	1.86E-01	mg/kg	1.86E-01	mg/kg	M	1.16E-08	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.91E-03	mg/kg	2.91E-03	mg/kg	M	6.04E-11	mg/kg-day	2.4E-01	mg/kg-day-1	1.4E-11
	4,4'-DDE	2.55E-03	mg/kg	2.55E-03	mg/kg	M	5.29E-11	mg/kg-day	3.4E-01	mg/kg-day-1	1.8E-11
	4,4'-DDT	9.11E-03	mg/kg	9.11E-03	mg/kg	M	1.89E-10	mg/kg-day	3.4E-01	mg/kg-day-1	6.4E-11
	ALDRIN	9.90E-04	mg/kg	9.90E-04	mg/kg	M	2.06E-11	mg/kg-day	1.7E+01	mg/kg-day-1	3.5E-10
	ALPHA-BHC	3.56E-03	mg/kg	3.56E-03	mg/kg	M	7.39E-11	mg/kg-day	6.3E+00	mg/kg-day-1	4.7E-10
	ALPHA-CHLORDANE	2.36E-03	mg/kg	2.36E-03	mg/kg	M	4.90E-11	mg/kg-day	1.2E+00	mg/kg-day-1	5.9E-11
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	6.86E-10	mg/kg-day	2.0E+00	mg/kg-day-1	1.4E-09
	AROCLOR-1260	3.89E-02	mg/kg	3.89E-02	mg/kg	M	2.42E-09	mg/kg-day	2.0E+00	mg/kg-day-1	4.8E-09
	BETA-BHC	1.46E-03	mg/kg	1.46E-03	mg/kg	M	3.03E-11	mg/kg-day	1.8E+00	mg/kg-day-1	5.5E-11
	DELTA-BHC	1.12E-03	mg/kg	1.12E-03	mg/kg	M	2.32E-11	mg/kg-day	--	--	--
	DIELDRIN	2.04E-03	mg/kg	2.04E-03	mg/kg	M	4.23E-11	mg/kg-day	1.6E+01	mg/kg-day-1	6.8E-10
	ENDOSULFAN I	1.13E-03	mg/kg	1.13E-03	mg/kg	M	2.35E-11	mg/kg-day	--	--	--
	ENDOSULFAN II	1.89E-03	mg/kg	1.89E-03	mg/kg	M	3.92E-11	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	4.98E-11	mg/kg-day	--	--	--
	ENDRIN	1.96E-03	mg/kg	1.96E-03	mg/kg	M	4.07E-11	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	3.15E-03	mg/kg	M	6.54E-11	mg/kg-day	--	--	--
	ENDRIN KETONE	2.48E-03	mg/kg	2.48E-03	mg/kg	M	5.15E-11	mg/kg-day	--	--	--
	GAMMA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	3.40E-11	mg/kg-day	1.3E+00	mg/kg-day-1	4.4E-11
	GAMMA-CHLORDANE	2.27E-03	mg/kg	2.27E-03	mg/kg	M	4.71E-11	mg/kg-day	1.2E+00	mg/kg-day-1	5.7E-11
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	4.15E-12	mg/kg-day	5.7E+00	mg/kg-day-1	2.4E-11
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	2.90E-04	mg/kg	M	6.02E-12	mg/kg-day	1.3E+01	mg/kg-day-1	7.8E-11
	METHOXYCHLOR	9.51E-03	mg/kg	9.51E-03	mg/kg	M	1.97E-10	mg/kg-day	--	--	--

TABLE J-22

EPA TABLE U.8.1.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
										Total Risk Across All Direct Contact Exposure Routes/Pathways	3.6E-07

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
bgs = Below ground surface
Ft. = Feet
mg/kg = Milligrams per kilogram
-- = No value available

TABLE J-23

EPA TABLE U.8.2.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation-Dust	**METALS**										
	BARIUM	9.65E+01	mg/kg	7.33E-08	mg/m^3	R	4.79E-10	mg/kg-day	--	--	--
	COBALT	1.17E+01	mg/kg	8.89E-09	mg/m^3	R	5.82E-11	mg/kg-day	--	--	--
	LEAD	1.11E+02	mg/kg	8.47E-08	mg/m^3	R	5.54E-10	mg/kg-day	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	2.14E-10	mg/m^3	R	1.40E-12	mg/kg-day	--	--	--
	SELENIUM	5.25E-01	mg/kg	3.99E-10	mg/m^3	R	2.61E-12	mg/kg-day	--	--	--
	SILVER	3.01E-01	mg/kg	2.29E-10	mg/m^3	R	1.50E-12	mg/kg-day	--	--	--
	THALLIUM	3.96E-01	mg/kg	3.01E-10	mg/m^3	R	1.97E-12	mg/kg-day	--	--	--
	TIN	1.53E+01	mg/kg	1.16E-08	mg/m^3	R	7.59E-11	mg/kg-day	--	--	--
	TITANIUM	4.41E+03	mg/kg	3.35E-06	mg/m^3	R	2.19E-08	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	1.52E-12	mg/m^3	R	9.94E-15	mg/kg-day	--	--	--
	TOLUENE	5.59E-03	mg/kg	4.25E-12	mg/m^3	R	2.78E-14	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	1.99E-14	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	1.84E-13	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	1.70E-10	mg/m^3	R	1.11E-12	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	7.46E-13	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	1.57E-10	mg/m^3	R	1.02E-12	mg/kg-day	3.9E-01	mg/kg-day	4.0E-13
	BENZO(A)PYRENE	2.02E-01	mg/kg	1.53E-10	mg/m^3	R	1.00E-12	mg/kg-day	3.9E+00	mg/kg-day	3.9E-12
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	1.63E-10	mg/m^3	R	1.07E-12	mg/kg-day	3.9E-01	mg/kg-day	4.2E-13
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	1.59E-10	mg/m^3	R	1.04E-12	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	1.67E-10	mg/m^3	R	1.09E-12	mg/kg-day	3.9E-01	mg/kg-day	4.2E-13
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	9.79E-11	mg/m^3	R	6.41E-13	mg/kg-day	8.4E-03	mg/kg-day	5.4E-15

TABLE J-23

EPA TABLE U.8.2.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	3.63E-13	mg/kg-day	2.0E-02	mg/kg-day	7.3E-15
	CHRYSENE	1.93E-01	mg/kg	1.47E-10	mg/m^3	R	9.59E-13	mg/kg-day	3.9E-02	mg/kg-day	3.7E-14
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	2.98E-13	mg/kg-day	4.1E+00	mg/kg-day	1.2E-12
	FLUORANTHENE	2.06E-01	mg/kg	1.57E-10	mg/m^3	R	1.02E-12	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	4.08E-13	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	6.96E-13	mg/kg-day	3.9E-01	mg/kg-day	2.7E-13
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	2.49E-12	mg/kg-day	1.2E-01	mg/kg-day	3.0E-13
	PHENANTHRENE	2.28E-01	mg/kg	1.74E-10	mg/m^3	R	1.14E-12	mg/kg-day	--	--	--
	PYRENE	1.86E-01	mg/kg	1.42E-10	mg/m^3	R	9.27E-13	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.91E-03	mg/kg	2.21E-12	mg/m^3	R	1.45E-14	mg/kg-day	2.4E-01	mg/kg-day	3.5E-15
	4,4'-DDE	2.55E-03	mg/kg	1.94E-12	mg/m^3	R	1.27E-14	mg/kg-day	3.4E-01	mg/kg-day	4.3E-15
	4,4'-DDT	9.11E-03	mg/kg	6.92E-12	mg/m^3	R	4.53E-14	mg/kg-day	3.4E-01	mg/kg-day	1.5E-14
	ALDRIN	9.90E-04	mg/kg	7.52E-13	mg/m^3	R	4.92E-15	mg/kg-day	1.7E+01	mg/kg-day	8.5E-14
	ALPHA-BHC	3.56E-03	mg/kg	2.71E-12	mg/m^3	R	1.77E-14	mg/kg-day	6.3E+00	mg/kg-day	1.1E-13
	ALPHA-CHLORDANE	2.36E-03	mg/kg	1.79E-12	mg/m^3	R	1.17E-14	mg/kg-day	1.2E+00	mg/kg-day	1.4E-14
	AROCLOR-1254	1.10E-02	mg/kg	8.37E-12	mg/m^3	R	5.47E-14	mg/kg-day	2.0E+00	mg/kg-day	1.1E-13
	AROCLOR-1260	3.89E-02	mg/kg	2.95E-11	mg/m^3	R	1.93E-13	mg/kg-day	2.0E+00	mg/kg-day	3.9E-13
	BETA-BHC	1.46E-03	mg/kg	1.11E-12	mg/m^3	R	7.26E-15	mg/kg-day	1.9E+00	mg/kg-day	1.3E-14
	DELTA-BHC	1.12E-03	mg/kg	8.51E-13	mg/m^3	R	5.57E-15	mg/kg-day	--	--	--
	DIELDRIN	2.04E-03	mg/kg	1.55E-12	mg/m^3	R	1.01E-14	mg/kg-day	1.6E+01	mg/kg-day	1.6E-13
	ENDOSULFAN I	1.13E-03	mg/kg	8.59E-13	mg/m^3	R	5.62E-15	mg/kg-day	--	--	--
	ENDOSULFAN II	1.89E-03	mg/kg	1.44E-12	mg/m^3	R	9.40E-15	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	1.82E-12	mg/m^3	R	1.19E-14	mg/kg-day	--	--	--

TABLE J-23

EPA TABLE U.8.2.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDRIN	1.96E-03	mg/kg	1.49E-12	mg/m^3	R	9.74E-15	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	2.39E-12	mg/m^3	R	1.57E-14	mg/kg-day	--	--	--
	ENDRIN KETONE	2.48E-03	mg/kg	1.88E-12	mg/m^3	R	1.23E-14	mg/kg-day	--	--	--
	GAMMA-BHC	1.64E-03	mg/kg	1.25E-12	mg/m^3	R	8.15E-15	mg/kg-day	1.3E+00	mg/kg-day	1.1E-14
	GAMMA-CHLORDANE	2.27E-03	mg/kg	1.72E-12	mg/m^3	R	1.13E-14	mg/kg-day	1.2E+00	mg/kg-day	1.4E-14
	HEPTACHLOR	2.00E-04	mg/kg	1.52E-13	mg/m^3	R	9.94E-16	mg/kg-day	5.7E+00	mg/kg-day	5.7E-15
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	2.20E-13	mg/m^3	R	1.44E-15	mg/kg-day	1.3E+01	mg/kg-day	1.9E-14
	METHOXYCHLOR	9.51E-03	mg/kg	7.23E-12	mg/m^3	R	4.73E-14	mg/kg-day	--	--	--
Inhalation VOCs	**METALS**										
	BARIUM	9.65E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COBALT	1.17E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	LEAD	1.11E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SELENIUM	5.25E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SILVER	3.01E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	THALLIUM	3.96E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TIN	1.53E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TITANIUM	4.41E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	2.30E-02	mg/m^3	R	1.51E-04	mg/kg-day	--	--	--
	TOLUENE	5.59E-03	mg/kg	2.46E-02	mg/m^3	R	1.61E-04	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	1.07E-05	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	2.95E-04	mg/kg-day	--	--	--

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EPA TABLE U.8.2.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	1.66E-01	mg/m^3	R	1.09E-03	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	1.79E-05	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	BENZO(A)PYRENE	2.02E-01	mg/kg	--	mg/m^3	R	--	--	3.9E+00	mg/kg-day	--
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	--	mg/m^3	R	--	--	8.4E-03	mg/kg-day	--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day	--
	CHRYSENE	1.93E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-02	mg/kg-day	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	4.1E+00	mg/kg-day	--
	FLUORANTHENE	2.06E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	2.22E-05	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	1.2E-01	mg/kg-day	--
	PHENANTHRENE	2.28E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	PYRENE	1.86E-01	mg/kg	7.11E-04	mg/m^3	R	4.65E-06	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.91E-03	mg/kg	--	mg/m^3	R	--	--	2.4E-01	mg/kg-day	--
	4,4'-DDE	2.55E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	mg/kg-day	--
	4,4'-DDT	9.11E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	mg/kg-day	--
	ALDRIN	9.90E-04	mg/kg	--	mg/m^3	R	--	--	1.7E+01	mg/kg-day	--
	ALPHA-BHC	3.56E-03	mg/kg	--	mg/m^3	R	--	--	6.3E+00	mg/kg-day	--
	ALPHA-CHLORDANE	2.36E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	mg/kg-day	--

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EPA TABLE U.8.2.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	AROCLOR-1254	1.10E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	mg/kg-day	--
	AROCLOR-1260	3.89E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	mg/kg-day	--
	BETA-BHC	1.46E-03	mg/kg	--	mg/m^3	R	--	--	1.9E+00	mg/kg-day	--
	DELTA-BHC	1.12E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	DIELDRIN	2.04E-03	mg/kg	--	mg/m^3	R	--	--	1.6E+01	mg/kg-day	--
	ENDOSULFAN I	1.13E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN II	1.89E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN	1.96E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN KETONE	2.48E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	GAMMA-BHC	1.64E-03	mg/kg	--	mg/m^3	R	--	--	1.3E+00	mg/kg-day	--
	GAMMA-CHLORDANE	2.27E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	mg/kg-day	--
	HEPTACHLOR	2.00E-04	mg/kg	--	mg/m^3	R	--	--	5.7E+00	mg/kg-day	--
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	--	mg/m^3	R	--	--	1.3E+01	mg/kg-day	--
	METHOXYCHLOR	9.51E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--

Total Risk Across All Air Exposure Routes/Pathways	7.95E-12
Total Risk Across All Direct Contact Exposure Routes/Pathways - Soil	3.58E-06
Total Risk Across All Exposure Routes/Pathways - Soil	**3.58E-06**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

-- = No value available

VOC = Volatile organic compound

TABLE J-24

EPA TABLE U.8.3.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation VOCs	**VOLATILE ORGANIC COMPOUNDS**										
	1,2-DICHLOROETHANE	2.80E-04	mg/L	8.69E-06	mg/m^3	R	5.68E-08	mg/kg-day	9.1E-02	(mg/kg-day)-1	5.2E-09
	2-BUTANONE	9.42E-03	mg/L	1.06E-04	mg/m^3	R	6.92E-07	mg/kg-day	--	--	--
	4-METHYL-2-PENTANONE	8.00E-04	mg/L	1.41E-05	mg/m^3	R	9.23E-08	mg/kg-day	--	--	--
	ACETONE	6.84E-02	mg/L	7.53E-04	mg/m^3	R	4.93E-06	mg/kg-day	--	--	--
	CHLOROMETHANE	7.00E-04	mg/L	1.36E-05	mg/m^3	R	8.89E-08	mg/kg-day	--	--	--
	ETHYLBENZENE	7.00E-04	mg/L	1.62E-05	mg/m^3	R	1.06E-07	mg/kg-day	--	--	--
	TOLUENE	8.30E-04	mg/L	2.12E-05	mg/m^3	R	1.39E-07	mg/kg-day	--	--	--
	XYLENE (TOTAL)	1.26E-03	mg/L	2.74E-05	mg/m^3	R	1.79E-07	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,3-DICHLOROBENZENE	9.00E-04	mg/L	2.10E-05	mg/m^3	R	1.37E-07	mg/kg-day	--	--	--
	2,4-DICHLOROPHENOL	2.00E-03	mg/L	--		R	--	--	--	--	--
	4-METHYLPHENOL	6.00E-03	mg/L	--		R	--	--	--	--	--
	ACENAPHTHENE	2.00E-03	mg/L	--		R	--	--	--	--	--
	BENZO(B)FLUORANTHENE	2.00E-03	mg/L	--		R	--	--	3.9E-01	(mg/kg-day)-1	--
	BIS(2-ETHYLHEXYL)PHTHALATE	4.92E-03	mg/L	--		R	--	--	8.4E-03	(mg/kg-day)-1	--
	CARBAZOLE	2.00E-03	mg/L	--		R	--	--	2.0E-02	(mg/kg-day)-1	--
	FLUORANTHENE	4.00E-03	mg/L	--		R	--	--	--	--	--
	N-NITROSODIPHENYLAMINE (1)	8.83E-03	mg/L	--		R	--	--	9.0E-03	(mg/kg-day)-1	--
	NAPHTHALENE	2.00E-03	mg/L	4.32E-05	mg/m^3	R	2.83E-07	mg/kg-day	--	--	--
	PHENANTHRENE	2.00E-03	mg/L	1.60E-05	mg/m^3	R	1.05E-07	mg/kg-day	--	--	--
	PHENOL	2.00E-03	mg/L	--		R	--	--	--	--	--

TABLE J-24

EPA TABLE U.8.3.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	PYRENE	8.39E-03	mg/L	2.24E-05	mg/m^3	R	1.46E-07	mg/kg-day	--	--	--

Total Risk Across All Air Exposure Routes/Pathways - Groundwater	5.2E-09
Total Risk Across All Exposure Routes/Pathways - Soil	3.6E-06
Total Risk Across All Exposure Routes/Pathways - Soil and Groundwater	**3.6E-06**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/L = Milligrams per liter

mg/m^3 = Milligrams per cubic meter

-- = No value available

TABLE J-25

EPA TABLE U.7.1.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	**METALS**												
	BARIUM	1.10E+02	mg/kg	1.10E+02	mg/kg	M	5.37E-05	mg/kg-day	7.0E-02	mg/kg-day	--	--	7.7E-04
	COBALT	1.33E+01	mg/kg	1.33E+01	mg/kg	M	6.52E-06	mg/kg-day	6.0E-02	mg/kg-day	--	--	1.1E-04
	LEAD	1.71E+02	mg/kg	1.71E+02	mg/kg	M	8.38E-05	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	3.60E-01	mg/kg	M	1.76E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.5E-05
	SELENIUM	6.02E-01	mg/kg	6.02E-01	mg/kg	M	2.95E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	5.9E-05
	SILVER	4.56E-01	mg/kg	4.56E-01	mg/kg	M	2.23E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	4.5E-05
	THALLIUM	4.29E-01	mg/kg	4.29E-01	mg/kg	M	2.10E-07	mg/kg-day	7.0E-05	mg/kg-day	--	--	3.0E-03
	TIN	2.39E+01	mg/kg	2.39E+01	mg/kg	M	1.17E-05	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.9E-05
	TITANIUM	5.16E+03	mg/kg	5.16E+03	mg/kg	M	2.53E-03	mg/kg-day	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	9.78E-10	mg/kg-day	1.0E-01	mg/kg-day	--	--	9.8E-09
	TOLUENE	5.82E-03	mg/kg	5.82E-03	mg/kg	M	2.85E-09	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.4E-08
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.96E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	9.8E-10
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.81E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	1.8E-06
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.17E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.9E-07
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	7.34E-08	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.4E-07
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	2.46E-01	mg/kg	M	1.21E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.0E-07
	BENZO(A)PYRENE	2.50E-01	mg/kg	2.50E-01	mg/kg	M	1.22E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	4.1E-06
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	2.61E-01	mg/kg	M	1.28E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.2E-06
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	2.47E-01	mg/kg	M	1.21E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	4.0E-06
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	2.60E-01	mg/kg	M	1.27E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.2E-06
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	1.76E-01	mg/kg	M	8.59E-08	mg/kg-day	2.0E-02	mg/kg-day	--	--	4.3E-06
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	3.57E-08	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.4E-06
	CHRYSENE	2.42E-01	mg/kg	2.42E-01	mg/kg	M	1.18E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.9E-07
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	2.94E-08	mg/kg-day	3.0E-01	mg/kg-day	--	--	9.8E-08
	FLUORANTHENE	2.80E-01	mg/kg	2.80E-01	mg/kg	M	1.37E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.4E-06
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	4.01E-08	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.0E-06
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	6.85E-08	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.7E-06
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	2.45E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	8.2E-06
	PHENANTHRENE	2.88E-01	mg/kg	2.88E-01	mg/kg	M	1.41E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.7E-07
	PYRENE	2.52E-01	mg/kg	2.52E-01	mg/kg	M	1.23E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	4.1E-06

TABLE J-25

EPA TABLE U.7.1.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.39E-03	mg/kg	3.39E-03	mg/kg	M	1.66E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.3E-06
	4,4'-DDE	2.87E-03	mg/kg	2.87E-03	mg/kg	M	1.40E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.8E-06
	4,4'-DDT	1.20E-02	mg/kg	1.20E-02	mg/kg	M	5.88E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.2E-05
	ALDRIN	1.00E-03	mg/kg	1.00E-03	mg/kg	M	4.89E-10	mg/kg-day	3.0E-05	mg/kg-day	--	--	1.6E-05
	ALPHA-BHC	4.77E-03	mg/kg	4.77E-03	mg/kg	M	2.33E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	7.8E-06
	ALPHA-CHLORDANE	2.92E-03	mg/kg	2.92E-03	mg/kg	M	1.43E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.9E-06
	AROCLOR-1254	1.42E-02	mg/kg	1.42E-02	mg/kg	M	6.95E-09	mg/kg-day	2.0E-05	mg/kg-day	--	--	3.5E-04
	AROCLOR-1260	5.10E-02	mg/kg	5.10E-02	mg/kg	M	2.50E-08	mg/kg-day	2.0E-05	mg/kg-day	--	--	1.2E-03
	BETA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	8.02E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.7E-06
	DELTA-BHC	1.20E-03	mg/kg	1.20E-03	mg/kg	M	5.87E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.0E-06
	DIELDRIN	2.15E-03	mg/kg	2.15E-03	mg/kg	M	1.05E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	2.1E-05
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	5.92E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	9.9E-08
	ENDOSULFAN II	1.94E-03	mg/kg	1.94E-03	mg/kg	M	9.49E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.6E-07
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	1.30E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.2E-07
	ENDRIN	2.03E-03	mg/kg	2.03E-03	mg/kg	M	9.93E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.3E-06
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	3.61E-03	mg/kg	M	1.77E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	5.9E-06
	ENDRIN KETONE	2.72E-03	mg/kg	2.72E-03	mg/kg	M	1.33E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	4.4E-06
	GAMMA-BHC	1.89E-03	mg/kg	1.89E-03	mg/kg	M	9.25E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.1E-06
	GAMMA-CHLORDANE	4.77E-03	mg/kg	4.77E-03	mg/kg	M	2.33E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	4.7E-06
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	1.13E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.3E-07
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	3.40E-04	mg/kg	M	1.66E-10	mg/kg-day	1.3E-05	mg/kg-day	--	--	1.3E-05
	METHOXYCHLOR	9.79E-03	mg/kg	9.79E-03	mg/kg	M	4.79E-09	mg/kg-day	5.0E-03	mg/kg-day	--	--	9.6E-07
Dermal	**METALS**												
	BARIUM	1.10E+02	mg/kg	1.10E+02	mg/kg	M	1.22E-05	mg/kg-day	7.0E-02	mg/kg-day	--	--	1.7E-04
	COBALT	1.33E+01	mg/kg	1.33E+01	mg/kg	M	1.49E-06	mg/kg-day	6.0E-02	mg/kg-day	--	--	2.5E-05
	LEAD	1.71E+02	mg/kg	1.71E+02	mg/kg	M	1.91E-05	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	3.60E-01	mg/kg	M	4.01E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	8.0E-06
	SELENIUM	6.02E-01	mg/kg	6.02E-01	mg/kg	M	6.72E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.3E-05
	SILVER	4.56E-01	mg/kg	4.56E-01	mg/kg	M	5.09E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.0E-05
	THALLIUM	4.29E-01	mg/kg	4.29E-01	mg/kg	M	4.79E-08	mg/kg-day	7.0E-05	mg/kg-day	--	--	6.8E-04
	TIN	2.39E+01	mg/kg	2.39E+01	mg/kg	M	2.67E-06	mg/kg-day	6.0E-01	mg/kg-day	--	--	4.4E-06
	TITANIUM	5.16E+03	mg/kg	5.16E+03	mg/kg	M	5.76E-04	mg/kg-day	--	--	--	--	--

TABLE J-25

EPA TABLE U.7.1.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	2.23E-09	mg/kg-day	1.0E-01	mg/kg-day	--	--	2.2E-08
	TOLUENE	5.82E-03	mg/kg	5.82E-03	mg/kg	M	6.49E-09	mg/kg-day	2.0E-01	mg/kg-day	--	--	3.2E-08
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	4.46E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	2.2E-09
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	4.13E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	4.1E-06
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	4.02E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.3E-06
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	2.51E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	8.4E-07
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	2.46E-01	mg/kg	M	4.12E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.4E-06
	BENZO(A)PYRENE	2.50E-01	mg/kg	2.50E-01	mg/kg	M	4.19E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.4E-05
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	2.61E-01	mg/kg	M	4.36E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.1E-05
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	2.47E-01	mg/kg	M	4.14E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.4E-05
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	2.60E-01	mg/kg	M	4.35E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.1E-05
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	1.76E-01	mg/kg	M	1.96E-07	mg/kg-day	2.0E-02	mg/kg-day	--	--	9.8E-06
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	8.14E-08	mg/kg-day	2.5E-02	mg/kg-day	--	--	3.3E-06
	CHRYSENE	2.42E-01	mg/kg	2.42E-01	mg/kg	M	4.05E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.3E-06
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	1.00E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.3E-07
	FLUORANTHENE	2.80E-01	mg/kg	2.80E-01	mg/kg	M	4.69E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.2E-05
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	1.37E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.4E-06
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	2.34E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	5.9E-06
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	1.39E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	4.6E-05
	PHENANTHRENE	2.88E-01	mg/kg	2.88E-01	mg/kg	M	4.82E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.6E-06
	PYRENE	2.52E-01	mg/kg	2.52E-01	mg/kg	M	4.22E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.4E-05
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.39E-03	mg/kg	3.39E-03	mg/kg	M	1.89E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.8E-06
	4,4'-DDE	2.87E-03	mg/kg	2.87E-03	mg/kg	M	1.60E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.2E-06
	4,4'-DDT	1.20E-02	mg/kg	1.20E-02	mg/kg	M	6.70E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.3E-05
	ALDRIN	1.00E-03	mg/kg	1.00E-03	mg/kg	M	5.58E-10	mg/kg-day	3.0E-05	mg/kg-day	--	--	1.9E-05
	ALPHA-BHC	4.77E-03	mg/kg	4.77E-03	mg/kg	M	2.66E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	8.9E-06
	ALPHA-CHLORDANE	2.92E-03	mg/kg	2.92E-03	mg/kg	M	1.63E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.3E-06
	AROCLOR-1254	1.42E-02	mg/kg	1.42E-02	mg/kg	M	2.38E-08	mg/kg-day	2.0E-05	mg/kg-day	--	--	1.2E-03
	AROCLOR-1260	5.10E-02	mg/kg	5.10E-02	mg/kg	M	8.54E-08	mg/kg-day	2.0E-05	mg/kg-day	--	--	4.3E-03
	BETA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	9.15E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.0E-06

TABLE J-25

EPA TABLE U.7.1.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	DELTA-BHC	1.20E-03	mg/kg	1.20E-03	mg/kg	M	6.69E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.2E-06
	DIELDRIN	2.15E-03	mg/kg	2.15E-03	mg/kg	M	1.20E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	2.4E-05
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	6.75E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.1E-07
	ENDOSULFAN II	1.94E-03	mg/kg	1.94E-03	mg/kg	M	1.08E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.8E-07
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	1.48E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.5E-07
	ENDRIN	2.03E-03	mg/kg	2.03E-03	mg/kg	M	1.13E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.8E-06
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	3.61E-03	mg/kg	M	2.01E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	6.7E-06
	ENDRIN KETONE	2.72E-03	mg/kg	2.72E-03	mg/kg	M	1.52E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	5.1E-06
	GAMMA-BHC	1.89E-03	mg/kg	1.89E-03	mg/kg	M	1.05E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.5E-06
	GAMMA-CHLORDANE	2.81E-03	mg/kg	2.81E-03	mg/kg	M	1.57E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.1E-06
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	1.28E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.6E-07
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	3.40E-04	mg/kg	M	1.90E-10	mg/kg-day	1.3E-05	mg/kg-day	--	--	1.5E-05
	METHOXYCHLOR	9.79E-03	mg/kg	9.79E-03	mg/kg	M	5.46E-09	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.1E-06
												Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	1.2E-02

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
(2) Chronic Values Used
bgs = Below ground surface
Ft. = Feet
mg/kg = Milligrams per kilogram
-- = No value available

TABLE J-26

EPA TABLE U.7.2.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation-Dust	**METALS**												
	BARIUM	1.10E+02	mg/kg	8.33E-08	mg/m^3	R	1.63E-08	mg/kg-day	1.0E-04	mg/kg-day	--	--	1.6E-04
	COBALT	1.33E+01	mg/kg	1.01E-08	mg/m^3	R	1.98E-09	mg/kg-day	1.4E-06	mg/kg-day	--	--	1.4E-03
	LEAD	1.71E+02	mg/kg	1.30E-07	mg/m^3	R	2.55E-08	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	2.74E-10	mg/m^3	R	5.35E-11	mg/kg-day	--	--	--	--	--
	SELENIUM	6.02E-01	mg/kg	4.58E-10	mg/m^3	R	8.96E-11	mg/kg-day	2.3E-05	mg/kg-day	--	--	3.9E-06
	SILVER	4.56E-01	mg/kg	3.47E-10	mg/m^3	R	6.78E-11	mg/kg-day	5.7E-03	mg/kg-day	--	--	1.2E-08
	THALLIUM	4.29E-01	mg/kg	3.26E-10	mg/m^3	R	6.38E-11	mg/kg-day	--	--	--	--	--
	TIN	2.39E+01	mg/kg	1.82E-08	mg/m^3	R	3.55E-09	mg/kg-day	--	--	--	--	--
	TITANIUM	5.16E+03	mg/kg	3.92E-06	mg/m^3	R	7.67E-07	mg/kg-day	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	1.52E-12	mg/m^3	R	2.97E-13	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.5E-12
	TOLUENE	5.82E-03	mg/kg	4.42E-12	mg/m^3	R	8.65E-13	mg/kg-day	1.1E-01	mg/kg-day	--	--	7.6E-12
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	5.95E-13	mg/kg-day	2.0E-01	mg/kg-day	--	--	3.0E-12
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	5.50E-12	mg/kg-day	5.7E-02	mg/kg-day	--	--	9.6E-11
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	3.57E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.2E-10
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	2.23E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	7.4E-11
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	1.87E-10	mg/m^3	R	3.66E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.2E-10
	BENZO(A)PYRENE	2.50E-01	mg/kg	1.90E-10	mg/m^3	R	3.72E-11	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.2E-09
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	1.98E-10	mg/m^3	R	3.88E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	9.7E-10
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	1.88E-10	mg/m^3	R	3.68E-11	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.2E-09
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	1.97E-10	mg/m^3	R	3.86E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	9.7E-10
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	1.33E-10	mg/m^3	R	2.61E-11	mg/kg-day	2.0E-02	mg/kg-day	--	--	1.3E-09
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	1.09E-11	mg/kg-day	2.5E-02	mg/kg-day	--	--	4.3E-10
	CHRYSENE	2.42E-01	mg/kg	1.84E-10	mg/m^3	R	3.60E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.2E-10
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	8.92E-12	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.0E-11

TABLE J-26

EPA TABLE U.7.2.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	FLUORANTHENE	2.80E-01	mg/kg	2.13E-10	mg/m^3	R	4.16E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.0E-09
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	1.22E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.0E-10
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	2.08E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	5.2E-10
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	7.44E-11	mg/kg-day	3.0E-02	mg/kg-day	--	--	2.5E-09
	PHENANTHRENE	2.88E-01	mg/kg	2.19E-10	mg/m^3	R	4.28E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.4E-10
	PYRENE	2.52E-01	mg/kg	1.91E-10	mg/m^3	R	3.75E-11	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.2E-09
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.39E-03	mg/kg	2.58E-12	mg/m^3	R	5.04E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.0E-09
	4,4'-DDE	2.87E-03	mg/kg	2.18E-12	mg/m^3	R	4.27E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	8.5E-10
	4,4'-DDT	1.20E-02	mg/kg	9.13E-12	mg/m^3	R	1.79E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.6E-09
	ALDRIN	1.00E-03	mg/kg	7.60E-13	mg/m^3	R	1.49E-13	mg/kg-day	3.0E-05	mg/kg-day	--	--	5.0E-09
	ALPHA-BHC	4.77E-03	mg/kg	3.62E-12	mg/m^3	R	7.09E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.4E-09
	ALPHA-CHLORDANE	2.92E-03	mg/kg	2.22E-12	mg/m^3	R	4.34E-13	mg/kg-day	2.0E-04	mg/kg-day	--	--	2.2E-09
	AROCLOR-1254	1.42E-02	mg/kg	1.08E-11	mg/m^3	R	2.11E-12	mg/kg-day	2.0E-05	mg/kg-day	--	--	1.1E-07
	AROCLOR-1260	5.10E-02	mg/kg	3.88E-11	mg/m^3	R	7.59E-12	mg/kg-day	2.0E-05	mg/kg-day	--	--	3.8E-07
	BETA-BHC	1.64E-03	mg/kg	1.25E-12	mg/m^3	R	2.44E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	8.1E-10
	DELTA-BHC	1.20E-03	mg/kg	9.12E-13	mg/m^3	R	1.78E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	5.9E-10
	DIELDRIN	2.15E-03	mg/kg	1.63E-12	mg/m^3	R	3.20E-13	mg/kg-day	5.0E-05	mg/kg-day	--	--	6.4E-09
	ENDOSULFAN I	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	1.80E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	3.0E-11
	ENDOSULFAN II	1.94E-03	mg/kg	1.47E-12	mg/m^3	R	2.88E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	4.8E-11
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	2.01E-12	mg/m^3	R	3.94E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	6.6E-11
	ENDRIN	2.03E-03	mg/kg	1.54E-12	mg/m^3	R	3.02E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.0E-09
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	2.74E-12	mg/m^3	R	5.37E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.8E-09
	ENDRIN KETONE	2.72E-03	mg/kg	2.07E-12	mg/m^3	R	4.04E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.3E-09
	GAMMA-BHC	1.89E-03	mg/kg	1.44E-12	mg/m^3	R	2.81E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	9.4E-10
	GAMMA-CHLORDANE	2.81E-03	mg/kg	2.14E-12	mg/m^3	R	4.18E-13	mg/kg-day	2.0E-04	mg/kg-day	--	--	2.1E-09

TABLE J-26

EPA TABLE U.7.2.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	HEPTACHLOR	2.30E-04	mg/kg	1.75E-13	mg/m^3	R	3.42E-14	mg/kg-day	5.0E-04	mg/kg-day	--	--	6.8E-11
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	2.58E-13	mg/m^3	R	5.06E-14	mg/kg-day	1.3E-05	mg/kg-day	--	--	3.9E-09
	METHOXYCHLOR	9.79E-03	mg/kg	7.44E-12	mg/m^3	R	1.46E-12	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.9E-10
Inhalation VOCs	**METALS**												
	BARIUM	1.10E+02	mg/kg	--	mg/m^3	R	--	--	1.0E-04	mg/kg-day	--	--	--
	COBALT	1.33E+01	mg/kg	--	mg/m^3	R	--	--	1.4E-06	mg/kg-day	--	--	--
	LEAD	1.71E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	SELENIUM	6.02E-01	mg/kg	--	mg/m^3	R	--	--	2.3E-05	mg/kg-day	--	--	--
	SILVER	4.56E-01	mg/kg	--	mg/m^3	R	--	--	5.7E-03	mg/kg-day	--	--	--
	THALLIUM	4.29E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TIN	2.39E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TITANIUM	5.16E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	2.30E-02	mg/m^3	R	4.50E-03	mg/kg-day	2.0E-01	mg/kg-day	--	--	2.3E-02
	TOLUENE	5.82E-03	mg/kg	2.56E-02	mg/m^3	R	5.01E-03	mg/kg-day	1.1E-01	mg/kg-day	--	--	4.4E-02
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	3.19E-04	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.6E-03
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	8.84E-03	mg/kg-day	5.7E-02	mg/kg-day	--	--	1.5E-01
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.78E-01	mg/m^3	R	3.48E-02	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.2E-01
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	5.37E-04	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.8E-03
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(A)PYRENE	2.50E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day	--	--	--

TABLE J-26

EPA TABLE U.7.2.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.5E-02	mg/kg-day	--	--	--
	CHRYSENE	2.42E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	FLUORANTHENE	2.80E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	6.65E-04	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.7E-02
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day	--	--	--
	PHENANTHRENE	2.88E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	PYRENE	2.52E-01	mg/kg	9.61E-04	mg/m^3	R	1.88E-04	mg/kg-day	3.0E-02	mg/kg-day	--	--	6.3E-03
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.39E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDE	2.87E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDT	1.20E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	ALDRIN	1.00E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-05	mg/kg-day	--	--	--
	ALPHA-BHC	4.77E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ALPHA-CHLORDANE	2.92E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-04	mg/kg-day	--	--	--
	AROCLOR-1254	1.42E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-05	mg/kg-day	--	--	--
	AROCLOR-1260	5.10E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-05	mg/kg-day	--	--	--
	BETA-BHC	1.64E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	DELTA-BHC	1.20E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	DIELDRIN	2.15E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	ENDOSULFAN I	1.21E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN II	1.94E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDRIN	2.03E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--

TABLE J-26

EPA TABLE U.7.2.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	ENDRIN KETONE	2.72E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	GAMMA-BHC	1.89E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	GAMMA-CHLORDANE	2.81E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-04	mg/kg-day	--	--	--
	HEPTACHLOR	2.30E-04	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	--	mg/m^3	R	--	--	1.3E-05	mg/kg-day	--	--	--
	METHOXYCHLOR	9.79E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-03	mg/kg-day	--	--	--
												Total Hazard Index Across All Air Exposure Routes/Pathways - Soil	3.6E-01
												Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	1.2E-02
												Total Hazard Index Across All Exposure Routes/Pathways - Soil	**3.8E-01**

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
(2) Chronic Values Used
bgs = Below ground surface
Ft. = Feet
mg/kg = Milligrams per kilogram
mg/m^3 = Milligrams per cubic meter
-- = No value available
VOC = Volatile Organic Compound

TABLE J-27

EPA TABLE U.7.3.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation VOCs	**VOLATILE ORGANIC COMPOUNDS**												
	1,2-DICHLOROETHANE	3.30E-04	mg/L	1.02E-05	mg/m^3	R	2.00E-06	mg/kg-day	1.4E-03	mg/kg-day	--	--	1.4E-03
	2-BUTANONE	1.98E-02	mg/L	2.23E-04	mg/m^3	R	4.35E-05	mg/kg-day	2.9E-01	mg/kg-day	--	--	1.5E-04
	4-METHYL-2-PENTANONE	8.00E-04	mg/L	1.41E-05	mg/m^3	R	2.76E-06	mg/kg-day	2.3E-02	mg/kg-day	--	--	1.2E-04
	ACETONE	8.79E-02	mg/L	9.67E-04	mg/m^3	R	1.89E-04	mg/kg-day	1.0E-01	mg/kg-day			1.9E-03
	CHLOROMETHANE	7.00E-04	mg/L	1.36E-05	mg/m^3	R	2.66E-06	mg/kg-day	2.6E-02	mg/kg-day	--	--	1.0E-04
	ETHYLBENZENE	7.00E-04	mg/L	1.62E-05	mg/m^3	R	3.17E-06	mg/kg-day	2.9E-01	mg/kg-day	--	--	1.1E-05
	TOLUENE	1.00E-03	mg/L	2.55E-05	mg/m^3	R	4.99E-06	mg/kg-day	1.1E-01	mg/kg-day	--	--	4.4E-05
	XYLENE (TOTAL)	1.54E-03	mg/L	3.35E-05	mg/m^3	R	6.55E-06	mg/kg-day	2.0E-01	mg/kg-day	--	--	3.3E-05
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,3-DICHLOROBENZENE	9.00E-04	mg/L	2.10E-05	mg/m^3	R	4.10E-06	mg/kg-day	9.0E-04	mg/kg-day	--	--	4.6E-03
	2,4-DICHLOROPHENOL	2.00E-03	mg/L	--		R	--	--	3.0E-03	mg/kg-day	--	--	--
	4-METHYLPHENOL	6.00E-03	mg/L	--		R	--	--	5.0E-03	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-03	mg/L	--		R	--	--	6.0E-02	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.00E-03	mg/L	--		R	--	--	4.0E-02	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	7.85E-03	mg/L	--		R	--	--	2.0E-02	mg/kg-day	--	--	--
	CARBAZOLE	2.00E-03	mg/L	--		R	--	--	2.5E-02	mg/kg-day	--	--	--
	FLUORANTHENE	4.00E-03	mg/L	--		R	--	--	4.0E-02	mg/kg-day	--	--	--
	N-NITROSODIPHENYLAMINE (1)	1.32E-02	mg/L	--		R	--	--	--	--	--	--	--
	NAPHTHALENE	2.00E-03	mg/L	4.32E-05	mg/m^3	R	8.45E-06	mg/kg-day	8.6E-04	mg/kg-day	--	--	9.9E-03
	PHENANTHRENE	2.00E-03	mg/L	1.60E-05	mg/m^3	R	3.13E-06	mg/kg-day	3.0E-01	mg/kg-day			1.0E-05
	PHENOL	2.00E-03	mg/L	--		R	--	--	6.0E-01	mg/kg-day	--	--	--

TABLE J-27

EPA TABLE U.7.3.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	PYRENE	1.10E-02	mg/L	2.93E-05	mg/m^3	R	5.74E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.9E-04

Total Hazard Index Across All Air Exposure Routes/Pathways - Groundwater	1.84E-02
Total Hazard Index Across All Exposure Routes/Pathways - Soil	3.77E-01
Total Hazard Index Across All Exposure Routes/Pathways - Soil and Groundwater	**3.96E-01**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) Chronic Values Used

bgs = Below ground surface

Ft. = Feet

mg/L = Milligrams per liter

mg/m^3 = Milligrams per cubic meter

-- = No value available

TABLE J-28

EPA TABLE U.7.1.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	**METALS**												
	BARIUM	9.65E+01	mg/kg	9.65E+01	mg/kg	M	4.72E-05	mg/kg-day	7.0E-02	mg/kg-day	--	--	6.7E-04
	COBALT	1.17E+01	mg/kg	1.17E+01	mg/kg	M	5.72E-06	mg/kg-day	6.0E-02	mg/kg-day	--	--	9.5E-05
	LEAD	1.11E+02	mg/kg	1.11E+02	mg/kg	M	5.45E-05	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	2.82E-01	mg/kg	M	1.38E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.8E-05
	SELENIUM	5.25E-01	mg/kg	5.25E-01	mg/kg	M	2.57E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	5.1E-05
	SILVER	3.01E-01	mg/kg	3.01E-01	mg/kg	M	1.47E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.9E-05
	THALLIUM	3.96E-01	mg/kg	3.96E-01	mg/kg	M	1.93E-07	mg/kg-day	7.0E-04	mg/kg-day	--	--	2.8E-04
	TIN	1.53E+01	mg/kg	1.53E+01	mg/kg	M	7.46E-06	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.2E-05
	TITANIUM	4.41E+03	mg/kg	4.41E+03	mg/kg	M	2.15E-03	mg/kg-day	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	9.78E-10	mg/kg-day	1.0E-01	mg/kg-day	--	--	9.8E-09
	TOLUENE	5.59E-03	mg/kg	5.59E-03	mg/kg	M	2.73E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.4E-09
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.96E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	9.8E-10
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.81E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	1.8E-06
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	2.24E-01	mg/kg	M	1.09E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.6E-08
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	7.34E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.4E-08
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	1.01E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.4E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	9.87E-08	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.3E-07
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	2.15E-01	mg/kg	M	1.05E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.6E-07
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	2.10E-01	mg/kg	M	1.03E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.4E-07
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	2.19E-01	mg/kg	M	1.07E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.7E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	1.29E-01	mg/kg	M	6.30E-08	mg/kg-day	2.0E-02	mg/kg-day	--	--	3.2E-06
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	3.57E-08	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.4E-06
	CHRYSENE	1.93E-01	mg/kg	1.93E-01	mg/kg	M	9.43E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.1E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	2.93E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	9.8E-09
	FLUORANTHENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	1.01E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.5E-07
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	4.01E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.0E-07
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	6.85E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.7E-07
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	2.45E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	8.2E-06
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	1.12E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.7E-08
	PYRENE	1.86E-01	mg/kg	1.86E-01	mg/kg	M	9.12E-08	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.0E-07

TABLE J-28

EPA TABLE U.7.1.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.91E-03	mg/kg	2.91E-03	mg/kg	M	1.42E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.8E-06
	4,4'-DDE	2.55E-03	mg/kg	2.55E-03	mg/kg	M	1.25E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.5E-06
	4,4'-DDT	9.11E-03	mg/kg	9.11E-03	mg/kg	M	4.46E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	8.9E-06
	ALDRIN	9.90E-04	mg/kg	9.90E-04	mg/kg	M	4.84E-10	mg/kg-day	3.0E-05	mg/kg-day	--	--	1.6E-05
	ALPHA-BHC	3.56E-03	mg/kg	3.56E-03	mg/kg	M	1.74E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	5.8E-07
	ALPHA-CHLORDANE	2.36E-03	mg/kg	2.36E-03	mg/kg	M	1.15E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.3E-06
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	5.38E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.1E-04
	AROCLOR-1260	3.89E-02	mg/kg	3.89E-02	mg/kg	M	1.90E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	3.8E-04
	BETA-BHC	1.46E-03	mg/kg	1.46E-03	mg/kg	M	7.14E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.4E-07
	DELTA-BHC	1.12E-03	mg/kg	1.12E-03	mg/kg	M	5.48E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.8E-07
	DIELDRIN	2.04E-03	mg/kg	2.04E-03	mg/kg	M	9.98E-10	mg/kg-day	5.0E-05	mg/kg-day	--	--	2.0E-05
	ENDOSULFAN I	1.13E-03	mg/kg	1.13E-03	mg/kg	M	5.53E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	9.2E-08
	ENDOSULFAN II	1.89E-03	mg/kg	1.89E-03	mg/kg	M	9.24E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.5E-07
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	1.17E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.0E-07
	ENDRIN	1.96E-03	mg/kg	1.96E-03	mg/kg	M	9.59E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.2E-06
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	3.15E-03	mg/kg	M	1.54E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	5.1E-06
	ENDRIN KETONE	2.48E-03	mg/kg	2.48E-03	mg/kg	M	1.21E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	4.0E-06
	GAMMA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	8.02E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.7E-07
	GAMMA-CHLORDANE	2.27E-03	mg/kg	2.27E-03	mg/kg	M	1.11E-09	mg/kg-day	6.0E-05	mg/kg-day	--	--	1.9E-05
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	9.78E-11	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.0E-07
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	2.90E-04	mg/kg	M	1.42E-10	mg/kg-day	1.3E-05	mg/kg-day	--	--	1.1E-05
	METHOXYCHLOR	9.51E-03	mg/kg	9.51E-03	mg/kg	M	4.65E-09	mg/kg-day	5.0E-03	mg/kg-day	--	--	9.3E-07
Dermal	**METALS**												
	BARIUM	9.65E+01	mg/kg	9.65E+01	mg/kg	M	6.23E-06	mg/kg-day	7.0E-02	mg/kg-day	--	--	8.9E-05
	COBALT	1.17E+01	mg/kg	1.17E+01	mg/kg	M	7.56E-07	mg/kg-day	6.0E-02	mg/kg-day	--	--	1.3E-05
	LEAD	1.11E+02	mg/kg	1.11E+02	mg/kg	M	7.20E-06	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	2.82E-01	mg/kg	M	1.82E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.6E-06
	SELENIUM	5.25E-01	mg/kg	5.25E-01	mg/kg	M	3.39E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	6.8E-06
	SILVER	3.01E-01	mg/kg	3.01E-01	mg/kg	M	1.94E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.9E-06
	THALLIUM	3.96E-01	mg/kg	3.96E-01	mg/kg	M	2.55E-08	mg/kg-day	7.0E-04	mg/kg-day	--	--	3.6E-05
	TIN	1.53E+01	mg/kg	1.53E+01	mg/kg	M	9.85E-07	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.6E-06
	TITANIUM	4.41E+03	mg/kg	4.41E+03	mg/kg	M	2.84E-04	mg/kg-day	--	--	--	--	--

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EPA TABLE U.7.1.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	1.29E-09	mg/kg-day	1.0E-01	mg/kg-day	--	--	1.3E-08
	TOLUENE	5.59E-03	mg/kg	5.59E-03	mg/kg	M	3.61E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.8E-09
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	2.58E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.3E-09
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	2.39E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	2.4E-06
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	2.24E-01	mg/kg	M	2.17E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	7.2E-08
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.45E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.8E-08
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	2.00E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	6.7E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	1.95E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	6.5E-07
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	2.15E-01	mg/kg	M	2.08E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	5.2E-07
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	2.10E-01	mg/kg	M	2.03E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	6.8E-07
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	2.19E-01	mg/kg	M	2.12E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	5.3E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	1.29E-01	mg/kg	M	8.32E-08	mg/kg-day	2.0E-02	mg/kg-day	--	--	4.2E-06
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	4.71E-08	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.9E-06
	CHRYSENE	1.93E-01	mg/kg	1.93E-01	mg/kg	M	1.87E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	6.2E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	5.81E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.9E-08
	FLUORANTHENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	2.00E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	5.0E-07
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	7.94E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.0E-07
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	1.36E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.4E-07
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	8.07E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	2.7E-05
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	2.21E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	7.4E-08
	PYRENE	1.86E-01	mg/kg	1.86E-01	mg/kg	M	1.81E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	6.0E-07
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.91E-03	mg/kg	2.91E-03	mg/kg	M	9.39E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.9E-06
	4,4'-DDE	2.55E-03	mg/kg	2.55E-03	mg/kg	M	8.23E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.6E-06
	4,4'-DDT	9.11E-03	mg/kg	9.11E-03	mg/kg	M	2.94E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	5.9E-06
	ALDRIN	9.90E-04	mg/kg	9.90E-04	mg/kg	M	3.20E-10	mg/kg-day	3.0E-05	mg/kg-day	--	--	1.1E-05
	ALPHA-BHC	3.56E-03	mg/kg	3.56E-03	mg/kg	M	1.15E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	3.8E-07
	ALPHA-CHLORDANE	2.36E-03	mg/kg	2.36E-03	mg/kg	M	7.62E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.5E-06
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	1.07E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	2.1E-04
	AROCLOR-1260	3.89E-02	mg/kg	3.89E-02	mg/kg	M	3.77E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	7.5E-04
	BETA-BHC	1.46E-03	mg/kg	1.46E-03	mg/kg	M	4.71E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.6E-07

TABLE J-28

EPA TABLE U.7.1.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	DELTA-BHC	1.12E-03	mg/kg	1.12E-03	mg/kg	M	3.62E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.2E-07
	DIELDRIN	2.04E-03	mg/kg	2.04E-03	mg/kg	M	6.59E-10	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.3E-05
	ENDOSULFAN I	1.13E-03	mg/kg	1.13E-03	mg/kg	M	3.65E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	6.1E-08
	ENDOSULFAN II	1.89E-03	mg/kg	1.89E-03	mg/kg	M	6.10E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.0E-07
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	7.75E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.3E-07
	ENDRIN	1.96E-03	mg/kg	1.96E-03	mg/kg	M	6.33E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.1E-06
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	3.15E-03	mg/kg	M	1.02E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.4E-06
	ENDRIN KETONE	2.48E-03	mg/kg	2.48E-03	mg/kg	M	8.01E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.7E-06
	GAMMA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	5.29E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.8E-07
	GAMMA-CHLORDANE	2.27E-03	mg/kg	2.27E-03	mg/kg	M	7.33E-10	mg/kg-day	6.0E-05	mg/kg-day	--	--	1.2E-05
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	6.46E-11	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.3E-07
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	2.90E-04	mg/kg	M	9.36E-11	mg/kg-day	1.3E-05	mg/kg-day	--	--	7.2E-06
	METHOXYCHLOR	9.51E-03	mg/kg	9.51E-03	mg/kg	M	3.07E-09	mg/kg-day	5.0E-03	mg/kg-day	--	--	6.1E-07
												Total Hazard Index Across All Direct Contact Exposure Routes/Pathways	3.0E-03

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) All values are subchronic

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

-- = No value available

TABLE J-29

EPA TABLE U.7.2.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation-Dust	**METALS**												
	BARIUM	9.65E+01	mg/kg	7.33E-08	mg/m^3	R	7.46E-09	mg/kg-day	1.0E-03	mg/kg-day	--	--	7.5E-06
	COBALT	1.17E+01	mg/kg	8.89E-09	mg/m^3	R	9.05E-10	mg/kg-day	1.4E-06	mg/kg-day	--	--	6.3E-04
	LEAD	1.11E+02	mg/kg	8.47E-08	mg/m^3	R	8.62E-09	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	2.14E-10	mg/m^3	R	2.18E-11	mg/kg-day	--	--	--	--	--
	SELENIUM	5.25E-01	mg/kg	3.99E-10	mg/m^3	R	4.06E-11	mg/kg-day	2.3E-05	mg/kg-day	--	--	1.8E-06
	SILVER	3.01E-01	mg/kg	2.29E-10	mg/m^3	R	2.33E-11	mg/kg-day	5.7E-03	mg/kg-day	--	--	4.1E-09
	THALLIUM	3.96E-01	mg/kg	3.01E-10	mg/m^3	R	3.06E-11	mg/kg-day	--	--	--	--	--
	TIN	1.53E+01	mg/kg	1.16E-08	mg/m^3	R	1.18E-09	mg/kg-day	--	--	--	--	--
	TITANIUM	4.41E+03	mg/kg	3.35E-06	mg/m^3	R	3.41E-07	mg/kg-day	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	1.52E-12	mg/m^3	R	1.55E-13	mg/kg-day	2.0E-01	mg/kg-day	--	--	7.7E-13
	TOLUENE	5.59E-03	mg/kg	4.25E-12	mg/m^3	R	4.32E-13	mg/kg-day	1.1E-01	mg/kg-day	--	--	3.8E-12
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	3.09E-13	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.5E-13
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	2.86E-12	mg/kg-day	5.7E-01	mg/kg-day	--	--	5.0E-12
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	1.70E-10	mg/m^3	R	1.73E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.8E-12
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	1.16E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.9E-12
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	1.57E-10	mg/m^3	R	1.59E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.3E-12
	BENZO(A)PYRENE	2.02E-01	mg/kg	1.53E-10	mg/m^3	R	1.56E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	5.2E-11
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	1.63E-10	mg/m^3	R	1.66E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	4.1E-11
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	1.59E-10	mg/m^3	R	1.62E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	5.4E-11
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	1.67E-10	mg/m^3	R	1.70E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	4.2E-11
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	9.79E-11	mg/m^3	R	9.96E-12	mg/kg-day	2.0E-02	mg/kg-day	--	--	5.0E-10
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	5.64E-12	mg/kg-day	2.5E-02	mg/kg-day	--	--	2.3E-10
	CHRYSENE	1.93E-01	mg/kg	1.47E-10	mg/m^3	R	1.49E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.0E-12

TABLE J-29

EPA TABLE U.7.2.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	4.64E-12	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.5E-12
	FLUORANTHENE	2.06E-01	mg/kg	1.57E-10	mg/m^3	R	1.59E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	4.0E-11
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	6.34E-12	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.6E-11
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	1.08E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.7E-11
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	3.87E-11	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.3E-09
	PHENANTHRENE	2.28E-01	mg/kg	1.74E-10	mg/m^3	R	1.77E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.9E-12
	PYRENE	1.86E-01	mg/kg	1.42E-10	mg/m^3	R	1.44E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.8E-11
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.91E-03	mg/kg	2.21E-12	mg/m^3	R	2.25E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	4.5E-10
	4,4'-DDE	2.55E-03	mg/kg	1.94E-12	mg/m^3	R	1.97E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.9E-10
	4,4'-DDT	9.11E-03	mg/kg	6.92E-12	mg/m^3	R	7.04E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.4E-09
	ALDRIN	9.90E-04	mg/kg	7.52E-13	mg/m^3	R	7.65E-14	mg/kg-day	3.0E-05	mg/kg-day	--	--	2.6E-09
	ALPHA-BHC	3.56E-03	mg/kg	2.71E-12	mg/m^3	R	2.75E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	9.2E-11
	ALPHA-CHLORDANE	2.36E-03	mg/kg	1.79E-12	mg/m^3	R	1.82E-13	mg/kg-day	2.0E-03	mg/kg-day	--	--	9.1E-11
	AROCLOR-1254	1.10E-02	mg/kg	8.37E-12	mg/m^3	R	8.51E-13	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.7E-08
	AROCLOR-1260	3.89E-02	mg/kg	2.95E-11	mg/m^3	R	3.01E-12	mg/kg-day	5.0E-05	mg/kg-day	--	--	6.0E-08
	BETA-BHC	1.46E-03	mg/kg	1.11E-12	mg/m^3	R	1.13E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	3.8E-11
	DELTA-BHC	1.12E-03	mg/kg	8.51E-13	mg/m^3	R	8.66E-14	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.9E-11
	DIELDRIN	2.04E-03	mg/kg	1.55E-12	mg/m^3	R	1.58E-13	mg/kg-day	5.0E-05	mg/kg-day	--	--	3.2E-09
	ENDOSULFAN I	1.13E-03	mg/kg	8.59E-13	mg/m^3	R	8.74E-14	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.5E-11
	ENDOSULFAN II	1.89E-03	mg/kg	1.44E-12	mg/m^3	R	1.46E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.4E-11
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	1.82E-12	mg/m^3	R	1.86E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	3.1E-11
	ENDRIN	1.96E-03	mg/kg	1.49E-12	mg/m^3	R	1.52E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	5.1E-10
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	2.39E-12	mg/m^3	R	2.44E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	8.1E-10
	ENDRIN KETONE	2.48E-03	mg/kg	1.88E-12	mg/m^3	R	1.92E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	6.4E-10
	GAMMA-BHC	1.64E-03	mg/kg	1.25E-12	mg/m^3	R	1.27E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	4.2E-11
	GAMMA-CHLORDANE	2.27E-03	mg/kg	1.72E-12	mg/m^3	R	1.75E-13	mg/kg-day	2.0E-03	mg/kg-day	--	--	8.8E-11

TABLE J-29

EPA TABLE U.7.2.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	HEPTACHLOR	2.00E-04	mg/kg	1.52E-13	mg/m^3	R	1.55E-14	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.1E-11
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	2.20E-13	mg/m^3	R	2.24E-14	mg/kg-day	1.3E-05	mg/kg-day	--	--	1.7E-09
	METHOXYCHLOR	9.51E-03	mg/kg	7.23E-12	mg/m^3	R	7.35E-13	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.5E-10
Inhalation VOCs	**METALS**												
	BARIUM	9.65E+01	mg/kg	--	mg/m^3	R	--	--	1.0E-03	mg/kg-day	--	--	--
	COBALT	1.17E+01	mg/kg	--	mg/m^3	R	--	--	1.4E-06	mg/kg-day	--	--	--
	LEAD	1.11E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	SELENIUM	5.25E-01	mg/kg	--	mg/m^3	R	--	--	2.3E-05	mg/kg-day	--	--	--
	SILVER	3.01E-01	mg/kg	--	mg/m^3	R	--	--	5.7E-03	mg/kg-day	--	--	--
	THALLIUM	3.96E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TIN	1.53E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TITANIUM	4.41E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	2.30E-02	mg/m^3	R	2.34E-03	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.2E-02
	TOLUENE	5.59E-03	mg/kg	2.46E-02	mg/m^3	R	2.50E-03	mg/kg-day	1.1E-01	mg/kg-day	--	--	2.2E-02
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	1.66E-04	mg/kg-day	2.0E+00	mg/kg-day	--	--	8.3E-05
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	4.60E-03	mg/kg-day	5.7E-01	mg/kg-day	--	--	8.0E-03
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	1.66E-01	mg/m^3	R	1.69E-02	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.6E-03
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	2.79E-04	mg/kg-day	3.0E+00	mg/kg-day	--	--	9.3E-05
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	BENZO(A)PYRENE	2.02E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day	--	--	--

TABLE J-29

EPA TABLE U.7.2.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.5E-02	mg/kg-day	--	--	--
	CHRYSENE	1.93E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	FLUORANTHENE	2.06E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	3.45E-04	mg/kg-day	4.0E-01	mg/kg-day	--	--	8.6E-04
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day	--	--	--
	PHENANTHRENE	2.28E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	PYRENE	1.86E-01	mg/kg	7.11E-04	mg/m^3	R	7.24E-05	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.4E-04
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.91E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDE	2.55E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDT	9.11E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	ALDRIN	9.90E-04	mg/kg	--	mg/m^3	R	--	--	3.0E-05	mg/kg-day	--	--	--
	ALPHA-BHC	3.56E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	ALPHA-CHLORDANE	2.36E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-03	mg/kg-day	--	--	--
	AROCLOR-1254	1.10E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	AROCLOR-1260	3.89E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	BETA-BHC	1.46E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	DELTA-BHC	1.12E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	DIELDRIN	2.04E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	ENDOSULFAN I	1.13E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN II	1.89E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDRIN	1.96E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ENDRIN KETONE	2.48E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--

TABLE J-29

EPA TABLE U.7.2.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	GAMMA-BHC	1.64E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	GAMMA-CHLORDANE	2.27E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-03	mg/kg-day	--	--	--
	HEPTACHLOR	2.00E-04	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	--	mg/m^3	R	--	--	1.3E-05	mg/kg-day	--	--	--
	METHOXYCHLOR	9.51E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-03	mg/kg-day	--	--	--

Total Hazard Index Across All Air Exposure Routes/Pathways	4.92E-02
Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	1.24E-02
Total Hazard Index Across All Exposure Routes/Pathways - Soil	**6.16E-02**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) All values are subchronic

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

-- = No value available

VOC = Volatile Organic Compound

TABLE J-30

EPA TABLE U.7.3.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation	**VOLATILE ORGANIC COMPOUNDS**												
	1,2-DICHLOROETHANE	2.80E-04	mg/L	8.69E-06	mg/m^3	R	8.84E-07	mg/kg-day	1.4E-03	mg/kg-day	--	--	6.3E-04
	2-BUTANONE	9.42E-03	mg/L	1.06E-04	mg/m^3	R	1.08E-05	mg/kg-day	2.9E-01	mg/kg-day	--	--	3.8E-05
	4-METHYL-2-PENTANONE	8.00E-04	mg/L	1.41E-05	mg/m^3	R	1.44E-06	mg/kg-day	2.0E-01	mg/kg-day	--	--	7.2E-06
	ACETONE	6.84E-02	mg/L	7.53E-04	mg/m^3	R	7.66E-05	mg/kg-day	1.0E+00	mg/kg-day			7.7E-05
	CHLOROMETHANE	7.00E-04	mg/L	1.36E-05	mg/m^3	R	1.38E-06	mg/kg-day	8.6E-02	mg/kg-day	--	--	1.6E-05
	ETHYLBENZENE	7.00E-04	mg/L	1.62E-05	mg/m^3	R	1.65E-06	mg/kg-day	2.9E-01	mg/kg-day	--	--	5.8E-06
	TOLUENE	8.30E-04	mg/L	2.12E-05	mg/m^3	R	2.15E-06	mg/kg-day	1.1E-01	mg/kg-day	--	--	1.9E-05
	XYLENE (TOTAL)	1.26E-03	mg/L	2.74E-05	mg/m^3	R	2.79E-06	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.4E-06
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,3-DICHLOROBENZENE	9.00E-04	mg/L	2.10E-05	mg/m^3	R	2.13E-06	mg/kg-day	9.0E-04	mg/kg-day	--	--	2.4E-03
	2,4-DICHLOROPHENOL	2.00E-03	mg/L	--		R	--	--	3.0E-03	mg/kg-day	--	--	--
	4-METHYLPHENOL	6.00E-03	mg/L	--		R	--	--	5.0E-03	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-03	mg/L	--		R	--	--	6.0E-01	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.00E-03	mg/L	--		R	--	--	4.0E-01	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	4.92E-03	mg/L	--		R	--	--	2.0E-02	mg/kg-day	--	--	--
	CARBAZOLE	2.00E-03	mg/L	--		R	--	--	2.5E-02	mg/kg-day	--	--	--
	FLUORANTHENE	4.00E-03	mg/L	--		R	--	--	4.0E-01	mg/kg-day	--	--	--
	N-NITROSODIPHENYLAMINE (1)	8.83E-03	mg/L	--		R	--	--	--	--	--	--	--
	NAPHTHALENE	2.00E-03	mg/L	4.32E-05	mg/m^3	R	4.39E-06	mg/kg-day	8.6E-04	mg/kg-day	--	--	5.1E-03
	PHENANTHRENE	2.00E-03	mg/L	1.60E-05	mg/m^3	R	1.63E-06	mg/kg-day	3.0E+00	mg/kg-day			5.4E-07
	PHENOL	2.00E-03	mg/L	--		R	--	--	6.0E-01	mg/kg-day	--	--	--
	PYRENE	8.39E-03	mg/L	2.24E-05	mg/m^3	R	2.28E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	7.6E-06

Total Hazard Index Across All Air Exposure Routes/Pathways - Groundwater	8.3E-03
Total Hazard Index Across All Exposure Routes/Pathways - Soil	6.2E-02
Total Hazard Index Across All Exposure Routes/Pathways - Soil and Groundwater	**7.0E-02**

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
(2) All values are subchronic
bgs = Below ground surface
Ft. = Feet
mg/L = Milligrams per liter
mg/m^3 = Milligrams per cubic meter
-- = No value available

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TABLE U.9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe: Future
Receptor Population: Commercial/Industrial
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Soil	Direct Soil Contact	**METALS**					**METALS**					
			BARIUM	--		--	--	BARIUM	No adverse effect	8.E-04	--	2.E-04	9.E-04
			COBALT	--		--	--	COBALT	--	1.E-04	--	2.E-05	1.E-04
			LEAD	--		--	--	LEAD	--	--	--	--	--
			MOLYBDENUM	--		--	--	MOLYBDENUM	Kidney	4.E-05	--	8.E-06	4.E-05
			SELENIUM	--		--	--	SELENIUM	CNS/PNS, Liver, Skin, Blood	6.E-05	--	1.E-05	7.E-05
			SILVER	--		--	--	SILVER	Skin	4.E-05	--	1.E-05	5.E-05
			THALLIUM	--		--	--	THALLIUM	No adverse effect	3.E-03	--	7.E-04	4.E-03
			TIN	--		--	--	TIN	Liver, Kidney	2.E-05	--	4.E-06	2.E-05
			TITANIUM	--		--	--	TITANIUM	--	--	--	--	--
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			CARBON DISULFIDE	--		--	--	CARBON DISULFIDE	Reproductive System	1.E-08	--	2.E-08	3.E-08
			TOLUENE	--		--	--	TOLUENE	Liver, Kidney	1.E-08	--	3.E-08	5.E-08
			XYLENE (TOTAL)	--		--	--	XYLENE (TOTAL)	Whole body (weight), CNS/PNS	1.E-09	--	2.E-09	3.E-09
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE	--		--	--	1,2,4-TRICHLOROBENZENE	Adrenal	2.E-06	--	4.E-06	6.E-06
			2-METHYLNAPHTHALENE	--		--	--	2-METHYLNAPHTHALENE	No observed effect	4.E-07	--	1.E-06	2.E-06
			ANTHRACENE	--		--	--	ANTHRACENE	No observed effect	2.E-07	--	8.E-07	1.E-06
			BENZO(A)ANTHRACENE	5E-08		1.8E-07	2.E-07	BENZO(A)ANTHRACENE	No observed effect	4.E-07	--	1.E-06	2.E-06
			BENZO(A)PYRENE	5E-07		1.8E-06	2.E-06	BENZO(A)PYRENE	Kidney	4.E-06	--	1.E-05	2.E-05
			BENZO(B)FLUORANTHENE	5E-08		1.9E-07	2.E-07	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood	3.E-06	--	1.E-05	1.E-05
			BENZO(G,H,I)PERYLENE	--		--	--	BENZO(G,H,I)PERYLENE	Kidney	4.E-06	--	1.E-05	2.E-05
			BENZO(K)FLUORANTHENE	5E-08		1.9E-07	2.E-07	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood	3.E-06	--	1.E-05	1.E-05
			BIS(2-ETHYLHEXYL)PHTHALATE	4E-10		9.8E-10	1.E-09	BIS(2-ETHYLHEXYL)PHTHALATE	Liver	4.E-06	--	1.E-05	1.E-05
			CARBAZOLE	3E-10		5.8E-10	8.E-10	CARBAZOLE	Whole body (weight), Liver, Kidney	1.E-06	--	3.E-06	5.E-06
			CHRYSENE	5E-09		1.7E-08	2.E-08	CHRYSENE	No observed effect	4.E-07	--	1.E-06	2.E-06
			DIBENZ(A,H)ANTHRACENE	4E-08		1.5E-07	2.E-07	DIBENZ(A,H)ANTHRACENE	No observed effect				
			FLUORANTHENE	--		--	--	FLUORANTHENE	Liver, Kidney, Blood	3.E-06	--	1.E-05	2.E-05
			FLUORENE	--		--	--	FLUORENE	Blood	1.E-06	--	3.E-06	4.E-06
			INDENO(1,2,3-CD)PYRENE	3E-08		1.0E-07	1.E-07	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood	2.E-06	--	6.E-06	8.E-06
			PENTACHLOROPHENOL	1E-08		6.0E-08	7.E-08	PENTACHLOROPHENOL	Liver, Kidney	8.E-06	--	5.E-05	5.E-05
			PHENANTHRENE	--		--	--	PHENANTHRENE	No observed effect	5.E-07	--	2.E-06	2.E-06
			PYRENE	--		--	--	PYRENE	Kidney	4.E-06	--	1.E-05	2.E-05
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD	1E-10		1.6E-10	3.E-10	4,4'-DDD	Liver	3.E-06	--	4.E-06	7.E-06
			4,4'-DDE	2E-10		1.9E-10	0E+00	4,4'-DDE	Liver	3.E-06	--	3.E-06	6.E-06
			4,4'-DDT	7E-10		8.1E-10	2.E-09	4,4'-DDT	Liver	1.E-05	--	1.E-05	3.E-05
			ALDRIN	3E-09		3.4E-09	6.E-09	ALDRIN	Liver	2.E-05	--	2.E-05	3.E-05
			ALPHA-BHC	5E-09		6.0E-09	1.E-08	ALPHA-BHC	Liver, kidney	8.E-06	--	9.E-06	2.E-05
			ALPHA-CHLORDANE	6E-10		7.0E-10	1.E-09	ALPHA-CHLORDANE	Liver	3.E-06	--	3.E-06	6.E-06
			AROCLOR-1254	5E-09		1.7E-08	2.E-08	AROCLOR-1254	Immune System	3.E-04	--	1.E-03	2.E-03
			AROCLOR-1260	2E-08		6.1E-08	8.E-08	AROCLOR-1260	Immune System	1.E-03	--	4.E-03	6.E-03
			BETA-BHC	5E-10		5.9E-10	1.E-09	BETA-BHC	Liver, Kidney	3.E-06	--	3.E-06	6.E-06
			DELTA-BHC	--		--	--	DELTA-BHC	Liver, Kidney	2.E-06	--	2.E-06	4.E-06
			DIELDRIN	6E-09		6.9E-09	1.E-08	DIELDRIN	Liver	2.E-05	--	2.E-05	5.E-05
			ENDOSULFAN I	--		--	--	ENDOSULFAN I	Whole body (weight), Kidney, Blood	1.E-07	--	1.E-07	2.E-07
			ENDOSULFAN II	--		--	--	ENDOSULFAN II	Whole body (weight), Kidney, Blood	2.E-07	--	2.E-07	3.E-07
			ENDOSULFAN SULFATE	--		--	--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood	2.E-07	--	2.E-07	5.E-07
			ENDRIN	--		--	--	ENDRIN	Liver, CNS/PNS	3.E-06	--	4.E-06	7.E-06
			ENDRIN ALDEHYDE	--		--	--	ENDRIN ALDEHYDE	Liver, CNS/PNS	6.E-06	--	7.E-06	1.E-05
			ENDRIN KETONE					ENDRIN KETONE	Liver, CNS/PNS	4.E-06	--	5.E-06	9.E-06
			GAMMA-BHC					GAMMA-BHC	Liver, Kidney	3.E-06	--	4.E-06	7.E-06
			GAMMA-CHLORDANE	1E-09		6.7E-10	2.E-09	GAMMA-CHLORDANE	Liver	5.E-06	--	3.E-06	8.E-06
			HEPTACHLOR	2E-10		2.6E-10	5.E-10	HEPTACHLOR	Liver	2.E-07	--	3.E-07	5.E-07
			HEPTACHLOR EPOXIDE	8E-10		8.8E-10	2.E-09	HEPTACHLOR EPOXIDE	Liver	1.E-05	--	1.E-05	3.E-05
			METHOXYCHLOR	--		--	--	METHOXYCHLOR	Reproductive System	1.E-06	--	1.E-06	2.E-06
			(Total)	8E-07		3E-06	4E-06	(Total)		0.01		0.007	0.01

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TABLE U.9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe: Future
Receptor Population: Commercial/Industrial
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Air	Indoor Air	**METALS**					**METALS**					
			BARIUM		--		--	BARIUM	Reproductive System		2.E-04		2.E-04
			COBALT		--		--	COBALT	Respiratory System		1.E-03		1.E-03
			LEAD		--		--	LEAD	--		--		--
			MOLYBDENUM		--		--	MOLYBDENUM	--		--		--
			SELENIUM		--		--	SELENIUM	Respiratory System		4.E-06		4.E-06
			SILVER		--		--	SILVER	Skin		1.E-08		1.E-08
			THALLIUM		--		--	THALLIUM	--		--		--
			TIN		--		--	TIN	--		--		--
			TITANIUM		--		--	TITANIUM	--		--		--
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			CARBON DISULFIDE		--		--	CARBON DISULFIDE	CNS/PNS		2.E-02		2.E-02
			TOLUENE		--		--	TOLUENE	CNS/PNS		4.E-02		4.E-02
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		2.E-03		2.E-03
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE		--		--	1,2,4-TRICHLOROBENZENE	Liver		2.E-01		2.E-01
			2-METHYLNAPHTHALENE		--		--	2-METHYLNAPHTHALENE	No observed effect		1.E-01		1.E-01
			ANTHRACENE		--		--	ANTHRACENE	No observed effect		2.E-03		2.E-03
			BENZO(A)ANTHRACENE		5.E-12		5.E-12	BENZO(A)ANTHRACENE	No observed effect		1.E-10		1.E-10
			BENZO(A)PYRENE		5.E-11		5.E-11	BENZO(A)PYRENE	Kidney		1.E-09		1.E-09
			BENZO(B)FLUORANTHENE		5.E-12		5.E-12	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		1.E-09		1.E-09
			BENZO(G,H,I)PERYLENE		--		--	BENZO(G,H,I)PERYLENE	Kidney		1.E-09		1.E-09
			BENZO(K)FLUORANTHENE		5.E-12		5.E-12	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood		1.E-09		1.E-09
			BIS(2-ETHYLHEXYL)PHTHALATE		8.E-14		8.E-14	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		1.E-09		1.E-09
			CARBAZOLE		8.E-14		8.E-14	CARBAZOLE	Whole body (weight), Liver, Kidney		4.E-10		4.E-10
			CHRYSENE		5.E-13		5.E-13	CHRYSENE	No observed effect		1.E-10		1.E-10
			DIBENZ(A,H)ANTHRACENE		1.E-11		1.E-11	DIBENZ(A,H)ANTHRACENE	No observed effect		3.E-11		3.E-11
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		1.E-09		1.E-09
			FLUORENE		--		--	FLUORENE	Blood		2.E-02		2.E-02
			INDENO(1,2,3-CD)PYRENE		3.E-12		3.E-12	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood		5.E-10		5.E-10
			PENTACHLOROPHENOL		3.E-12		3.E-12	PENTACHLOROPHENOL	Liver, Kidney		2.E-09		2.E-09
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		1.E-10		1.E-10
			PYRENE		--		--	PYRENE	Kidney		6.E-03		6.E-03
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD		4.E-14		4.E-14	4,4'-DDD	Liver		1.E-09		1.E-09
			4,4'-DDE		5.E-14		5.E-14	4,4'-DDE	Liver		9.E-10		9.E-10
			4,4'-DDT		2.E-13		2.E-13	4,4'-DDT	Liver		4.E-09		4.E-09
			ALDRIN		9.E-13		9.E-13	ALDRIN	Liver		5.E-09		5.E-09
			ALPHA-BHC		2.E-12		2.E-12	ALPHA-BHC	Liver, Kidney		2.E-09		2.E-09
			ALPHA-CHLORDANE		2.E-13		2.E-13	ALPHA-CHLORDANE	Liver		2.E-09		2.E-09
			AROCLOR-1254		2.E-12		2.E-12	AROCLOR-1254	Immune System		1.E-07		1.E-07
			AROCLOR-1260		5.E-12		5.E-12	AROCLOR-1260	Immune System		4.E-07		4.E-07
			BETA-BHC		2.E-13		2.E-13	BETA-BHC	Liver, Kidney		8.E-10		8.E-10
			DELTA-BHC		--		--	DELTA-BHC	Liver, Kidney		6.E-10		6.E-10
			DIELDRIN		2.E-12		2.E-12	DIELDRIN	Liver		6.E-09		6.E-09
			ENDOSULFAN I		--		--	ENDOSULFAN I	Whole body (weight), Kidney, Blood		3.E-11		3.E-11
			ENDOSULFAN II		--		--	ENDOSULFAN II	Whole body (weight), Kidney, Blood		5.E-11		5.E-11
			ENDOSULFAN SULFATE		--		--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood		7.E-11		7.E-11
			ENDRIN		--		--	ENDRIN	Liver, CNS/PNS		1.E-09		1.E-09
			ENDRIN ALDEHYDE		--		--	ENDRIN ALDEHYDE	Liver, CNS/PNS		2.E-09		2.E-09
			ENDRIN KETONE		--		--	ENDRIN KETONE	Liver, CNS/PNS		1.E-09		1.E-09
			GAMMA-BHC		1.E-13		1.E-13	GAMMA-BHC	Liver, Kidney		9.E-10		9.E-10
			GAMMA-CHLORDANE		2.E-13		2.E-13	GAMMA-CHLORDANE	Liver		2.E-09		2.E-09
			HEPTACHLOR		7.E-14		7.E-14	HEPTACHLOR	Liver		7.E-11		7.E-11
			HEPTACHLOR EPOXIDE		2.E-13		2.E-13	HEPTACHLOR EPOXIDE	Liver		4.E-09		4.E-09
			METHOXYCHLOR		--		--	METHOXYCHLOR	Reproductive System		3.E-10		3.E-10
			(Total)		1E-10		1E-10	(Total)			0.4		0.4

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TABLE U.9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe: Future
Receptor Population: Commercial/Industrial
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Air	Indoor Air	**VOLATILE ORGANIC COMPOUNDS**					**VOLATILE ORGANIC COMPOUNDS**					
			1,2-DICHLOROETHANE		7.E-08		7.E-08	1,2-DICHLOROETHANE	--		1.E-03		1.E-03
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		2.E-04		2.E-04
Groundwater	Air		4-METHYL-2-PENTANONE		--		--	4-METHYL-2-PENTANONE	Liver, Kidney		1.E-04		1.E-04
			ACETONE		--		--	ACETONE	Liver, Kidney		2.E-03		2.E-03
			CHLOROMETHANE		--		--	CHLOROMETHANE	CNS/PNS		1.E-04		1.E-04
			ETHYLBENZENE		--		--	ETHYLBENZENE	Reproductive System		1.E-05		1.E-05
			TOLUENE		--		--	TOLUENE	CNS/PNS		4.E-05		4.E-05
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		3.E-05		3.E-05
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,3-DICHLOROBENZENE		--		--	1,3-DICHLOROBENZENE	--		5.E-03		5.E-03
			2,4-DICHLOROPHENOL		--		--	2,4-DICHLOROPHENOL	Immune System		--		--
			4-METHYLPHENOL		--		--	4-METHYLPHENOL	CNS/PNS, Respiratory System		--		--
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		--		--
			BENZO(B)FLUORANTHENE		--		--	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		--		--
			BIS(2-ETHYLHEXYL)PHTHALATE		--		--	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		--		--
			CARBAZOLE		--		--	CARBAZOLE	Whole body (weight), Liver, Kidney		--		--
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		--		--
			N-NITROSODIPHENYLAMINE (1)		--		--	N-NITROSODIPHENYLAMINE (1)	--		--		--
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		1.E-02		1.E-02
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		1.E-05		1.E-05
			PHENOL		--		--	PHENOL	Reproductive System		--		--
			PYRENE		--		--	PYRENE	Kidney		2.E-04		2.E-04
			(Total)		7E-08		7E-08	(Total)			0.018		0.018
						Total Risk Across Soil	4.E-06					Total Hazard Index Across Soil	0.4
						Total Risk Across Groundwater	7E-08					Total Hazard Across Groundwater	0.018
						Total Risk Across All Media and All Exposure Routes	4.E-06					Total Hazard Across All Media and All Exposure Routes	0.4

Notes:
Ft. = Feet
-- = Not available
bgs = Below ground surface
RME = Reasonable maximum exposure
COPC = Chemical of potential concern
CNS/PNS = Central nervous system/peripheral nervous system

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TABLE U.9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe: Future
Receptor Population: Commercial/Industrial
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Soil	Direct Soil Contact	**METALS**					METALS					
			BARIUM	--		--	--	BARIUM	No adverse effect	7.E-04	--	9.E-05	8.E-04
			COBALT	--		--	--	COBALT	--	1.E-04	--	1.E-05	1.E-04
			LEAD	--		--	--	LEAD	--	--	--	--	--
			MOLYBDENUM	--		--	--	MOLYBDENUM	Kidney	3.E-05	--	4.E-06	3.E-05
			SELENIUM	--		--	--	SELENIUM	CNS/PNS, Liver, Skin, Blood	5.E-05	--	7.E-06	6.E-05
			SILVER	--		--	--	SILVER	Skin	3.E-05	--	4.E-06	3.E-05
			THALLIUM	--		--	--	THALLIUM	No adverse effect	3.E-04	--	4.E-05	3.E-04
			TIN	--		--	--	TIN	Liver, Kidney	1.E-05	--	2.E-06	1.E-05
			TITANIUM	--		--	--	TITANIUM	--	--	--	--	--
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**	0.00E+00				
			CARBON DISULFIDE	--		--	--	CARBON DISULFIDE	Reproductive System	1.E-08	--	1.E-08	2.E-08
			TOLUENE	--		--	--	TOLUENE	Liver, Kidney	1.E-09	--	2.E-09	3.E-09
			XYLENE (TOTAL)	--		--	--	XYLENE (TOTAL)	Whole body (weight), CNS/PNS	1.E-09	--	1.E-09	2.E-09
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE	--		--	--	1,2,4-TRICHLOROBENZENE	Adrenal	2.E-06	--	2.E-06	4.E-06
			2-METHYLNAPHTHALENE	--		--	--	2-METHYLNAPHTHALENE	No observed effect	4.E-08	--	7.E-08	1.E-07
			ANTHRACENE	--		--	--	ANTHRACENE	No observed effect	2.E-08	--	5.E-08	7.E-08
			BENZO(A)ANTHRACENE	8E-09		1.5E-08	2.E-08	BENZO(A)ANTHRACENE	No observed effect	3.E-08	--	7.E-08	1.E-07
			BENZO(A)PYRENE	8E-08		1.5E-07	2.E-07	BENZO(A)PYRENE	Kidney	3.E-07	--	7.E-07	1.E-06
			BENZO(B)FLUORANTHENE	8E-09		1.6E-08	2.E-08	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood	3.E-07	--	5.E-07	8.E-07
			BENZO(G,H,I)PERYLENE	--		--	--	BENZO(G,H,I)PERYLENE	Kidney	3.E-07	--	7.E-07	1.E-06
			BENZO(K)FLUORANTHENE	8E-09		1.6E-08	2.E-08	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood	3.E-07	--	5.E-07	8.E-07
			BIS(2-ETHYLHEXYL)PHTHALATE	6E-11		7.5E-11	1.E-10	BIS(2-ETHYLHEXYL)PHTHALATE	Liver	3.E-06	--	4.E-06	7.E-06
			CARBAZOLE	5E-11		6.1E-11	1.E-10	CARBAZOLE	Whole body (weight), Liver, Kidney	1.E-06	--	2.E-06	3.E-06
			CHRYSENE	7E-10		1.4E-09	2.E-09	CHRYSENE	No observed effect	3.E-08	--	6.E-08	9.E-08
			DIBENZ(A,H)ANTHRACENE	8E-09		1.5E-08	2.E-08	DIBENZ(A,H)ANTHRACENE	No observed effect				
			FLUORANTHENE	--		--	--	FLUORANTHENE	Liver, Kidney, Blood	3.E-07	--	5.E-07	8.E-07
			FLUORENE	--		--	--	FLUORENE	Blood	1.E-07	--	2.E-07	3.E-07
			INDENO(1,2,3-CD)PYRENE	5E-09		1.0E-08	2.E-08	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood	2.E-07	--	3.E-07	5.E-07
			PENTACHLOROPHENOL	2E-09		6.2E-09	8.E-09	PENTACHLOROPHENOL	Liver, Kidney	8.E-06	--	3.E-05	4.E-05
			PHENANTHRENE	--		--	--	PHENANTHRENE	No observed effect	4.E-08	--	7.E-08	1.E-07
			PYRENE	--		--	--	PYRENE	Kidney	3.E-07	--	6.E-07	9.E-07
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD	2E-11		1.4E-11	4.E-11	4,4'-DDD	Liver	3.E-06	--	2.E-06	5.E-06
			4,4'-DDE	3E-11		1.8E-11	5.E-11	4,4'-DDE	Liver	2.E-06	--	2.E-06	4.E-06
			4,4'-DDT	1E-10		6.4E-11	2.E-10	4,4'-DDT	Liver	9.E-06	--	6.E-06	1.E-05
			ALDRIN	5E-10		3.5E-10	9.E-10	ALDRIN	Liver	2.E-05	--	1.E-05	3.E-05
			ALPHA-BHC	7E-10		4.7E-10	1.E-09	ALPHA-BHC	Liver, kidney	6.E-07	--	4.E-07	1.E-06
			ALPHA-CHLORDANE	9E-11		5.9E-11	1.E-10	ALPHA-CHLORDANE	Liver	2.E-06	--	2.E-06	4.E-06
			AROCLOR-1254	7E-10		1.4E-09	2.E-09	AROCLOR-1254	Immune System	1.E-04	--	2.E-04	3.E-04
			AROCLOR-1260	2E-09		4.8E-09	7.E-09	AROCLOR-1260	Immune System	4.E-04	--	8.E-04	1.E-03
			BETA-BHC	8E-11		5.5E-11	1.E-10	BETA-BHC	Liver, Kidney	2.E-07	--	2.E-07	4.E-07
			DELTA-BHC	--		--	--	DELTA-BHC	Liver, Kidney	2.E-07	--	1.E-07	3.E-07
			DIELDRIN	1E-09		6.8E-10	2.E-09	DIELDRIN	Liver	2.E-05	--	1.E-05	3.E-05
			ENDOSULFAN I	--		--	--	ENDOSULFAN I	Whole body (weight), Kidney, Blood	9.E-08	--	6.E-08	2.E-07
			ENDOSULFAN II	--		--	--	ENDOSULFAN II	Whole body (weight), Kidney, Blood	2.E-07	--	1.E-07	3.E-07
			ENDOSULFAN SULFATE	--		--	--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood	2.E-07	--	1.E-07	3.E-07
			ENDRIN	--		--	--	ENDRIN	Liver, CNS/PNS	3.E-06	--	2.E-06	5.E-06
			ENDRIN ALDEHYDE	--		--	--	ENDRIN ALDEHYDE	Liver, CNS/PNS	5.E-06	--	3.E-06	9.E-06
			ENDRIN KETONE					ENDRIN KETONE	Liver, CNS/PNS	4.E-06	--	3.E-06	7.E-06
			GAMMA-BHC					GAMMA-BHC	Liver, Kidney	3.E-07	--	2.E-07	4.E-07
			GAMMA-CHLORDANE	9E-11		5.7E-11	1.E-10	GAMMA-CHLORDANE	Liver	2.E-05	--	1.E-05	3.E-05
			HEPTACHLOR	4E-11		2.4E-11	6.E-11	HEPTACHLOR	Liver	2.E-07	--	1.E-07	3.E-07
			HEPTACHLOR EPOXIDE	1E-10		7.8E-11	2.E-10	HEPTACHLOR EPOXIDE	Liver	1.E-05	--	7.E-06	2.E-05
			METHOXYCHLOR	--		--	--	METHOXYCHLOR	Reproductive System	9.E-07	--	6.E-07	2.E-06
			(Total)	1E-07		2E-07	4E-07	(Total)		0.002		0.0012	0.003

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TABLE U.9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe: Future
Receptor Population: Commercial/Industrial
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Air	Indoor Air	**METALS**					**METALS**					
			BARIUM		--		--	BARIUM	Reproductive System		7.E-06		7.E-06
			COBALT		--		--	COBALT	Respiratory System		6.E-04		6.E-04
			LEAD		--		--	LEAD	--		--		--
			MOLYBDENUM		--		--	MOLYBDENUM	--		--		--
			SELENIUM		--		--	SELENIUM	Respiratory System		2.E-06		2.E-06
			SILVER		--		--	SILVER	Skin		4.E-09		4.E-09
			THALLIUM		--		--	THALLIUM	--		--		--
			TIN		--		--	TIN	--		--		--
			TITANIUM		--		--	TITANIUM	--		--		--
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			CARBON DISULFIDE		--		--	CARBON DISULFIDE	CNS/PNS		1.E-02		1.E-02
			TOLUENE		--		--	TOLUENE	CNS/PNS		2.E-02		2.E-02
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		8.E-05		8.E-05
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE		--		--	1,2,4-TRICHLOROBENZENE	Liver		8.E-03		8.E-03
			2-METHYLNAPHTHALENE		--		--	2-METHYLNAPHTHALENE	No observed effect		6.E-03		6.E-03
			ANTHRACENE		--		--	ANTHRACENE	No observed effect		9.E-05		9.E-05
			BENZO(A)ANTHRACENE		4.E-13		4.E-13	BENZO(A)ANTHRACENE	No observed effect		5.E-12		5.E-12
			BENZO(A)PYRENE		4.E-12		4.E-12	BENZO(A)PYRENE	Kidney		5.E-11		5.E-11
			BENZO(B)FLUORANTHENE		4.E-13		4.E-13	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		4.E-11		4.E-11
			BENZO(G,H,I)PERYLENE		--		--	BENZO(G,H,I)PERYLENE	Kidney		5.E-11		5.E-11
			BENZO(K)FLUORANTHENE		4.E-13		4.E-13	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood		4.E-11		4.E-11
			BIS(2-ETHYLHEXYL)PHTHALATE		5.E-15		5.E-15	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		5.E-10		5.E-10
			CARBAZOLE		7.E-15		7.E-15	CARBAZOLE	Whole body (weight), Liver, Kidney		2.E-10		2.E-10
			CHRYSENE		4.E-14		4.E-14	CHRYSENE	No observed effect		5.E-12		5.E-12
			DIBENZ(A,H)ANTHRACENE		1.E-12		1.E-12	DIBENZ(A,H)ANTHRACENE	No observed effect		2.E-12		2.E-12
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		4.E-11		4.E-11
			FLUORENE		--		--	FLUORENE	Blood		9.E-04		9.E-04
			INDENO(1,2,3-CD)PYRENE		3.E-13		3.E-13	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood		3.E-11		3.E-11
			PENTACHLOROPHENOL		3.E-13		3.E-13	PENTACHLOROPHENOL	Liver, Kidney		1.E-09		1.E-09
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		6.E-12		6.E-12
			PYRENE		--		--	PYRENE	Kidney		2.E-04		2.E-04
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD		3.E-15		3.E-15	4,4'-DDD	Liver		4.E-10		4.E-10
			4,4'-DDE		4.E-15		4.E-15	4,4'-DDE	Liver		4.E-10		4.E-10
			4,4'-DDT		2.E-14		2.E-14	4,4'-DDT	Liver		1.E-09		1.E-09
			ALDRIN		8.E-14		8.E-14	ALDRIN	Liver		3.E-09		3.E-09
			ALPHA-BHC		1.E-13		1.E-13	ALPHA-BHC	Liver, Kidney		9.E-11		9.E-11
			ALPHA-CHLORDANE		1.E-14		1.E-14	ALPHA-CHLORDANE	Liver		9.E-11		9.E-11
			AROCLOR-1254		1.E-13		1.E-13	AROCLOR-1254	Immune System		2.E-08		2.E-08
			AROCLOR-1260		4.E-13		4.E-13	AROCLOR-1260	Immune System		6.E-08		6.E-08
			BETA-BHC		1.E-14		1.E-14	BETA-BHC	Liver, Kidney		4.E-11		4.E-11
			DELTA-BHC		--		--	DELTA-BHC	Liver, Kidney		3.E-11		3.E-11
			DIELDRIN		2.E-13		2.E-13	DIELDRIN	Liver		3.E-09		3.E-09
			ENDOSULFAN I		--		--	ENDOSULFAN I	Whole body (weight), Kidney, Blood		1.E-11		1.E-11
			ENDOSULFAN II		--		--	ENDOSULFAN II	Whole body (weight), Kidney, Blood		2.E-11		2.E-11
			ENDOSULFAN SULFATE		--		--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood		3.E-11		3.E-11
			ENDRIN		--		--	ENDRIN	Liver, CNS/PNS		5.E-10		5.E-10
			ENDRIN ALDEHYDE		--		--	ENDRIN ALDEHYDE	Liver, CNS/PNS		8.E-10		8.E-10
			ENDRIN KETONE		--		--	ENDRIN KETONE	Liver, CNS/PNS		6.E-10		6.E-10
			GAMMA-BHC		1.E-14		1.E-14	GAMMA-BHC	Liver, Kidney		4.E-11		4.E-11
			GAMMA-CHLORDANE		1.E-14		1.E-14	GAMMA-CHLORDANE	Liver		9.E-11		9.E-11
			HEPTACHLOR		6.E-15		6.E-15	HEPTACHLOR	Liver		3.E-11		3.E-11
			HEPTACHLOR EPOXIDE		2.E-14		2.E-14	HEPTACHLOR EPOXIDE	Liver		2.E-09		2.E-09
			METHOXYCHLOR		--		--	METHOXYCHLOR	Reproductive System		1.E-10		1.E-10
			(Total)		8E-12		8E-12	(Total)			0.05		0.05

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TABLE U.9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe: Future
Receptor Population: Commercial/Industrial
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Air	Indoor Air	**VOLATILE ORGANIC COMPOUNDS**					**VOLATILE ORGANIC COMPOUNDS**					
			1,2-DICHLOROETHANE		5.E-09		5.E-09	1,2-DICHLOROETHANE	--		6.E-04		6.E-04
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		4.E-05		4.E-05
			4-METHYL-2-PENTANONE		--		--	4-METHYL-2-PENTANONE	Liver, Kidney		7.E-06		7.E-06
			ACETONE		--		--	ACETONE	Liver, Kidney		8.E-05		8.E-05
			CHLOROMETHANE		--		--	CHLOROMETHANE	CNS/PNS		2.E-05		2.E-05
			ETHYLBENZENE		--		--	ETHYLBENZENE	Reproductive System		6.E-06		6.E-06
			TOLUENE		--		--	TOLUENE	CNS/PNS		2.E-05		2.E-05
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		1.E-06		1.E-06
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,3-DICHLOROBENZENE		--		--	1,3-DICHLOROBENZENE	--		2.E-03		2.E-03
			2,4-DICHLOROPHENOL		--		--	2,4-DICHLOROPHENOL	Immune System		--		--
			4-METHYLPHENOL		--		--	4-METHYLPHENOL	CNS/PNS, Respiratory System		--		--
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		--		--
			BENZO(B)FLUORANTHENE		--		--	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		--		--
			BIS(2-ETHYLHEXYL)PHTHALATE		--		--	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		--		--
			CARBAZOLE		--		--	CARBAZOLE	Whole body (weight), Liver, Kidney		--		--
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		--		--
			N-NITROSODIPHENYLAMINE (1)		--		--	N-NITROSODIPHENYLAMINE (1)	--		--		--
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		5.E-03		5.E-03
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		5.E-07		5.E-07
			PHENOL		--		--	PHENOL	Reproductive System		--		--
			PYRENE		--		--	PYRENE	Kidney		8.E-06		8.E-06
			(Total)		5E-09		5E-09	(Total)			0.008		0.008
						Total Risk Across Soil	4.E-07					Total Hazard Index Across Soil	0.05
						Total Risk Across Groundwater	5E-09					Total Hazard Across Groundwater	0.008
						Total Risk Across All Media and All Exposure Routes	4.E-07					Total Hazard Across All Media and All Exposure Routes	0.06

Notes:
Ft. = Feet
-- = Not available
bgs = Below ground surface
CTE = Central tendency exposure
COPC = Chemical of potential concern
CNS/PNS = Central nervous system/peripheral nervous system

TABLE J-33

TABLE U.10.1.RME
RISK ASSESSMENT SUMMARY
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Soil	Direct Soil Contact	**METALS**					**METALS**					
			BARIUM	--		--	--	BARIUM	**Blood**	**8.E-04**	--	**2.E-04**	**9.E-04**
			COBALT	--		--	--	COBALT	Blood	1.E-04	--	2.E-05	1.E-04
			LEAD	--		--	--	LEAD	--	--	--	--	--
			MOLYBDENUM	--		--	--	MOLYBDENUM	Inc. Uric Acid	4.E-05	--	8.E-06	4.E-05
			SELENIUM	--		--	--	SELENIUM	Selenosis	6.E-05	--	1.E-05	7.E-05
			SILVER	--		--	--	SILVER	Argyria	4.E-05	--	1.E-05	5.E-05
			THALLIUM	--		--	--	THALLIUM	, lacrimation, exopl	3.E-03	--	7.E-04	4.E-03
			TIN	--		--	--	TIN	Liver/Kidney	2.E-05	--	4.E-06	2.E-05
			TITANIUM	--		--	--	TITANIUM	--	--	--	--	--
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			CARBON DISULFIDE	--		--	--	CARBON DISULFIDE	Fetal Tox.	1.E-08	--	2.E-08	3.E-08
			TOLUENE	--		--	--	TOLUENE	Liver/Kidney	1.E-08	--	3.E-08	5.E-08
			XYLENE (TOTAL)	--		--	--	XYLENE (TOTAL)	Body Wt./Mortality	1.E-09	--	2.E-09	3.E-09
			SEMIVOLATILE ORGANIC COMPOUNDS										
			BENZO(A)PYRENE	5E-07		1.8E-06	2.E-06						
			(Total)	8E-07		3E-06	4E-06	(Total)		0.01		0.007	0.01
Soil 0-3 ft. bgs	Air	Indoor Air											
			(Total)		1E-10		1E-10	(Total)			0.4		0.4
Groundwater	Air	Indoor Air											
			(Total)		7E-08		7E-08	(Total)			0.018		0.018
						Total Risk Across Soil	4.E-06					Total Hazard Index Across Soil	0.4
						Total Risk Across Groundwater	7E-08					Total Hazard Across Groundwater	0.018
						Total Risk Across All Media and All Exposure Routes	4.E-06					Total Hazard Across All Media and All Exposure Routes	0.4

Notes:
Ft. = Feet
bgs = Below ground surface
RME = Reasonable maximum exposure

TABLE J-34

TABLE U.10.1.CTE
RISK ASSESSMENT SUMMARY
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Soil	Direct Soil Contact											
			(Total)	1E-07		2E-07	4E-07	(Total)		0.002		0.0012	0.003
Soil 0-3 ft. bgs	Air	Indoor Air											
			(Total)		8E-12		8E-12	(Total)			0.05		0.05
Groundwater	Air	Indoor Air											
			(Total)		5E-09		5E-09	(Total)			0.008		0.008
						Total Risk Across Soil	4.E-07					Total Hazard Index Across Soil	0.05
						Total Risk Across Groundwater	5E-09					Total Hazard Across Groundwater	0.008
						Total Risk Across All Media and All Exposure Routes	4.E-07					Total Hazard Across All Media and All Exposure Routes	0.06

Notes:

Ft. = Feet

bgs = Below ground surface

CTE = Central tendency exposure

TABLE J-35

EPA TABLE U.8.4.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	**METALS**										
	BARIUM	1.10E+02	mg/kg	1.10E+02	mg/kg	M	5.15E-05	mg/kg-day	--	--	--
	COBALT	1.33E+01	mg/kg	1.33E+01	mg/kg	M	6.25E-06	mg/kg-day	--	--	--
	LEAD	1.71E+02	mg/kg	1.71E+02	mg/kg	M	8.05E-05	mg/kg-day	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	3.60E-01	mg/kg	M	1.69E-07	mg/kg-day	--	--	--
	SELENIUM	6.02E-01	mg/kg	6.02E-01	mg/kg	M	2.83E-07	mg/kg-day	--	--	--
	SILVER	4.56E-01	mg/kg	4.56E-01	mg/kg	M	2.14E-07	mg/kg-day	--	--	--
	THALLIUM	4.29E-01	mg/kg	4.29E-01	mg/kg	M	2.02E-07	mg/kg-day	--	--	--
	TIN	2.39E+01	mg/kg	2.39E+01	mg/kg	M	1.12E-05	mg/kg-day	--	--	--
	TITANIUM	5.16E+03	mg/kg	5.16E+03	mg/kg	M	2.42E-03	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	9.39E-10	mg/kg-day	--	--	--
	TOLUENE	5.82E-03	mg/kg	5.82E-03	mg/kg	M	2.73E-09	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.88E-09	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.74E-08	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.13E-07	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	7.05E-08	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	2.46E-01	mg/kg	M	1.16E-07	mg/kg-day	1.2E+00	mg/kg-day-1	1.4E-07
	BENZO(A)PYRENE	2.50E-01	mg/kg	2.50E-01	mg/kg	M	1.18E-07	mg/kg-day	1.2E+01	mg/kg-day-1	1.4E-06
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	2.61E-01	mg/kg	M	1.22E-07	mg/kg-day	1.2E+00	mg/kg-day-1	1.5E-07
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	2.47E-01	mg/kg	M	1.16E-07	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	2.60E-01	mg/kg	M	1.22E-07	mg/kg-day	1.2E+00	mg/kg-day-1	1.5E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	1.76E-01	mg/kg	M	8.25E-08	mg/kg-day	1.4E-02	mg/kg-day-1	1.2E-09
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	3.43E-08	mg/kg-day	2.0E-02	mg/kg-day-1	6.9E-10
	CHRYSENE	2.42E-01	mg/kg	2.42E-01	mg/kg	M	1.14E-07	mg/kg-day	1.2E-01	mg/kg-day-1	1.4E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	2.82E-08	mg/kg-day	4.1E+00	mg/kg-day-1	1.2E-07

TABLE J-35

EPA TABLE U.8.4.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	FLUORANTHENE	2.80E-01	mg/kg	2.80E-01	mg/kg	M	1.32E-07	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	3.85E-08	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	6.58E-08	mg/kg-day	1.2E+00	mg/kg-day-1	7.9E-08
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	2.35E-07	mg/kg-day	1.2E-01	mg/kg-day-1	2.8E-08
	PHENANTHRENE	2.88E-01	mg/kg	2.88E-01	mg/kg	M	1.35E-07	mg/kg-day	--	--	--
	PYRENE	2.52E-01	mg/kg	2.52E-01	mg/kg	M	1.18E-07	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.39E-03	mg/kg	3.39E-03	mg/kg	M	1.59E-09	mg/kg-day	2.4E-01	mg/kg-day-1	3.8E-10
	4,4'-DDE	2.87E-03	mg/kg	2.87E-03	mg/kg	M	1.35E-09	mg/kg-day	3.4E-01	mg/kg-day-1	4.6E-10
	4,4'-DDT	1.20E-02	mg/kg	1.20E-02	mg/kg	M	5.64E-09	mg/kg-day	3.4E-01	mg/kg-day-1	1.9E-09
	ALDRIN	1.00E-03	mg/kg	1.00E-03	mg/kg	M	4.70E-10	mg/kg-day	1.7E+01	mg/kg-day-1	8.0E-09
	ALPHA-BHC	4.77E-03	mg/kg	4.77E-03	mg/kg	M	2.24E-09	mg/kg-day	6.3E+00	mg/kg-day-1	1.4E-08
	ALPHA-CHLORDANE	2.92E-03	mg/kg	2.92E-03	mg/kg	M	1.37E-09	mg/kg-day	1.2E+00	mg/kg-day-1	1.6E-09
	AROCLOR-1254	1.42E-02	mg/kg	1.42E-02	mg/kg	M	6.67E-09	mg/kg-day	2.0E+00	mg/kg-day-1	1.3E-08
	AROCLOR-1260	5.10E-02	mg/kg	5.10E-02	mg/kg	M	2.40E-08	mg/kg-day	2.0E+00	mg/kg-day-1	4.8E-08
	BETA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	7.70E-10	mg/kg-day	1.8E+00	mg/kg-day-1	1.4E-09
	DELTA-BHC	1.20E-03	mg/kg	1.20E-03	mg/kg	M	5.64E-10	mg/kg-day	--	--	--
	DIELDRIN	2.15E-03	mg/kg	2.15E-03	mg/kg	M	1.01E-09	mg/kg-day	1.6E+01	mg/kg-day-1	1.6E-08
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	5.68E-10	mg/kg-day	--	--	--
	ENDOSULFAN II	1.94E-03	mg/kg	1.94E-03	mg/kg	M	9.11E-10	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	1.24E-09	mg/kg-day	--	--	--
	ENDRIN	2.03E-03	mg/kg	2.03E-03	mg/kg	M	9.53E-10	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	3.61E-03	mg/kg	M	1.70E-09	mg/kg-day	--	--	--
	ENDRIN KETONE	2.72E-03	mg/kg	2.72E-03	mg/kg	M	1.28E-09	mg/kg-day	--	--	--
	GAMMA-BHC	1.89E-03	mg/kg	1.89E-03	mg/kg	M	8.88E-10	mg/kg-day	1.3E+00	mg/kg-day-1	1.2E-09
	GAMMA-CHLORDANE	2.81E-03	mg/kg	2.81E-03	mg/kg	M	1.32E-09	mg/kg-day	1.2E+00	mg/kg-day-1	1.6E-09
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	1.08E-10	mg/kg-day	5.7E+00	mg/kg-day-1	6.2E-10

TABLE J-35

EPA TABLE U.8.4.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	3.40E-04	mg/kg	M	1.60E-10	mg/kg-day	1.3E+01	mg/kg-day-1	2.1E-09
	METHOXYCHLOR	9.79E-03	mg/kg	9.79E-03	mg/kg	M	4.60E-09	mg/kg-day	--	--	--
Dermal	**METALS**										
	BARIUM	1.10E+02	mg/kg	1.10E+02	mg/kg	M	2.06E-06	mg/kg-day	--	--	--
	COBALT	1.33E+01	mg/kg	1.33E+01	mg/kg	M	2.50E-07	mg/kg-day	--	--	--
	LEAD	1.71E+02	mg/kg	1.71E+02	mg/kg	M	3.21E-06	mg/kg-day	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	3.60E-01	mg/kg	M	6.74E-09	mg/kg-day	--	--	--
	SELENIUM	6.02E-01	mg/kg	6.02E-01	mg/kg	M	1.13E-08	mg/kg-day	--	--	--
	SILVER	4.56E-01	mg/kg	4.56E-01	mg/kg	M	8.55E-09	mg/kg-day	--	--	--
	THALLIUM	4.29E-01	mg/kg	4.29E-01	mg/kg	M	8.04E-09	mg/kg-day	--	--	--
	TIN	2.39E+01	mg/kg	2.39E+01	mg/kg	M	4.48E-07	mg/kg-day	--	--	--
	TITANIUM	5.16E+03	mg/kg	5.16E+03	mg/kg	M	9.67E-05	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	3.75E-10	mg/kg-day	--	--	--
	TOLUENE	5.82E-03	mg/kg	5.82E-03	mg/kg	M	1.09E-09	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	7.50E-10	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	6.93E-09	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	6.75E-08	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	4.22E-08	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	2.46E-01	mg/kg	M	6.92E-08	mg/kg-day	1.2E+00	mg/kg-day-1	8.3E-08
	BENZO(A)PYRENE	2.50E-01	mg/kg	2.50E-01	mg/kg	M	7.03E-08	mg/kg-day	1.2E+01	mg/kg-day-1	8.4E-07
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	2.61E-01	mg/kg	M	7.33E-08	mg/kg-day	1.2E+00	mg/kg-day-1	8.8E-08
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	2.47E-01	mg/kg	M	6.95E-08	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	2.60E-01	mg/kg	M	7.30E-08	mg/kg-day	1.2E+00	mg/kg-day-1	8.8E-08
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	1.76E-01	mg/kg	M	3.29E-08	mg/kg-day	1.4E-02	mg/kg-day-1	4.6E-10
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	1.37E-08	mg/kg-day	2.0E-02	mg/kg-day-1	2.7E-10

TABLE J-35

EPA TABLE U.8.4.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	CHRYSENE	2.42E-01	mg/kg	2.42E-01	mg/kg	M	6.80E-08	mg/kg-day	1.2E-01	mg/kg-day-1	8.2E-09
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	1.69E-08	mg/kg-day	4.1E+00	mg/kg-day-1	6.9E-08
	FLUORANTHENE	2.80E-01	mg/kg	2.80E-01	mg/kg	M	7.87E-08	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	2.30E-08	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	3.94E-08	mg/kg-day	1.2E+00	mg/kg-day-1	4.7E-08
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	2.34E-07	mg/kg-day	1.2E-01	mg/kg-day-1	2.8E-08
	PHENANTHRENE	2.88E-01	mg/kg	2.88E-01	mg/kg	M	8.09E-08	mg/kg-day	--	--	--
	PYRENE	2.52E-01	mg/kg	2.52E-01	mg/kg	M	7.08E-08	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.39E-03	mg/kg	3.39E-03	mg/kg	M	3.18E-10	mg/kg-day	2.4E-01	mg/kg-day-1	7.6E-11
	4,4'-DDE	2.87E-03	mg/kg	2.87E-03	mg/kg	M	2.69E-10	mg/kg-day	3.4E-01	mg/kg-day-1	9.1E-11
	4,4'-DDT	1.20E-02	mg/kg	1.20E-02	mg/kg	M	1.13E-09	mg/kg-day	3.4E-01	mg/kg-day-1	3.8E-10
	ALDRIN	1.00E-03	mg/kg	1.00E-03	mg/kg	M	9.37E-11	mg/kg-day	1.7E+01	mg/kg-day-1	1.6E-09
	ALPHA-BHC	4.77E-03	mg/kg	4.77E-03	mg/kg	M	4.47E-10	mg/kg-day	6.3E+00	mg/kg-day-1	2.8E-09
	ALPHA-CHLORDANE	2.92E-03	mg/kg	2.92E-03	mg/kg	M	2.74E-10	mg/kg-day	1.2E+00	mg/kg-day-1	3.3E-10
	AROCLOR-1254	1.42E-02	mg/kg	1.42E-02	mg/kg	M	3.99E-09	mg/kg-day	2.0E+00	mg/kg-day-1	8.0E-09
	AROCLOR-1260	5.10E-02	mg/kg	5.10E-02	mg/kg	M	1.43E-08	mg/kg-day	2.0E+00	mg/kg-day-1	2.9E-08
	BETA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	1.54E-10	mg/kg-day	1.8E+00	mg/kg-day-1	2.8E-10
	DELTA-BHC	1.20E-03	mg/kg	1.20E-03	mg/kg	M	1.12E-10	mg/kg-day	--	--	--
	DIELDRIN	2.15E-03	mg/kg	2.15E-03	mg/kg	M	2.01E-10	mg/kg-day	1.6E+01	mg/kg-day-1	3.2E-09
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.13E-10	mg/kg-day	--	--	--
	ENDOSULFAN II	1.94E-03	mg/kg	1.94E-03	mg/kg	M	1.82E-10	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	2.48E-10	mg/kg-day	--	--	--
	ENDRIN	2.03E-03	mg/kg	2.03E-03	mg/kg	M	1.90E-10	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	3.61E-03	mg/kg	M	3.38E-10	mg/kg-day	--	--	--
	ENDRIN KETONE	2.72E-03	mg/kg	2.72E-03	mg/kg	M	2.55E-10	mg/kg-day	--	--	--
	GAMMA-BHC	1.89E-03	mg/kg	1.89E-03	mg/kg	M	1.77E-10	mg/kg-day	1.3E+00	mg/kg-day-1	2.3E-10

TABLE J-35

EPA TABLE U.8.4.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	GAMMA-CHLORDANE	2.81E-03	mg/kg	2.81E-03	mg/kg	M	2.63E-10	mg/kg-day	1.2E+00	mg/kg-day-1	3.2E-10
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	2.16E-11	mg/kg-day	5.7E+00	mg/kg-day-1	1.2E-10
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	3.40E-04	mg/kg	M	3.19E-11	mg/kg-day	1.3E+01	mg/kg-day-1	4.1E-10
	METHOXYCHLOR	9.79E-03	mg/kg	9.79E-03	mg/kg	M	9.17E-10	mg/kg-day	--	--	--
										Total Risk Across All Direct Contact Exposure Routes/Pathways	3.5E-06

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

-- = No value available

TABLE J-36

EPA TABLE U.8.5.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	**METALS**										
	BARIUM	1.10E+02	mg/kg	1.10E+02	mg/kg	M	1.20E-04	mg/kg-day	--	--	--
	COBALT	1.33E+01	mg/kg	1.33E+01	mg/kg	M	1.46E-05	mg/kg-day	--	--	--
	LEAD	1.71E+02	mg/kg	1.71E+02	mg/kg	M	1.88E-04	mg/kg-day	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	3.60E-01	mg/kg	M	3.94E-07	mg/kg-day	--	--	--
	SELENIUM	6.02E-01	mg/kg	6.02E-01	mg/kg	M	6.60E-07	mg/kg-day	--	--	--
	SILVER	4.56E-01	mg/kg	4.56E-01	mg/kg	M	5.00E-07	mg/kg-day	--	--	--
	THALLIUM	4.29E-01	mg/kg	4.29E-01	mg/kg	M	4.70E-07	mg/kg-day	--	--	--
	TIN	2.39E+01	mg/kg	2.39E+01	mg/kg	M	2.62E-05	mg/kg-day	--	--	--
	TITANIUM	5.16E+03	mg/kg	5.16E+03	mg/kg	M	5.66E-03	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	2.19E-09	mg/kg-day	--	--	--
	TOLUENE	5.82E-03	mg/kg	5.82E-03	mg/kg	M	6.38E-09	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	4.38E-09	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	4.05E-08	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	2.63E-07	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.64E-07	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	2.46E-01	mg/kg	M	2.70E-07	mg/kg-day	1.2E+00	mg/kg-day-1	3.2E-07
	BENZO(A)PYRENE	2.50E-01	mg/kg	2.50E-01	mg/kg	M	2.74E-07	mg/kg-day	1.2E+01	mg/kg-day-1	3.3E-06
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	2.61E-01	mg/kg	M	2.86E-07	mg/kg-day	1.2E+00	mg/kg-day-1	3.4E-07
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	2.47E-01	mg/kg	M	2.71E-07	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	2.60E-01	mg/kg	M	2.85E-07	mg/kg-day	1.2E+00	mg/kg-day-1	3.4E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	1.76E-01	mg/kg	M	1.92E-07	mg/kg-day	1.4E-02	mg/kg-day-1	2.7E-09
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	8.00E-08	mg/kg-day	2.0E-02	mg/kg-day-1	1.6E-09
	CHRYSENE	2.42E-01	mg/kg	2.42E-01	mg/kg	M	2.65E-07	mg/kg-day	1.2E-01	mg/kg-day-1	3.2E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	6.58E-08	mg/kg-day	4.1E+00	mg/kg-day-1	2.7E-07
	FLUORANTHENE	2.80E-01	mg/kg	2.80E-01	mg/kg	M	3.07E-07	mg/kg-day	--	--	--

TABLE J-36

EPA TABLE U.8.5.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	8.99E-08	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	1.53E-07	mg/kg-day	1.2E+00	mg/kg-day-1	1.8E-07
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	5.48E-07	mg/kg-day	1.2E-01	mg/kg-day-1	6.6E-08
	PHENANTHRENE	2.88E-01	mg/kg	2.88E-01	mg/kg	M	3.15E-07	mg/kg-day	--	--	--
	PYRENE	2.52E-01	mg/kg	2.52E-01	mg/kg	M	2.76E-07	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.39E-03	mg/kg	3.39E-03	mg/kg	M	3.72E-09	mg/kg-day	2.4E-01	mg/kg-day-1	8.9E-10
	4,4'-DDE	2.87E-03	mg/kg	2.87E-03	mg/kg	M	3.15E-09	mg/kg-day	3.4E-01	mg/kg-day-1	1.1E-09
	4,4'-DDT	1.20E-02	mg/kg	1.20E-02	mg/kg	M	1.32E-08	mg/kg-day	3.4E-01	mg/kg-day-1	4.5E-09
	ALDRIN	1.00E-03	mg/kg	1.00E-03	mg/kg	M	1.10E-09	mg/kg-day	1.7E+01	mg/kg-day-1	1.9E-08
	ALPHA-BHC	4.77E-03	mg/kg	4.77E-03	mg/kg	M	5.23E-09	mg/kg-day	6.3E+00	mg/kg-day-1	3.3E-08
	ALPHA-CHLORDANE	2.92E-03	mg/kg	2.92E-03	mg/kg	M	3.20E-09	mg/kg-day	1.2E+00	mg/kg-day-1	3.8E-09
	AROCLOR-1254	1.42E-02	mg/kg	1.42E-02	mg/kg	M	1.56E-08	mg/kg-day	2.0E+00	mg/kg-day-1	3.1E-08
	AROCLOR-1260	5.10E-02	mg/kg	5.10E-02	mg/kg	M	5.59E-08	mg/kg-day	2.0E+00	mg/kg-day-1	1.1E-07
	BETA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	1.80E-09	mg/kg-day	1.8E+00	mg/kg-day-1	3.2E-09
	DELTA-BHC	1.20E-03	mg/kg	1.20E-03	mg/kg	M	1.32E-09	mg/kg-day	--	--	--
	DIELDRIN	2.15E-03	mg/kg	2.15E-03	mg/kg	M	2.36E-09	mg/kg-day	1.6E+01	mg/kg-day-1	3.8E-08
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.33E-09	mg/kg-day	--	--	--
	ENDOSULFAN II	1.94E-03	mg/kg	1.94E-03	mg/kg	M	2.13E-09	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	2.90E-09	mg/kg-day	--	--	--
	ENDRIN	2.03E-03	mg/kg	2.03E-03	mg/kg	M	2.22E-09	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	3.61E-03	mg/kg	M	3.96E-09	mg/kg-day	--	--	--
	ENDRIN KETONE	2.72E-03	mg/kg	2.72E-03	mg/kg	M	2.98E-09	mg/kg-day	--	--	--
	GAMMA-BHC	1.89E-03	mg/kg	1.89E-03	mg/kg	M	2.07E-09	mg/kg-day	1.3E+00	mg/kg-day-1	2.7E-09
	GAMMA-CHLORDANE	2.81E-03	mg/kg	2.81E-03	mg/kg	M	3.08E-09	mg/kg-day	1.2E+00	mg/kg-day-1	3.7E-09
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	2.52E-10	mg/kg-day	5.7E+00	mg/kg-day-1	1.4E-09
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	3.40E-04	mg/kg	M	3.73E-10	mg/kg-day	1.3E+01	mg/kg-day-1	4.8E-09
	METHOXYCHLOR	9.79E-03	mg/kg	9.79E-03	mg/kg	M	1.07E-08	mg/kg-day	--	--	--

TABLE J-36

EPA TABLE U.8.5.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	**METALS**										
	BARIUM	1.10E+02	mg/kg	1.10E+02	mg/kg	M	3.49E-06	mg/kg-day	--	--	--
	COBALT	1.33E+01	mg/kg	1.33E+01	mg/kg	M	4.23E-07	mg/kg-day	--	--	--
	LEAD	1.71E+02	mg/kg	1.71E+02	mg/kg	M	5.45E-06	mg/kg-day	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	3.60E-01	mg/kg	M	1.14E-08	mg/kg-day	--	--	--
	SELENIUM	6.02E-01	mg/kg	6.02E-01	mg/kg	M	1.91E-08	mg/kg-day	--	--	--
	SILVER	4.56E-01	mg/kg	4.56E-01	mg/kg	M	1.45E-08	mg/kg-day	--	--	--
	THALLIUM	4.29E-01	mg/kg	4.29E-01	mg/kg	M	1.36E-08	mg/kg-day	--	--	--
	TIN	2.39E+01	mg/kg	2.39E+01	mg/kg	M	7.60E-07	mg/kg-day	--	--	--
	TITANIUM	5.16E+03	mg/kg	5.16E+03	mg/kg	M	1.64E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	6.36E-10	mg/kg-day	--	--	--
	TOLUENE	5.82E-03	mg/kg	5.82E-03	mg/kg	M	1.85E-09	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.27E-09	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.18E-08	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.14E-07	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	7.15E-08	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	2.46E-01	mg/kg	M	1.17E-07	mg/kg-day	1.2E+00	mg/kg-day-1	1.4E-07
	BENZO(A)PYRENE	2.50E-01	mg/kg	2.50E-01	mg/kg	M	1.19E-07	mg/kg-day	1.2E+01	mg/kg-day-1	1.4E-06
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	2.61E-01	mg/kg	M	1.24E-07	mg/kg-day	1.2E+00	mg/kg-day-1	1.5E-07
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	2.47E-01	mg/kg	M	1.18E-07	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	2.60E-01	mg/kg	M	1.24E-07	mg/kg-day	1.2E+00	mg/kg-day-1	1.5E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	1.76E-01	mg/kg	M	5.58E-08	mg/kg-day	1.4E-02	mg/kg-day-1	7.8E-10
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	2.32E-08	mg/kg-day	2.0E-02	mg/kg-day-1	4.6E-10
	CHRYSENE	2.42E-01	mg/kg	2.42E-01	mg/kg	M	1.15E-07	mg/kg-day	1.2E-01	mg/kg-day-1	1.4E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	2.86E-08	mg/kg-day	4.1E+00	mg/kg-day-1	1.2E-07
	FLUORANTHENE	2.80E-01	mg/kg	2.80E-01	mg/kg	M	1.34E-07	mg/kg-day	--	--	--

TABLE J-36

EPA TABLE U.8.5.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	3.91E-08	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	6.67E-08	mg/kg-day	1.2E+00	mg/kg-day-1	8.0E-08
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	3.97E-07	mg/kg-day	1.2E-01	mg/kg-day-1	4.8E-08
	PHENANTHRENE	2.88E-01	mg/kg	2.88E-01	mg/kg	M	1.37E-07	mg/kg-day	--	--	--
	PYRENE	2.52E-01	mg/kg	2.52E-01	mg/kg	M	1.20E-07	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.39E-03	mg/kg	3.39E-03	mg/kg	M	5.39E-10	mg/kg-day	2.4E-01	mg/kg-day-1	1.3E-10
	4,4'-DDE	2.87E-03	mg/kg	2.87E-03	mg/kg	M	4.56E-10	mg/kg-day	3.4E-01	mg/kg-day-1	1.6E-10
	4,4'-DDT	1.20E-02	mg/kg	1.20E-02	mg/kg	M	1.91E-09	mg/kg-day	3.4E-01	mg/kg-day-1	6.5E-10
	ALDRIN	1.00E-03	mg/kg	1.00E-03	mg/kg	M	1.59E-10	mg/kg-day	1.7E+01	mg/kg-day-1	2.7E-09
	ALPHA-BHC	4.77E-03	mg/kg	4.77E-03	mg/kg	M	7.58E-10	mg/kg-day	6.3E+00	mg/kg-day-1	4.8E-09
	ALPHA-CHLORDANE	2.92E-03	mg/kg	2.92E-03	mg/kg	M	4.64E-10	mg/kg-day	1.2E+00	mg/kg-day-1	5.6E-10
	AROCLOR-1254	1.42E-02	mg/kg	1.42E-02	mg/kg	M	6.77E-09	mg/kg-day	2.0E+00	mg/kg-day-1	1.4E-08
	AROCLOR-1260	5.10E-02	mg/kg	5.10E-02	mg/kg	M	2.43E-08	mg/kg-day	2.0E+00	mg/kg-day-1	4.9E-08
	BETA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	2.61E-10	mg/kg-day	1.8E+00	mg/kg-day-1	4.7E-10
	DELTA-BHC	1.20E-03	mg/kg	1.20E-03	mg/kg	M	1.91E-10	mg/kg-day	--	--	--
	DIELDRIN	2.15E-03	mg/kg	2.15E-03	mg/kg	M	3.42E-10	mg/kg-day	1.6E+01	mg/kg-day-1	5.5E-09
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.92E-10	mg/kg-day	--	--	--
	ENDOSULFAN II	1.94E-03	mg/kg	1.94E-03	mg/kg	M	3.08E-10	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	4.21E-10	mg/kg-day	--	--	--
	ENDRIN	2.03E-03	mg/kg	2.03E-03	mg/kg	M	3.23E-10	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	3.61E-03	mg/kg	M	5.74E-10	mg/kg-day	--	--	--
	ENDRIN KETONE	2.72E-03	mg/kg	2.72E-03	mg/kg	M	4.32E-10	mg/kg-day	--	--	--
	GAMMA-BHC	1.89E-03	mg/kg	1.89E-03	mg/kg	M	3.00E-10	mg/kg-day	1.3E+00	mg/kg-day-1	3.9E-10
	GAMMA-CHLORDANE	2.81E-03	mg/kg	2.81E-03	mg/kg	M	4.47E-10	mg/kg-day	1.2E+00	mg/kg-day-1	5.4E-10
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	3.65E-11	mg/kg-day	5.7E+00	mg/kg-day-1	2.1E-10
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	3.40E-04	mg/kg	M	5.40E-11	mg/kg-day	1.3E+01	mg/kg-day-1	7.0E-10

TABLE J-36

EPA TABLE U.8.5.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	METHOXYCHLOR	9.79E-03	mg/kg	9.79E-03	mg/kg	M	1.56E-09	mg/kg-day	--	--	--
										Total Risk Across All Direct Contact Exposure Routes/Pathways - Soil	7.3E-06

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
bgs = Below ground surface
Ft. = Feet
mg/kg = Milligrams per kilogram
-- = No value available

TABLE J-37

EPA TABLE U.8.6.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation-Dust	**METALS**										
	BARIUM	1.10E+02	mg/kg	8.33E-08	mg/m^3	R	7.83E-09	mg/kg-day	--	--	--
	COBALT	1.33E+01	mg/kg	1.01E-08	mg/m^3	R	9.51E-10	mg/kg-day	--	--	--
	LEAD	1.71E+02	mg/kg	1.30E-07	mg/m^3	R	1.22E-08	mg/kg-day	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	2.74E-10	mg/m^3	R	2.57E-11	mg/kg-day	--	--	--
	SELENIUM	6.02E-01	mg/kg	4.58E-10	mg/m^3	R	4.30E-11	mg/kg-day	--	--	--
	SILVER	4.56E-01	mg/kg	3.47E-10	mg/m^3	R	3.26E-11	mg/kg-day	--	--	--
	THALLIUM	4.29E-01	mg/kg	3.26E-10	mg/m^3	R	3.06E-11	mg/kg-day	--	--	--
	TIN	2.39E+01	mg/kg	1.82E-08	mg/m^3	R	1.71E-09	mg/kg-day	--	--	--
	TITANIUM	5.16E+03	mg/kg	3.92E-06	mg/m^3	R	3.68E-07	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	1.52E-12	mg/m^3	R	1.43E-13	mg/kg-day	--	--	--
	TOLUENE	5.82E-03	mg/kg	4.42E-12	mg/m^3	R	4.15E-13	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	2.86E-13	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	2.64E-12	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	1.71E-11	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	1.07E-11	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	1.87E-10	mg/m^3	R	1.76E-11	mg/kg-day	3.9E-01	mg/kg-day	6.8E-12
	BENZO(A)PYRENE	2.50E-01	mg/kg	1.90E-10	mg/m^3	R	1.79E-11	mg/kg-day	3.9E+00	mg/kg-day	7.0E-11
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	1.98E-10	mg/m^3	R	1.86E-11	mg/kg-day	3.9E-01	mg/kg-day	7.2E-12
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	1.88E-10	mg/m^3	R	1.77E-11	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	1.97E-10	mg/m^3	R	1.85E-11	mg/kg-day	3.9E-01	mg/kg-day	7.2E-12

TABLE J-37

EPA TABLE U.8.6.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	1.33E-10	mg/m^3	R	1.25E-11	mg/kg-day	8.4E-03	mg/kg-day	1.1E-13
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	5.21E-12	mg/kg-day	2.0E-02	mg/kg-day	1.0E-13
	CHRYSENE	2.42E-01	mg/kg	1.84E-10	mg/m^3	R	1.73E-11	mg/kg-day	3.9E-02	mg/kg-day	6.7E-13
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	4.28E-12	mg/kg-day	4.1E+00	mg/kg-day	1.8E-11
	FLUORANTHENE	2.80E-01	mg/kg	2.13E-10	mg/m^3	R	2.00E-11	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	5.85E-12	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	9.99E-12	mg/kg-day	3.9E-01	mg/kg-day	3.9E-12
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	3.57E-11	mg/kg-day	1.2E-01	mg/kg-day	4.3E-12
	PHENANTHRENE	2.88E-01	mg/kg	2.19E-10	mg/m^3	R	2.05E-11	mg/kg-day	--	--	--
	PYRENE	2.52E-01	mg/kg	1.91E-10	mg/m^3	R	1.80E-11	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS				mg/m^3						
	4,4'-DDD	3.39E-03	mg/kg	2.58E-12	mg/m^3	R	2.42E-13	mg/kg-day	2.4E-01	mg/kg-day	5.8E-14
	4,4'-DDE	2.87E-03	mg/kg	2.18E-12	mg/m^3	R	2.05E-13	mg/kg-day	3.4E-01	mg/kg-day	7.0E-14
	4,4'-DDT	1.20E-02	mg/kg	9.13E-12	mg/m^3	R	8.57E-13	mg/kg-day	3.4E-01	mg/kg-day	2.9E-13
	ALDRIN	1.00E-03	mg/kg	7.60E-13	mg/m^3	R	7.14E-14	mg/kg-day	1.7E+01	mg/kg-day	1.2E-12
	ALPHA-BHC	4.77E-03	mg/kg	3.62E-12	mg/m^3	R	3.40E-13	mg/kg-day	6.3E+00	mg/kg-day	2.1E-12
	ALPHA-CHLORDANE	2.92E-03	mg/kg	2.22E-12	mg/m^3	R	2.08E-13	mg/kg-day	1.2E+00	mg/kg-day	2.5E-13
	AROCLOR-1254	1.42E-02	mg/kg	1.08E-11	mg/m^3	R	1.01E-12	mg/kg-day	2.0E+00	mg/kg-day	2.0E-12
	AROCLOR-1260	5.10E-02	mg/kg	3.88E-11	mg/m^3	R	3.64E-12	mg/kg-day	2.0E+00	mg/kg-day	7.3E-12
	BETA-BHC	1.64E-03	mg/kg	1.25E-12	mg/m^3	R	1.17E-13	mg/kg-day	1.9E+00	mg/kg-day	2.2E-13
	DELTA-BHC	1.20E-03	mg/kg	9.12E-13	mg/m^3	R	8.57E-14	mg/kg-day	--	--	--
	DIELDRIN	2.15E-03	mg/kg	1.63E-12	mg/m^3	R	1.53E-13	mg/kg-day	1.6E+01	mg/kg-day	2.5E-12
	ENDOSULFAN I	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	8.64E-14	mg/kg-day	--	--	--

TABLE J-37

EPA TABLE U.8.6.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDOSULFAN II	1.94E-03	mg/kg	1.47E-12	mg/m^3	R	1.38E-13	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	2.01E-12	mg/m^3	R	1.89E-13	mg/kg-day	--	--	--
	ENDRIN	2.03E-03	mg/kg	1.54E-12	mg/m^3	R	1.45E-13	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	2.74E-12	mg/m^3	R	2.58E-13	mg/kg-day	--	--	--
	ENDRIN KETONE	2.72E-03	mg/kg	2.07E-12	mg/m^3	R	1.94E-13	mg/kg-day	--	--	--
	GAMMA-BHC	1.89E-03	mg/kg	1.44E-12	mg/m^3	R	1.35E-13	mg/kg-day	1.3E+00	mg/kg-day	1.8E-13
	GAMMA-CHLORDANE	2.81E-03	mg/kg	2.14E-12	mg/m^3	R	2.01E-13	mg/kg-day	1.2E+00	mg/kg-day	2.4E-13
	HEPTACHLOR	2.30E-04	mg/kg	1.75E-13	mg/m^3	R	1.64E-14	mg/kg-day	5.7E+00	mg/kg-day	9.4E-14
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	2.58E-13	mg/m^3	R	2.43E-14	mg/kg-day	1.3E+01	mg/kg-day	3.2E-13
	METHOXYCHLOR	9.79E-03	mg/kg	7.44E-12	mg/m^3	R	6.99E-13	mg/kg-day	--	--	--
Inhalation VOCs	**METALS**										
	BARIUM	1.10E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COBALT	1.33E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	LEAD	1.71E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SELENIUM	6.02E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SILVER	4.56E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	THALLIUM	4.29E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TIN	2.39E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TITANIUM	5.16E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	2.30E-02	mg/m^3	R	2.16E-03	mg/kg-day	--	--	--

TABLE J-37

EPA TABLE U.8.6.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	TOLUENE	5.82E-03	mg/kg	2.56E-02	mg/m^3	R	2.40E-03	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	1.53E-04	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	4.24E-03	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.78E-01	mg/m^3	R	1.67E-02	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	2.58E-04	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	BENZO(A)PYRENE	2.50E-01	mg/kg	--	mg/m^3	R	--	--	3.9E+00	mg/kg-day	--
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	--	mg/m^3	R	--	--	8.4E-03	mg/kg-day	--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day	--
	CHRYSENE	2.42E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-02	mg/kg-day	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	4.1E+00	mg/kg-day	--
	FLUORANTHENE	2.80E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	3.19E-04	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	1.2E-01	mg/kg-day	--
	PHENANTHRENE	2.88E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	PYRENE	2.52E-01	mg/kg	9.61E-04	mg/m^3	R	9.03E-05	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.39E-03	mg/kg	--	mg/m^3	R	--	--	2.4E-01	mg/kg-day	--

TABLE J-37

EPA TABLE U.8.6.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	4,4'-DDE	2.87E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	mg/kg-day	--
	4,4'-DDT	1.20E-02	mg/kg	--	mg/m^3	R	--	--	3.4E-01	mg/kg-day	--
	ALDRIN	1.00E-03	mg/kg	--	mg/m^3	R	--	--	1.7E+01	mg/kg-day	--
	ALPHA-BHC	4.77E-03	mg/kg	--	mg/m^3	R	--	--	6.3E+00	mg/kg-day	--
	ALPHA-CHLORDANE	2.92E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	mg/kg-day	--
	AROCLOR-1254	1.42E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	mg/kg-day	--
	AROCLOR-1260	5.10E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	mg/kg-day	--
	BETA-BHC	1.64E-03	mg/kg	--	mg/m^3	R	--	--	1.9E+00	mg/kg-day	--
	DELTA-BHC	1.20E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	DIELDRIN	2.15E-03	mg/kg	--	mg/m^3	R	--	--	1.6E+01	mg/kg-day	--
	ENDOSULFAN I	1.21E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN II	1.94E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN	2.03E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN KETONE	2.72E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	GAMMA-BHC	1.89E-03	mg/kg	--	mg/m^3	R	--	--	1.3E+00	mg/kg-day	--
	GAMMA-CHLORDANE	2.81E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	mg/kg-day	--
	HEPTACHLOR	2.30E-04	mg/kg	--	mg/m^3	R	--	--	5.7E+00	mg/kg-day	--
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	--	mg/m^3	R	--	--	1.3E+01	mg/kg-day	--

TABLE J-37

EPA TABLE U.8.6.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	METHOXYCHLOR	9.79E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
										Total Risk Across All Air Exposure Routes/Pathways	1.3E-10
										Total Risk Across All Direct Contact Exposure Routes/Pathways - Soil	3.5E-06
										Total Risk Across All Exposure Routes/Pathways - Soil	**3.5E-06**

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

-- = No value available

VOC = Volatile organic compound

TABLE J-38

EPA TABLE U.8.7.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation-Dust	**METALS**										
	BARIUM	1.10E+02	mg/kg	8.33E-08	mg/m^3	R	4.57E-09	mg/kg-day	--	--	--
	COBALT	1.33E+01	mg/kg	1.01E-08	mg/m^3	R	5.55E-10	mg/kg-day	--	--	--
	LEAD	1.71E+02	mg/kg	1.30E-07	mg/m^3	R	7.13E-09	mg/kg-day	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	2.74E-10	mg/m^3	R	1.50E-11	mg/kg-day	--	--	--
	SELENIUM	6.02E-01	mg/kg	4.58E-10	mg/m^3	R	2.51E-11	mg/kg-day	--	--	--
	SILVER	4.56E-01	mg/kg	3.47E-10	mg/m^3	R	1.90E-11	mg/kg-day	--	--	--
	THALLIUM	4.29E-01	mg/kg	3.26E-10	mg/m^3	R	1.79E-11	mg/kg-day	--	--	--
	TIN	2.39E+01	mg/kg	1.82E-08	mg/m^3	R	9.95E-10	mg/kg-day	--	--	--
	TITANIUM	5.16E+03	mg/kg	3.92E-06	mg/m^3	R	2.15E-07	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	1.52E-12	mg/m^3	R	8.33E-14	mg/kg-day	--	--	--
	TOLUENE	5.82E-03	mg/kg	4.42E-12	mg/m^3	R	2.42E-13	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	1.67E-13	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	1.54E-12	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	9.99E-12	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	6.25E-12	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	1.87E-10	mg/m^3	R	1.03E-11	mg/kg-day	3.9E-01	mg/kg-day	4.0E-12
	BENZO(A)PYRENE	2.50E-01	mg/kg	1.90E-10	mg/m^3	R	1.04E-11	mg/kg-day	3.9E+00	mg/kg-day	4.1E-11
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	1.98E-10	mg/m^3	R	1.09E-11	mg/kg-day	3.9E-01	mg/kg-day	4.2E-12
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	1.88E-10	mg/m^3	R	1.03E-11	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	1.97E-10	mg/m^3	R	1.08E-11	mg/kg-day	3.9E-01	mg/kg-day	4.2E-12

TABLE J-38

EPA TABLE U.8.7.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	1.33E-10	mg/m^3	R	7.31E-12	mg/kg-day	8.4E-03	mg/kg-day	6.1E-14
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	3.04E-12	mg/kg-day	2.0E-02	mg/kg-day	6.1E-14
	CHRYSENE	2.42E-01	mg/kg	1.84E-10	mg/m^3	R	1.01E-11	mg/kg-day	3.9E-02	mg/kg-day	3.9E-13
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	2.50E-12	mg/kg-day	4.1E+00	mg/kg-day	1.0E-11
	FLUORANTHENE	2.80E-01	mg/kg	2.13E-10	mg/m^3	R	1.17E-11	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	3.41E-12	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	5.83E-12	mg/kg-day	3.9E-01	mg/kg-day	2.3E-12
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	2.08E-11	mg/kg-day	1.2E-01	mg/kg-day	2.5E-12
	PHENANTHRENE	2.88E-01	mg/kg	2.19E-10	mg/m^3	R	1.20E-11	mg/kg-day	--	--	--
	PYRENE	2.52E-01	mg/kg	1.91E-10	mg/m^3	R	1.05E-11	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.39E-03	mg/kg	2.58E-12	mg/m^3	R	1.41E-13	mg/kg-day	2.4E-01	mg/kg-day	3.4E-14
	4,4'-DDE	2.87E-03	mg/kg	2.18E-12	mg/m^3	R	1.19E-13	mg/kg-day	3.4E-01	mg/kg-day	4.1E-14
	4,4'-DDT	1.20E-02	mg/kg	9.13E-12	mg/m^3	R	5.00E-13	mg/kg-day	3.4E-01	mg/kg-day	1.7E-13
	ALDRIN	1.00E-03	mg/kg	7.60E-13	mg/m^3	R	4.16E-14	mg/kg-day	1.7E+01	mg/kg-day	7.2E-13
	ALPHA-BHC	4.77E-03	mg/kg	3.62E-12	mg/m^3	R	1.99E-13	mg/kg-day	6.3E+00	mg/kg-day	1.3E-12
	ALPHA-CHLORDANE	2.92E-03	mg/kg	2.22E-12	mg/m^3	R	1.22E-13	mg/kg-day	1.2E+00	mg/kg-day	1.5E-13
	AROCLOR-1254	1.42E-02	mg/kg	1.08E-11	mg/m^3	R	5.91E-13	mg/kg-day	2.0E+00	mg/kg-day	1.2E-12
	AROCLOR-1260	5.10E-02	mg/kg	3.88E-11	mg/m^3	R	2.12E-12	mg/kg-day	2.0E+00	mg/kg-day	4.2E-12
	BETA-BHC	1.64E-03	mg/kg	1.25E-12	mg/m^3	R	6.83E-14	mg/kg-day	1.9E+00	mg/kg-day	1.3E-13
	DELTA-BHC	1.20E-03	mg/kg	9.12E-13	mg/m^3	R	5.00E-14	mg/kg-day	--	--	--
	DIELDRIN	2.15E-03	mg/kg	1.63E-12	mg/m^3	R	8.95E-14	mg/kg-day	1.6E+01	mg/kg-day	1.4E-12
	ENDOSULFAN I	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	5.04E-14	mg/kg-day	--	--	--

TABLE J-38

EPA TABLE U.8.7.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDOSULFAN II	1.94E-03	mg/kg	1.47E-12	mg/m^3	R	8.08E-14	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	2.01E-12	mg/m^3	R	1.10E-13	mg/kg-day	--	--	--
	ENDRIN	2.03E-03	mg/kg	1.54E-12	mg/m^3	R	8.45E-14	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	2.74E-12	mg/m^3	R	1.50E-13	mg/kg-day	--	--	--
	ENDRIN KETONE	2.72E-03	mg/kg	2.07E-12	mg/m^3	R	1.13E-13	mg/kg-day	--	--	--
	GAMMA-BHC	1.89E-03	mg/kg	1.44E-12	mg/m^3	R	7.87E-14	mg/kg-day	1.3E+00	mg/kg-day	1.0E-13
	GAMMA-CHLORDANE	2.81E-03	mg/kg	2.14E-12	mg/m^3	R	1.17E-13	mg/kg-day	1.2E+00	mg/kg-day	1.4E-13
	HEPTACHLOR	2.30E-04	mg/kg	1.75E-13	mg/m^3	R	9.58E-15	mg/kg-day	5.7E+00	mg/kg-day	5.5E-14
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	2.58E-13	mg/m^3	R	1.42E-14	mg/kg-day	1.3E+01	mg/kg-day	1.8E-13
	METHOXYCHLOR	9.79E-03	mg/kg	7.44E-12	mg/m^3	R	4.08E-13	mg/kg-day	--	--	--
Inhalation VOCs	**METALS**										
	BARIUM	1.10E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COBALT	1.33E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	LEAD	1.71E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SELENIUM	6.02E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SILVER	4.56E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	THALLIUM	4.29E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TIN	2.39E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TITANIUM	5.16E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	2.30E-02	mg/m^3	R	1.26E-03	mg/kg-day	--	--	--
	TOLUENE	5.82E-03	mg/kg	2.56E-02	mg/m^3	R	1.40E-03	mg/kg-day	--	--	--

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EPA TABLE U.8.7.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	8.94E-05	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	2.47E-03	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.78E-01	mg/m^3	R	9.75E-03	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	1.50E-04	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	BENZO(A)PYRENE	2.50E-01	mg/kg	--	mg/m^3	R	--	--	3.9E+00	mg/kg-day	--
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	--	mg/m^3	R	--	--	8.4E-03	mg/kg-day	--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day	--
	CHRYSENE	2.42E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-02	mg/kg-day	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	4.1E+00	mg/kg-day	--
	FLUORANTHENE	2.80E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	1.86E-04	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	1.2E-01	mg/kg-day	--
	PHENANTHRENE	2.88E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	PYRENE	2.52E-01	mg/kg	9.61E-04	mg/m^3	R	5.27E-05	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.39E-03	mg/kg	--	mg/m^3	R	--	--	2.4E-01	mg/kg-day	--
	4,4'-DDE	2.87E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	mg/kg-day	--

TABLE J-38

EPA TABLE U.8.7.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	4,4'-DDT	1.20E-02	mg/kg	--	mg/m^3	R	--	--	3.4E-01	mg/kg-day	--
	ALDRIN	1.00E-03	mg/kg	--	mg/m^3	R	--	--	1.7E+01	mg/kg-day	--
	ALPHA-BHC	4.77E-03	mg/kg	--	mg/m^3	R	--	--	6.3E+00	mg/kg-day	--
	ALPHA-CHLORDANE	2.92E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	mg/kg-day	--
	AROCLOR-1254	1.42E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	mg/kg-day	--
	AROCLOR-1260	5.10E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	mg/kg-day	--
	BETA-BHC	1.64E-03	mg/kg	--	mg/m^3	R	--	--	1.9E+00	mg/kg-day	--
	DELTA-BHC	1.20E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	DIELDRIN	2.15E-03	mg/kg	--	mg/m^3	R	--	--	1.6E+01	mg/kg-day	--
	ENDOSULFAN I	1.21E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN II	1.94E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN	2.03E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN KETONE	2.72E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	GAMMA-BHC	1.89E-03	mg/kg	--	mg/m^3	R	--	--	1.3E+00	mg/kg-day	--
	GAMMA-CHLORDANE	2.81E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	mg/kg-day	--
	HEPTACHLOR	2.30E-04	mg/kg	--	mg/m^3	R	--	--	5.7E+00	mg/kg-day	--
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	--	mg/m^3	R	--	--	1.3E+01	mg/kg-day	--

TABLE J-38

EPA TABLE U.8.7.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	METHOXYCHLOR	9.79E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--

Total Risk Across All Air Exposure Routes/Pathways	7.8E-11
Total Risk Across All Direct Contact Exposure Routes/Pathways - Soil	7.3E-06
Total Risk Across All Exposure Routes/Pathways - Soil	**7.3E-06**

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

-- = No value available

VOC = Volatile organic compound

TABLE J-39

EPA TABLE U.8.8.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation VOCs	**VOLATILE ORGANIC COMPOUNDS**										
	1,2-DICHLOROETHANE	3.30E-04	mg/L	1.02E-05	mg/m^3	R	9.62E-07	mg/kg-day	9.1E-02	(mg/kg-day)-1	8.8E-08
	2-BUTANONE	1.98E-02	mg/L	2.23E-04	mg/m^3	R	2.09E-05	mg/kg-day	--	--	--
	4-METHYL-2-PENTANONE	8.00E-04	mg/L	1.41E-05	mg/m^3	R	1.33E-06	mg/kg-day	--	--	--
	ACETONE	8.79E-02	mg/L	9.67E-04	mg/m^3	R	9.09E-05	mg/kg-day	--	--	--
	CHLOROMETHANE	7.00E-04	mg/L	1.36E-05	mg/m^3	R	1.28E-06	mg/kg-day	--	--	--
	ETHYLBENZENE	7.00E-04	mg/L	1.62E-05	mg/m^3	R	1.52E-06	mg/kg-day	--	--	--
	TOLUENE	1.00E-03	mg/L	2.55E-05	mg/m^3	R	2.40E-06	mg/kg-day	--	--	--
	XYLENE (TOTAL)	1.54E-03	mg/L	3.35E-05	mg/m^3	R	3.15E-06	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,3-DICHLOROBENZENE	9.00E-04	mg/L	2.10E-05	mg/m^3	R	1.97E-06	mg/kg-day	--	--	--
	2,4-DICHLOROPHENOL	2.00E-03	mg/L	--		R	--	--	--	--	--
	4-METHYLPHENOL	6.00E-03	mg/L	--		R	--	--	--	--	--
	ACENAPHTHENE	2.00E-03	mg/L	--		R	--	--	--	--	--
	BENZO(B)FLUORANTHENE	2.00E-03	mg/L	--		R	--	--	3.9E-01	(mg/kg-day)-1	--
	BIS(2-ETHYLHEXYL)PHTHALATE	7.85E-03	mg/L	--		R	--	--	8.4E-03	(mg/kg-day)-1	--
	CARBAZOLE	2.00E-03	mg/L	--		R	--	--	2.0E-02	(mg/kg-day)-1	--
	FLUORANTHENE	4.00E-03	mg/L	--		R	--	--	--	--	--
	N-NITROSODIPHENYLAMINE (1)	1.32E-02	mg/L	--		R	--	--	9.0E-03	(mg/kg-day)-1	--
	NAPHTHALENE	2.00E-03	mg/L	4.32E-05	mg/m^3	R	4.06E-06	mg/kg-day	--	--	--
	PHENANTHRENE	2.00E-03	mg/L	1.60E-05	mg/m^3	R	1.50E-06	mg/kg-day	--	--	--
	PHENOL	2.00E-03	mg/L	--		R	--	--	--	--	--

TABLE J-39

EPA TABLE U.8.8.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	PYRENE	1.10E-02	mg/L	2.93E-05	mg/m^3	R	2.76E-06	mg/kg-day	--	--	--

Total Risk Across All Exposure Routes/Pathways - Groundwater	8.8E-08
Total Risk Across All Exposure Routes/Pathways - Soil	3.5E-06
Total Risk Across All Exposure Routes/Pathways - Soil and Groundwater	**3.6E-06**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/L = Milligrams per liter

mg/m^3 = Milligrams per cubic meter

-- = No value available

TABLE J-40

EPA TABLE U.8.9.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation VOCs	**VOLATILE ORGANIC COMPOUNDS**										
	1,2-DICHLOROETHANE	3.30E-04	mg/L	1.02E-05	mg/m^3	R	5.61E-07	mg/kg-day	9.1E-02	(mg/kg-day)-1	5.1E-08
	2-BUTANONE	1.98E-02	mg/L	2.23E-04	mg/m^3	R	1.22E-05	mg/kg-day	--	--	--
	4-METHYL-2-PENTANONE	8.00E-04	mg/L	1.41E-05	mg/m^3	R	7.73E-07	mg/kg-day	--	--	--
	ACETONE	8.79E-02	mg/L	9.67E-04	mg/m^3	R	5.30E-05	mg/kg-day	--	--	--
	CHLOROMETHANE	7.00E-04	mg/L	1.36E-05	mg/m^3	R	7.44E-07	mg/kg-day	--	--	--
	ETHYLBENZENE	7.00E-04	mg/L	1.62E-05	mg/m^3	R	8.89E-07	mg/kg-day	--	--	--
	TOLUENE	1.00E-03	mg/L	2.55E-05	mg/m^3	R	1.40E-06	mg/kg-day	--	--	--
	XYLENE (TOTAL)	1.54E-03	mg/L	3.35E-05	mg/m^3	R	1.84E-06	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,3-DICHLOROBENZENE	9.00E-04	mg/L	2.10E-05	mg/m^3	R	1.15E-06	mg/kg-day	--	--	--
	2,4-DICHLOROPHENOL	2.00E-03	mg/L	--		R	--	--	--	--	--
	4-METHYLPHENOL	6.00E-03	mg/L	--		R	--	--	--	--	--
	ACENAPHTHENE	2.00E-03	mg/L	--		R	--	--	--	--	--
	BENZO(B)FLUORANTHENE	2.00E-03	mg/L	--		R	--	--	3.9E-01	(mg/kg-day)-1	--
	BIS(2-ETHYLHEXYL)PHTHALATE	7.85E-03	mg/L	--		R	--	--	8.4E-03	(mg/kg-day)-1	--
	CARBAZOLE	2.00E-03	mg/L	--		R	--	--	2.0E-02	(mg/kg-day)-1	--
	FLUORANTHENE	4.00E-03	mg/L	--		R	--	--	--	--	--
	N-NITROSODIPHENYLAMINE (1)	1.32E-02	mg/L	--		R	--	--	9.0E-03	(mg/kg-day)-1	--
	NAPHTHALENE	2.00E-03	mg/L	4.32E-05	mg/m^3	R	2.37E-06	mg/kg-day	--	--	--
	PHENANTHRENE	2.00E-03	mg/L	1.60E-05	mg/m^3	R	8.77E-07	mg/kg-day	--	--	--
	PHENOL	2.00E-03	mg/L	--		R	--	--	--	--	--

TABLE J-40

EPA TABLE U.8.9.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	PYRENE	1.10E-02	mg/L	2.93E-05	mg/m^3	R	1.61E-06	mg/kg-day	--	--	--

Total Risk Across All Air Exposure Routes/Pathways - Groundwater	5.1E-08
Total Risk Across All Exposure Routes/Pathways - Soil	7.3E-06
Total Risk Across All Exposure Routes/Pathways - Soil and Groundwater	**7.4E-06**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/L = Milligrams per liter

mg/m^3 = Milligrams per cubic meter

-- = No value available

TABLE J-41

EPA TABLE U.8.4.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	**METALS**										
	BARIUM	9.65E+01	mg/kg	9.65E+01	mg/kg	M	6.61E-06	mg/kg-day	--	--	--
	COBALT	1.17E+01	mg/kg	1.17E+01	mg/kg	M	8.02E-07	mg/kg-day	--	--	--
	LEAD	1.11E+02	mg/kg	1.11E+02	mg/kg	M	7.64E-06	mg/kg-day	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	2.82E-01	mg/kg	M	1.93E-08	mg/kg-day	--	--	--
	SELENIUM	5.25E-01	mg/kg	5.25E-01	mg/kg	M	3.59E-08	mg/kg-day	--	--	--
	SILVER	3.01E-01	mg/kg	3.01E-01	mg/kg	M	2.06E-08	mg/kg-day	--	--	--
	THALLIUM	3.96E-01	mg/kg	3.96E-01	mg/kg	M	2.71E-08	mg/kg-day	--	--	--
	TIN	1.53E+01	mg/kg	1.53E+01	mg/kg	M	1.05E-06	mg/kg-day	--	--	--
	TITANIUM	4.41E+03	mg/kg	4.41E+03	mg/kg	M	3.02E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	1.37E-10	mg/kg-day	--	--	--
	TOLUENE	5.59E-03	mg/kg	5.59E-03	mg/kg	M	3.83E-10	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	2.74E-10	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	2.53E-09	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	2.24E-01	mg/kg	M	1.53E-08	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.03E-08	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	1.41E-08	mg/kg-day	1.2E+00	mg/kg-day-1	1.7E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	1.38E-08	mg/kg-day	1.2E+01	mg/kg-day-1	1.7E-07
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	2.15E-01	mg/kg	M	1.47E-08	mg/kg-day	1.2E+00	mg/kg-day-1	1.8E-08
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	2.10E-01	mg/kg	M	1.44E-08	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	2.19E-01	mg/kg	M	1.50E-08	mg/kg-day	1.2E+00	mg/kg-day-1	1.8E-08
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	1.29E-01	mg/kg	M	8.83E-09	mg/kg-day	1.4E-02	mg/kg-day-1	1.2E-10
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	5.00E-09	mg/kg-day	2.0E-02	mg/kg-day-1	1.0E-10
	CHRYSENE	1.93E-01	mg/kg	1.93E-01	mg/kg	M	1.32E-08	mg/kg-day	1.2E-01	mg/kg-day-1	1.6E-09
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	4.11E-09	mg/kg-day	4.1E+00	mg/kg-day-1	1.7E-08
	FLUORANTHENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	1.41E-08	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	5.62E-09	mg/kg-day	--	--	--

TABLE J-41

EPA TABLE U.8.4.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	9.59E-09	mg/kg-day	1.2E+00	mg/kg-day-1	1.2E-08
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	3.42E-08	mg/kg-day	1.2E-01	mg/kg-day-1	4.1E-09
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	1.56E-08	mg/kg-day	--	--	--
	PYRENE	1.86E-01	mg/kg	1.86E-01	mg/kg	M	1.28E-08	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.91E-03	mg/kg	2.91E-03	mg/kg	M	1.99E-10	mg/kg-day	2.4E-01	mg/kg-day-1	4.8E-11
	4,4'-DDE	2.55E-03	mg/kg	2.55E-03	mg/kg	M	1.75E-10	mg/kg-day	3.4E-01	mg/kg-day-1	5.9E-11
	4,4'-DDT	9.11E-03	mg/kg	9.11E-03	mg/kg	M	6.24E-10	mg/kg-day	3.4E-01	mg/kg-day-1	2.1E-10
	ALDRIN	9.90E-04	mg/kg	9.90E-04	mg/kg	M	6.78E-11	mg/kg-day	1.7E+01	mg/kg-day-1	1.2E-09
	ALPHA-BHC	3.56E-03	mg/kg	3.56E-03	mg/kg	M	2.44E-10	mg/kg-day	6.3E+00	mg/kg-day-1	1.5E-09
	ALPHA-CHLORDANE	2.36E-03	mg/kg	2.36E-03	mg/kg	M	1.62E-10	mg/kg-day	1.2E+00	mg/kg-day-1	1.9E-10
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	7.54E-10	mg/kg-day	2.0E+00	mg/kg-day-1	1.5E-09
	AROCLOR-1260	3.89E-02	mg/kg	3.89E-02	mg/kg	M	2.66E-09	mg/kg-day	2.0E+00	mg/kg-day-1	5.3E-09
	BETA-BHC	1.46E-03	mg/kg	1.46E-03	mg/kg	M	1.00E-10	mg/kg-day	1.8E+00	mg/kg-day-1	1.8E-10
	DELTA-BHC	1.12E-03	mg/kg	1.12E-03	mg/kg	M	7.67E-11	mg/kg-day	--	--	--
	DIELDRIN	2.04E-03	mg/kg	2.04E-03	mg/kg	M	1.40E-10	mg/kg-day	1.6E+01	mg/kg-day-1	2.2E-09
	ENDOSULFAN I	1.13E-03	mg/kg	1.13E-03	mg/kg	M	7.74E-11	mg/kg-day	--	--	--
	ENDOSULFAN II	1.89E-03	mg/kg	1.89E-03	mg/kg	M	1.29E-10	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	1.64E-10	mg/kg-day	--	--	--
	ENDRIN	1.96E-03	mg/kg	1.96E-03	mg/kg	M	1.34E-10	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	3.15E-03	mg/kg	M	2.16E-10	mg/kg-day	--	--	--
	ENDRIN KETONE	2.48E-03	mg/kg	2.48E-03	mg/kg	M	1.70E-10	mg/kg-day	--	--	--
	GAMMA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	1.12E-10	mg/kg-day	1.3E+00	mg/kg-day-1	1.5E-10
	GAMMA-CHLORDANE	2.27E-03	mg/kg	2.27E-03	mg/kg	M	1.55E-10	mg/kg-day	1.2E+00	mg/kg-day-1	1.9E-10
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	1.37E-11	mg/kg-day	5.7E+00	mg/kg-day-1	7.8E-11
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	2.90E-04	mg/kg	M	1.99E-11	mg/kg-day	1.3E+01	mg/kg-day-1	2.6E-10
	METHOXYCHLOR	9.51E-03	mg/kg	9.51E-03	mg/kg	M	6.51E-10	mg/kg-day	--	--	--

TABLE J-41

EPA TABLE U.8.4.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	**METALS**										
	BARIUM	9.65E+01	mg/kg	9.65E+01	mg/kg	M	4.62E-07	mg/kg-day	--	--	--
	COBALT	1.17E+01	mg/kg	1.17E+01	mg/kg	M	5.61E-08	mg/kg-day	--	--	--
	LEAD	1.11E+02	mg/kg	1.11E+02	mg/kg	M	5.34E-07	mg/kg-day	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	2.82E-01	mg/kg	M	1.35E-09	mg/kg-day	--	--	--
	SELENIUM	5.25E-01	mg/kg	5.25E-01	mg/kg	M	2.52E-09	mg/kg-day	--	--	--
	SILVER	3.01E-01	mg/kg	3.01E-01	mg/kg	M	1.44E-09	mg/kg-day	--	--	--
	THALLIUM	3.96E-01	mg/kg	3.96E-01	mg/kg	M	1.90E-09	mg/kg-day	--	--	--
	TIN	1.53E+01	mg/kg	1.53E+01	mg/kg	M	7.32E-08	mg/kg-day	--	--	--
	TITANIUM	4.41E+03	mg/kg	4.41E+03	mg/kg	M	2.11E-05	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	9.59E-11	mg/kg-day	--	--	--
	TOLUENE	5.59E-03	mg/kg	5.59E-03	mg/kg	M	2.68E-10	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.92E-10	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.77E-09	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	2.24E-01	mg/kg	M	1.61E-08	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.08E-08	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	1.48E-08	mg/kg-day	1.2E+00	mg/kg-day-1	1.8E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	1.45E-08	mg/kg-day	1.2E+01	mg/kg-day-1	1.7E-07
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	2.15E-01	mg/kg	M	1.54E-08	mg/kg-day	1.2E+00	mg/kg-day-1	1.9E-08
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	2.10E-01	mg/kg	M	1.51E-08	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	2.19E-01	mg/kg	M	1.58E-08	mg/kg-day	1.2E+00	mg/kg-day-1	1.9E-08
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	1.29E-01	mg/kg	M	6.18E-09	mg/kg-day	1.4E-02	mg/kg-day-1	8.7E-11
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	3.50E-09	mg/kg-day	2.0E-02	mg/kg-day-1	7.0E-11
	CHRYSENE	1.93E-01	mg/kg	1.93E-01	mg/kg	M	1.39E-08	mg/kg-day	1.2E-01	mg/kg-day-1	1.7E-09
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	4.32E-09	mg/kg-day	4.1E+00	mg/kg-day-1	1.8E-08
	FLUORANTHENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	1.48E-08	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	5.90E-09	mg/kg-day	--	--	--

TABLE J-41

EPA TABLE U.8.4.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	1.01E-08	mg/kg-day	1.2E+00	mg/kg-day-1	1.2E-08
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	5.99E-08	mg/kg-day	1.2E-01	mg/kg-day-1	7.2E-09
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	1.64E-08	mg/kg-day	--	--	--
	PYRENE	1.86E-01	mg/kg	1.86E-01	mg/kg	M	1.34E-08	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.91E-03	mg/kg	2.91E-03	mg/kg	M	6.98E-11	mg/kg-day	2.4E-01	mg/kg-day-1	1.7E-11
	4,4'-DDE	2.55E-03	mg/kg	2.55E-03	mg/kg	M	6.11E-11	mg/kg-day	3.4E-01	mg/kg-day-1	2.1E-11
	4,4'-DDT	9.11E-03	mg/kg	9.11E-03	mg/kg	M	2.18E-10	mg/kg-day	3.4E-01	mg/kg-day-1	7.4E-11
	ALDRIN	9.90E-04	mg/kg	9.90E-04	mg/kg	M	2.37E-11	mg/kg-day	1.7E+01	mg/kg-day-1	4.0E-10
	ALPHA-BHC	3.56E-03	mg/kg	3.56E-03	mg/kg	M	8.53E-11	mg/kg-day	6.3E+00	mg/kg-day-1	5.4E-10
	ALPHA-CHLORDANE	2.36E-03	mg/kg	2.36E-03	mg/kg	M	5.66E-11	mg/kg-day	1.2E+00	mg/kg-day-1	6.8E-11
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	7.92E-10	mg/kg-day	2.0E+00	mg/kg-day-1	1.6E-09
	AROCLOR-1260	3.89E-02	mg/kg	3.89E-02	mg/kg	M	2.80E-09	mg/kg-day	2.0E+00	mg/kg-day-1	5.6E-09
	BETA-BHC	1.46E-03	mg/kg	1.46E-03	mg/kg	M	3.50E-11	mg/kg-day	1.8E+00	mg/kg-day-1	6.3E-11
	DELTA-BHC	1.12E-03	mg/kg	1.12E-03	mg/kg	M	2.68E-11	mg/kg-day	--	--	--
	DIELDRIN	2.04E-03	mg/kg	2.04E-03	mg/kg	M	4.89E-11	mg/kg-day	1.6E+01	mg/kg-day-1	7.8E-10
	ENDOSULFAN I	1.13E-03	mg/kg	1.13E-03	mg/kg	M	2.71E-11	mg/kg-day	--	--	--
	ENDOSULFAN II	1.89E-03	mg/kg	1.89E-03	mg/kg	M	4.53E-11	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	5.75E-11	mg/kg-day	--	--	--
	ENDRIN	1.96E-03	mg/kg	1.96E-03	mg/kg	M	4.70E-11	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	3.15E-03	mg/kg	M	7.55E-11	mg/kg-day	--	--	--
	ENDRIN KETONE	2.48E-03	mg/kg	2.48E-03	mg/kg	M	5.95E-11	mg/kg-day	--	--	--
	GAMMA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	3.93E-11	mg/kg-day	1.3E+00	mg/kg-day-1	5.1E-11
	GAMMA-CHLORDANE	2.27E-03	mg/kg	2.27E-03	mg/kg	M	5.44E-11	mg/kg-day	1.2E+00	mg/kg-day-1	6.5E-11
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	4.79E-12	mg/kg-day	5.7E+00	mg/kg-day-1	2.7E-11
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	2.90E-04	mg/kg	M	6.95E-12	mg/kg-day	1.3E+01	mg/kg-day-1	9.0E-11

TABLE J-41

EPA TABLE U.8.4.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	METHOXYCHLOR	9.51E-03	mg/kg	9.51E-03	mg/kg	M	2.28E-10	mg/kg-day	--	--	--
										Total Risk Across All Direct Contact Exposure Routes/Pathways - Soil	5.4E-07

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

-- = No value available

TABLE J-42

EPA TABLE U.8.5.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	**METALS**										
	BARIUM	9.65E+01	mg/kg	9.65E+01	mg/kg	M	1.76E-05	mg/kg-day	--	--	--
	COBALT	1.17E+01	mg/kg	1.17E+01	mg/kg	M	2.14E-06	mg/kg-day	--	--	--
	LEAD	1.11E+02	mg/kg	1.11E+02	mg/kg	M	2.04E-05	mg/kg-day	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	2.82E-01	mg/kg	M	5.14E-08	mg/kg-day	--	--	--
	SELENIUM	5.25E-01	mg/kg	5.25E-01	mg/kg	M	9.59E-08	mg/kg-day	--	--	--
	SILVER	3.01E-01	mg/kg	3.01E-01	mg/kg	M	5.49E-08	mg/kg-day	--	--	--
	THALLIUM	3.96E-01	mg/kg	3.96E-01	mg/kg	M	7.23E-08	mg/kg-day	--	--	--
	TIN	1.53E+01	mg/kg	1.53E+01	mg/kg	M	2.79E-06	mg/kg-day	--	--	--
	TITANIUM	4.41E+03	mg/kg	4.41E+03	mg/kg	M	8.05E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	3.65E-10	mg/kg-day	--	--	--
	TOLUENE	5.59E-03	mg/kg	5.59E-03	mg/kg	M	1.02E-09	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	7.31E-10	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	6.76E-09	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	2.24E-01	mg/kg	M	4.09E-08	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	2.74E-08	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	3.76E-08	mg/kg-day	1.2E+00	mg/kg-day-1	4.5E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	3.69E-08	mg/kg-day	1.2E+01	mg/kg-day-1	4.4E-07
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	2.15E-01	mg/kg	M	3.92E-08	mg/kg-day	1.2E+00	mg/kg-day-1	4.7E-08
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	2.10E-01	mg/kg	M	3.83E-08	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	2.19E-01	mg/kg	M	4.01E-08	mg/kg-day	1.2E+00	mg/kg-day-1	4.8E-08
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	1.29E-01	mg/kg	M	2.35E-08	mg/kg-day	1.4E-02	mg/kg-day-1	3.3E-10
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	1.33E-08	mg/kg-day	2.0E-02	mg/kg-day-1	2.7E-10
	CHRYSENE	1.93E-01	mg/kg	1.93E-01	mg/kg	M	3.52E-08	mg/kg-day	1.2E-01	mg/kg-day-1	4.2E-09
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	1.10E-08	mg/kg-day	4.1E+00	mg/kg-day-1	4.5E-08
	FLUORANTHENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	3.77E-08	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	1.50E-08	mg/kg-day	--	--	--

TABLE J-42

EPA TABLE U.8.5.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	2.56E-08	mg/kg-day	1.2E+00	mg/kg-day-1	3.1E-08
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	9.13E-08	mg/kg-day	1.2E-01	mg/kg-day-1	1.1E-08
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	4.17E-08	mg/kg-day	--	--	--
	PYRENE	1.86E-01	mg/kg	1.86E-01	mg/kg	M	3.41E-08	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.91E-03	mg/kg	2.91E-03	mg/kg	M	5.32E-10	mg/kg-day	2.4E-01	mg/kg-day-1	1.3E-10
	4,4'-DDE	2.55E-03	mg/kg	2.55E-03	mg/kg	M	4.66E-10	mg/kg-day	3.4E-01	mg/kg-day-1	1.6E-10
	4,4'-DDT	9.11E-03	mg/kg	9.11E-03	mg/kg	M	1.66E-09	mg/kg-day	3.4E-01	mg/kg-day-1	5.7E-10
	ALDRIN	9.90E-04	mg/kg	9.90E-04	mg/kg	M	1.81E-10	mg/kg-day	1.7E+01	mg/kg-day-1	3.1E-09
	ALPHA-BHC	3.56E-03	mg/kg	3.56E-03	mg/kg	M	6.50E-10	mg/kg-day	6.3E+00	mg/kg-day-1	4.1E-09
	ALPHA-CHLORDANE	2.36E-03	mg/kg	2.36E-03	mg/kg	M	4.31E-10	mg/kg-day	1.2E+00	mg/kg-day-1	5.2E-10
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	2.01E-09	mg/kg-day	2.0E+00	mg/kg-day-1	4.0E-09
	AROCLOR-1260	3.89E-02	mg/kg	3.89E-02	mg/kg	M	7.10E-09	mg/kg-day	2.0E+00	mg/kg-day-1	1.4E-08
	BETA-BHC	1.46E-03	mg/kg	1.46E-03	mg/kg	M	2.67E-10	mg/kg-day	1.8E+00	mg/kg-day-1	4.8E-10
	DELTA-BHC	1.12E-03	mg/kg	1.12E-03	mg/kg	M	2.05E-10	mg/kg-day	--	--	--
	DIELDRIN	2.04E-03	mg/kg	2.04E-03	mg/kg	M	3.73E-10	mg/kg-day	1.6E+01	mg/kg-day-1	6.0E-09
	ENDOSULFAN I	1.13E-03	mg/kg	1.13E-03	mg/kg	M	2.06E-10	mg/kg-day	--	--	--
	ENDOSULFAN II	1.89E-03	mg/kg	1.89E-03	mg/kg	M	3.45E-10	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	4.38E-10	mg/kg-day	--	--	--
	ENDRIN	1.96E-03	mg/kg	1.96E-03	mg/kg	M	3.58E-10	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	3.15E-03	mg/kg	M	5.75E-10	mg/kg-day	--	--	--
	ENDRIN KETONE	2.48E-03	mg/kg	2.48E-03	mg/kg	M	4.53E-10	mg/kg-day	--	--	--
	GAMMA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	3.00E-10	mg/kg-day	1.3E+00	mg/kg-day-1	3.9E-10
	GAMMA-CHLORDANE	2.27E-03	mg/kg	2.27E-03	mg/kg	M	4.15E-10	mg/kg-day	1.2E+00	mg/kg-day-1	5.0E-10
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	3.65E-11	mg/kg-day	5.7E+00	mg/kg-day-1	2.1E-10
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	2.90E-04	mg/kg	M	5.30E-11	mg/kg-day	1.3E+01	mg/kg-day-1	6.9E-10
	METHOXYCHLOR	9.51E-03	mg/kg	9.51E-03	mg/kg	M	1.74E-09	mg/kg-day	--	--	--
Dermal	**METALS**										
	BARIUM	9.65E+01	mg/kg	9.65E+01	mg/kg	M	1.02E-06	mg/kg-day	--	--	--

TABLE J-42

EPA TABLE U.8.5.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	COBALT	1.17E+01	mg/kg	1.17E+01	mg/kg	M	1.24E-07	mg/kg-day	--	--	--
	LEAD	1.11E+02	mg/kg	1.11E+02	mg/kg	M	1.18E-06	mg/kg-day	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	2.82E-01	mg/kg	M	2.98E-09	mg/kg-day	--	--	--
	SELENIUM	5.25E-01	mg/kg	5.25E-01	mg/kg	M	5.56E-09	mg/kg-day	--	--	--
	SILVER	3.01E-01	mg/kg	3.01E-01	mg/kg	M	3.19E-09	mg/kg-day	--	--	--
	THALLIUM	3.96E-01	mg/kg	3.96E-01	mg/kg	M	4.19E-09	mg/kg-day	--	--	--
	TIN	1.53E+01	mg/kg	1.53E+01	mg/kg	M	1.62E-07	mg/kg-day	--	--	--
	TITANIUM	4.41E+03	mg/kg	4.41E+03	mg/kg	M	4.67E-05	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	2.12E-10	mg/kg-day	--	--	--
	TOLUENE	5.59E-03	mg/kg	5.59E-03	mg/kg	M	5.92E-10	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	4.24E-10	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	3.92E-09	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	2.24E-01	mg/kg	M	3.56E-08	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	2.38E-08	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	3.27E-08	mg/kg-day	1.2E+00	mg/kg-day-1	3.9E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	3.21E-08	mg/kg-day	1.2E+01	mg/kg-day-1	3.8E-07
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	2.15E-01	mg/kg	M	3.41E-08	mg/kg-day	1.2E+00	mg/kg-day-1	4.1E-08
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	2.10E-01	mg/kg	M	3.33E-08	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	2.19E-01	mg/kg	M	3.48E-08	mg/kg-day	1.2E+00	mg/kg-day-1	4.2E-08
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	1.29E-01	mg/kg	M	1.37E-08	mg/kg-day	1.4E-02	mg/kg-day-1	1.9E-10
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	7.73E-09	mg/kg-day	2.0E-02	mg/kg-day-1	1.5E-10
	CHRYSENE	1.93E-01	mg/kg	1.93E-01	mg/kg	M	3.06E-08	mg/kg-day	1.2E-01	mg/kg-day-1	3.7E-09
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	9.53E-09	mg/kg-day	4.1E+00	mg/kg-day-1	3.9E-08
	FLUORANTHENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	3.28E-08	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	1.30E-08	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	2.22E-08	mg/kg-day	1.2E+00	mg/kg-day-1	2.7E-08
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	1.32E-07	mg/kg-day	1.2E-01	mg/kg-day-1	1.6E-08

TABLE J-42

EPA TABLE U.8.5.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	3.63E-08	mg/kg-day	--	--	--
	PYRENE	1.86E-01	mg/kg	1.86E-01	mg/kg	M	2.96E-08	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.91E-03	mg/kg	2.91E-03	mg/kg	M	1.54E-10	mg/kg-day	2.4E-01	mg/kg-day-1	3.7E-11
	4,4'-DDE	2.55E-03	mg/kg	2.55E-03	mg/kg	M	1.35E-10	mg/kg-day	3.4E-01	mg/kg-day-1	4.6E-11
	4,4'-DDT	9.11E-03	mg/kg	9.11E-03	mg/kg	M	4.83E-10	mg/kg-day	3.4E-01	mg/kg-day-1	1.6E-10
	ALDRIN	9.90E-04	mg/kg	9.90E-04	mg/kg	M	5.24E-11	mg/kg-day	1.7E+01	mg/kg-day-1	8.9E-10
	ALPHA-BHC	3.56E-03	mg/kg	3.56E-03	mg/kg	M	1.89E-10	mg/kg-day	6.3E+00	mg/kg-day-1	1.2E-09
	ALPHA-CHLORDANE	2.36E-03	mg/kg	2.36E-03	mg/kg	M	1.25E-10	mg/kg-day	1.2E+00	mg/kg-day-1	1.5E-10
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	1.75E-09	mg/kg-day	2.0E+00	mg/kg-day-1	3.5E-09
	AROCLOR-1260	3.89E-02	mg/kg	3.89E-02	mg/kg	M	6.18E-09	mg/kg-day	2.0E+00	mg/kg-day-1	1.2E-08
	BETA-BHC	1.46E-03	mg/kg	1.46E-03	mg/kg	M	7.73E-11	mg/kg-day	1.8E+00	mg/kg-day-1	1.4E-10
	DELTA-BHC	1.12E-03	mg/kg	1.12E-03	mg/kg	M	5.93E-11	mg/kg-day	--	--	--
	DIELDRIN	2.04E-03	mg/kg	2.04E-03	mg/kg	M	1.08E-10	mg/kg-day	1.6E+01	mg/kg-day-1	1.7E-09
	ENDOSULFAN I	1.13E-03	mg/kg	1.13E-03	mg/kg	M	5.99E-11	mg/kg-day	--	--	--
	ENDOSULFAN II	1.89E-03	mg/kg	1.89E-03	mg/kg	M	1.00E-10	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	1.27E-10	mg/kg-day	--	--	--
	ENDRIN	1.96E-03	mg/kg	1.96E-03	mg/kg	M	1.04E-10	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	3.15E-03	mg/kg	M	1.67E-10	mg/kg-day	--	--	--
	ENDRIN KETONE	2.48E-03	mg/kg	2.48E-03	mg/kg	M	1.31E-10	mg/kg-day	--	--	--
	GAMMA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	8.69E-11	mg/kg-day	1.3E+00	mg/kg-day-1	1.1E-10
	GAMMA-CHLORDANE	2.27E-03	mg/kg	2.27E-03	mg/kg	M	1.20E-10	mg/kg-day	1.2E+00	mg/kg-day-1	1.4E-10
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	1.06E-11	mg/kg-day	5.7E+00	mg/kg-day-1	6.0E-11
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	2.90E-04	mg/kg	M	1.54E-11	mg/kg-day	1.3E+01	mg/kg-day-1	2.0E-10

TABLE J-42

EPA TABLE U.8.5.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	METHOXYCHLOR	9.51E-03	mg/kg	9.51E-03	mg/kg	M	5.04E-10	mg/kg-day	--	--	--
										Total Risk Across All Direct Contact Exposure Routes/Pathways - Soil	1.3E-06

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

-- = No value available

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EPA TABLE U.8.6.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dust	**METALS**										
	BARIUM	9.65E+01	mg/kg	7.33E-08	mg/m3	R	1.34E-09	mg/kg-day	--	--	--
	COBALT	1.17E+01	mg/kg	8.89E-09	mg/m3	R	1.62E-10	mg/kg-day	--	--	--
	LEAD	1.11E+02	mg/kg	8.47E-08	mg/m3	R	1.54E-09	mg/kg-day	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	2.14E-10	mg/m3	R	3.90E-12	mg/kg-day	--	--	--
	SELENIUM	5.25E-01	mg/kg	3.99E-10	mg/m3	R	7.27E-12	mg/kg-day	--	--	--
	SILVER	3.01E-01	mg/kg	2.29E-10	mg/m3	R	4.16E-12	mg/kg-day	--	--	--
	THALLIUM	3.96E-01	mg/kg	3.01E-10	mg/m3	R	5.48E-12	mg/kg-day	--	--	--
	TIN	1.53E+01	mg/kg	1.16E-08	mg/m3	R	2.11E-10	mg/kg-day	--	--	--
	TITANIUM	4.41E+03	mg/kg	3.35E-06	mg/m3	R	6.10E-08	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	1.52E-12	mg/m3	R	2.77E-14	mg/kg-day	--	--	--
	TOLUENE	5.59E-03	mg/kg	4.25E-12	mg/m3	R	7.74E-14	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m3	R	5.54E-14	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m3	R	5.1E-13	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	1.70E-10	mg/m3	R	3.10E-12	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m3	R	2.08E-12	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	1.57E-10	mg/m3	R	2.85E-12	mg/kg-day	3.9E-01	mg/kg-day	1.1E-12
	BENZO(A)PYRENE	2.02E-01	mg/kg	1.53E-10	mg/m3	R	2.79E-12	mg/kg-day	3.9E+00	mg/kg-day	1.1E-11
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	1.63E-10	mg/m3	R	2.97E-12	mg/kg-day	3.9E-01	mg/kg-day	1.2E-12
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	1.59E-10	mg/m3	R	2.90E-12	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	1.67E-10	mg/m3	R	3.04E-12	mg/kg-day	3.9E-01	mg/kg-day	1.2E-12
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	9.79E-11	mg/m3	R	1.78E-12	mg/kg-day	8.4E-03	mg/kg-day	1.5E-14
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m3	R	1.01E-12	mg/kg-day	2.0E-02	mg/kg-day	2.0E-14
	CHRYSENE	1.93E-01	mg/kg	1.47E-10	mg/m3	R	2.67E-12	mg/kg-day	3.9E-02	mg/kg-day	1.0E-13
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m3	R	8.31E-13	mg/kg-day	4.1E+00	mg/kg-day	3.4E-12
	FLUORANTHENE	2.06E-01	mg/kg	1.57E-10	mg/m3	R	2.85E-12	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m3	R	1.14E-12	mg/kg-day	--	--	--

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EPA TABLE U.8.6.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m3	R	1.94E-12	mg/kg-day	3.9E-01	mg/kg-day	7.6E-13
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m3	R	6.92E-12	mg/kg-day	1.2E-01	mg/kg-day	8.3E-13
	PHENANTHRENE	2.28E-01	mg/kg	1.74E-10	mg/m3	R	3.16E-12	mg/kg-day	--	--	--
	PYRENE	1.86E-01	mg/kg	1.42E-10	mg/m3	R	2.58E-12	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.91E-03	mg/kg	2.21E-12	mg/m3	R	4.0E-14	mg/kg-day	2.4E-01	mg/kg-day	9.7E-15
	4,4'-DDE	2.55E-03	mg/kg	1.94E-12	mg/m3	R	3.5E-14	mg/kg-day	3.4E-01	mg/kg-day	1.2E-14
	4,4'-DDT	9.11E-03	mg/kg	6.92E-12	mg/m3	R	1.26E-13	mg/kg-day	3.4E-01	mg/kg-day	4.3E-14
	ALDRIN	9.90E-04	mg/kg	7.52E-13	mg/m3	R	1.37E-14	mg/kg-day	1.7E+01	mg/kg-day	2.4E-13
	ALPHA-BHC	3.56E-03	mg/kg	2.71E-12	mg/m3	R	4.93E-14	mg/kg-day	6.3E+00	mg/kg-day	3.1E-13
	ALPHA-CHLORDANE	2.36E-03	mg/kg	1.79E-12	mg/m3	R	3.27E-14	mg/kg-day	1.2E+00	mg/kg-day	3.9E-14
	AROCLOR-1254	1.10E-02	mg/kg	8.37E-12	mg/m3	R	1.52E-13	mg/kg-day	2.0E+00	mg/kg-day	3.0E-13
	AROCLOR-1260	3.89E-02	mg/kg	2.95E-11	mg/m3	R	5.38E-13	mg/kg-day	2.0E+00	mg/kg-day	1.1E-12
	BETA-BHC	1.46E-03	mg/kg	1.11E-12	mg/m3	R	2.02E-14	mg/kg-day	1.9E+00	mg/kg-day	3.7E-14
	DELTA-BHC	1.12E-03	mg/kg	8.51E-13	mg/m3	R	1.55E-14	mg/kg-day	--	--	--
	DIELDRIN	2.04E-03	mg/kg	1.55E-12	mg/m3	R	2.82E-14	mg/kg-day	1.6E+01	mg/kg-day	4.5E-13
	ENDOSULFAN I	1.13E-03	mg/kg	8.59E-13	mg/m3	R	1.56E-14	mg/kg-day	--	--	--
	ENDOSULFAN II	1.89E-03	mg/kg	1.44E-12	mg/m3	R	2.62E-14	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	1.82E-12	mg/m3	R	3.32E-14	mg/kg-day	--	--	--
	ENDRIN	1.96E-03	mg/kg	1.49E-12	mg/m3	R	2.71E-14	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	2.39E-12	mg/m3	R	4.36E-14	mg/kg-day	--	--	--
	ENDRIN KETONE	2.48E-03	mg/kg	1.88E-12	mg/m3	R	3.43E-14	mg/kg-day	--	--	--
	GAMMA-BHC	1.64E-03	mg/kg	1.25E-12	mg/m3	R	2.27E-14	mg/kg-day	1.3E+00	mg/kg-day	3.0E-14
	GAMMA-CHLORDANE	2.27E-03	mg/kg	1.72E-12	mg/m3	R	3.14E-14	mg/kg-day	1.2E+00	mg/kg-day	3.8E-14
	HEPTACHLOR	2.00E-04	mg/kg	1.52E-13	mg/m3	R	2.77E-15	mg/kg-day	5.7E+00	mg/kg-day	1.6E-14
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	2.20E-13	mg/m3	R	4.01E-15	mg/kg-day	1.3E+01	mg/kg-day	5.2E-14
	METHOXYCHLOR	9.51E-03	mg/kg	7.23E-12	mg/m3	R	1.32E-13	mg/kg-day	--	--	--

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EPA TABLE U.8.6.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation VOCs	**METALS**										
	BARIUM	9.65E+01	mg/kg	--	mg/m^3	M	--	--	--	--	--
	COBALT	1.17E+01	mg/kg	--	mg/m^3	M	--	--	--	--	--
	LEAD	1.11E+02	mg/kg	--	mg/m^3	M	--	--	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	--	mg/m^3	M	--	--	--	--	--
	SELENIUM	5.25E-01	mg/kg	--	mg/m^3	M	--	--	--	--	--
	SILVER	3.01E-01	mg/kg	--	mg/m^3	M	--	--	--	--	--
	THALLIUM	3.96E-01	mg/kg	--	mg/m^3	M	--	--	--	--	--
	TIN	1.53E+01	mg/kg	--	mg/m^3	M	--	--	--	--	--
	TITANIUM	4.41E+03	mg/kg	--	mg/m^3	M	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	2.30E-02	mg/m^3	M	4.19E-04	mg/kg-day	--	--	--
	TOLUENE	5.59E-03	mg/kg	2.46E-02	mg/m^3	M	4.48E-04	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	M	2.97E-05	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	M	8.23E-04	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	1.66E-01	mg/m^3	M	3.02E-03	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	M	5.00E-05	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	--	mg/m^3	M	--	--	3.9E-01	mg/kg-day	--
	BENZO(A)PYRENE	2.02E-01	mg/kg	--	mg/m^3	M	--	--	3.9E+00	mg/kg-day	--
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	--	mg/m^3	M	--	--	3.9E-01	mg/kg-day	--
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	--	mg/m^3	M	--	--	--	--	--
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	--	mg/m^3	M	--	--	3.9E-01	mg/kg-day	--

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EPA TABLE U.8.6.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	--	mg/m^3	M	--	--	8.4E-03	mg/kg-day	--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	M	--	--	2.0E-02	mg/kg-day	--
	CHRYSENE	1.93E-01	mg/kg	--	mg/m^3	M	--	--	3.9E-02	mg/kg-day	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	M	--	--	4.1E+00	mg/kg-day	--
	FLUORANTHENE	2.06E-01	mg/kg	--	mg/m^3	M	--	--	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	M	6.19E-05	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	M	--	--	3.9E-01	mg/kg-day	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	M	--	--	1.2E-01	mg/kg-day	--
	PHENANTHRENE	2.28E-01	mg/kg	--	mg/m^3	M	--	--	--	--	--
	PYRENE	1.86E-01	mg/kg	7.11E-04	mg/m^3	M	1.30E-05	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.91E-03	mg/kg	--	mg/m^3	M	--	--	2.4E-01	mg/kg-day	--
	4,4'-DDE	2.55E-03	mg/kg	--	mg/m^3	M	--	--	3.4E-01	mg/kg-day	--
	4,4'-DDT	9.11E-03	mg/kg	--	mg/m^3	M	--	--	3.4E-01	mg/kg-day	--
	ALDRIN	9.90E-04	mg/kg	--	mg/m^3	M	--	--	1.7E+01	mg/kg-day	--
	ALPHA-BHC	3.56E-03	mg/kg	--	mg/m^3	M	--	--	6.3E+00	mg/kg-day	--
	ALPHA-CHLORDANE	2.36E-03	mg/kg	--	mg/m^3	M	--	--	1.2E+00	mg/kg-day	--
	AROCLOR-1254	1.10E-02	mg/kg	--	mg/m^3	M	--	--	2.0E+00	mg/kg-day	--
	AROCLOR-1260	3.89E-02	mg/kg	--	mg/m^3	M	--	--	2.0E+00	mg/kg-day	--
	BETA-BHC	1.46E-03	mg/kg	--	mg/m^3	M	--	--	1.9E+00	mg/kg-day	--
	DELTA-BHC	1.12E-03	mg/kg	--	mg/m^3	M	--	--	--	--	--
	DIELDRIN	2.04E-03	mg/kg	--	mg/m^3	M	--	--	1.6E+01	mg/kg-day	--
	ENDOSULFAN I	1.13E-03	mg/kg	--	mg/m^3	M	--	--	--	--	--

TABLE J-43

EPA TABLE U.8.6.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDOSULFAN II	1.89E-03	mg/kg	--	mg/m^3	M	--	--	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	--	mg/m^3	M	--	--	--	--	--
	ENDRIN	1.96E-03	mg/kg	--	mg/m^3	M	--	--	--	--	--
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	--	mg/m^3	M	--	--	--	--	--
	ENDRIN KETONE	2.48E-03	mg/kg	--	mg/m^3	M	--	--	--	--	--
	GAMMA-BHC	1.64E-03	mg/kg	--	mg/m^3	M	--	--	1.3E+00	mg/kg-day	--
	GAMMA-CHLORDANE	2.27E-03	mg/kg	--	mg/m^3	M	--	--	1.2E+00	mg/kg-day	--
	HEPTACHLOR	2.00E-04	mg/kg	--	mg/m^3	M	--	--	5.7E+00	mg/kg-day	--
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	--	mg/m^3	M	--	--	1.3E+01	mg/kg-day	--
	METHOXYCHLOR	9.51E-03	mg/kg	--	mg/m^3	M	--	--	--	--	--

Total Risk Across All Air Exposure Routes/Pathways - Soil	2.2E-11
Total Risk Across All Direct Contact Exposure Routes/Pathways - Soil	5.4E-07
Total Risk Across All Exposure Routes/Pathways - Soil	**5.4E-07**

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

-- = No value available

VOC = Volatile organic compound

TABLE J-44

EPA TABLE U.8.7.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation-	**METALS**										
	BARIUM	9.65E+01	mg/kg	7.33E-08	mg/m^3	R	8.03E-14	mg/kg-day	--	--	--
	COBALT	1.17E+01	mg/kg	8.89E-09	mg/m^3	R	1.35E-10	mg/kg-day	--	--	--
	LEAD	1.11E+02	mg/kg	8.47E-08	mg/m^3	R	1.28E-09	mg/kg-day	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	2.14E-10	mg/m^3	R	3.24E-12	mg/kg-day	--	--	--
	SELENIUM	5.25E-01	mg/kg	3.99E-10	mg/m^3	R	6.05E-12	mg/kg-day	--	--	--
	SILVER	3.01E-01	mg/kg	2.29E-10	mg/m^3	R	3.47E-12	mg/kg-day	--	--	--
	THALLIUM	3.96E-01	mg/kg	3.01E-10	mg/m^3	R	4.56E-12	mg/kg-day	--	--	--
	TIN	1.53E+01	mg/kg	1.16E-08	mg/m^3	R	1.76E-10	mg/kg-day	--	--	--
	TITANIUM	4.41E+03	mg/kg	3.35E-06	mg/m^3	R	5.08E-08	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	1.52E-12	mg/m^3	R	2.30E-14	mg/kg-day	--	--	--
	TOLUENE	5.59E-03	mg/kg	4.25E-12	mg/m^3	R	6.44E-14	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	4.61E-14	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	4.3E-13	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	1.70E-10	mg/m^3	R	2.58E-12	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	1.73E-12	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	1.57E-10	mg/m^3	R	2.37E-12	mg/kg-day	3.9E-01	mg/kg-day	9.2E-13
	BENZO(A)PYRENE	2.02E-01	mg/kg	1.53E-10	mg/m^3	R	2.33E-12	mg/kg-day	3.9E+00	mg/kg-day	9.1E-12
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	1.63E-10	mg/m^3	R	2.47E-12	mg/kg-day	3.9E-01	mg/kg-day	9.6E-13
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	1.59E-10	mg/m^3	R	2.42E-12	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	1.67E-10	mg/m^3	R	2.53E-12	mg/kg-day	3.9E-01	mg/kg-day	9.8E-13
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	9.79E-11	mg/m^3	R	1.48E-12	mg/kg-day	8.4E-03	mg/kg-day	1.2E-14

TABLE J-44

EPA TABLE U.8.7.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	8.41E-13	mg/kg-day	2.0E-02	mg/kg-day	1.7E-14
	CHRYSENE	1.93E-01	mg/kg	1.47E-10	mg/m^3	R	2.22E-12	mg/kg-day	3.9E-02	mg/kg-day	8.7E-14
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	6.91E-13	mg/kg-day	4.1E+00	mg/kg-day	2.8E-12
	FLUORANTHENE	2.06E-01	mg/kg	1.57E-10	mg/m^3	R	2.37E-12	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	9.45E-13	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	1.61E-12	mg/kg-day	3.9E-01	mg/kg-day	6.3E-13
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	5.76E-12	mg/kg-day	1.2E-01	mg/kg-day	6.9E-13
	PHENANTHRENE	2.28E-01	mg/kg	1.74E-10	mg/m^3	R	2.63E-12	mg/kg-day	--	--	--
	PYRENE	1.86E-01	mg/kg	1.42E-10	mg/m^3	R	2.15E-12	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS				mg/m^3						
	4,4'-DDD	2.91E-03	mg/kg	2.21E-12	mg/m^3	R	3.35E-14	mg/kg-day	2.4E-01	mg/kg-day	8.0E-15
	4,4'-DDE	2.55E-03	mg/kg	1.94E-12	mg/m^3	R	2.94E-14	mg/kg-day	3.4E-01	mg/kg-day	1.0E-14
	4,4'-DDT	9.11E-03	mg/kg	6.92E-12	mg/m^3	R	1.05E-13	mg/kg-day	3.4E-01	mg/kg-day	3.6E-14
	ALDRIN	9.90E-04	mg/kg	7.52E-13	mg/m^3	R	1.14E-14	mg/kg-day	1.7E+01	mg/kg-day	2.0E-13
	ALPHA-BHC	3.56E-03	mg/kg	2.71E-12	mg/m^3	R	4.10E-14	mg/kg-day	6.3E+00	mg/kg-day	2.6E-13
	ALPHA-CHLORDANE	2.36E-03	mg/kg	1.79E-12	mg/m^3	R	2.72E-14	mg/kg-day	1.2E+00	mg/kg-day	3.3E-14
	AROCLOR-1254	1.10E-02	mg/kg	8.37E-12	mg/m^3	R	1.27E-13	mg/kg-day	2.0E+00	mg/kg-day	2.5E-13
	AROCLOR-1260	3.89E-02	mg/kg	2.95E-11	mg/m^3	R	4.48E-13	mg/kg-day	2.0E+00	mg/kg-day	9.0E-13
	BETA-BHC	1.46E-03	mg/kg	1.11E-12	mg/m^3	R	1.68E-14	mg/kg-day	1.9E+00	mg/kg-day	3.1E-14
	DELTA-BHC	1.12E-03	mg/kg	8.51E-13	mg/m^3	R	1.29E-14	mg/kg-day	--	--	--
	DIELDRIN	2.04E-03	mg/kg	1.55E-12	mg/m^3	R	2.35E-14	mg/kg-day	1.6E+01	mg/kg-day	3.8E-13
	ENDOSULFAN I	1.13E-03	mg/kg	8.59E-13	mg/m^3	R	1.30E-14	mg/kg-day	--	--	--
	ENDOSULFAN II	1.89E-03	mg/kg	1.44E-12	mg/m^3	R	2.18E-14	mg/kg-day	--	--	--

TABLE J-44

EPA TABLE U.8.7.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	1.82E-12	mg/m^3	R	2.76E-14	mg/kg-day	--	--	--
	ENDRIN	1.96E-03	mg/kg	1.49E-12	mg/m^3	R	2.26E-14	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	2.39E-12	mg/m^3	R	3.63E-14	mg/kg-day	--	--	--
	ENDRIN KETONE	2.48E-03	mg/kg	1.88E-12	mg/m^3	R	2.86E-14	mg/kg-day	--	--	--
	GAMMA-BHC	1.64E-03	mg/kg	1.25E-12	mg/m^3	R	1.89E-14	mg/kg-day	1.3E+00	mg/kg-day	2.5E-14
	GAMMA-CHLORDANE	2.27E-03	mg/kg	1.72E-12	mg/m^3	R	2.61E-14	mg/kg-day	1.2E+00	mg/kg-day	3.1E-14
	HEPTACHLOR	2.00E-04	mg/kg	1.52E-13	mg/m^3	R	2.30E-15	mg/kg-day	5.7E+00	mg/kg-day	1.3E-14
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	2.20E-13	mg/m^3	R	3.34E-15	mg/kg-day	1.3E+01	mg/kg-day	4.3E-14
	METHOXYCHLOR	9.51E-03	mg/kg	7.23E-12	mg/m^3	R	1.10E-13	mg/kg-day	--	--	--
Inhalation VOCs	**METALS**										
	BARIUM	9.65E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COBALT	1.17E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	LEAD	1.11E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SELENIUM	5.25E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SILVER	3.01E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	THALLIUM	3.96E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TIN	1.53E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TITANIUM	4.41E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	CARBON DISULFIDE	2.00E-03	mg/kg	2.30E-02	mg/m^3	R	3.49E-04	mg/kg-day	--	--	--
	TOLUENE	5.59E-03	mg/kg	2.46E-02	mg/m^3	R	3.73E-04	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	2.47E-05	mg/kg-day	--	--	--

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EPA TABLE U.8.7.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	6.85E-04	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	1.66E-01	mg/m^3	R	2.52E-03	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	4.16E-05	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	BENZO(A)PYRENE	2.02E-01	mg/kg	--	mg/m^3	R	--	--	3.9E+00	mg/kg-day	--
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	--	mg/m^3	R	--	--	8.4E-03	mg/kg-day	--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day	--
	CHRYSENE	1.93E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-02	mg/kg-day	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	4.1E+00	mg/kg-day	--
	FLUORANTHENE	2.06E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	5.15E-05	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	mg/kg-day	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	1.2E-01	mg/kg-day	--
	PHENANTHRENE	2.28E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	PYRENE	1.86E-01	mg/kg	7.11E-04	mg/m^3	R	1.08E-05	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.91E-03	mg/kg	--	mg/m^3	R	--	--	2.4E-01	mg/kg-day	--
	4,4'-DDE	2.55E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	mg/kg-day	--
	4,4'-DDT	9.11E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	mg/kg-day	--

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EPA TABLE U.8.7.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ALDRIN	9.90E-04	mg/kg	--	mg/m^3	R	--	--	1.7E+01	mg/kg-day	--
	ALPHA-BHC	3.56E-03	mg/kg	--	mg/m^3	R	--	--	6.3E+00	mg/kg-day	--
	ALPHA-CHLORDANE	2.36E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	mg/kg-day	--
	AROCLOR-1254	1.10E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	mg/kg-day	--
	AROCLOR-1260	3.89E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	mg/kg-day	--
	BETA-BHC	1.46E-03	mg/kg	--	mg/m^3	R	--	--	1.9E+00	mg/kg-day	--
	DELTA-BHC	1.12E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	DIELDRIN	2.04E-03	mg/kg	--	mg/m^3	R	--	--	1.6E+01	mg/kg-day	--
	ENDOSULFAN I	1.13E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN II	1.89E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN	1.96E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN KETONE	2.48E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	GAMMA-BHC	1.64E-03	mg/kg	--	mg/m^3	R	--	--	1.3E+00	mg/kg-day	--
	GAMMA-CHLORDANE	2.27E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	mg/kg-day	--
	HEPTACHLOR	2.00E-04	mg/kg	--	mg/m^3	R	--	--	5.7E+00	mg/kg-day	--
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	--	mg/m^3	R	--	--	1.3E+01	mg/kg-day	--

TABLE J-44

EPA TABLE U.8.7.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	METHOXYCHLOR	9.51E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
										Total Risk Across All Air Exposure Routes/Pathways - Soil	1.8E-11
										Total Risk Across All Direct Contact Exposure Routes/Pathways - Soil	1.3E-06
										Total Risk Across All Exposure Routes/Pathways - Soil	**1.3E-06**

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

-- = No value available

VOC = Volatile organic compound

TABLE J-45

EPA TABLE U.8.8.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation VOCs	**VOLATILE ORGANIC COMPOUNDS**										
	1,2-DICHLOROETHANE	2.80E-04	mg/L	8.69E-06	mg/m^3	R	1.58E-07	mg/kg-day	9.1E-02	(mg/kg-day)-1	1.4E-08
	2-BUTANONE	9.42E-03	mg/L	1.06E-04	mg/m^3	R	1.93E-06	mg/kg-day	--	--	--
	4-METHYL-2-PENTANONE	8.00E-04	mg/L	1.41E-05	mg/m^3	R	2.57E-07	mg/kg-day	--	--	--
	ACETONE	6.84E-02	mg/L	7.53E-04	mg/m^3	R	1.37E-05	mg/kg-day	--	--	--
	CHLOROMETHANE	7.00E-04	mg/L	1.36E-05	mg/m^3	R	2.47E-07	mg/kg-day	--	--	--
	ETHYLBENZENE	7.00E-04	mg/L	1.62E-05	mg/m^3	R	2.96E-07	mg/kg-day	--	--	--
	TOLUENE	8.30E-04	mg/L	2.12E-05	mg/m^3	R	3.86E-07	mg/kg-day	--	--	--
	XYLENE (TOTAL)	1.26E-03	mg/L	2.74E-05	mg/m^3	R	4.99E-07	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,3-DICHLOROBENZENE	9.00E-04	mg/L	2.10E-05	mg/m^3	R	3.82E-07	mg/kg-day	--	--	--
	2,4-DICHLOROPHENOL	2.00E-03	mg/L	--		R	--	--	--	--	--
	4-METHYLPHENOL	6.00E-03	mg/L	--		R	--	--	--	--	--
	ACENAPHTHENE	2.00E-03	mg/L	--		R	--	--	--	--	--
	BENZO(B)FLUORANTHENE	2.00E-03	mg/L	--		R	--	--	3.9E-01	(mg/kg-day)-1	--
	BIS(2-ETHYLHEXYL)PHTHALATE	4.92E-03	mg/L	--		R	--	--	8.4E-03	(mg/kg-day)-1	--
	CARBAZOLE	2.00E-03	mg/L	--		R	--	--	2.0E-02	(mg/kg-day)-1	--
	FLUORANTHENE	4.00E-03	mg/L	--		R	--	--	--	--	--
	N-NITROSODIPHENYLAMINE (1)	8.83E-03	mg/L	--		R	--	--	9.0E-03	(mg/kg-day)-1	--
	NAPHTHALENE	2.00E-03	mg/L	4.32E-05	mg/m^3	R	7.87E-07	mg/kg-day	--	--	--
	PHENANTHRENE	2.00E-03	mg/L	1.60E-05	mg/m^3	R	2.92E-07	mg/kg-day	--	--	--
	PHENOL	2.00E-03	mg/L	--		R	--	--	--	--	--

TABLE J-45

EPA TABLE U.8.8.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	PYRENE	8.39E-03	mg/L	2.24E-05	mg/m^3	R	4.08E-07	mg/kg-day	--	--	--

Total Risk Across All Air Exposure Routes/Pathways - Groundwater	1.4E-08
Total Risk Across All Direct Contact Exposure Routes/Pathways - Soil	5.4E-07
Total Risk Across All Exposure Routes/Pathways - Soil and Groundwater	**5.6E-07**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/L = Milligrams per liter

-- = No value available

mg/m^3 = Milligrams per cubic meter

TABLE J-46

EPA TABLE U.8.9.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation VOCs	**VOLATILE ORGANIC COMPOUNDS**										
	1,2-DICHLOROETHANE	2.80E-04	mg/L	8.69E-06	mg/m^3	R	1.32E-07	mg/kg-day	9.1E-02	(mg/kg-day)-1	1.2E-08
	2-BUTANONE	9.42E-03	mg/L	1.06E-04	mg/m^3	R	1.60E-06	mg/kg-day	--	--	--
	4-METHYL-2-PENTANONE	8.00E-04	mg/L	1.41E-05	mg/m^3	R	2.14E-07	mg/kg-day	--	--	--
	ACETONE	6.84E-02	mg/L	7.53E-04	mg/m^3	R	1.14E-05	mg/kg-day	--	--	--
	CHLOROMETHANE	7.00E-04	mg/L	1.36E-05	mg/m^3	R	2.06E-07	mg/kg-day	--	--	--
	ETHYLBENZENE	7.00E-04	mg/L	1.62E-05	mg/m^3	R	2.46E-07	mg/kg-day	--	--	--
	TOLUENE	8.30E-04	mg/L	2.12E-05	mg/m^3	R	3.21E-07	mg/kg-day	--	--	--
	XYLENE (TOTAL)	1.26E-03	mg/L	2.74E-05	mg/m^3	R	4.15E-07	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,3-DICHLOROBENZENE	9.00E-04	mg/L	2.10E-05	mg/m^3	R	3.18E-07	mg/kg-day	--	--	--
	2,4-DICHLOROPHENOL	2.00E-03	mg/L	--		R	--	--	--	--	--
	4-METHYLPHENOL	6.00E-03	mg/L	--		R	--	--	--	--	--
	ACENAPHTHENE	2.00E-03	mg/L	--		R	--	--	--	--	--
	BENZO(B)FLUORANTHENE	2.00E-03	mg/L	--		R	--	--	3.9E-01	(mg/kg-day)-1	--
	BIS(2-ETHYLHEXYL)PHTHALATE	4.92E-03	mg/L	--		R	--	--	8.4E-03	(mg/kg-day)-1	--
	CARBAZOLE	2.00E-03	mg/L	--		R	--	--	2.0E-02	(mg/kg-day)-1	--
	FLUORANTHENE	4.00E-03	mg/L	--		R	--	--	--	--	--
	N-NITROSODIPHENYLAMINE (1)	8.83E-03	mg/L	--		R	--	--	9.0E-03	(mg/kg-day)-1	--
	NAPHTHALENE	2.00E-03	mg/L	4.32E-05	mg/m^3	R	6.55E-07	mg/kg-day	--	--	--
	PHENANTHRENE	2.00E-03	mg/L	1.60E-05	mg/m^3	R	2.43E-07	mg/kg-day	--	--	--
	PHENOL	2.00E-03	mg/L	--		R	--	--	--	--	--

TABLE J-46

EPA TABLE U.8.9.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	PYRENE	8.39E-03	mg/L	2.24E-05	mg/m^3	R	3.39E-07	mg/kg-day	--	--	--
										Total Risk Across All Air Exposure Routes/Pathways - Groundwater	1.2E-08
										Total Risk Across All Exposure Routes/Pathways - Soil	1.3E-06
										Total Risk Across All Exposure Routes/Pathways - Soil and Groundwater	**1.3E-06**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/L = Milligrams per liter

-- = No value available

mg/m^3 = Milligrams per cubic meter

TABLE J-47

EPA TABLE U.7.4.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	**METALS**												
	BARIUM	1.10E+02	mg/kg	1.10E+02	mg/kg	M	1.50E-04	mg/kg-day	7.0E-02	mg/kg-day	--	--	2.1E-03
	COBALT	1.33E+01	mg/kg	1.33E+01	mg/kg	M	1.82E-05	mg/kg-day	6.0E-02	mg/kg-day	--	--	3.0E-04
	LEAD	1.71E+02	mg/kg	1.71E+02	mg/kg	M	2.35E-04	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	3.60E-01	mg/kg	M	4.93E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	9.9E-05
	SELENIUM	6.02E-01	mg/kg	6.02E-01	mg/kg	M	8.25E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.7E-04
	SILVER	4.56E-01	mg/kg	4.56E-01	mg/kg	M	6.25E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.2E-04
	THALLIUM	4.29E-01	mg/kg	4.29E-01	mg/kg	M	5.88E-07	mg/kg-day	7.0E-05	mg/kg-day	--	--	8.4E-03
	TIN	2.39E+01	mg/kg	2.39E+01	mg/kg	M	3.27E-05	mg/kg-day	6.0E-01	mg/kg-day	--	--	5.5E-05
	TITANIUM	5.16E+03	mg/kg	5.16E+03	mg/kg	M	7.07E-03	mg/kg-day	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	2.74E-09	mg/kg-day	1.0E-01	mg/kg-day	--	--	2.7E-08
	TOLUENE	5.82E-03	mg/kg	5.82E-03	mg/kg	M	7.97E-09	mg/kg-day	2.0E-01	mg/kg-day	--	--	4.0E-08
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	5.48E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	2.7E-09
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	5.1E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	5.1E-06
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	3.29E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.1E-06
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	2.05E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	6.8E-07
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	2.46E-01	mg/kg	M	3.37E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.1E-06
	BENZO(A)PYRENE	2.50E-01	mg/kg	2.50E-01	mg/kg	M	3.43E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.1E-05
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	2.61E-01	mg/kg	M	3.57E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	8.9E-06
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	2.47E-01	mg/kg	M	3.39E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.1E-05
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	2.60E-01	mg/kg	M	3.56E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	8.9E-06
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	1.76E-01	mg/kg	M	2.40E-07	mg/kg-day	2.0E-02	mg/kg-day	--	--	1.2E-05
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	1.00E-07	mg/kg-day	2.5E-02	mg/kg-day	--	--	4.0E-06
	CHRYSENE	2.42E-01	mg/kg	2.42E-01	mg/kg	M	3.31E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.1E-06
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	8.22E-08	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.7E-07
	FLUORANTHENE	2.80E-01	mg/kg	2.80E-01	mg/kg	M	3.84E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	9.6E-06
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	1.12E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	2.8E-06
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	1.92E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	4.8E-06
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	6.85E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	2.3E-05
	PHENANTHRENE	2.88E-01	mg/kg	2.88E-01	mg/kg	M	3.94E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.3E-06
	PYRENE	2.52E-01	mg/kg	2.52E-01	mg/kg	M	3.45E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.2E-05

TABLE J-47

EPA TABLE U.7.4.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.39E-03	mg/kg	3.39E-03	mg/kg	M	4.6E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	9.3E-06
	4,4'-DDE	2.87E-03	mg/kg	2.87E-03	mg/kg	M	3.9E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	7.9E-06
	4,4'-DDT	1.20E-02	mg/kg	1.20E-02	mg/kg	M	1.65E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.3E-05
	ALDRIN	1.00E-03	mg/kg	1.00E-03	mg/kg	M	1.37E-09	mg/kg-day	3.0E-05	mg/kg-day	--	--	4.6E-05
	ALPHA-BHC	4.77E-03	mg/kg	4.77E-03	mg/kg	M	6.53E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.2E-05
	ALPHA-CHLORDANE	2.92E-03	mg/kg	2.92E-03	mg/kg	M	4.00E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	8.0E-06
	AROCLOR-1254	1.42E-02	mg/kg	1.42E-02	mg/kg	M	1.95E-08	mg/kg-day	2.0E-05	mg/kg-day	--	--	9.7E-04
	AROCLOR-1260	5.10E-02	mg/kg	5.10E-02	mg/kg	M	6.99E-08	mg/kg-day	2.0E-05	mg/kg-day	--	--	3.5E-03
	BETA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	2.25E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	7.5E-06
	DELTA-BHC	1.20E-03	mg/kg	1.20E-03	mg/kg	M	1.64E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	5.5E-06
	DIELDRIN	2.15E-03	mg/kg	2.15E-03	mg/kg	M	2.95E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	5.9E-05
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.66E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.8E-07
	ENDOSULFAN II	1.94E-03	mg/kg	1.94E-03	mg/kg	M	2.66E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	4.4E-07
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	3.63E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	6.1E-07
	ENDRIN	2.03E-03	mg/kg	2.03E-03	mg/kg	M	2.78E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	9.3E-06
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	3.61E-03	mg/kg	M	4.95E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.6E-05
	ENDRIN KETONE	2.72E-03	mg/kg	2.72E-03	mg/kg	M	3.73E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.2E-05
	GAMMA-BHC	1.89E-03	mg/kg	1.89E-03	mg/kg	M	2.59E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	8.6E-06
	GAMMA-CHLORDANE	2.81E-03	mg/kg	2.81E-03	mg/kg	M	3.85E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	7.7E-06
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	3.15E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	6.3E-07
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	3.40E-04	mg/kg	M	4.66E-10	mg/kg-day	1.3E-05	mg/kg-day	--	--	3.6E-05
	METHOXYCHLOR	9.79E-03	mg/kg	9.79E-03	mg/kg	M	1.34E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.7E-06
Dermal	**METALS**												
	BARIUM	1.10E+02	mg/kg	1.10E+02	mg/kg	M	5.99E-06	mg/kg-day	7.0E-02	mg/kg-day	--	--	8.6E-05
	COBALT	1.33E+01	mg/kg	1.33E+01	mg/kg	M	7.28E-07	mg/kg-day	6.0E-02	mg/kg-day	--	--	1.2E-05
	LEAD	1.71E+02	mg/kg	1.71E+02	mg/kg	M	9.37E-06	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	3.60E-01	mg/kg	M	1.97E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.9E-06
	SELENIUM	6.02E-01	mg/kg	6.02E-01	mg/kg	M	3.29E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	6.6E-06
	SILVER	4.56E-01	mg/kg	4.56E-01	mg/kg	M	2.49E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	5.0E-06
	THALLIUM	4.29E-01	mg/kg	4.29E-01	mg/kg	M	2.35E-08	mg/kg-day	7.0E-05	mg/kg-day	--	--	3.4E-04
	TIN	2.39E+01	mg/kg	2.39E+01	mg/kg	M	1.31E-06	mg/kg-day	6.0E-01	mg/kg-day	--	--	2.2E-06
	TITANIUM	5.16E+03	mg/kg	5.16E+03	mg/kg	M	2.82E-04	mg/kg-day	--	--	--	--	--

TABLE J-47

EPA TABLE U.7.4.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	1.09E-09	mg/kg-day	1.0E-01	mg/kg-day	--	--	1.1E-08
	TOLUENE	5.82E-03	mg/kg	5.82E-03	mg/kg	M	3.18E-09	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.6E-08
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	2.19E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.1E-09
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	2.02E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	2.0E-06
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.97E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	6.6E-07
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.23E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.1E-07
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	2.46E-01	mg/kg	M	2.02E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	6.7E-07
	BENZO(A)PYRENE	2.50E-01	mg/kg	2.50E-01	mg/kg	M	2.05E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	6.8E-06
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	2.61E-01	mg/kg	M	2.14E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	5.3E-06
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	2.47E-01	mg/kg	M	2.03E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	6.8E-06
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	2.60E-01	mg/kg	M	2.13E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	5.3E-06
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	1.76E-01	mg/kg	M	9.60E-08	mg/kg-day	2.0E-02	mg/kg-day	--	--	4.8E-06
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	3.99E-08	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.6E-06
	CHRYSENE	2.42E-01	mg/kg	2.42E-01	mg/kg	M	1.98E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	6.6E-07
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	4.92E-08	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.6E-07
	FLUORANTHENE	2.80E-01	mg/kg	2.80E-01	mg/kg	M	2.30E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	5.7E-06
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	6.72E-08	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.7E-06
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	1.15E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	2.9E-06
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	6.83E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	2.3E-05
	PHENANTHRENE	2.88E-01	mg/kg	2.88E-01	mg/kg	M	2.36E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	7.9E-07
	PYRENE	2.52E-01	mg/kg	2.52E-01	mg/kg	M	2.07E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	6.9E-06
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.39E-03	mg/kg	3.39E-03	mg/kg	M	9.26E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.9E-06
	4,4'-DDE	2.87E-03	mg/kg	2.87E-03	mg/kg	M	7.84E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.6E-06
	4,4'-DDT	1.20E-02	mg/kg	1.20E-02	mg/kg	M	3.28E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	6.6E-06
	ALDRIN	1.00E-03	mg/kg	1.00E-03	mg/kg	M	2.73E-10	mg/kg-day	3.0E-05	mg/kg-day	--	--	9.1E-06
	ALPHA-BHC	4.77E-03	mg/kg	4.77E-03	mg/kg	M	1.30E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	4.3E-06
	ALPHA-CHLORDANE	2.92E-03	mg/kg	2.92E-03	mg/kg	M	7.98E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.6E-06
	AROCLOR-1254	1.42E-02	mg/kg	1.42E-02	mg/kg	M	1.16E-08	mg/kg-day	2.0E-05	mg/kg-day	--	--	5.8E-04
	AROCLOR-1260	5.10E-02	mg/kg	5.10E-02	mg/kg	M	4.18E-08	mg/kg-day	2.0E-05	mg/kg-day	--	--	2.1E-03
	BETA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	4.48E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.5E-06

TABLE J-47

EPA TABLE U.7.4.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	DELTA-BHC	1.20E-03	mg/kg	1.20E-03	mg/kg	M	3.28E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.1E-06
	DIELDRIN	2.15E-03	mg/kg	2.15E-03	mg/kg	M	5.88E-10	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.2E-05
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	3.31E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	5.5E-08
	ENDOSULFAN II	1.94E-03	mg/kg	1.94E-03	mg/kg	M	5.30E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	8.8E-08
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	7.24E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.2E-07
	ENDRIN	2.03E-03	mg/kg	2.03E-03	mg/kg	M	5.55E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.8E-06
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	3.61E-03	mg/kg	M	9.87E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.3E-06
	ENDRIN KETONE	2.72E-03	mg/kg	2.72E-03	mg/kg	M	7.43E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.5E-06
	GAMMA-BHC	1.89E-03	mg/kg	1.89E-03	mg/kg	M	5.17E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.7E-06
	GAMMA-CHLORDANE	2.81E-03	mg/kg	2.81E-03	mg/kg	M	7.68E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.5E-06
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	6.29E-11	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.3E-07
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	3.40E-04	mg/kg	M	9.29E-11	mg/kg-day	1.3E-05	mg/kg-day	--	--	7.1E-06
	METHOXYCHLOR	9.79E-03	mg/kg	9.79E-03	mg/kg	M	2.68E-09	mg/kg-day	5.0E-03	mg/kg-day	--	--	5.4E-07
												Total Hazard Index Across All Direct Contact Exposure Routes/Pathways	1.9E-02

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) Chronic Values Used

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

TABLE J-48

EPA TABLE U.7.5.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	**METALS**												
	BARIUM	1.10E+02	mg/kg	1.10E+02	mg/kg	M	1.40E-03	mg/kg-day	7.0E-02	mg/kg-day	--	--	2.0E-02
	COBALT	1.33E+01	mg/kg	1.33E+01	mg/kg	M	1.70E-04	mg/kg-day	6.0E-02	mg/kg-day	--	--	2.8E-03
	LEAD	1.71E+02	mg/kg	1.71E+02	mg/kg	M	2.19E-03	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	3.60E-01	mg/kg	M	4.60E-06	mg/kg-day	5.0E-03	mg/kg-day	--	--	9.2E-04
	SELENIUM	6.02E-01	mg/kg	6.02E-01	mg/kg	M	7.70E-06	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.5E-03
	SILVER	4.56E-01	mg/kg	4.56E-01	mg/kg	M	5.83E-06	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.2E-03
	THALLIUM	4.29E-01	mg/kg	4.29E-01	mg/kg	M	5.49E-06	mg/kg-day	7.0E-05	mg/kg-day	--	--	7.8E-02
	TIN	2.39E+01	mg/kg	2.39E+01	mg/kg	M	3.06E-04	mg/kg-day	6.0E-01	mg/kg-day	--	--	5.1E-04
	TITANIUM	5.16E+03	mg/kg	5.16E+03	mg/kg	M	6.60E-02	mg/kg-day	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	2.56E-08	mg/kg-day	1.0E-01	mg/kg-day	--	--	2.6E-07
	TOLUENE	5.82E-03	mg/kg	5.82E-03	mg/kg	M	7.44E-08	mg/kg-day	2.0E-01	mg/kg-day	--	--	3.7E-07
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	5.11E-08	mg/kg-day	2.0E+00	mg/kg-day	--	--	2.6E-08
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	4.73E-07	mg/kg-day	1.0E-02	mg/kg-day	--	--	4.7E-05
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	3.07E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.0E-05
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.92E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	6.4E-06
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	2.46E-01	mg/kg	M	3.15E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.0E-05
	BENZO(A)PYRENE	2.50E-01	mg/kg	2.50E-01	mg/kg	M	3.20E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.1E-04
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	2.61E-01	mg/kg	M	3.33E-06	mg/kg-day	4.0E-02	mg/kg-day	--	--	8.3E-05
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	2.47E-01	mg/kg	M	3.16E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.1E-04
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	2.60E-01	mg/kg	M	3.32E-06	mg/kg-day	4.0E-02	mg/kg-day	--	--	8.3E-05
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	1.76E-01	mg/kg	M	2.24E-06	mg/kg-day	2.0E-02	mg/kg-day	--	--	1.1E-04
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	9.33E-07	mg/kg-day	2.5E-02	mg/kg-day	--	--	3.7E-05
	CHRYSENE	2.42E-01	mg/kg	2.42E-01	mg/kg	M	3.09E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.0E-05
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	7.67E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.6E-06
	FLUORANTHENE	2.80E-01	mg/kg	2.80E-01	mg/kg	M	3.58E-06	mg/kg-day	4.0E-02	mg/kg-day	--	--	9.0E-05
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	1.05E-06	mg/kg-day	4.0E-02	mg/kg-day	--	--	2.6E-05
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	1.79E-06	mg/kg-day	4.0E-02	mg/kg-day	--	--	4.5E-05
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	6.39E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	2.1E-04
	PHENANTHRENE	2.88E-01	mg/kg	2.88E-01	mg/kg	M	3.68E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.2E-05
	PYRENE	2.52E-01	mg/kg	2.52E-01	mg/kg	M	3.22E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.1E-04

TABLE J-48

EPA TABLE U.7.5.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.39E-03	mg/kg	3.39E-03	mg/kg	M	4.33E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	8.7E-05
	4,4'-DDE	2.87E-03	mg/kg	2.87E-03	mg/kg	M	3.67E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	7.3E-05
	4,4'-DDT	1.20E-02	mg/kg	1.20E-02	mg/kg	M	1.54E-07	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.1E-04
	ALDRIN	1.00E-03	mg/kg	1.00E-03	mg/kg	M	1.28E-08	mg/kg-day	3.0E-05	mg/kg-day	--	--	4.3E-04
	ALPHA-BHC	4.77E-03	mg/kg	4.77E-03	mg/kg	M	6.10E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.0E-04
	ALPHA-CHLORDANE	2.92E-03	mg/kg	2.92E-03	mg/kg	M	3.73E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	7.5E-05
	AROCLOR-1254	1.42E-02	mg/kg	1.42E-02	mg/kg	M	1.82E-07	mg/kg-day	2.0E-05	mg/kg-day	--	--	9.1E-03
	AROCLOR-1260	5.10E-02	mg/kg	5.10E-02	mg/kg	M	6.52E-07	mg/kg-day	2.0E-05	mg/kg-day	--	--	3.3E-02
	BETA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	2.10E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	7.0E-05
	DELTA-BHC	1.20E-03	mg/kg	1.20E-03	mg/kg	M	1.53E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	5.1E-05
	DIELDRIN	2.15E-03	mg/kg	2.15E-03	mg/kg	M	2.75E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	5.5E-04
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.55E-08	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.6E-06
	ENDOSULFAN II	1.94E-03	mg/kg	1.94E-03	mg/kg	M	2.48E-08	mg/kg-day	6.0E-03	mg/kg-day	--	--	4.1E-06
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	3.39E-08	mg/kg-day	6.0E-03	mg/kg-day	--	--	5.6E-06
	ENDRIN	2.03E-03	mg/kg	2.03E-03	mg/kg	M	2.60E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	8.7E-05
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	3.61E-03	mg/kg	M	4.62E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.5E-04
	ENDRIN KETONE	2.72E-03	mg/kg	2.72E-03	mg/kg	M	3.48E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.2E-04
	GAMMA-BHC	1.89E-03	mg/kg	1.89E-03	mg/kg	M	2.42E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	8.1E-05
	GAMMA-CHLORDANE	2.81E-03	mg/kg	2.81E-03	mg/kg	M	3.59E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	7.2E-05
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	2.94E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	5.9E-06
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	3.40E-04	mg/kg	M	4.35E-09	mg/kg-day	1.3E-05	mg/kg-day	--	--	3.3E-04
	METHOXYCHLOR	9.79E-03	mg/kg	9.79E-03	mg/kg	M	1.25E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.5E-05
Dermal	**METALS**												
	BARIUM	1.10E+02	mg/kg	1.10E+02	mg/kg	M	4.07E-05	mg/kg-day	7.0E-02	mg/kg-day	--	--	5.8E-04
	COBALT	1.33E+01	mg/kg	1.33E+01	mg/kg	M	4.94E-06	mg/kg-day	6.0E-02	mg/kg-day	--	--	8.2E-05
	LEAD	1.71E+02	mg/kg	1.71E+02	mg/kg	M	6.35E-05	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	3.60E-01	mg/kg	M	1.33E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.7E-05
	SELENIUM	6.02E-01	mg/kg	6.02E-01	mg/kg	M	2.23E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	4.5E-05
	SILVER	4.56E-01	mg/kg	4.56E-01	mg/kg	M	1.69E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.4E-05
	THALLIUM	4.29E-01	mg/kg	4.29E-01	mg/kg	M	1.59E-07	mg/kg-day	7.0E-05	mg/kg-day	--	--	2.3E-03
	TIN	2.39E+01	mg/kg	2.39E+01	mg/kg	M	8.86E-06	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.5E-05
	TITANIUM	5.16E+03	mg/kg	5.16E+03	mg/kg	M	1.91E-03	mg/kg-day	--	--	--	--	--

TABLE J-48

EPA TABLE U.7.5.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	7.42E-09	mg/kg-day	1.0E-01	mg/kg-day	--	--	7.4E-08
	TOLUENE	5.82E-03	mg/kg	5.82E-03	mg/kg	M	2.16E-08	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.1E-07
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.48E-08	mg/kg-day	2.0E+00	mg/kg-day	--	--	7.4E-09
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.37E-07	mg/kg-day	1.0E-02	mg/kg-day	--	--	1.4E-05
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.33E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.4E-06
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	8.34E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.8E-06
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	2.46E-01	mg/kg	M	1.37E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.6E-06
	BENZO(A)PYRENE	2.50E-01	mg/kg	2.50E-01	mg/kg	M	1.39E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	4.6E-05
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	2.61E-01	mg/kg	M	1.45E-06	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.6E-05
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	2.47E-01	mg/kg	M	1.38E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	4.6E-05
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	2.60E-01	mg/kg	M	1.45E-06	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.6E-05
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	1.76E-01	mg/kg	M	6.51E-07	mg/kg-day	2.0E-02	mg/kg-day	--	--	3.3E-05
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	2.71E-07	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.1E-05
	CHRYSENE	2.42E-01	mg/kg	2.42E-01	mg/kg	M	1.34E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.5E-06
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	3.34E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.1E-06
	FLUORANTHENE	2.80E-01	mg/kg	2.80E-01	mg/kg	M	1.56E-06	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.9E-05
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	4.56E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.1E-05
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	7.79E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.9E-05
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	4.63E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.5E-04
	PHENANTHRENE	2.88E-01	mg/kg	2.88E-01	mg/kg	M	1.60E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	5.3E-06
	PYRENE	2.52E-01	mg/kg	2.52E-01	mg/kg	M	1.40E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	4.7E-05
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.39E-03	mg/kg	3.39E-03	mg/kg	M	6.28E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.3E-05
	4,4'-DDE	2.87E-03	mg/kg	2.87E-03	mg/kg	M	5.32E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.1E-05
	4,4'-DDT	1.20E-02	mg/kg	1.20E-02	mg/kg	M	2.23E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	4.5E-05
	ALDRIN	1.00E-03	mg/kg	1.00E-03	mg/kg	M	1.85E-09	mg/kg-day	3.0E-05	mg/kg-day	--	--	6.2E-05
	ALPHA-BHC	4.77E-03	mg/kg	4.77E-03	mg/kg	M	8.84E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.9E-05
	ALPHA-CHLORDANE	2.92E-03	mg/kg	2.92E-03	mg/kg	M	5.41E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.1E-05
	AROCLOR-1254	1.42E-02	mg/kg	1.42E-02	mg/kg	M	7.90E-08	mg/kg-day	2.0E-05	mg/kg-day	--	--	3.9E-03
	AROCLOR-1260	5.10E-02	mg/kg	5.10E-02	mg/kg	M	2.84E-07	mg/kg-day	2.0E-05	mg/kg-day	--	--	1.4E-02
	BETA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	3.04E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.0E-05

TABLE J-48

EPA TABLE U.7.5.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	DELTA-BHC	1.20E-03	mg/kg	1.20E-03	mg/kg	M	2.22E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	7.4E-06
	DIELDRIN	2.15E-03	mg/kg	2.15E-03	mg/kg	M	3.99E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	8.0E-05
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	2.24E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	3.7E-07
	ENDOSULFAN II	1.94E-03	mg/kg	1.94E-03	mg/kg	M	3.60E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	6.0E-07
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	4.91E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	8.2E-07
	ENDRIN	2.03E-03	mg/kg	2.03E-03	mg/kg	M	3.76E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.3E-05
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	3.61E-03	mg/kg	M	6.69E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.2E-05
	ENDRIN KETONE	2.72E-03	mg/kg	2.72E-03	mg/kg	M	5.04E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.7E-05
	GAMMA-BHC	1.89E-03	mg/kg	1.89E-03	mg/kg	M	3.50E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.2E-05
	GAMMA-CHLORDANE	2.81E-03	mg/kg	2.81E-03	mg/kg	M	5.21E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.0E-05
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	4.26E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	8.5E-07
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	3.40E-04	mg/kg	M	6.30E-10	mg/kg-day	1.3E-05	mg/kg-day	--	--	4.8E-05
	METHOXYCHLOR	9.79E-03	mg/kg	9.79E-03	mg/kg	M	1.81E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.6E-06
												Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	1.7E-01

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
(2) Chronic Values Used
bgs = Below ground surface
Ft. = Feet
mg/kg = Milligrams per kilogram

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EPA TABLE U.7.6.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation-Dust	**METALS**												
	BARIUM	1.10E+02	mg/kg	8.33E-08	mg/m^3	R	2.28E-08	mg/kg-day	1.0E-04	mg/kg-day	--	--	2.3E-04
	COBALT	1.33E+01	mg/kg	1.01E-08	mg/m^3	R	2.77E-09	mg/kg-day	1.4E-06	mg/kg-day	--	--	1.9E-03
	LEAD	1.71E+02	mg/kg	1.30E-07	mg/m^3	R	3.57E-08	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	2.74E-10	mg/m^3	R	7.49E-11	mg/kg-day	--	--	--	--	--
	SELENIUM	6.02E-01	mg/kg	4.58E-10	mg/m^3	R	1.25E-10	mg/kg-day	2.3E-05	mg/kg-day	--	--	5.5E-06
	SILVER	4.56E-01	mg/kg	3.47E-10	mg/m^3	R	9.50E-11	mg/kg-day	5.7E-03	mg/kg-day	--	--	1.7E-08
	THALLIUM	4.29E-01	mg/kg	3.26E-10	mg/m^3	R	8.94E-11	mg/kg-day	--	--	--	--	--
	TIN	2.39E+01	mg/kg	1.82E-08	mg/m^3	R	4.98E-09	mg/kg-day	--	--	--	--	--
	TITANIUM	5.16E+03	mg/kg	3.92E-06	mg/m^3	R	1.07E-06	mg/kg-day	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	1.52E-12	mg/m^3	R	4.16E-13	mg/kg-day	2.0E-01	mg/kg-day	--	--	2.1E-12
	TOLUENE	5.82E-03	mg/kg	4.42E-12	mg/m^3	R	1.21E-12	mg/kg-day	1.1E-01	mg/kg-day	--	--	1.1E-11
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	8.33E-13	mg/kg-day	2.0E-01	mg/kg-day	--	--	4.2E-12
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	7.70E-12	mg/kg-day	5.7E-02	mg/kg-day	--	--	1.3E-10
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	5.00E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.7E-10
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	3.12E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.0E-10
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	1.87E-10	mg/m^3	R	5.13E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.7E-10
	BENZO(A)PYRENE	2.50E-01	mg/kg	1.90E-10	mg/m^3	R	5.21E-11	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.7E-09
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	1.98E-10	mg/m^3	R	5.43E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.4E-09
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	1.88E-10	mg/m^3	R	5.15E-11	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.7E-09
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	1.97E-10	mg/m^3	R	5.41E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.4E-09
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	1.33E-10	mg/m^3	R	3.65E-11	mg/kg-day	2.0E-02	mg/kg-day	--	--	1.8E-09
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	1.52E-11	mg/kg-day	2.5E-02	mg/kg-day	--	--	6.1E-10
	CHRYSENE	2.42E-01	mg/kg	1.84E-10	mg/m^3	R	5.03E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.7E-10

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EPA TABLE U.7.6.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	1.25E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.2E-11
	FLUORANTHENE	2.80E-01	mg/kg	2.13E-10	mg/m^3	R	5.83E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.5E-09
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	1.71E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	4.3E-10
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	2.91E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	7.3E-10
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	1.04E-10	mg/kg-day	3.0E-02	mg/kg-day	--	--	3.5E-09
	PHENANTHRENE	2.88E-01	mg/kg	2.19E-10	mg/m^3	R	5.99E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.0E-10
	PYRENE	2.52E-01	mg/kg	1.91E-10	mg/m^3	R	5.25E-11	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.7E-09
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.39E-03	mg/kg	2.58E-12	mg/m^3	R	7.06E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.4E-09
	4,4'-DDE	2.87E-03	mg/kg	2.18E-12	mg/m^3	R	5.97E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.2E-09
	4,4'-DDT	1.20E-02	mg/kg	9.13E-12	mg/m^3	R	2.50E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	5.0E-09
	ALDRIN	1.00E-03	mg/kg	7.60E-13	mg/m^3	R	2.08E-13	mg/kg-day	3.0E-05	mg/kg-day	--	--	6.9E-09
	ALPHA-BHC	4.77E-03	mg/kg	3.62E-12	mg/m^3	R	9.93E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.3E-09
	ALPHA-CHLORDANE	2.92E-03	mg/kg	2.22E-12	mg/m^3	R	6.08E-13	mg/kg-day	2.0E-04	mg/kg-day	--	--	3.0E-09
	AROCLOR-1254	1.42E-02	mg/kg	1.08E-11	mg/m^3	R	2.96E-12	mg/kg-day	2.0E-05	mg/kg-day	--	--	1.5E-07
	AROCLOR-1260	5.10E-02	mg/kg	3.88E-11	mg/m^3	R	1.06E-11	mg/kg-day	2.0E-05	mg/kg-day	--	--	5.3E-07
	BETA-BHC	1.64E-03	mg/kg	1.25E-12	mg/m^3	R	3.41E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.1E-09
	DELTA-BHC	1.20E-03	mg/kg	9.12E-13	mg/m^3	R	2.50E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	8.3E-10
	DIELDRIN	2.15E-03	mg/kg	1.63E-12	mg/m^3	R	4.48E-13	mg/kg-day	5.0E-05	mg/kg-day	--	--	9.0E-09
	ENDOSULFAN I	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	2.52E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	4.2E-11
	ENDOSULFAN II	1.94E-03	mg/kg	1.47E-12	mg/m^3	R	4.04E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	6.7E-11
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	2.01E-12	mg/m^3	R	5.52E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	9.2E-11
	ENDRIN	2.03E-03	mg/kg	1.54E-12	mg/m^3	R	4.23E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.4E-09
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	2.74E-12	mg/m^3	R	7.52E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.5E-09
	ENDRIN KETONE	2.72E-03	mg/kg	2.07E-12	mg/m^3	R	5.66E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.9E-09
	GAMMA-BHC	1.89E-03	mg/kg	1.44E-12	mg/m^3	R	3.93E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.3E-09
	GAMMA-CHLORDANE	2.81E-03	mg/kg	2.14E-12	mg/m^3	R	5.85E-13	mg/kg-day	2.0E-04	mg/kg-day	--	--	2.9E-09

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EPA TABLE U.7.6.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	HEPTACHLOR	2.30E-04	mg/kg	1.75E-13	mg/m^3	R	4.79E-14	mg/kg-day	5.0E-04	mg/kg-day	--	--	9.6E-11
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	2.58E-13	mg/m^3	R	7.08E-14	mg/kg-day	1.3E-05	mg/kg-day	--	--	5.4E-09
	METHOXYCHLOR	9.79E-03	mg/kg	7.44E-12	mg/m^3	R	2.04E-12	mg/kg-day	5.0E-03	mg/kg-day	--	--	4.1E-10
Inhalation VOCs	**METALS**												
	BARIUM	1.10E+02	mg/kg	--	mg/m^3	R	--	--	1.0E-04	mg/kg-day	--	--	--
	COBALT	1.33E+01	mg/kg	--	mg/m^3	R	--	--	1.4E-06	mg/kg-day	--	--	--
	LEAD	1.71E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	SELENIUM	6.02E-01	mg/kg	--	mg/m^3	R	--	--	2.3E-05	mg/kg-day	--	--	--
	SILVER	4.56E-01	mg/kg	--	mg/m^3	R	--	--	5.7E-03	mg/kg-day	--	--	--
	THALLIUM	4.29E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TIN	2.39E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TITANIUM	5.16E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	2.30E-02	mg/m^3	R	6.30E-03	mg/kg-day	2.0E-01	mg/kg-day	--	--	3.2E-02
	TOLUENE	5.82E-03	mg/kg	2.56E-02	mg/m^3	R	7.01E-03	mg/kg-day	1.1E-01	mg/kg-day	--	--	6.1E-02
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	4.47E-04	mg/kg-day	2.0E-01	mg/kg-day	--	--	2.2E-03
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	1.24E-02	mg/kg-day	5.7E-02	mg/kg-day	--	--	2.2E-01
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.78E-01	mg/m^3	R	4.87E-02	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.6E-01
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	7.51E-04	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.5E-03
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(A)PYRENE	2.50E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day	--	--	--

TABLE J-49

EPA TABLE U.7.6.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.5E-02	mg/kg-day	--	--	--
	CHRYSENE	2.42E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	FLUORANTHENE	2.80E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	9.30E-04	mg/kg-day	4.0E-02	mg/kg-day	--	--	2.3E-02
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day	--	--	--
	PHENANTHRENE	2.88E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	PYRENE	2.52E-01	mg/kg	9.61E-04	mg/m^3	R	2.63E-04	mg/kg-day	3.0E-02	mg/kg-day	--	--	8.8E-03
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.39E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDE	2.87E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDT	1.20E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	ALDRIN	1.00E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-05	mg/kg-day	--	--	--
	ALPHA-BHC	4.77E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ALPHA-CHLORDANE	2.92E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-04	mg/kg-day	--	--	--
	AROCLOR-1254	1.42E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-05	mg/kg-day	--	--	--
	AROCLOR-1260	5.10E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-05	mg/kg-day	--	--	--
	BETA-BHC	1.64E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	DELTA-BHC	1.20E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	DIELDRIN	2.15E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	ENDOSULFAN I	1.21E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN II	1.94E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDRIN	2.03E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ENDRIN KETONE	2.72E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--

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EPA TABLE U.7.6.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	GAMMA-BHC	1.89E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	GAMMA-CHLORDANE	2.81E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-04	mg/kg-day	--	--	--
	HEPTACHLOR	2.30E-04	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	--	mg/m^3	R	--	--	1.3E-05	mg/kg-day	--	--	--
	METHOXYCHLOR	9.79E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-03	mg/kg-day	--	--	--

Total Hazard Index Across All Air Exposure Routes/Pathways	5.1E-01
Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	1.9E-02
Total Hazard Index Across All Exposure Routes/Pathways - Soil	**5.3E-01**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) All values are chronic

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

-- = No value available

VOC = Volatile Organic Compound

TABLE J-50

EPA TABLE U.7.7.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation-Dust	**METALS**												
	BARIUM	1.10E+02	mg/kg	8.33E-08	mg/m^3	R	5.33E-08	mg/kg-day	1.0E-04	mg/kg-day	--	--	5.3E-04
	COBALT	1.33E+01	mg/kg	1.01E-08	mg/m^3	R	6.47E-09	mg/kg-day	1.4E-06	mg/kg-day	--	--	4.5E-03
	LEAD	1.71E+02	mg/kg	1.30E-07	mg/m^3	R	8.32E-08	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	2.74E-10	mg/m^3	R	1.75E-10	mg/kg-day	--	--	--	--	--
	SELENIUM	6.02E-01	mg/kg	4.58E-10	mg/m^3	R	2.93E-10	mg/kg-day	2.3E-05	mg/kg-day	--	--	1.3E-05
	SILVER	4.56E-01	mg/kg	3.47E-10	mg/m^3	R	2.22E-10	mg/kg-day	5.7E-03	mg/kg-day	--	--	3.9E-08
	THALLIUM	4.29E-01	mg/kg	3.26E-10	mg/m^3	R	2.09E-10	mg/kg-day	--	--	--	--	--
	TIN	2.39E+01	mg/kg	1.82E-08	mg/m^3	R	1.16E-08	mg/kg-day	--	--	--	--	--
	TITANIUM	5.16E+03	mg/kg	3.92E-06	mg/m^3	R	2.51E-06	mg/kg-day	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	1.52E-12	mg/m^3	R	9.72E-13	mg/kg-day	2.0E-01	mg/kg-day	--	--	4.9E-12
	TOLUENE	5.82E-03	mg/kg	4.42E-12	mg/m^3	R	2.83E-12	mg/kg-day	1.1E-01	mg/kg-day	--	--	2.5E-11
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	1.94E-12	mg/kg-day	2.0E-01	mg/kg-day	--	--	9.7E-12
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	1.8E-11	mg/kg-day	5.7E-02	mg/kg-day	--	--	3.1E-10
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	1.17E-10	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.9E-10
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	7.29E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.4E-10
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	1.87E-10	mg/m^3	R	1.20E-10	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.0E-10
	BENZO(A)PYRENE	2.50E-01	mg/kg	1.90E-10	mg/m^3	R	1.22E-10	mg/kg-day	3.0E-02	mg/kg-day	--	--	4.1E-09
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	1.98E-10	mg/m^3	R	1.27E-10	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.2E-09
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	1.88E-10	mg/m^3	R	1.20E-10	mg/kg-day	3.0E-02	mg/kg-day	--	--	4.0E-09
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	1.97E-10	mg/m^3	R	1.26E-10	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.2E-09
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	1.33E-10	mg/m^3	R	8.53E-11	mg/kg-day	2.0E-02	mg/kg-day	--	--	4.3E-09
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	3.55E-11	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.4E-09
	CHRYSENE	2.42E-01	mg/kg	1.84E-10	mg/m^3	R	1.17E-10	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.9E-10
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	2.91E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	9.7E-11
	FLUORANTHENE	2.80E-01	mg/kg	2.13E-10	mg/m^3	R	1.36E-10	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.4E-09

TABLE J-50

EPA TABLE U.7.7.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	3.98E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.0E-09
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	6.80E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.7E-09
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	2.43E-10	mg/kg-day	3.0E-02	mg/kg-day	--	--	8.1E-09
	PHENANTHRENE	2.88E-01	mg/kg	2.19E-10	mg/m^3	R	1.40E-10	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.7E-10
	PYRENE	2.52E-01	mg/kg	1.91E-10	mg/m^3	R	1.22E-10	mg/kg-day	3.0E-02	mg/kg-day	--	--	4.1E-09
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.39E-03	mg/kg	2.58E-12	mg/m^3	R	1.65E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.3E-09
	4,4'-DDE	2.87E-03	mg/kg	2.18E-12	mg/m^3	R	1.39E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.8E-09
	4,4'-DDT	1.20E-02	mg/kg	9.13E-12	mg/m^3	R	5.83E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.2E-08
	ALDRIN	1.00E-03	mg/kg	7.60E-13	mg/m^3	R	4.86E-13	mg/kg-day	3.0E-05	mg/kg-day	--	--	1.6E-08
	ALPHA-BHC	4.77E-03	mg/kg	3.62E-12	mg/m^3	R	2.32E-12	mg/kg-day	3.0E-04	mg/kg-day	--	--	7.7E-09
	ALPHA-CHLORDANE	2.92E-03	mg/kg	2.22E-12	mg/m^3	R	1.42E-12	mg/kg-day	2.0E-04	mg/kg-day	--	--	7.1E-09
	AROCLOR-1254	1.42E-02	mg/kg	1.08E-11	mg/m^3	R	6.90E-12	mg/kg-day	2.0E-05	mg/kg-day	--	--	3.4E-07
	AROCLOR-1260	5.10E-02	mg/kg	3.88E-11	mg/m^3	R	2.48E-11	mg/kg-day	2.0E-05	mg/kg-day	--	--	1.2E-06
	BETA-BHC	1.64E-03	mg/kg	1.25E-12	mg/m^3	R	7.97E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.7E-09
	DELTA-BHC	1.20E-03	mg/kg	9.12E-13	mg/m^3	R	5.83E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.9E-09
	DIELDRIN	2.15E-03	mg/kg	1.63E-12	mg/m^3	R	1.04E-12	mg/kg-day	5.0E-05	mg/kg-day	--	--	2.1E-08
	ENDOSULFAN I	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	5.88E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	9.8E-11
	ENDOSULFAN II	1.94E-03	mg/kg	1.47E-12	mg/m^3	R	9.42E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.6E-10
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	2.01E-12	mg/m^3	R	1.29E-12	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.1E-10
	ENDRIN	2.03E-03	mg/kg	1.54E-12	mg/m^3	R	9.86E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.3E-09
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	2.74E-12	mg/m^3	R	1.75E-12	mg/kg-day	3.0E-04	mg/kg-day	--	--	5.8E-09
	ENDRIN KETONE	2.72E-03	mg/kg	2.07E-12	mg/m^3	R	1.32E-12	mg/kg-day	3.0E-04	mg/kg-day	--	--	4.4E-09
	GAMMA-BHC	1.89E-03	mg/kg	1.44E-12	mg/m^3	R	9.18E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.1E-09
	GAMMA-CHLORDANE	2.81E-03	mg/kg	2.14E-12	mg/m^3	R	1.37E-12	mg/kg-day	2.0E-04	mg/kg-day	--	--	6.8E-09
	HEPTACHLOR	2.30E-04	mg/kg	1.75E-13	mg/m^3	R	1.12E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.2E-10
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	2.58E-13	mg/m^3	R	1.65E-13	mg/kg-day	1.3E-05	mg/kg-day	--	--	1.3E-08
	METHOXYCHLOR	9.79E-03	mg/kg	7.44E-12	mg/m^3	R	4.76E-12	mg/kg-day	5.0E-03	mg/kg-day	--	--	9.5E-10

TABLE J-50

EPA TABLE U.7.7.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation VOCs	**METALS**												
	BARIUM	1.10E+02	mg/kg	--	mg/m^3	R	--	--	1.0E-04	mg/kg-day	--	--	--
	COBALT	1.33E+01	mg/kg	--	mg/m^3	R	--	--	1.4E-06	mg/kg-day	--	--	--
	LEAD	1.71E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	MOLYBDENUM	3.60E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	SELENIUM	6.02E-01	mg/kg	--	mg/m^3	R	--	--	2.3E-05	mg/kg-day	--	--	--
	SILVER	4.56E-01	mg/kg	--	mg/m^3	R	--	--	5.7E-03	mg/kg-day	--	--	--
	THALLIUM	4.29E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TIN	2.39E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TITANIUM	5.16E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	2.30E-02	mg/m^3	R	1.47E-02	mg/kg-day	2.0E-01	mg/kg-day	--	--	7.4E-02
	TOLUENE	5.82E-03	mg/kg	2.56E-02	mg/m^3	R	1.64E-02	mg/kg-day	1.1E-01	mg/kg-day	--	--	1.4E-01
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	1.04E-03	mg/kg-day	2.0E-01	mg/kg-day	--	--	5.2E-03
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	2.89E-02	mg/kg-day	5.7E-02	mg/kg-day	--	--	5.1E-01
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.78E-01	mg/m^3	R	1.14E-01	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.8E-01
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	1.75E-03	mg/kg-day	3.0E-01	mg/kg-day	--	--	5.8E-03
	BENZO(A)ANTHRACENE	2.46E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(A)PYRENE	2.50E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.61E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	BENZO(G,H,I)PERYLENE	2.47E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.60E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.76E-01	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day	--	--	--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.5E-02	mg/kg-day	--	--	--
	CHRYSENE	2.42E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	FLUORANTHENE	2.80E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	2.17E-03	mg/kg-day	4.0E-02	mg/kg-day	--	--	5.4E-02

TABLE J-50

EPA TABLE U.7.7.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day	--	--	--
	PHENANTHRENE	2.88E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	PYRENE	2.52E-01	mg/kg	9.61E-04	mg/m^3	R	6.14E-04	mg/kg-day	3.0E-02	mg/kg-day	--	--	2.0E-02
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	PHENANTHRENE	3.39E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	PHENANTHRENE	2.87E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDT	1.20E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	ALDRIN	1.00E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-05	mg/kg-day	--	--	--
	ALPHA-BHC	4.77E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ALPHA-CHLORDANE	2.92E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-04	mg/kg-day	--	--	--
	AROCLOR-1254	1.42E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-05	mg/kg-day	--	--	--
	AROCLOR-1260	5.10E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-05	mg/kg-day	--	--	--
	BETA-BHC	1.64E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	DELTA-BHC	1.20E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	DIELDRIN	2.15E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	ENDOSULFAN I	1.21E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN II	1.94E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.65E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDRIN	2.03E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.61E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ENDRIN KETONE	2.72E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	GAMMA-BHC	1.89E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	GAMMA-CHLORDANE	2.81E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-04	mg/kg-day	--	--	--
	PHENANTHRENE	2.30E-04	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	HEPTACHLOR EPOXIDE	3.40E-04	mg/kg	--	mg/m^3	R	--	--	1.3E-05	mg/kg-day	--	--	--

TABLE J-50

EPA TABLE U.7.7.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	METHOXYCHLOR	9.79E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-03	mg/kg-day	--	--	--
												Total Hazard Index Across All Air Exposure Routes/Pathways	1.2E+00
												Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	1.7E-01
												Total Hazard Index Across All Exposure Routes/Pathways - Soil	**1.4E+00**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) All values are chronic

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

-- = No value available

VOC = Volatile Organic Compound

TABLE J-51

EPA TABLE U.7.8.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation VOCs	**VOLATILE ORGANIC COMPOUNDS**												
	1,2-DICHLOROETHANE	3.30E-04	mg/L	1.02E-05	mg/m^3	R	2.81E-06	mg/kg-day	1.4E-03	mg/kg-day	--	--	2.0E-03
	2-BUTANONE	1.98E-02	mg/L	2.23E-04	mg/m^3	R	6.10E-05	mg/kg-day	2.9E-01	mg/kg-day	--	--	2.1E-04
	4-METHYL-2-PENTANONE	8.00E-04	mg/L	1.41E-05	mg/m^3	R	3.87E-06	mg/kg-day	2.3E-02	mg/kg-day	--	--	1.7E-04
	ACETONE	8.79E-02	mg/L	9.67E-04	mg/m^3	R	2.65E-04	mg/kg-day	1.0E-01	mg/kg-day			2.7E-03
	CHLOROMETHANE	7.00E-04	mg/L	1.36E-05	mg/m^3	R	3.72E-06	mg/kg-day	2.6E-02	mg/kg-day	--	--	1.4E-04
	ETHYLBENZENE	7.00E-04	mg/L	1.62E-05	mg/m^3	R	4.44E-06	mg/kg-day	2.9E-01	mg/kg-day	--	--	1.6E-05
	TOLUENE	1.00E-03	mg/L	2.55E-05	mg/m^3	R	6.99E-06	mg/kg-day	1.1E-01	mg/kg-day	--	--	6.1E-05
	XYLENE (TOTAL)	1.54E-03	mg/L	3.35E-05	mg/m^3	R	9.18E-06	mg/kg-day	2.0E-01	mg/kg-day	--	--	4.6E-05
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,3-DICHLOROBENZENE	9.00E-04	mg/L	2.10E-05	mg/m^3	R	5.74E-06	mg/kg-day	9.0E-04	mg/kg-day	--	--	6.4E-03
	2,4-DICHLOROPHENOL	2.00E-03	mg/L	--		R	--	--	3.0E-03	mg/kg-day	--	--	--
	4-METHYLPHENOL	6.00E-03	mg/L	--		R	--	--	5.0E-03	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-03	mg/L	--		R	--	--	6.0E-02	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.00E-03	mg/L	--		R	--	--	4.0E-02	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	7.85E-03	mg/L	--		R	--	--	2.0E-02	mg/kg-day	--	--	--
	CARBAZOLE	2.00E-03	mg/L	--		R	--	--	2.5E-02	mg/kg-day	--	--	--
	FLUORANTHENE	4.00E-03	mg/L	--		R	--	--	4.0E-02	mg/kg-day	--	--	--
	N-NITROSODIPHENYLAMINE (1)	1.32E-02	mg/L	--		R	--	--	--	--	--	--	--
	NAPHTHALENE	2.00E-03	mg/L	4.32E-05	mg/m^3	R	1.18E-05	mg/kg-day	8.6E-04	mg/kg-day	--	--	1.4E-02
	PHENANTHRENE	2.00E-03	mg/L	1.60E-05	mg/m^3	R	4.39E-06	mg/kg-day	3.0E-01	mg/kg-day			1.5E-05
	PHENOL	2.00E-03	mg/L	--		R	--	--	6.0E-01	mg/kg-day	--	--	--
	PYRENE	1.10E-02	mg/L	2.93E-05	mg/m^3	R	8.04E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	2.7E-04

Total Hazard Index Across All Air Exposure Routes/Pathways - Groundwater	2.6E-02
Total Hazard Index Across All Exposure Routes/Pathways - Soil	5.3E-01
Total Hazard Index Across All Exposure Routes/Pathways - Soil and Groundwater	**5.6E-01**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) All values are chronic

Ft. = Feet

mg/L = Milligrams per liter

mg/m^3 = Milligrams per cubic meter

-- = No value available

TABLE J-52

EPA TABLE U.7.9.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation VOCs	**VOLATILE ORGANIC COMPOUNDS**												
	1,2-DICHLOROETHANE	3.30E-04	mg/L	1.02E-05	mg/m^3	R	6.55E-06	mg/kg-day	1.4E-03	mg/kg-day	--	--	4.7E-03
	2-BUTANONE	1.98E-02	mg/L	2.23E-04	mg/m^3	R	1.42E-04	mg/kg-day	2.9E-01	mg/kg-day	--	--	4.9E-04
	4-METHYL-2-PENTANONE	8.00E-04	mg/L	1.41E-05	mg/m^3	R	9.02E-06	mg/kg-day	2.3E-02	mg/kg-day	--	--	3.9E-04
	ACETONE	8.79E-02	mg/L	9.67E-04	mg/m^3	R	6.18E-04	mg/kg-day	1.0E-01	mg/kg-day			6.2E-03
	CHLOROMETHANE	7.00E-04	mg/L	1.36E-05	mg/m^3	R	8.68E-06	mg/kg-day	2.6E-02	mg/kg-day	--	--	3.3E-04
	ETHYLBENZENE	7.00E-04	mg/L	1.62E-05	mg/m^3	R	1.04E-05	mg/kg-day	2.9E-01	mg/kg-day	--	--	3.6E-05
	TOLUENE	1.00E-03	mg/L	2.55E-05	mg/m^3	R	1.63E-05	mg/kg-day	1.1E-01	mg/kg-day	--	--	1.4E-04
	XYLENE (TOTAL)	1.54E-03	mg/L	3.35E-05	mg/m^3	R	2.14E-05	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.1E-04
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,3-DICHLOROBENZENE	9.00E-04	mg/L	2.10E-05	mg/m^3	R	1.34E-05	mg/kg-day	9.0E-04	mg/kg-day	--	--	1.5E-02
	2,4-DICHLOROPHENOL	2.00E-03	mg/L	--		R	--	--	3.0E-03	mg/kg-day	--	--	--
	4-METHYLPHENOL	6.00E-03	mg/L	--		R	--	--	5.0E-03	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-03	mg/L	--		R	--	--	6.0E-02	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.00E-03	mg/L	--		R	--	--	4.0E-02	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	7.85E-03	mg/L	--		R	--	--	2.0E-02	mg/kg-day	--	--	--
	CARBAZOLE	2.00E-03	mg/L	--		R	--	--	2.5E-02	mg/kg-day	--	--	--
	FLUORANTHENE	4.00E-03	mg/L	--		R	--	--	4.0E-02	mg/kg-day	--	--	--
	N-NITROSODIPHENYLAMINE (1)	1.32E-02	mg/L	--		R	--	--	--	--	--	--	--
	NAPHTHALENE	2.00E-03	mg/L	4.32E-05	mg/m^3	R	2.76E-05	mg/kg-day	8.6E-04	mg/kg-day	--	--	3.2E-02
	PHENANTHRENE	2.00E-03	mg/L	1.60E-05	mg/m^3	R	1.02E-05	mg/kg-day	3.0E-01	mg/kg-day			3.4E-05
	PHENOL	2.00E-03	mg/L	--		R	--	--	6.0E-01	mg/kg-day	--	--	--
	PYRENE	1.10E-02	mg/L	2.93E-05	mg/m^3	R	1.88E-05	mg/kg-day	3.0E-02	mg/kg-day	--	--	6.3E-04

Total Hazard Index Across All Air Exposure Routes/Pathways - Groundwater	6.0E-02
Total Hazard Index Across All Exposure Routes/Pathways - Soil	1.4E+00
Total Hazard Index Across All Exposure Routes/Pathways - Soil and Groundwater	**1.4E+00**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) All values are chronic

Ft. = Feet

mg/L = Milligrams per liter

mg/m^3 = Milligrams per cubic meter

-- = No value available

TABLE J-53

EPA TABLE U.7.4.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	**METALS**												
	BARIUM	9.65E+01	mg/kg	9.65E+01	mg/kg	M	6.61E-05	mg/kg-day	7.0E-02	mg/kg-day	--	--	9.4E-04
	COBALT	1.17E+01	mg/kg	1.17E+01	mg/kg	M	8.02E-06	mg/kg-day	6.0E-02	mg/kg-day	--	--	1.3E-04
	LEAD	1.11E+02	mg/kg	1.11E+02	mg/kg	M	7.64E-05	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	2.82E-01	mg/kg	M	1.93E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.9E-05
	SELENIUM	5.25E-01	mg/kg	5.25E-01	mg/kg	M	3.59E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	7.2E-05
	SILVER	3.01E-01	mg/kg	3.01E-01	mg/kg	M	2.06E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	4.1E-05
	THALLIUM	3.96E-01	mg/kg	3.96E-01	mg/kg	M	2.71E-07	mg/kg-day	7.0E-04	mg/kg-day	--	--	3.9E-04
	TIN	1.53E+01	mg/kg	1.53E+01	mg/kg	M	1.05E-05	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.7E-05
	TITANIUM	4.41E+03	mg/kg	4.41E+03	mg/kg	M	3.02E-03	mg/kg-day	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	1.37E-09	mg/kg-day	1.0E-01	mg/kg-day	--	--	1.4E-08
	TOLUENE	5.59E-03	mg/kg	5.59E-03	mg/kg	M	3.83E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.9E-09
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	2.74E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.4E-09
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	2.5E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	2.5E-06
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	2.24E-01	mg/kg	M	1.53E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.1E-08
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.03E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.4E-08
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	1.41E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.7E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	1.38E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.6E-07
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	2.15E-01	mg/kg	M	1.47E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.7E-07
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	2.10E-01	mg/kg	M	1.44E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.8E-07
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	2.19E-01	mg/kg	M	1.50E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.8E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	1.29E-01	mg/kg	M	8.83E-08	mg/kg-day	2.0E-02	mg/kg-day	--	--	4.4E-06
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	5.00E-08	mg/kg-day	2.5E-02	mg/kg-day	--	--	2.0E-06
	CHRYSENE	1.93E-01	mg/kg	1.93E-01	mg/kg	M	1.32E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.4E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	4.11E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.4E-08
	FLUORANTHENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	1.41E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.5E-07
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	5.62E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.4E-07
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	9.59E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.4E-07
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	3.42E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.1E-05
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	1.56E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.2E-08
	PYRENE	1.86E-01	mg/kg	1.86E-01	mg/kg	M	1.28E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.3E-07
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.91E-03	mg/kg	2.91E-03	mg/kg	M	2.0E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	4.0E-06
	4,4'-DDE	2.55E-03	mg/kg	2.55E-03	mg/kg	M	1.7E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.5E-06
	4,4'-DDT	9.11E-03	mg/kg	9.11E-03	mg/kg	M	6.24E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.2E-05

TABLE J-53

EPA TABLE U.7.4.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	ALDRIN	9.90E-04	mg/kg	9.90E-04	mg/kg	M	6.78E-10	mg/kg-day	3.0E-05	mg/kg-day	--	--	2.3E-05
	ALPHA-BHC	3.56E-03	mg/kg	3.56E-03	mg/kg	M	2.44E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	8.1E-07
	ALPHA-CHLORDANE	2.36E-03	mg/kg	2.36E-03	mg/kg	M	1.62E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.2E-06
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	7.54E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.5E-04
	AROCLOR-1260	3.89E-02	mg/kg	3.89E-02	mg/kg	M	2.66E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	5.3E-04
	BETA-BHC	1.46E-03	mg/kg	1.46E-03	mg/kg	M	1.00E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	3.3E-07
	DELTA-BHC	1.12E-03	mg/kg	1.12E-03	mg/kg	M	7.67E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.6E-07
	DIELDRIN	2.04E-03	mg/kg	2.04E-03	mg/kg	M	1.40E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	2.8E-05
	ENDOSULFAN I	1.13E-03	mg/kg	1.13E-03	mg/kg	M	7.74E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.3E-07
	ENDOSULFAN II	1.89E-03	mg/kg	1.89E-03	mg/kg	M	1.29E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.2E-07
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	1.64E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.7E-07
	ENDRIN	1.96E-03	mg/kg	1.96E-03	mg/kg	M	1.34E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	4.5E-06
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	3.15E-03	mg/kg	M	2.16E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	7.2E-06
	ENDRIN KETONE	2.48E-03	mg/kg	2.48E-03	mg/kg	M	1.70E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	5.7E-06
	GAMMA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	1.12E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	3.7E-07
	GAMMA-CHLORDANE	2.27E-03	mg/kg	2.27E-03	mg/kg	M	1.55E-09	mg/kg-day	6.0E-05	mg/kg-day	--	--	2.6E-05
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	1.37E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.7E-07
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	2.90E-04	mg/kg	M	1.99E-10	mg/kg-day	1.3E-05	mg/kg-day	--	--	1.5E-05
	METHOXYCHLOR	9.51E-03	mg/kg	9.51E-03	mg/kg	M	6.51E-09	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.3E-06
Dermal	**METALS**												
	BARIUM	9.65E+01	mg/kg	9.65E+01	mg/kg	M	4.62E-06	mg/kg-day	7.0E-02	mg/kg-day	--	--	6.6E-05
	COBALT	1.17E+01	mg/kg	1.17E+01	mg/kg	M	5.61E-07	mg/kg-day	6.0E-02	mg/kg-day	--	--	9.4E-06
	LEAD	1.11E+02	mg/kg	1.11E+02	mg/kg	M	5.34E-06	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	2.82E-01	mg/kg	M	1.35E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.7E-06
	SELENIUM	5.25E-01	mg/kg	5.25E-01	mg/kg	M	2.52E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	5.0E-06
	SILVER	3.01E-01	mg/kg	3.01E-01	mg/kg	M	1.44E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.9E-06
	THALLIUM	3.96E-01	mg/kg	3.96E-01	mg/kg	M	1.90E-08	mg/kg-day	7.0E-04	mg/kg-day	--	--	2.7E-05
	TIN	1.53E+01	mg/kg	1.53E+01	mg/kg	M	7.32E-07	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.2E-06
	TITANIUM	4.41E+03	mg/kg	4.41E+03	mg/kg	M	2.11E-04	mg/kg-day	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	9.59E-10	mg/kg-day	1.0E-01	mg/kg-day	--	--	9.6E-09
	TOLUENE	5.59E-03	mg/kg	5.59E-03	mg/kg	M	2.68E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.3E-09
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.92E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	9.6E-10
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.77E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	1.8E-06
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	2.24E-01	mg/kg	M	1.61E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.4E-08
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.08E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.6E-08

TABLE J-53

EPA TABLE U.7.4.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	1.48E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.9E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	1.45E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.8E-07
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	2.15E-01	mg/kg	M	1.54E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.9E-07
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	2.10E-01	mg/kg	M	1.51E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	5.0E-07
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	2.19E-01	mg/kg	M	1.58E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.9E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	1.29E-01	mg/kg	M	6.18E-08	mg/kg-day	2.0E-02	mg/kg-day	--	--	3.1E-06
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	3.50E-08	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.4E-06
	CHRYSENE	1.93E-01	mg/kg	1.93E-01	mg/kg	M	1.39E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.6E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	4.32E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.4E-08
	FLUORANTHENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	1.48E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.7E-07
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	5.90E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.5E-07
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	1.01E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.5E-07
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	5.99E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	2.0E-05
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	1.64E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.5E-08
	PYRENE	1.86E-01	mg/kg	1.86E-01	mg/kg	M	1.34E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.5E-07
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.91E-03	mg/kg	2.91E-03	mg/kg	M	6.98E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.4E-06
	4,4'-DDE	2.55E-03	mg/kg	2.55E-03	mg/kg	M	6.11E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.2E-06
	4,4'-DDT	9.11E-03	mg/kg	9.11E-03	mg/kg	M	2.18E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	4.4E-06
	ALDRIN	9.90E-04	mg/kg	9.90E-04	mg/kg	M	2.37E-10	mg/kg-day	3.0E-05	mg/kg-day	--	--	7.9E-06
	ALPHA-BHC	3.56E-03	mg/kg	3.56E-03	mg/kg	M	8.53E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.8E-07
	ALPHA-CHLORDANE	2.36E-03	mg/kg	2.36E-03	mg/kg	M	5.66E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.1E-06
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	7.92E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.6E-04
	AROCLOR-1260	3.89E-02	mg/kg	3.89E-02	mg/kg	M	2.80E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	5.6E-04
	BETA-BHC	1.46E-03	mg/kg	1.46E-03	mg/kg	M	3.50E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.2E-07
	DELTA-BHC	1.12E-03	mg/kg	1.12E-03	mg/kg	M	2.68E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	8.9E-08
	DIELDRIN	2.04E-03	mg/kg	2.04E-03	mg/kg	M	4.89E-10	mg/kg-day	5.0E-05	mg/kg-day	--	--	9.8E-06
	ENDOSULFAN I	1.13E-03	mg/kg	1.13E-03	mg/kg	M	2.71E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	4.5E-08
	ENDOSULFAN II	1.89E-03	mg/kg	1.89E-03	mg/kg	M	4.53E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	7.6E-08
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	5.75E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	9.6E-08
	ENDRIN	1.96E-03	mg/kg	1.96E-03	mg/kg	M	4.70E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.6E-06
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	3.15E-03	mg/kg	M	7.55E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.5E-06
	ENDRIN KETONE	2.48E-03	mg/kg	2.48E-03	mg/kg	M	5.95E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.0E-06
	GAMMA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	3.93E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.3E-07
	GAMMA-CHLORDANE	2.27E-03	mg/kg	2.27E-03	mg/kg	M	5.44E-10	mg/kg-day	6.0E-05	mg/kg-day	--	--	9.1E-06
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	4.79E-11	mg/kg-day	5.0E-04	mg/kg-day	--	--	9.6E-08
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	2.90E-04	mg/kg	M	6.95E-11	mg/kg-day	1.3E-05	mg/kg-day	--	--	5.3E-06

TABLE J-53

EPA TABLE U.7.4.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	METHOXYCHLOR	9.51E-03	mg/kg	9.51E-03	mg/kg	M	2.28E-09	mg/kg-day	5.0E-03	mg/kg-day	--	--	4.6E-07
												Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	3.4E-03

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
(2) All values are subchronic
bgs = Below ground surface
Ft. = Feet
mg/kg = Milligrams per kilogram
-- = No value available

TABLE J-54

EPA TABLE U.7.5.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	**METALS**												
	BARIUM	9.65E+01	mg/kg	9.65E+01	mg/kg	M	6.17E-04	mg/kg-day	7.0E-02	mg/kg-day	--	--	8.8E-03
	COBALT	1.17E+01	mg/kg	1.17E+01	mg/kg	M	7.48E-05	mg/kg-day	6.0E-02	mg/kg-day	--	--	1.2E-03
	LEAD	1.11E+02	mg/kg	1.11E+02	mg/kg	M	7.13E-04	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	2.82E-01	mg/kg	M	1.80E-06	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.6E-04
	SELENIUM	5.25E-01	mg/kg	5.25E-01	mg/kg	M	3.35E-06	mg/kg-day	5.0E-03	mg/kg-day	--	--	6.7E-04
	SILVER	3.01E-01	mg/kg	3.01E-01	mg/kg	M	1.92E-06	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.8E-04
	THALLIUM	3.96E-01	mg/kg	3.96E-01	mg/kg	M	2.53E-06	mg/kg-day	7.0E-04	mg/kg-day	--	--	3.6E-03
	TIN	1.53E+01	mg/kg	1.53E+01	mg/kg	M	9.75E-05	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.6E-04
	TITANIUM	4.41E+03	mg/kg	4.41E+03	mg/kg	M	2.82E-02	mg/kg-day	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	1.28E-08	mg/kg-day	1.0E-01	mg/kg-day	--	--	1.3E-07
	TOLUENE	5.59E-03	mg/kg	5.59E-03	mg/kg	M	3.57E-08	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.8E-08
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	2.56E-08	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.3E-08
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	2.4E-07	mg/kg-day	1.0E-02	mg/kg-day	--	--	2.4E-05
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	2.24E-01	mg/kg	M	1.43E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.8E-07
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	9.59E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.2E-07
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	1.32E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.4E-07
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	1.29E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.3E-06
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	2.15E-01	mg/kg	M	1.37E-06	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.4E-06
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	2.10E-01	mg/kg	M	1.34E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.5E-06
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	2.19E-01	mg/kg	M	1.40E-06	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.5E-06
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	1.29E-01	mg/kg	M	8.24E-07	mg/kg-day	2.0E-02	mg/kg-day	--	--	4.1E-05
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	4.67E-07	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.9E-05
	CHRYSENE	1.93E-01	mg/kg	1.93E-01	mg/kg	M	1.23E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.1E-07
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	3.84E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.3E-07
	FLUORANTHENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	1.32E-06	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.3E-06
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	5.24E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.3E-06
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	8.95E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.2E-06
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	3.20E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.1E-04
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	1.46E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.9E-07
	PYRENE	1.86E-01	mg/kg	1.86E-01	mg/kg	M	1.19E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.0E-06
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.91E-03	mg/kg	2.91E-03	mg/kg	M	1.86E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.7E-05

TABLE J-54

EPA TABLE U.7.5.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	4,4'-DDE	2.55E-03	mg/kg	2.55E-03	mg/kg	M	1.63E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.3E-05
	4,4'-DDT	9.11E-03	mg/kg	9.11E-03	mg/kg	M	5.82E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.2E-04
	ALDRIN	9.90E-04	mg/kg	9.90E-04	mg/kg	M	6.33E-09	mg/kg-day	3.0E-05	mg/kg-day	--	--	2.1E-04
	ALPHA-BHC	3.56E-03	mg/kg	3.56E-03	mg/kg	M	2.28E-08	mg/kg-day	3.0E-03	mg/kg-day	--	--	7.6E-06
	ALPHA-CHLORDANE	2.36E-03	mg/kg	2.36E-03	mg/kg	M	1.51E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.0E-05
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	7.04E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.4E-03
	AROCLOR-1260	3.89E-02	mg/kg	3.89E-02	mg/kg	M	2.49E-07	mg/kg-day	5.0E-05	mg/kg-day	--	--	5.0E-03
	BETA-BHC	1.46E-03	mg/kg	1.46E-03	mg/kg	M	9.33E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	3.1E-06
	DELTA-BHC	1.12E-03	mg/kg	1.12E-03	mg/kg	M	7.16E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.4E-06
	DIELDRIN	2.04E-03	mg/kg	2.04E-03	mg/kg	M	1.30E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	2.6E-04
	ENDOSULFAN I	1.13E-03	mg/kg	1.13E-03	mg/kg	M	7.22E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.2E-06
	ENDOSULFAN II	1.89E-03	mg/kg	1.89E-03	mg/kg	M	1.21E-08	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.0E-06
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	1.53E-08	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.6E-06
	ENDRIN	1.96E-03	mg/kg	1.96E-03	mg/kg	M	1.25E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	4.2E-05
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	3.15E-03	mg/kg	M	2.01E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	6.7E-05
	ENDRIN KETONE	2.48E-03	mg/kg	2.48E-03	mg/kg	M	1.59E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	5.3E-05
	GAMMA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	1.05E-08	mg/kg-day	3.0E-03	mg/kg-day	--	--	3.5E-06
	GAMMA-CHLORDANE	2.27E-03	mg/kg	2.27E-03	mg/kg	M	1.45E-08	mg/kg-day	6.0E-05	mg/kg-day	--	--	2.4E-04
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	1.28E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.6E-06
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	2.90E-04	mg/kg	M	1.85E-09	mg/kg-day	1.3E-05	mg/kg-day	--	--	1.4E-04
	METHOXYCHLOR	9.51E-03	mg/kg	9.51E-03	mg/kg	M	6.08E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.2E-05
Dermal	**METALS**												
	BARIUM	9.65E+01	mg/kg	9.65E+01	mg/kg	M	3.58E-05	mg/kg-day	7.0E-02	mg/kg-day	--	--	5.1E-04
	COBALT	1.17E+01	mg/kg	1.17E+01	mg/kg	M	4.34E-06	mg/kg-day	6.0E-02	mg/kg-day	--	--	7.2E-05
	LEAD	1.11E+02	mg/kg	1.11E+02	mg/kg	M	4.13E-05	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	2.82E-01	mg/kg	M	1.04E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.1E-05
	SELENIUM	5.25E-01	mg/kg	5.25E-01	mg/kg	M	1.95E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.9E-05
	SILVER	3.01E-01	mg/kg	3.01E-01	mg/kg	M	1.12E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.2E-05
	THALLIUM	3.96E-01	mg/kg	3.96E-01	mg/kg	M	1.47E-07	mg/kg-day	7.0E-04	mg/kg-day	--	--	2.1E-04
	TIN	1.53E+01	mg/kg	1.53E+01	mg/kg	M	5.66E-06	mg/kg-day	6.0E-01	mg/kg-day	--	--	9.4E-06
	TITANIUM	4.41E+03	mg/kg	4.41E+03	mg/kg	M	1.63E-03	mg/kg-day	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	2.00E-03	mg/kg	M	7.42E-09	mg/kg-day	1.0E-01	mg/kg-day	--	--	7.4E-08
	TOLUENE	5.59E-03	mg/kg	5.59E-03	mg/kg	M	2.07E-08	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.0E-08
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.48E-08	mg/kg-day	2.0E+00	mg/kg-day	--	--	7.4E-09

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EPA TABLE U.7.5.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.37E-07	mg/kg-day	1.0E-02	mg/kg-day	--	--	1.4E-05
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	2.24E-01	mg/kg	M	1.25E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.2E-07
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	8.34E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.8E-07
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	1.15E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.8E-07
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	1.12E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.7E-06
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	2.15E-01	mg/kg	M	1.19E-06	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.0E-06
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	2.10E-01	mg/kg	M	1.17E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.9E-06
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	2.19E-01	mg/kg	M	1.22E-06	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.0E-06
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	1.29E-01	mg/kg	M	4.78E-07	mg/kg-day	2.0E-02	mg/kg-day	--	--	2.4E-05
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	2.71E-07	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.1E-05
	CHRYSENE	1.93E-01	mg/kg	1.93E-01	mg/kg	M	1.07E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.6E-07
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	3.34E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.1E-07
	FLUORANTHENE	2.06E-01	mg/kg	2.06E-01	mg/kg	M	1.15E-06	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.9E-06
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	4.56E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.1E-06
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	7.79E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.9E-06
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	4.63E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.5E-04
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	1.27E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.2E-07
	PYRENE	1.86E-01	mg/kg	1.86E-01	mg/kg	M	1.04E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.5E-06
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.91E-03	mg/kg	2.91E-03	mg/kg	M	5.39E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.1E-05
	4,4'-DDE	2.55E-03	mg/kg	2.55E-03	mg/kg	M	4.73E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	9.5E-06
	4,4'-DDT	9.11E-03	mg/kg	9.11E-03	mg/kg	M	1.69E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.4E-05
	ALDRIN	9.90E-04	mg/kg	9.90E-04	mg/kg	M	1.84E-09	mg/kg-day	3.0E-05	mg/kg-day	--	--	6.1E-05
	ALPHA-BHC	3.56E-03	mg/kg	3.56E-03	mg/kg	M	6.60E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.2E-06
	ALPHA-CHLORDANE	2.36E-03	mg/kg	2.36E-03	mg/kg	M	4.38E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	8.8E-06
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	6.12E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.2E-03
	AROCLOR-1260	3.89E-02	mg/kg	3.89E-02	mg/kg	M	2.16E-07	mg/kg-day	5.0E-05	mg/kg-day	--	--	4.3E-03
	BETA-BHC	1.46E-03	mg/kg	1.46E-03	mg/kg	M	2.71E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	9.0E-07
	DELTA-BHC	1.12E-03	mg/kg	1.12E-03	mg/kg	M	2.08E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	6.9E-07
	DIELDRIN	2.04E-03	mg/kg	2.04E-03	mg/kg	M	3.78E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	7.6E-05
	ENDOSULFAN I	1.13E-03	mg/kg	1.13E-03	mg/kg	M	2.09E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	3.5E-07
	ENDOSULFAN II	1.89E-03	mg/kg	1.89E-03	mg/kg	M	3.50E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	5.8E-07
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	4.45E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	7.4E-07
	ENDRIN	1.96E-03	mg/kg	1.96E-03	mg/kg	M	3.63E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.2E-05

TABLE J-54

EPA TABLE U.7.5.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	3.15E-03	mg/kg	M	5.84E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.9E-05
	ENDRIN KETONE	2.48E-03	mg/kg	2.48E-03	mg/kg	M	4.60E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.5E-05
	GAMMA-BHC	1.64E-03	mg/kg	1.64E-03	mg/kg	M	3.04E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.0E-06
	GAMMA-CHLORDANE	2.27E-03	mg/kg	2.27E-03	mg/kg	M	4.21E-09	mg/kg-day	6.0E-05	mg/kg-day	--	--	7.0E-05
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	3.71E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	7.4E-07
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	2.90E-04	mg/kg	M	5.38E-10	mg/kg-day	1.3E-05	mg/kg-day	--	--	4.1E-05
	METHOXYCHLOR	9.51E-03	mg/kg	9.51E-03	mg/kg	M	1.76E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.5E-06
												Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	3.0E-02

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
(2) All values are subchronic
bgs = Below ground surface
Ft. = Feet
mg/kg = Milligrams per kilogram
-- = No value available

TABLE J-55

EPA TABLE U.7.6.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation-Dust	**METALS**												
	BARIUM	9.65E+01	mg/kg	7.33E-08	mg/m^3	R	1.34E-08	mg/kg-day	1.0E-03	mg/kg-day	--	--	1.3E-05
	COBALT	1.17E+01	mg/kg	8.89E-09	mg/m^3	R	1.62E-09	mg/kg-day	1.4E-06	mg/kg-day	--	--	1.1E-03
	LEAD	1.11E+02	mg/kg	8.47E-08	mg/m^3	R	1.54E-08	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	2.14E-10	mg/m^3	R	3.90E-11	mg/kg-day	--	--	--	--	--
	SELENIUM	5.25E-01	mg/kg	3.99E-10	mg/m^3	R	7.27E-11	mg/kg-day	2.3E-05	mg/kg-day	--	--	3.2E-06
	SILVER	3.01E-01	mg/kg	2.29E-10	mg/m^3	R	4.16E-11	mg/kg-day	5.7E-03	mg/kg-day	--	--	7.3E-09
	THALLIUM	3.96E-01	mg/kg	3.01E-10	mg/m^3	R	5.48E-11	mg/kg-day	--	--	--	--	--
	TIN	1.53E+01	mg/kg	1.16E-08	mg/m^3	R	2.11E-09	mg/kg-day	--	--	--	--	--
	TITANIUM	4.41E+03	mg/kg	3.35E-06	mg/m^3	R	6.10E-07	mg/kg-day	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	1.52E-12	mg/m^3	R	2.77E-13	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.4E-12
	TOLUENE	5.59E-03	mg/kg	4.25E-12	mg/m^3	R	7.74E-13	mg/kg-day	1.1E-01	mg/kg-day	--	--	6.8E-12
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	5.54E-13	mg/kg-day	2.0E+00	mg/kg-day	--	--	2.8E-13
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	5.12E-12	mg/kg-day	5.7E-01	mg/kg-day	--	--	9.0E-12
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	1.70E-10	mg/m^3	R	3.10E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.0E-11
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	2.08E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	6.9E-12
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	1.57E-10	mg/m^3	R	2.85E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	9.5E-12
	BENZO(A)PYRENE	2.02E-01	mg/kg	1.53E-10	mg/m^3	R	2.79E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	9.3E-11
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	1.63E-10	mg/m^3	R	2.97E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	7.4E-11
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	1.59E-10	mg/m^3	R	2.90E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	9.7E-11
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	1.67E-10	mg/m^3	R	3.04E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	7.6E-11
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	9.79E-11	mg/m^3	R	1.78E-11	mg/kg-day	2.0E-02	mg/kg-day	--	--	8.9E-10
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	1.01E-11	mg/kg-day	2.5E-02	mg/kg-day	--	--	4.0E-10
	CHRYSENE	1.93E-01	mg/kg	1.47E-10	mg/m^3	R	2.67E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	8.9E-12
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	8.31E-12	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.8E-12
	FLUORANTHENE	2.06E-01	mg/kg	1.57E-10	mg/m^3	R	2.85E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	7.1E-11

TABLE J-55

EPA TABLE U.7.6.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	1.14E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.8E-11
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	1.94E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	4.8E-11
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	6.92E-11	mg/kg-day	3.0E-02	mg/kg-day	--	--	2.3E-09
	PHENANTHRENE	2.28E-01	mg/kg	1.74E-10	mg/m^3	R	3.16E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.1E-11
	PYRENE	1.86E-01	mg/kg	1.42E-10	mg/m^3	R	2.58E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	8.6E-11
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.91E-03	mg/kg	2.21E-12	mg/m^3	R	4.03E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	8.1E-10
	4,4'-DDE	2.55E-03	mg/kg	1.94E-12	mg/m^3	R	3.53E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	7.1E-10
	4,4'-DDT	9.11E-03	mg/kg	6.92E-12	mg/m^3	R	1.26E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.5E-09
	ALDRIN	9.90E-04	mg/kg	7.52E-13	mg/m^3	R	1.37E-13	mg/kg-day	3.0E-05	mg/kg-day	--	--	4.6E-09
	ALPHA-BHC	3.56E-03	mg/kg	2.71E-12	mg/m^3	R	4.93E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.6E-10
	ALPHA-CHLORDANE	2.36E-03	mg/kg	1.79E-12	mg/m^3	R	3.27E-13	mg/kg-day	2.0E-03	mg/kg-day	--	--	1.6E-10
	AROCLOR-1254	1.10E-02	mg/kg	8.37E-12	mg/m^3	R	1.52E-12	mg/kg-day	5.0E-05	mg/kg-day	--	--	3.0E-08
	AROCLOR-1260	3.89E-02	mg/kg	2.95E-11	mg/m^3	R	5.38E-12	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.1E-07
	BETA-BHC	1.46E-03	mg/kg	1.11E-12	mg/m^3	R	2.02E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	6.7E-11
	DELTA-BHC	1.12E-03	mg/kg	8.51E-13	mg/m^3	R	1.55E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	5.2E-11
	DIELDRIN	2.04E-03	mg/kg	1.55E-12	mg/m^3	R	2.82E-13	mg/kg-day	5.0E-05	mg/kg-day	--	--	5.6E-09
	ENDOSULFAN I	1.13E-03	mg/kg	8.59E-13	mg/m^3	R	1.56E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.6E-11
	ENDOSULFAN II	1.89E-03	mg/kg	1.44E-12	mg/m^3	R	2.62E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	4.4E-11
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	1.82E-12	mg/m^3	R	3.32E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	5.5E-11
	ENDRIN	1.96E-03	mg/kg	1.49E-12	mg/m^3	R	2.71E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	9.0E-10
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	2.39E-12	mg/m^3	R	4.36E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.5E-09
	ENDRIN KETONE	2.48E-03	mg/kg	1.88E-12	mg/m^3	R	3.43E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.1E-09
	GAMMA-BHC	1.64E-03	mg/kg	1.25E-12	mg/m^3	R	2.27E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	7.6E-11
	GAMMA-CHLORDANE	2.27E-03	mg/kg	1.72E-12	mg/m^3	R	3.14E-13	mg/kg-day	2.0E-03	mg/kg-day	--	--	1.6E-10
	HEPTACHLOR	2.00E-04	mg/kg	1.52E-13	mg/m^3	R	2.77E-14	mg/kg-day	5.0E-04	mg/kg-day	--	--	5.5E-11
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	2.20E-13	mg/m^3	R	4.01E-14	mg/kg-day	1.3E-05	mg/kg-day	--	--	3.1E-09
	METHOXYCHLOR	9.51E-03	mg/kg	7.23E-12	mg/m^3	R	1.32E-12	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.6E-10

TABLE J-55

EPA TABLE U.7.6.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation VOCs	**METALS**												
	BARIUM	9.65E+01	mg/kg	--	mg/m^3	R	--	--	1.0E-03	mg/kg-day	--	--	--
	COBALT	1.17E+01	mg/kg	--	mg/m^3	R	--	--	1.4E-06	mg/kg-day	--	--	--
	LEAD	1.11E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	SELENIUM	5.25E-01	mg/kg	--	mg/m^3	R	--	--	2.3E-05	mg/kg-day	--	--	--
	SILVER	3.01E-01	mg/kg	--	mg/m^3	R	--	--	5.7E-03	mg/kg-day	--	--	--
	THALLIUM	3.96E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TIN	1.53E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TITANIUM	4.41E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	2.30E-02	mg/m^3	R	4.19E-03	mg/kg-day	2.0E-01	mg/kg-day	--	--	2.1E-02
	TOLUENE	5.59E-03	mg/kg	2.46E-02	mg/m^3	R	4.48E-03	mg/kg-day	1.1E-01	mg/kg-day	--	--	3.9E-02
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	2.97E-04	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.5E-04
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	8.23E-03	mg/kg-day	5.7E-01	mg/kg-day	--	--	1.4E-02
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	1.66E-01	mg/m^3	R	3.02E-02	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.0E-02
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	5.00E-04	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.7E-04
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	BENZO(A)PYRENE	2.02E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day	--	--	--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.5E-02	mg/kg-day	--	--	--
	CHRYSENE	1.93E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--

TABLE J-55

EPA TABLE U.7.6.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	FLUORANTHENE	2.06E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	6.19E-04	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.5E-03
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day	--	--	--
	PHENANTHRENE	2.28E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	PYRENE	1.86E-01	mg/kg	7.11E-04	mg/m^3	R	1.30E-04	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.3E-04
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.91E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDE	2.55E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDT	9.11E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	ALDRIN	9.90E-04	mg/kg	--	mg/m^3	R	--	--	3.0E-05	mg/kg-day	--	--	--
	ALPHA-BHC	3.56E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	ALPHA-CHLORDANE	2.36E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-03	mg/kg-day	--	--	--
	AROCLOR-1254	1.10E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	AROCLOR-1260	3.89E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	BETA-BHC	1.46E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	DELTA-BHC	1.12E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	DIELDRIN	2.04E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	ENDOSULFAN I	1.13E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN II	1.89E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDRIN	1.96E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ENDRIN KETONE	2.48E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	GAMMA-BHC	1.64E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	GAMMA-CHLORDANE	2.27E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-03	mg/kg-day	--	--	--
	HEPTACHLOR	2.00E-04	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--

TABLE J-55

EPA TABLE U.7.6.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	--	mg/m^3	R	--	--	1.3E-05	mg/kg-day	--	--	--
	METHOXYCHLOR	9.51E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-03	mg/kg-day	--	--	--

Total Hazard Index Across All Air Exposure Routes/Pathways - Soil	8.8E-02
Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	3.4E-03
Total Hazard Index Across All Exposure Routes/Pathways - Soil	**9.1E-02**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) All values are subchronic

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

-- = No value available

VOC = Volatile Organic Compound

TABLE J-56

EPA TABLE U.7.7.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation-Dust	**METALS**												
	BARIUM	9.65E+01	mg/kg	7.33E-08	mg/m^3	R	3.89E-08	mg/kg-day	1.0E-03	mg/kg-day	--	--	3.9E-05
	COBALT	1.17E+01	mg/kg	8.89E-09	mg/m^3	R	4.72E-09	mg/kg-day	1.4E-06	mg/kg-day	--	--	3.3E-03
	LEAD	1.11E+02	mg/kg	8.47E-08	mg/m^3	R	4.49E-08	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	2.14E-10	mg/m^3	R	1.13E-10	mg/kg-day	--	--	--	--	--
	SELENIUM	5.25E-01	mg/kg	3.99E-10	mg/m^3	R	2.12E-10	mg/kg-day	2.3E-05	mg/kg-day	--	--	9.3E-06
	SILVER	3.01E-01	mg/kg	2.29E-10	mg/m^3	R	1.21E-10	mg/kg-day	5.7E-03	mg/kg-day	--	--	2.1E-08
	THALLIUM	3.96E-01	mg/kg	3.01E-10	mg/m^3	R	1.60E-10	mg/kg-day	--	--	--	--	--
	TIN	1.53E+01	mg/kg	1.16E-08	mg/m^3	R	6.15E-09	mg/kg-day	--	--	--	--	--
	TITANIUM	4.41E+03	mg/kg	3.35E-06	mg/m^3	R	1.78E-06	mg/kg-day	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	1.52E-12	mg/m^3	R	8.06E-13	mg/kg-day	2.0E-01	mg/kg-day	--	--	4.0E-12
	TOLUENE	5.59E-03	mg/kg	4.25E-12	mg/m^3	R	2.25E-12	mg/kg-day	1.1E-01	mg/kg-day	--	--	2.0E-11
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	1.61E-12	mg/kg-day	2.0E+00	mg/kg-day	--	--	8.1E-13
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	1.49E-11	mg/kg-day	5.7E-01	mg/kg-day	--	--	2.6E-11
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	1.70E-10	mg/m^3	R	9.03E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.0E-11
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	6.05E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.0E-11
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	1.57E-10	mg/m^3	R	8.31E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.8E-11
	BENZO(A)PYRENE	2.02E-01	mg/kg	1.53E-10	mg/m^3	R	8.14E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.7E-10
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	1.63E-10	mg/m^3	R	8.65E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.2E-10
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	1.59E-10	mg/m^3	R	8.45E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.8E-10
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	1.67E-10	mg/m^3	R	8.84E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.2E-10
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	9.79E-11	mg/m^3	R	5.20E-11	mg/kg-day	2.0E-02	mg/kg-day	--	--	2.6E-09
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	2.94E-11	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.2E-09
	CHRYSENE	1.93E-01	mg/kg	1.47E-10	mg/m^3	R	7.78E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.6E-11
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	2.42E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	8.1E-12
	FLUORANTHENE	2.06E-01	mg/kg	1.57E-10	mg/m^3	R	8.31E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.1E-10

TABLE J-56

EPA TABLE U.7.7.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	3.31E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	8.3E-11
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	5.64E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.4E-10
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	2.02E-10	mg/kg-day	3.0E-02	mg/kg-day	--	--	6.7E-09
	PHENANTHRENE	2.28E-01	mg/kg	1.74E-10	mg/m^3	R	9.21E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.1E-11
	PYRENE	1.86E-01	mg/kg	1.42E-10	mg/m^3	R	7.52E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.5E-10
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.91E-03	mg/kg	2.21E-12	mg/m^3	R	1.17E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.3E-09
	4,4'-DDE	2.55E-03	mg/kg	1.94E-12	mg/m^3	R	1.03E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.1E-09
	4,4'-DDT	9.11E-03	mg/kg	6.92E-12	mg/m^3	R	3.67E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	7.3E-09
	ALDRIN	9.90E-04	mg/kg	7.52E-13	mg/m^3	R	3.99E-13	mg/kg-day	3.0E-05	mg/kg-day	--	--	1.3E-08
	ALPHA-BHC	3.56E-03	mg/kg	2.71E-12	mg/m^3	R	1.44E-12	mg/kg-day	3.0E-03	mg/kg-day	--	--	4.8E-10
	ALPHA-CHLORDANE	2.36E-03	mg/kg	1.79E-12	mg/m^3	R	9.52E-13	mg/kg-day	2.0E-03	mg/kg-day	--	--	4.8E-10
	AROCLOR-1254	1.10E-02	mg/kg	8.37E-12	mg/m^3	R	4.44E-12	mg/kg-day	5.0E-05	mg/kg-day	--	--	8.9E-08
	AROCLOR-1260	3.89E-02	mg/kg	2.95E-11	mg/m^3	R	1.57E-11	mg/kg-day	5.0E-05	mg/kg-day	--	--	3.1E-07
	BETA-BHC	1.46E-03	mg/kg	1.11E-12	mg/m^3	R	5.89E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.0E-10
	DELTA-BHC	1.12E-03	mg/kg	8.51E-13	mg/m^3	R	4.52E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.5E-10
	DIELDRIN	2.04E-03	mg/kg	1.55E-12	mg/m^3	R	8.23E-13	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.6E-08
	ENDOSULFAN I	1.13E-03	mg/kg	8.59E-13	mg/m^3	R	4.56E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	7.6E-11
	ENDOSULFAN II	1.89E-03	mg/kg	1.44E-12	mg/m^3	R	7.62E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.3E-10
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	1.82E-12	mg/m^3	R	9.68E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.6E-10
	ENDRIN	1.96E-03	mg/kg	1.49E-12	mg/m^3	R	7.90E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.6E-09
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	2.39E-12	mg/m^3	R	1.27E-12	mg/kg-day	3.0E-04	mg/kg-day	--	--	4.2E-09
	ENDRIN KETONE	2.48E-03	mg/kg	1.88E-12	mg/m^3	R	1.00E-12	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.3E-09
	GAMMA-BHC	1.64E-03	mg/kg	1.25E-12	mg/m^3	R	6.61E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.2E-10
	GAMMA-CHLORDANE	2.27E-03	mg/kg	1.72E-12	mg/m^3	R	9.15E-13	mg/kg-day	2.0E-03	mg/kg-day	--	--	4.6E-10
	HEPTACHLOR	2.00E-04	mg/kg	1.52E-13	mg/m^3	R	8.06E-14	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.6E-10
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	2.20E-13	mg/m^3	R	1.17E-13	mg/kg-day	1.3E-05	mg/kg-day	--	--	9.0E-09
	METHOXYCHLOR	9.51E-03	mg/kg	7.23E-12	mg/m^3	R	3.83E-12	mg/kg-day	5.0E-03	mg/kg-day	--	--	7.7E-10

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EPA TABLE U.7.7.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation VOCs	**METALS**												
	BARIUM	9.65E+01	mg/kg	--	mg/m^3	R	--	--	1.0E-03	mg/kg-day	--	--	--
	COBALT	1.17E+01	mg/kg	--	mg/m^3	R	--	--	1.4E-06	mg/kg-day	--	--	--
	LEAD	1.11E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	MOLYBDENUM	2.82E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	SELENIUM	5.25E-01	mg/kg	--	mg/m^3	R	--	--	2.3E-05	mg/kg-day	--	--	--
	SILVER	3.01E-01	mg/kg	--	mg/m^3	R	--	--	5.7E-03	mg/kg-day	--	--	--
	THALLIUM	3.96E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TIN	1.53E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TITANIUM	4.41E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	CARBON DISULFIDE	2.00E-03	mg/kg	2.30E-02	mg/m^3	R	1.22E-02	mg/kg-day	2.0E-01	mg/kg-day	--	--	6.1E-02
	TOLUENE	5.59E-03	mg/kg	2.46E-02	mg/m^3	R	1.30E-02	mg/kg-day	1.1E-01	mg/kg-day	--	--	1.1E-01
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	8.65E-04	mg/kg-day	2.0E+00	mg/kg-day	--	--	4.3E-04
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	2.40E-02	mg/kg-day	5.7E-01	mg/kg-day	--	--	4.2E-02
	2-METHYLNAPHTHALENE	2.24E-01	mg/kg	1.66E-01	mg/m^3	R	8.80E-02	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.9E-02
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	1.46E-03	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.9E-04
	BENZO(A)ANTHRACENE	2.06E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	BENZO(A)PYRENE	2.02E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.15E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	BENZO(G,H,I)PERYLENE	2.10E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.19E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.29E-01	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day	--	--	--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.5E-02	mg/kg-day	--	--	--
	CHRYSENE	1.93E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	FLUORANTHENE	2.06E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--

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EPA TABLE U.7.7.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	1.80E-03	mg/kg-day	4.0E-01	mg/kg-day	--	--	4.5E-03
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day	--	--	--
	PHENANTHRENE	2.28E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	PYRENE	1.86E-01	mg/kg	7.11E-04	mg/m^3	R	3.77E-04	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.3E-03
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.91E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDE	2.55E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDT	9.11E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	ALDRIN	9.90E-04	mg/kg	--	mg/m^3	R	--	--	3.0E-05	mg/kg-day	--	--	--
	ALPHA-BHC	3.56E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	ALPHA-CHLORDANE	2.36E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-03	mg/kg-day	--	--	--
	AROCLOR-1254	1.10E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	AROCLOR-1260	3.89E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	BETA-BHC	1.46E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	DELTA-BHC	1.12E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	DIELDRIN	2.04E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	ENDOSULFAN I	1.13E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN II	1.89E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDRIN	1.96E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.15E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ENDRIN KETONE	2.48E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	GAMMA-BHC	1.64E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	GAMMA-CHLORDANE	2.27E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-03	mg/kg-day	--	--	--
	HEPTACHLOR	2.00E-04	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	HEPTACHLOR EPOXIDE	2.90E-04	mg/kg	--	mg/m^3	R	--	--	1.3E-05	mg/kg-day	--	--	--

TABLE J-56

EPA TABLE U.7.7.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-3 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	METHOXYCHLOR	9.51E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-03	mg/kg-day	--	--	--

Total Hazard Index Across All Air Exposure Routes/Pathways - Soil	2.6E-01
Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	3.0E-02
Total Hazard Index Across All Exposure Routes/Pathways - Soil	**2.9E-01**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) All values are subchronic

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

-- = No value available

VOC = Volatile Organic Compound

TABLE J-57

EPA TABLE U.7.8.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation VOCs	**VOLATILE ORGANIC COMPOUNDS**												
	1,2-DICHLOROETHANE	2.80E-04	mg/L	8.69E-06	mg/m^3	R	1.58E-06	mg/kg-day	1.4E-03	mg/kg-day	--	--	1.1E-03
	2-BUTANONE	9.42E-03	mg/L	1.06E-04	mg/m^3	R	1.93E-05	mg/kg-day	2.9E-01	mg/kg-day	--	--	6.7E-05
	4-METHYL-2-PENTANONE	8.00E-04	mg/L	1.41E-05	mg/m^3	R	2.57E-06	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.3E-05
	ACETONE	6.84E-02	mg/L	7.53E-04	mg/m^3	R	1.37E-04	mg/kg-day	1.0E+00	mg/kg-day	--	--	1.4E-04
	CHLOROMETHANE	7.00E-04	mg/L	1.36E-05	mg/m^3	R	2.47E-06	mg/kg-day	8.6E-02	mg/kg-day	--	--	2.9E-05
	ETHYLBENZENE	7.00E-04	mg/L	1.62E-05	mg/m^3	R	2.96E-06	mg/kg-day	2.9E-01	mg/kg-day	--	--	1.0E-05
	TOLUENE	8.30E-04	mg/L	2.12E-05	mg/m^3	R	3.86E-06	mg/kg-day	1.1E-01	mg/kg-day	--	--	3.4E-05
	XYLENE (TOTAL)	1.26E-03	mg/L	2.74E-05	mg/m^3	R	4.99E-06	mg/kg-day	2.0E+00	mg/kg-day	--	--	2.5E-06
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,3-DICHLOROBENZENE	9.00E-04	mg/L	2.10E-05	mg/m^3	R	3.82E-06	mg/kg-day	9.0E-04	mg/kg-day	--	--	4.2E-03
	2,4-DICHLOROPHENOL	2.00E-03	mg/L	--		R	--	--	3.0E-03	mg/kg-day	--	--	--
	4-METHYLPHENOL	6.00E-03	mg/L	--		R	--	--	5.0E-03	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-03	mg/L	--		R	--	--	6.0E-01	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.00E-03	mg/L	--		R	--	--	4.0E-01	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	4.92E-03	mg/L	--		R	--	--	2.0E-02	mg/kg-day	--	--	--
	CARBAZOLE	2.00E-03	mg/L	--		R	--	--	2.5E-02	mg/kg-day	--	--	--
	FLUORANTHENE	4.00E-03	mg/L	--		R	--	--	4.0E-01	mg/kg-day	--	--	--
	N-NITROSODIPHENYLAMINE (1)	8.83E-03	mg/L	--		R	--	--	--	--	--	--	--
	NAPHTHALENE	2.00E-03	mg/L	4.32E-05	mg/m^3	R	7.87E-06	mg/kg-day	8.6E-04	mg/kg-day	--	--	9.2E-03
	PHENANTHRENE	2.00E-03	mg/L	1.60E-05	mg/m^3	R	2.92E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	9.7E-07
	PHENOL	2.00E-03	mg/L	--		R	--	--	6.0E-01	mg/kg-day	--	--	--

TABLE J-57

EPA TABLE U.7.8.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	PYRENE	8.39E-03	mg/L	2.24E-05	mg/m^3	R	4.08E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.4E-05

Total Hazard Index Across All Air Exposure Routes/Pathways - Groundwater	1.5E-02
Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	3.4E-03
Total Hazard Index Across All Exposure Routes/Pathways - Soil and Groundwater	**1.8E-02**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) All values are subchronic

bgs = Below ground surface

Ft. = Feet

mg/L = Milligrams per liter

mg/m^3 = Milligrams per cubic meter

-- = No value available

TABLE J-58

EPA TABLE U.7.9.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation VOCs	**VOLATILE ORGANIC COMPOUNDS**												
	1,2-DICHLOROETHANE	2.80E-04	mg/L	8.69E-06	mg/m^3	R	4.61E-06	mg/kg-day	1.4E-03	mg/kg-day	--	--	3.3E-03
	2-BUTANONE	9.42E-03	mg/L	1.06E-04	mg/m^3	R	5.61E-05	mg/kg-day	2.9E-01	mg/kg-day	--	--	2.0E-04
	4-METHYL-2-PENTANONE	8.00E-04	mg/L	1.41E-05	mg/m^3	R	7.49E-06	mg/kg-day	2.0E-01	mg/kg-day	--	--	3.7E-05
	ACETONE	6.84E-02	mg/L	7.53E-04	mg/m^3	R	4.00E-04	mg/kg-day	1.0E+00	mg/kg-day	--	--	4.0E-04
	CHLOROMETHANE	7.00E-04	mg/L	1.36E-05	mg/m^3	R	7.21E-06	mg/kg-day	8.6E-02	mg/kg-day	--	--	8.4E-05
	ETHYLBENZENE	7.00E-04	mg/L	1.62E-05	mg/m^3	R	8.61E-06	mg/kg-day	2.9E-01	mg/kg-day	--	--	3.0E-05
	TOLUENE	8.30E-04	mg/L	2.12E-05	mg/m^3	R	1.12E-05	mg/kg-day	1.1E-01	mg/kg-day	--	--	9.8E-05
	XYLENE (TOTAL)	1.26E-03	mg/L	2.74E-05	mg/m^3	R	1.45E-05	mg/kg-day	2.0E+00	mg/kg-day	--	--	7.3E-06
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,3-DICHLOROBENZENE	9.00E-04	mg/L	2.10E-05	mg/m^3	R	1.11E-05	mg/kg-day	9.0E-04	mg/kg-day	--	--	1.2E-02
	2,4-DICHLOROPHENOL	2.00E-03	mg/L	--		R	--	--	3.0E-03	mg/kg-day	--	--	--
	4-METHYLPHENOL	6.00E-03	mg/L	--		R	--	--	5.0E-03	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-03	mg/L	--		R	--	--	6.0E-01	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.00E-03	mg/L	--		R	--	--	4.0E-01	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	4.92E-03	mg/L	--		R	--	--	2.0E-02	mg/kg-day	--	--	--
	CARBAZOLE	2.00E-03	mg/L	--		R	--	--	2.5E-02	mg/kg-day	--	--	--
	FLUORANTHENE	4.00E-03	mg/L	--		R	--	--	4.0E-01	mg/kg-day	--	--	--
	N-NITROSODIPHENYLAMINE (1)	8.83E-03	mg/L	--		R	--	--	--	--	--	--	--
	NAPHTHALENE	2.00E-03	mg/L	4.32E-05	mg/m^3	R	2.29E-05	mg/kg-day	8.6E-04	mg/kg-day	--	--	2.7E-02
	PHENANTHRENE	2.00E-03	mg/L	1.60E-05	mg/m^3	R	8.49E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.8E-06
	PHENOL	2.00E-03	mg/L	--		R	--	--	6.0E-01	mg/kg-day	--	--	--

TABLE J-58

EPA TABLE U.7.9.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	PYRENE	8.39E-03	mg/L	2.24E-05	mg/m^3	R	1.19E-05	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.0E-05

Total Hazard Index Across All Air Exposure Routes/Pathways - Groundwater	4.3E-02
Total Hazard Index Across All Exposure Routes/Pathways - Soil	2.9E-01
Total Hazard Index Across All Exposure Routes/Pathways - Soil and Groundwater	**3.3E-01**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) All values are subchronic

bgs = Below ground surface

Ft. = Feet

mg/L = Milligrams per liter

mg/m^3 = Milligrams per cubic meter

-- = No value available

TABLE J-59

TABLE U.9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Soil	Direct Soil Contact	**METALS**					**METALS**					
			BARIUM	--		--	--	BARIUM	No adverse effect	2.E-03	--	9.E-05	2.E-03
			COBALT	--		--	--	COBALT	--	3.E-04	--	1.E-05	3.E-04
			LEAD	--		--	--	LEAD	--	--	--	--	--
			MOLYBDENUM	--		--	--	MOLYBDENUM	Kidney	1.E-04	--	4.E-06	1.E-04
			SELENIUM	--		--	--	SELENIUM	CNS/PNS, Liver, Skin, Blood	2.E-04	--	7.E-06	2.E-04
			SILVER	--		--	--	SILVER	Skin	1.E-04	--	5.E-06	1.E-04
			THALLIUM	--		--	--	THALLIUM	No adverse effect	8.E-03	--	3.E-04	9.E-03
			TIN	--		--	--	TIN	Liver, Kidney	5.E-05	--	2.E-06	6.E-05
			TITANIUM	--		--	--	TITANIUM	--	--	--	--	--
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			CARBON DISULFIDE	--		--	--	CARBON DISULFIDE	Reproductive System	3.E-08	--	1.E-08	4.E-08
			TOLUENE	--		--	--	TOLUENE	Liver, Kidney	4.E-08	--	2.E-08	6.E-08
			XYLENE (TOTAL)	--		--	--	XYLENE (TOTAL)	Whole body (weight), CNS/PNS	3.E-09	--	1.E-09	4.E-09
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE	--		--	--	1,2,4-TRICHLOROBENZENE	Adrenal	5.E-06	--	2.E-06	7.E-06
			2-METHYLNAPHTHALENE	--		--	--	2-METHYLNAPHTHALENE	No observed effect	1.E-06	--	7.E-07	2.E-06
			ANTHRACENE	--		--	--	ANTHRACENE	No observed effect	7.E-07	--	4.E-07	1.E-06
			BENZO(A)ANTHRACENE	1E-07		8.3E-08	2.E-07	BENZO(A)ANTHRACENE	No observed effect	1.E-06	--	7.E-07	2.E-06
			BENZO(A)PYRENE	1E-06		8.4E-07	2.E-06	BENZO(A)PYRENE	Kidney	1.E-05	--	7.E-06	2.E-05
			BENZO(B)FLUORANTHENE	1E-07		8.8E-08	2.E-07	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood	9.E-06	--	5.E-06	1.E-05
			BENZO(G,H,I)PERYLENE	--		--	--	BENZO(G,H,I)PERYLENE	Kidney	1.E-05	--	7.E-06	2.E-05
			BENZO(K)FLUORANTHENE	1E-07		8.8E-08	2.E-07	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood	9.E-06	--	5.E-06	1.E-05
			BIS(2-ETHYLHEXYL)PHTHALATE	1E-09		4.6E-10	2.E-09	BIS(2-ETHYLHEXYL)PHTHALATE	Liver	1.E-05	--	5.E-06	2.E-05
			CARBAZOLE	7E-10		2.7E-10	1.E-09	CARBAZOLE	Whole body (weight), Liver, Kidney	4.E-06	--	2.E-06	6.E-06
			CHRYSENE	1E-08		8.2E-09	2.E-08	CHRYSENE	No observed effect	1.E-06	--	7.E-07	2.E-06
			DIBENZ(A,H)ANTHRACENE	1E-07		6.9E-08	2.E-07	DIBENZ(A,H)ANTHRACENE	No observed effect	3.E-07	--	2.E-07	4.E-07
			FLUORANTHENE	--		--	--	FLUORANTHENE	Liver, Kidney, Blood	1.E-05	--	6.E-06	2.E-05
			FLUORENE	--		--	--	FLUORENE	Blood	3.E-06	--	2.E-06	4.E-06
			INDENO(1,2,3-CD)PYRENE	8E-08		4.7E-08	1.E-07	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood	5.E-06	--	3.E-06	8.E-06
			PENTACHLOROPHENOL	3E-08		2.8E-08	6.E-08	PENTACHLOROPHENOL	Liver, Kidney	2.E-05	--	2.E-05	5.E-05
			PHENANTHRENE	--		--	--	PHENANTHRENE	No observed effect	1.E-06	--	8.E-07	2.E-06
			PYRENE	--		--	--	PYRENE	Kidney	1.E-05	--	7.E-06	2.E-05
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD	4E-10		7.6E-11	5.E-10	4,4'-DDD	Liver	9.E-06	--	2.E-06	1.E-05
			4,4'-DDE	5E-10		9.1E-11	5.E-10	4,4'-DDE	Liver	8.E-06	--	2.E-06	9.E-06
			4,4'-DDT	2E-09		3.8E-10	2.E-09	4,4'-DDT	Liver	3.E-05	--	7.E-06	4.E-05
			ALDRIN	8E-09		1.6E-09	1.E-08	ALDRIN	Liver	5.E-05	--	9.E-06	5.E-05
			ALPHA-BHC	1E-08		2.8E-09	2.E-08	ALPHA-BHC	Liver, kidney	2.E-05	--	4.E-06	3.E-05
			ALPHA-CHLORDANE	2E-09		3.3E-10	2.E-09	ALPHA-CHLORDANE	Liver	8.E-06	--	2.E-06	1.E-05
			AROCLOR-1254	1E-08		8.0E-09	2.E-08	AROCLOR-1254	Immune System	1.E-03	--	6.E-04	2.E-03
			AROCLOR-1260	5E-08		2.9E-08	8.E-08	AROCLOR-1260	Immune System	3.E-03	--	2.E-03	6.E-03
			BETA-BHC	1E-09		2.8E-10	2.E-09	BETA-BHC	Liver, Kidney	7.E-06	--	1.E-06	9.E-06
			DELTA-BHC	--		--	--	DELTA-BHC	Liver, Kidney	5.E-06	--	1.E-06	7.E-06
			DIELDRIN	2E-08		3.2E-09	2.E-08	DIELDRIN	Liver	6.E-05	--	1.E-05	7.E-05
			ENDOSULFAN I	--		--	--	ENDOSULFAN I	Whole body (weight), Kidney, Blood	3.E-07	--	6.E-08	3.E-07
			ENDOSULFAN II	--		--	--	ENDOSULFAN II	Whole body (weight), Kidney, Blood	4.E-07	--	9.E-08	5.E-07
			ENDOSULFAN SULFATE	--		--	--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood	6.E-07	--	1.E-07	7.E-07
			ENDRIN	--		--	--	ENDRIN	Liver, CNS/PNS	9.E-06	--	2.E-06	1.E-05
			ENDRIN ALDEHYDE	--		--	--	ENDRIN ALDEHYDE	Liver, CNS/PNS	2.E-05	--	3.E-06	2.E-05
			ENDRIN KETONE	--		--	--	ENDRIN KETONE	Liver, CNS/PNS	1.E-05	--	2.E-06	1.E-05
			GAMMA-BHC	1E-09		2.3E-10	1.E-09	GAMMA-BHC	Liver, Kidney	9.E-06	--	2.E-06	1.E-05
			GAMMA-CHLORDANE	2E-09		3.2E-10	2.E-09	GAMMA-CHLORDANE	Liver	8.E-06	--	2.E-06	9.E-06
			HEPTACHLOR	6E-10		1.2E-10	7.E-10	HEPTACHLOR	Liver	6.E-07	--	1.E-07	8.E-07
			HEPTACHLOR EPOXIDE	2E-09		4.1E-10	2.E-09	HEPTACHLOR EPOXIDE	Liver	4.E-05	--	7.E-06	4.E-05
			METHOXYCHLOR	--		--	--	METHOXYCHLOR	Reproductive System	3.E-06	--	5.E-07	3.E-06
			(Total)	2E-06		1E-06	3E-06	(Total)		0.02		0.0033	0.02
Soil 0-3 ft. bgs	Air	Indoor Air	**METALS**					**METALS**					
			BARIUM		--		--	BARIUM	Reproductive System		2.E-04		2.E-04
			COBALT		--		--	COBALT	Respiratory System		2.E-03		2.E-03
			LEAD		--		--	LEAD	--		--		--

TABLE J-59

TABLE U.9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Air	Indoor Air (continued)	MOLYBDENUM		--		--	MOLYBDENUM	--		--		--
			SELENIUM		--		--	SELENIUM	Respiratory System		5.E-06		5.E-06
			SILVER		--		--	SILVER	Skin		2.E-08		2.E-08
			THALLIUM		--		--	THALLIUM	--		--		--
			TIN		--		--	TIN	--		--		--
			TITANIUM		--		--	TITANIUM	--		--		--
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			CARBON DISULFIDE		--		--	CARBON DISULFIDE	CNS/PNS		3.E-02		3.E-02
			TOLUENE		--		--	TOLUENE	CNS/PNS		6.E-02		6.E-02
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		2.E-03		2.E-03
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE		--		--	1,2,4-TRICHLOROBENZENE	Liver		2.E-01		2.E-01
			2-METHYLNAPHTHALENE		--		--	2-METHYLNAPHTHALENE	No observed effect		2.E-01		2.E-01
			ANTHRACENE		--		--	ANTHRACENE	No observed effect		3.E-03		3.E-03
			BENZO(A)ANTHRACENE		7.E-12		7.E-12	BENZO(A)ANTHRACENE	No observed effect		2.E-10		2.E-10
			BENZO(A)PYRENE		7.E-11		7.E-11	BENZO(A)PYRENE	Kidney		2.E-09		2.E-09
			BENZO(B)FLUORANTHENE		7.E-12		7.E-12	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		1.E-09		1.E-09
			BENZO(G,H,I)PERYLENE		--		--	BENZO(G,H,I)PERYLENE	Kidney		2.E-09		2.E-09
			BENZO(K)FLUORANTHENE		7.E-12		7.E-12	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood		1.E-09		1.E-09
			BIS(2-ETHYLHEXYL)PHTHALATE		1.E-13		1.E-13	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		2.E-09		2.E-09
			CARBAZOLE		1.E-13		1.E-13	CARBAZOLE	Whole body (weight), Liver, Kidney		6.E-10		6.E-10
			CHRYSENE		7.E-13		7.E-13	CHRYSENE	No observed effect		2.E-10		2.E-10
			DIBENZ(A,H)ANTHRACENE		2.E-11		2.E-11	DIBENZ(A,H)ANTHRACENE	No observed effect		4.E-11		4.E-11
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		1.E-09		1.E-09
			FLUORENE		--		--	FLUORENE	Blood		2.E-02		2.E-02
			INDENO(1,2,3-CD)PYRENE		4.E-12		4.E-12	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood		7.E-10		7.E-10
			PENTACHLOROPHENOL		4.E-12		4.E-12	PENTACHLOROPHENOL	Liver, Kidney		3.E-09		3.E-09
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		2.E-10		2.E-10
			PYRENE		--		--	PYRENE	Kidney		9.E-03		9.E-03
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD		6.E-14		6.E-14	4,4'-DDD	Liver		1.E-09		1.E-09
			4,4'-DDE		7.E-14		7.E-14	4,4'-DDE	Liver		1.E-09		1.E-09
			4,4'-DDT		3.E-13		3.E-13	4,4'-DDT	Liver		5.E-09		5.E-09
			ALDRIN		1.E-12		1.E-12	ALDRIN	Liver		7.E-09		7.E-09
			ALPHA-BHC		2.E-12		2.E-12	ALPHA-BHC	Liver, Kidney		3.E-09		3.E-09
			ALPHA-CHLORDANE		3.E-13		3.E-13	ALPHA-CHLORDANE	Liver		3.E-09		3.E-09
			AROCLOR-1254		2.E-12		2.E-12	AROCLOR-1254	Immune System		1.E-07		1.E-07
			AROCLOR-1260		7.E-12		7.E-12	AROCLOR-1260	Immune System		5.E-07		5.E-07
			BETA-BHC		2.E-13		2.E-13	BETA-BHC	Liver, Kidney		1.E-09		1.E-09
			DELTA-BHC		--		--	DELTA-BHC	Liver, Kidney		8.E-10		8.E-10
			DIELDRIN		2.E-12		2.E-12	DIELDRIN	Liver		9.E-09		9.E-09
			ENDOSULFAN I		--		--	ENDOSULFAN I	Whole body (weight), Kidney, Blood		4.E-11		4.E-11
			ENDOSULFAN II		--		--	ENDOSULFAN II	Whole body (weight), Kidney, Blood		7.E-11		7.E-11
			ENDOSULFAN SULFATE		--		--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood		9.E-11		9.E-11
			ENDRIN		--		--	ENDRIN	Liver, CNS/PNS		1.E-09		1.E-09
			ENDRIN ALDEHYDE		--		--	ENDRIN ALDEHYDE	Liver, CNS/PNS		3.E-09		3.E-09
			ENDRIN KETONE		--		--	ENDRIN KETONE	Liver, CNS/PNS		2.E-09		2.E-09
			GAMMA-BHC		2.E-13		2.E-13	GAMMA-BHC	Liver, Kidney		1.E-09		1.E-09
			GAMMA-CHLORDANE		2.E-13		2.E-13	GAMMA-CHLORDANE	Liver		3.E-09		3.E-09
			HEPTACHLOR		9.E-14		9.E-14	HEPTACHLOR	Liver		1.E-10		1.E-10
			HEPTACHLOR EPOXIDE		3.E-13		3.E-13	HEPTACHLOR EPOXIDE	Liver		5.E-09		5.E-09
			METHOXYCHLOR		--		--	METHOXYCHLOR	Reproductive System		4.E-10		4.E-10
			(Total)		1E-10		1E-10	(Total)			0.5		0.5
Groundwater	Air	Indoor Air	**VOLATILE ORGANIC COMPOUNDS**					**VOLATILE ORGANIC COMPOUNDS**					
			1,2-DICHLOROETHANE		9.E-08		9.E-08	1,2-DICHLOROETHANE	--		2.E-03		2.E-03
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		2.E-04		2.E-04
			4-METHYL-2-PENTANONE		--		--	4-METHYL-2-PENTANONE	Liver, Kidney		2.E-04		2.E-04
			ACETONE		--		--	ACETONE	Liver, Kidney		3.E-03		3.E-03
			CHLOROMETHANE		--		--	CHLOROMETHANE	CNS/PNS		1.E-04		1.E-04
			ETHYLBENZENE		--		--	ETHYLBENZENE	Reproductive System		2.E-05		2.E-05
			TOLUENE		--		--	TOLUENE	CNS/PNS		6.E-05		6.E-05

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TABLE U.9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Air	Indoor Air (continued)	XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		5.E-05		5.E-05
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,3-DICHLOROBENZENE		--		--	1,3-DICHLOROBENZENE	--		6.E-03		6.E-03
			2,4-DICHLOROPHENOL		--		--	2,4-DICHLOROPHENOL	Immune System		--		--
			4-METHYLPHENOL		--		--	4-METHYLPHENOL	CNS/PNS, Respiratory System		--		--
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		--		--
			BENZO(B)FLUORANTHENE		--		--	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		--		--
			BIS(2-ETHYLHEXYL)PHTHALATE		--		--	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		--		--
			CARBAZOLE		--		--	CARBAZOLE	Whole body (weight), Liver, Kidney		--		--
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		--		--
			N-NITROSODIPHENYLAMINE (1)		--		--	N-NITROSODIPHENYLAMINE (1)	--		--		--
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		1.E-02		1.E-02
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		1.E-05		1.E-05
			PHENOL		--		--	PHENOL	Reproductive System		--		--
			PYRENE		--		--	PYRENE	Kidney		3.E-04		3.E-04
			(Total)		9E-08		9E-08	(Total)			0.026		0.026

Total Risk Across Soil	3.E-06
Total Risk Across Groundwater	9E-08
Total Risk Across All Media and All Exposure Routes	4.E-06

Total Hazard Index Across Soil	0.5
Total Hazard Across Groundwater	0.026
Total Hazard Across All Media and All Exposure Routes	0.6

Notes:
Ft. = Feet

-- = Not available
bgs = Below ground surface
RME = Reasonable maximum exposure
COPC = Chemical of potential concern
CNS/PNS = Central nervous system/peripheral nervous system

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TABLE U.9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Soil	Direct Soil Contact	**METALS**					**METALS**					
			BARIUM	--		--	--	BARIUM	No adverse effect	2.E-02	--	6.E-04	2.E-02
			COBALT	--		--	--	COBALT	--	3.E-03	--	8.E-05	3.E-03
			LEAD	--		--	--	LEAD	--	--	--	--	--
			MOLYBDENUM	--		--	--	MOLYBDENUM	Kidney	9.E-04	--	3.E-05	9.E-04
			SELENIUM	--		--	--	SELENIUM	CNS/PNS, Liver, Skin, Blood	2.E-03	--	4.E-05	2.E-03
			SILVER	--		--	--	SILVER	Skin	1.E-03	--	3.E-05	1.E-03
			THALLIUM	--		--	--	THALLIUM	No adverse effect	8.E-02	--	2.E-03	8.E-02
			TIN	--		--	--	TIN	Liver, Kidney	5.E-04	--	1.E-05	5.E-04
			TITANIUM	--		--	--	TITANIUM	--	--	--	--	--
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			CARBON DISULFIDE	--		--	--	CARBON DISULFIDE	Reproductive System	3.E-07	--	7.E-08	3.E-07
			TOLUENE	--		--	--	TOLUENE	Liver, Kidney	4.E-07	--	1.E-07	5.E-07
			XYLENE (TOTAL)	--		--	--	XYLENE (TOTAL)	Whole body (weight), CNS/PNS	3.E-08	--	7.E-09	3.E-08
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE	--		--	--	1,2,4-TRICHLOROBENZENE	Adrenal	5.E-05	--	1.E-05	6.E-05
			2-METHYLNAPHTHALENE	--		--	--	2-METHYLNAPHTHALENE	No observed effect	1.E-05	--	4.E-06	1.E-05
			ANTHRACENE	--		--	--	ANTHRACENE	No observed effect	6.E-06	--	3.E-06	9.E-06
			BENZO(A)ANTHRACENE	3E-07		1.4E-07	5.E-07	BENZO(A)ANTHRACENE	No observed effect	1.E-05	--	5.E-06	2.E-05
			BENZO(A)PYRENE	3E-06		1.4E-06	5.E-06	BENZO(A)PYRENE	Kidney	1.E-04	--	5.E-05	2.E-04
			BENZO(B)FLUORANTHENE	3E-07		1.5E-07	5.E-07	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood	8.E-05	--	4.E-05	1.E-04
			BENZO(G,H,I)PERYLENE	--		--	--	BENZO(G,H,I)PERYLENE	Kidney	1.E-04	--	5.E-05	2.E-04
			BENZO(K)FLUORANTHENE	3E-07		1.5E-07	5.E-07	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood	8.E-05	--	4.E-05	1.E-04
			BIS(2-ETHYLHEXYL)PHTHALATE	3E-09		7.8E-10	3.E-09	BIS(2-ETHYLHEXYL)PHTHALATE	Liver	1.E-04	--	3.E-05	1.E-04
			CARBAZOLE	2E-09		4.6E-10	2.E-09	CARBAZOLE	Whole body (weight), Liver, Kidney	4.E-05	--	1.E-05	5.E-05
			CHRYSENE	3E-08		1.4E-08	5.E-08	CHRYSENE	No observed effect	1.E-05	--	4.E-06	1.E-05
			DIBENZ(A,H)ANTHRACENE	3E-07		1.2E-07	4.E-07	DIBENZ(A,H)ANTHRACENE	No observed effect	3.E-06	--	1.E-06	4.E-06
			FLUORANTHENE	--		--	--	FLUORANTHENE	Liver, Kidney, Blood	9.E-05	--	4.E-05	1.E-04
			FLUORENE	--		--	--	FLUORENE	Blood	3.E-05	--	1.E-05	4.E-05
			INDENO(1,2,3-CD)PYRENE	2E-07		8.0E-08	3.E-07	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood	4.E-05	--	2.E-05	6.E-05
			PENTACHLOROPHENOL	7E-08		4.8E-08	1.E-07	PENTACHLOROPHENOL	Liver, Kidney	2.E-04	--	2.E-04	4.E-04
			PHENANTHRENE	--		--	--	PHENANTHRENE	No observed effect	1.E-05	--	5.E-06	2.E-05
			PYRENE	--		--	--	PYRENE	Kidney	1.E-04	--	5.E-05	2.E-04
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD	9E-10		1.3E-10	1.E-09	4,4'-DDD	Liver	9.E-05	--	1.E-05	1.E-04
			4,4'-DDE	1E-09		1.6E-10	1.E-09	4,4'-DDE	Liver	7.E-05	--	1.E-05	8.E-05
			4,4'-DDT	4E-09		6.5E-10	5.E-09	4,4'-DDT	Liver	3.E-04	--	4.E-05	4.E-04
			ALDRIN	2E-08		2.7E-09	2.E-08	ALDRIN	Liver	4.E-04	--	6.E-05	5.E-04
			ALPHA-BHC	3E-08		4.8E-09	4.E-08	ALPHA-BHC	Liver, kidney	2.E-04	--	3.E-05	2.E-04
			ALPHA-CHLORDANE	4E-09		5.6E-10	4.E-09	ALPHA-CHLORDANE	Liver	7.E-05	--	1.E-05	9.E-05
			AROCLOR-1254	3E-08		1.4E-08	4.E-08	AROCLOR-1254	Immune System	9.E-03	--	4.E-03	1.E-02
			AROCLOR-1260	1E-07		4.9E-08	2.E-07	AROCLOR-1260	Immune System	3.E-02	--	1.E-02	5.E-02
			BETA-BHC	3E-09		4.7E-10	4.E-09	BETA-BHC	Liver, Kidney	7.E-05	--	1.E-05	8.E-05
			DELTA-BHC	--		--	--	DELTA-BHC	Liver, Kidney	5.E-05	--	7.E-06	6.E-05
			DIELDRIN	4E-08		5.5E-09	4.E-08	DIELDRIN	Liver	5.E-04	--	8.E-05	6.E-04
			ENDOSULFAN I	--		--	--	ENDOSULFAN I	Whole body (weight), Kidney, Blood	3.E-06	--	4.E-07	3.E-06
			ENDOSULFAN II	--		--	--	ENDOSULFAN II	Whole body (weight), Kidney, Blood	4.E-06	--	6.E-07	5.E-06
			ENDOSULFAN SULFATE	--		--	--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood	6.E-06	--	8.E-07	6.E-06
			ENDRIN	--		--	--	ENDRIN	Liver, CNS/PNS	9.E-05	--	1.E-05	1.E-04
			ENDRIN ALDEHYDE	--		--	--	ENDRIN ALDEHYDE	Liver, CNS/PNS	2.E-04	--	2.E-05	2.E-04
			ENDRIN KETONE	--		--	--	ENDRIN KETONE	Liver, CNS/PNS	1.E-04	--	2.E-05	1.E-04
			GAMMA-BHC	3E-09		3.9E-10	3.E-09	GAMMA-BHC	Liver, Kidney	8.E-05	--	1.E-05	9.E-05
			GAMMA-CHLORDANE	4E-09		5.4E-10	4.E-09	GAMMA-CHLORDANE	Liver	7.E-05	--	1.E-05	8.E-05
			HEPTACHLOR	1E-09		2.1E-10	2.E-09	HEPTACHLOR	Liver	6.E-06	--	9.E-07	7.E-06
			HEPTACHLOR EPOXIDE	5E-09		7.0E-10	6.E-09	HEPTACHLOR EPOXIDE	Liver	3.E-04	--	5.E-05	4.E-04
			METHOXYCHLOR	--		--	--	METHOXYCHLOR	Reproductive System	3.E-05	--	4.E-06	3.E-05
			(Total)	5E-06		2E-06	7E-06	(Total)		0.2		0.0221	0.2
Soil 0-3 ft. bgs	Air	Indoor Air	**METALS**					**METALS**					
			BARIUM		--		--	BARIUM	Reproductive System		5.E-04		5.E-04
			COBALT		--		--	COBALT	Respiratory System		5.E-03		5.E-03
			LEAD		--		--	LEAD	--		--		--
			MOLYBDENUM		--		--	MOLYBDENUM	--		--		--
			SELENIUM		--		--	SELENIUM	Respiratory System		1.E-05		1.E-05
			SILVER		--		--	SILVER	Skin		4.E-08		4.E-08

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TABLE U.9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Air	Indoor Air (continued)	THALLIUM		--		--	THALLIUM	--		--		--
			TIN		--		--	TIN	--		--		--
			TITANIUM		--		--	TITANIUM	--		--		--
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			CARBON DISULFIDE		--		--	CARBON DISULFIDE	CNS/PNS		7.E-02		7.E-02
			TOLUENE		--		--	TOLUENE	CNS/PNS		1.E-01		1.E-01
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		5.E-03		5.E-03
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE		--		--	1,2,4-TRICHLOROBENZENE	Liver		5.E-01		5.E-01
			2-METHYLNAPHTHALENE		--		--	2-METHYLNAPHTHALENE	No observed effect		4.E-01		4.E-01
			ANTHRACENE		--		--	ANTHRACENE	No observed effect		6.E-03		6.E-03
			BENZO(A)ANTHRACENE		4.E-12		4.E-12	BENZO(A)ANTHRACENE	No observed effect		4.E-10		4.E-10
			BENZO(A)PYRENE		4.E-11		4.E-11	BENZO(A)PYRENE	Kidney		4.E-09		4.E-09
			BENZO(B)FLUORANTHENE		4.E-12		4.E-12	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		3.E-09		3.E-09
			BENZO(G,H,I)PERYLENE		--		--	BENZO(G,H,I)PERYLENE	Kidney		4.E-09		4.E-09
			BENZO(K)FLUORANTHENE		4.E-12		4.E-12	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood		3.E-09		3.E-09
			BIS(2-ETHYLHEXYL)PHTHALATE		6.E-14		6.E-14	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		4.E-09		4.E-09
			CARBAZOLE		6.E-14		6.E-14	CARBAZOLE	Whole body (weight), Liver, Kidney		1.E-09		1.E-09
			CHRYSENE		4.E-13		4.E-13	CHRYSENE	No observed effect		4.E-10		4.E-10
			DIBENZ(A,H)ANTHRACENE		1.E-11		1.E-11	DIBENZ(A,H)ANTHRACENE	No observed effect		1.E-10		1.E-10
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		3.E-09		3.E-09
			FLUORENE		--		--	FLUORENE	Blood		5.E-02		5.E-02
			INDENO(1,2,3-CD)PYRENE		2.E-12		2.E-12	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood		2.E-09		2.E-09
			PENTACHLOROPHENOL		2.E-12		2.E-12	PENTACHLOROPHENOL	Liver, Kidney		8.E-09		8.E-09
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		5.E-10		5.E-10
			PYRENE		--		--	PYRENE	Kidney		2.E-02		2.E-02
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD		3.E-14		3.E-14	4,4'-DDD	Liver		3.E-09		3.E-09
			4,4'-DDE		4.E-14		4.E-14	4,4'-DDE	Liver		3.E-09		3.E-09
			4,4'-DDT		2.E-13		2.E-13	4,4'-DDT	Liver		1.E-08		1.E-08
			ALDRIN		7.E-13		7.E-13	ALDRIN	Liver		2.E-08		2.E-08
			ALPHA-BHC		1.E-12		1.E-12	ALPHA-BHC	Liver, Kidney		8.E-09		8.E-09
			ALPHA-CHLORDANE		1.E-13		1.E-13	ALPHA-CHLORDANE	Liver		7.E-09		7.E-09
			AROCLOR-1254		1.E-12		1.E-12	AROCLOR-1254	Immune System		3.E-07		3.E-07
			AROCLOR-1260		4.E-12		4.E-12	AROCLOR-1260	Immune System		1.E-06		1.E-06
			BETA-BHC		1.E-13		1.E-13	BETA-BHC	Liver, Kidney		3.E-09		3.E-09
			DELTA-BHC		--		--	DELTA-BHC	Liver, Kidney		2.E-09		2.E-09
			DIELDRIN		1.E-12		1.E-12	DIELDRIN	Liver		2.E-08		2.E-08
			ENDOSULFAN I		--		--	ENDOSULFAN I	Whole body (weight), Kidney, Blood		1.E-10		1.E-10
			ENDOSULFAN II		--		--	ENDOSULFAN II	Whole body (weight), Kidney, Blood		2.E-10		2.E-10
			ENDOSULFAN SULFATE		--		--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood		2.E-10		2.E-10
			ENDRIN		--		--	ENDRIN	Liver, CNS/PNS		3.E-09		3.E-09
			ENDRIN ALDEHYDE		--		--	ENDRIN ALDEHYDE	Liver, CNS/PNS		6.E-09		6.E-09
			ENDRIN KETONE		--		--	ENDRIN KETONE	Liver, CNS/PNS		4.E-09		4.E-09
			GAMMA-BHC		1.E-13		1.E-13	GAMMA-BHC	Liver, Kidney		3.E-09		3.E-09
			GAMMA-CHLORDANE		1.E-13		1.E-13	GAMMA-CHLORDANE	Liver		7.E-09		7.E-09
			HEPTACHLOR		5.E-14		5.E-14	HEPTACHLOR	Liver		2.E-10		2.E-10
			HEPTACHLOR EPOXIDE		2.E-13		2.E-13	HEPTACHLOR EPOXIDE	Liver		1.E-08		1.E-08
			METHOXYCHLOR		--		--	METHOXYCHLOR	Reproductive System		1.E-09		1.E-09
			(Total)		8E-11		8E-11	(Total)			1.2		1.2
Groundwater	Air	Indoor Air	**VOLATILE ORGANIC COMPOUNDS**					**VOLATILE ORGANIC COMPOUNDS**					
			1,2-DICHLOROETHANE		5.E-08		5.E-08	1,2-DICHLOROETHANE	--		5.E-03		5.E-03
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		5.E-04		5.E-04
			4-METHYL-2-PENTANONE		--		--	4-METHYL-2-PENTANONE	Liver, Kidney		4.E-04		4.E-04
			ACETONE		--		--	ACETONE	Liver, Kidney		6.E-03		6.E-03
			CHLOROMETHANE		--		--	CHLOROMETHANE	CNS/PNS		3.E-04		3.E-04
			ETHYLBENZENE		--		--	ETHYLBENZENE	Reproductive System		4.E-05		4.E-05
			TOLUENE		--		--	TOLUENE	CNS/PNS		1.E-04		1.E-04
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		1.E-04		1.E-04
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,3-DICHLOROBENZENE		--		--	1,3-DICHLOROBENZENE	--		1.E-02		1.E-02
			2,4-DICHLOROPHENOL		--		--	2,4-DICHLOROPHENOL	Immune System		--		--
			4-METHYLPHENOL		--		--	4-METHYLPHENOL	CNS/PNS, Respiratory System		--		--
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		--		--

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TABLE U.9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Air	Indoor Air (continued)	BENZO(B)FLUORANTHENE		--		--	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		--		--
			BIS(2-ETHYLHEXYL)PHTHALATE		--		--	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		--		--
			CARBAZOLE		--		--	CARBAZOLE	Whole body (weight), Liver, Kidney		--		--
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		--		--
			N-NITROSODIPHENYLAMINE (1)		--		--	N-NITROSODIPHENYLAMINE (1)	--		--		--
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		3.E-02		3.E-02
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		3.E-05		3.E-05
			PHENOL		--		--	PHENOL	Reproductive System		--		--
			PYRENE		--		--	PYRENE	Kidney		6.E-04		6.E-04
			(Total)		5E-08		5E-08	(Total)			0.06		0.06

Total Risk Across Soil	7.E-06
Total Risk Across Groundwater	5E-08
Total Risk Across All Media and All Exposure Routes	7.E-06

Total Hazard Index Across Soil	1
Total Hazard Across Groundwater	0.06
Total Hazard Across All Media and All Exposure Routes	1

Notes:
Ft. = Feet
-- = Not available
bgs = Below ground surface
RME = Reasonable maximum exposure
COPC = Chemical of potential concern
CNS/PNS = Central nervous system/peripheral nervous system

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TABLE U.9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Soil	Direct Soil Contact	**METALS**					**METALS**					
			BARIUM	--		--	--	BARIUM	No adverse effect	9.E-04	--	7.E-05	1.E-03
			COBALT	--		--	--	COBALT	--	1.E-04	--	9.E-06	1.E-04
			LEAD	--		--	--	LEAD	--	--	--	--	--
			MOLYBDENUM	--		--	--	MOLYBDENUM	Kidney	4.E-05	--	3.E-06	4.E-05
			SELENIUM	--		--	--	SELENIUM	CNS/PNS, Liver, Skin, Blood	7.E-05	--	5.E-06	8.E-05
			SILVER	--		--	--	SILVER	Skin	4.E-05	--	3.E-06	4.E-05
			THALLIUM	--		--	--	THALLIUM	No adverse effect	4.E-04	--	3.E-05	4.E-04
			TIN	--		--	--	TIN	Liver, Kidney	2.E-05	--	1.E-06	2.E-05
			TITANIUM	--		--	--	TITANIUM	--	--	--	--	--
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			CARBON DISULFIDE	--		--	--	CARBON DISULFIDE	Reproductive System	1.E-08	--	1.E-08	2.E-08
			TOLUENE	--		--	--	TOLUENE	Liver, Kidney	2.E-09	--	1.E-09	3.E-09
			XYLENE (TOTAL)	--		--	--	XYLENE (TOTAL)	Whole body (weight), CNS/PNS	1.E-09	--	1.E-09	2.E-09
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE	--		--	--	1,2,4-TRICHLOROBENZENE	Adrenal	3.E-06	--	2.E-06	4.E-06
			2-METHYLNAPHTHALENE	--		--	--	2-METHYLNAPHTHALENE	No observed effect	5.E-08	--	5.E-08	1.E-07
			ANTHRACENE	--		--	--	ANTHRACENE	No observed effect	3.E-08	--	4.E-08	7.E-08
			BENZO(A)ANTHRACENE	2E-08		1.8E-08	3.E-08	BENZO(A)ANTHRACENE	No observed effect	5.E-08	--	5.E-08	1.E-07
			BENZO(A)PYRENE	2E-07		1.7E-07	3.E-07	BENZO(A)PYRENE	Kidney	5.E-07	--	5.E-07	9.E-07
			BENZO(B)FLUORANTHENE	2E-08		1.9E-08	4.E-08	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood	4.E-07	--	4.E-07	8.E-07
			BENZO(G,H,I)PERYLENE	--		--	--	BENZO(G,H,I)PERYLENE	Kidney	5.E-07	--	5.E-07	1.E-06
			BENZO(K)FLUORANTHENE	2E-08		1.9E-08	4.E-08	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood	4.E-07	--	4.E-07	8.E-07
			BIS(2-ETHYLHEXYL)PHTHALATE	1E-10		8.7E-11	2.E-10	BIS(2-ETHYLHEXYL)PHTHALATE	Liver	4.E-06	--	3.E-06	8.E-06
			CARBAZOLE	1E-10		7.0E-11	2.E-10	CARBAZOLE	Whole body (weight), Liver, Kidney	2.E-06	--	1.E-06	3.E-06
			CHRYSENE	2E-09		1.7E-09	3.E-09	CHRYSENE	No observed effect	4.E-08	--	5.E-08	9.E-08
			DIBENZ(A,H)ANTHRACENE	2E-08		1.8E-08	3.E-08	DIBENZ(A,H)ANTHRACENE	No observed effect	1.E-08	--	1.E-08	3.E-08
			FLUORANTHENE	--		--	--	FLUORANTHENE	Liver, Kidney, Blood	4.E-07	--	4.E-07	7.E-07
			FLUORENE	--		--	--	FLUORENE	Blood	1.E-07	--	1.E-07	3.E-07
			INDENO(1,2,3-CD)PYRENE	1E-08		1.2E-08	2.E-08	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood	2.E-07	--	3.E-07	5.E-07
			PENTACHLOROPHENOL	4E-09		7.2E-09	1.E-08	PENTACHLOROPHENOL	Liver, Kidney	1.E-05	--	2.E-05	3.E-05
			PHENANTHRENE	--		--	--	PHENANTHRENE	No observed effect	5.E-08	--	5.E-08	1.E-07
			PYRENE	--		--	--	PYRENE	Kidney	4.E-07	--	4.E-07	9.E-07
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD	5E-11		1.7E-11	6.E-11	4,4'-DDD	Liver	4.E-06	--	1.E-06	5.E-06
			4,4'-DDE	6E-11		2.1E-11	8.E-11	4,4'-DDE	Liver	3.E-06	--	1.E-06	5.E-06
			4,4'-DDT	2E-10		7.4E-11	3.E-10	4,4'-DDT	Liver	1.E-05	--	4.E-06	2.E-05
			ALDRIN	1E-09		4.0E-10	2.E-09	ALDRIN	Liver	2.E-05	--	8.E-06	3.E-05
			ALPHA-BHC	2E-09		5.4E-10	2.E-09	ALPHA-BHC	Liver, kidney	8.E-07	--	3.E-07	1.E-06
			ALPHA-CHLORDANE	2E-10		6.8E-11	3.E-10	ALPHA-CHLORDANE	Liver	3.E-06	--	1.E-06	4.E-06
			AROCLOR-1254	2E-09		1.6E-09	3.E-09	AROCLOR-1254	Immune System	2.E-04	--	2.E-04	3.E-04
			AROCLOR-1260	5E-09		5.6E-09	1.E-08	AROCLOR-1260	Immune System	5.E-04	--	6.E-04	1.E-03
			BETA-BHC	2E-10		6.3E-11	2.E-10	BETA-BHC	Liver, Kidney	3.E-07	--	1.E-07	5.E-07
			DELTA-BHC	--		--	--	DELTA-BHC	Liver, Kidney	3.E-07	--	9.E-08	3.E-07
			DIELDRIN	2E-09		7.8E-10	3.E-09	DIELDRIN	Liver	3.E-05	--	1.E-05	4.E-05
			ENDOSULFAN I	--		--	--	ENDOSULFAN I	Whole body (weight), Kidney, Blood	1.E-07	--	5.E-08	2.E-07
			ENDOSULFAN II	--		--	--	ENDOSULFAN II	Whole body (weight), Kidney, Blood	2.E-07	--	8.E-08	3.E-07
			ENDOSULFAN SULFATE	--		--	--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood	3.E-07	--	1.E-07	4.E-07
			ENDRIN	--		--	--	ENDRIN	Liver, CNS/PNS	4.E-06	--	2.E-06	6.E-06
			ENDRIN ALDEHYDE	--		--	--	ENDRIN ALDEHYDE	Liver, CNS/PNS	7.E-06	--	3.E-06	1.E-05
			ENDRIN KETONE	--		--	--	ENDRIN KETONE	Liver, CNS/PNS	6.E-06	--	2.E-06	8.E-06
			GAMMA-BHC	1E-10		5.1E-11	2.E-10	GAMMA-BHC	Liver, Kidney	4.E-07	--	1.E-07	5.E-07
			GAMMA-CHLORDANE	2E-10		6.5E-11	3.E-10	GAMMA-CHLORDANE	Liver	3.E-05	--	9.E-06	3.E-05
			HEPTACHLOR	8E-11		2.7E-11	1.E-10	HEPTACHLOR	Liver	3.E-07	--	1.E-07	4.E-07
			HEPTACHLOR EPOXIDE	3E-10		9.0E-11	3.E-10	HEPTACHLOR EPOXIDE	Liver	2.E-05	--	5.E-06	2.E-05
			METHOXYCHLOR	--		--	--	METHOXYCHLOR	Reproductive System	1.E-06	--	5.E-07	2.E-06
			(Total)	3E-07		3E-07	5E-07	(Total)		0.002		0.0009	0.003
Soil 0-3 ft. bgs	Air	Indoor Air	**METALS**					**METALS**					
			BARIUM		--		--	BARIUM	Reproductive System		1.E-05		1.E-05
			COBALT		--		--	COBALT	Respiratory System		1.E-03		1.E-03
			LEAD		--		--	LEAD	--		--		--
			MOLYBDENUM		--		--	MOLYBDENUM	--		--		--
			SELENIUM		--		--	SELENIUM	Respiratory System		3.E-06		3.E-06
			SILVER		--		--	SILVER	Skin		7.E-09		7.E-09

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TABLE U.9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Air	Indoor Air (continued)	THALLIUM		--		--	THALLIUM	--		--		--
			TIN		--		--	TIN	--		--		--
			TITANIUM		--		--	TITANIUM	--		--		--
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			CARBON DISULFIDE		--		--	CARBON DISULFIDE	CNS/PNS		2.E-02		2.E-02
			TOLUENE		--		--	TOLUENE	CNS/PNS		4.E-02		4.E-02
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		1.E-04		1.E-04
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE		--		--	1,2,4-TRICHLOROBENZENE	Liver		1.E-02		1.E-02
			2-METHYLNAPHTHALENE		--		--	2-METHYLNAPHTHALENE	No observed effect		1.E-02		1.E-02
			ANTHRACENE		--		--	ANTHRACENE	No observed effect		2.E-04		2.E-04
			BENZO(A)ANTHRACENE		1.E-12		1.E-12	BENZO(A)ANTHRACENE	No observed effect		1.E-11		1.E-11
			BENZO(A)PYRENE		1.E-11		1.E-11	BENZO(A)PYRENE	Kidney		9.E-11		9.E-11
			BENZO(B)FLUORANTHENE		1.E-12		1.E-12	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		7.E-11		7.E-11
			BENZO(G,H,I)PERYLENE		--		--	BENZO(G,H,I)PERYLENE	Kidney		1.E-10		1.E-10
			BENZO(K)FLUORANTHENE		1.E-12		1.E-12	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood		8.E-11		8.E-11
			BIS(2-ETHYLHEXYL)PHTHALATE		1.E-14		1.E-14	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		9.E-10		9.E-10
			CARBAZOLE		2.E-14		2.E-14	CARBAZOLE	Whole body (weight), Liver, Kidney		4.E-10		4.E-10
			CHRYSENE		1.E-13		1.E-13	CHRYSENE	No observed effect		9.E-12		9.E-12
			DIBENZ(A,H)ANTHRACENE		3.E-12		3.E-12	DIBENZ(A,H)ANTHRACENE	No observed effect		3.E-12		3.E-12
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		7.E-11		7.E-11
			FLUORENE		--		--	FLUORENE	Blood		2.E-03		2.E-03
			INDENO(1,2,3-CD)PYRENE		8.E-13		8.E-13	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood		5.E-11		5.E-11
			PENTACHLOROPHENOL		8.E-13		8.E-13	PENTACHLOROPHENOL	Liver, Kidney		2.E-09		2.E-09
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		1.E-11		1.E-11
			PYRENE		--		--	PYRENE	Kidney		4.E-04		4.E-04
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD		1.E-14		1.E-14	4,4'-DDD	Liver		8.E-10		8.E-10
			4,4'-DDE		1.E-14		1.E-14	4,4'-DDE	Liver		7.E-10		7.E-10
			4,4'-DDT		4.E-14		4.E-14	4,4'-DDT	Liver		3.E-09		3.E-09
			ALDRIN		2.E-13		2.E-13	ALDRIN	Liver		5.E-09		5.E-09
			ALPHA-BHC		3.E-13		3.E-13	ALPHA-BHC	Liver, Kidney		2.E-10		2.E-10
			ALPHA-CHLORDANE		4.E-14		4.E-14	ALPHA-CHLORDANE	Liver		2.E-10		2.E-10
			AROCLOR-1254		3.E-13		3.E-13	AROCLOR-1254	Immune System		3.E-08		3.E-08
			AROCLOR-1260		1.E-12		1.E-12	AROCLOR-1260	Immune System		1.E-07		1.E-07
			BETA-BHC		4.E-14		4.E-14	BETA-BHC	Liver, Kidney		7.E-11		7.E-11
			DELTA-BHC		--		--	DELTA-BHC	Liver, Kidney		5.E-11		5.E-11
			DIELDRIN		5.E-13		5.E-13	DIELDRIN	Liver		6.E-09		6.E-09
			ENDOSULFAN I		--		--	ENDOSULFAN I	Whole body (weight), Kidney, Blood		3.E-11		3.E-11
			ENDOSULFAN II		--		--	ENDOSULFAN II	Whole body (weight), Kidney, Blood		4.E-11		4.E-11
			ENDOSULFAN SULFATE		--		--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood		6.E-11		6.E-11
			ENDRIN		--		--	ENDRIN	Liver, CNS/PNS		9.E-10		9.E-10
			ENDRIN ALDEHYDE		--		--	ENDRIN ALDEHYDE	Liver, CNS/PNS		1.E-09		1.E-09
			ENDRIN KETONE		--		--	ENDRIN KETONE	Liver, CNS/PNS		1.E-09		1.E-09
			GAMMA-BHC		3.E-14		3.E-14	GAMMA-BHC	Liver, Kidney		8.E-11		8.E-11
			GAMMA-CHLORDANE		4.E-14		4.E-14	GAMMA-CHLORDANE	Liver		2.E-10		2.E-10
			HEPTACHLOR		2.E-14		2.E-14	HEPTACHLOR	Liver		6.E-11		6.E-11
			HEPTACHLOR EPOXIDE		5.E-14		5.E-14	HEPTACHLOR EPOXIDE	Liver		3.E-09		3.E-09
			METHOXYCHLOR		--		--	METHOXYCHLOR	Reproductive System		3.E-10		3.E-10
			(Total)		2E-11		2E-11	(Total)			0.09		0.09
Groundwater	Air	Indoor Air	**VOLATILE ORGANIC COMPOUNDS**					**VOLATILE ORGANIC COMPOUNDS**					
			1,2-DICHLOROETHANE		1.E-08		1.E-08	1,2-DICHLOROETHANE	--		1.E-03		1.E-03
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		7.E-05		7.E-05
			4-METHYL-2-PENTANONE		--		--	4-METHYL-2-PENTANONE	Liver, Kidney		1.E-05		1.E-05
			ACETONE		--		--	ACETONE	Liver, Kidney		1.E-04		1.E-04
			CHLOROMETHANE		--		--	CHLOROMETHANE	CNS/PNS		3.E-05		3.E-05
			ETHYLBENZENE		--		--	ETHYLBENZENE	Reproductive System		1.E-05		1.E-05
			TOLUENE		--		--	TOLUENE	CNS/PNS		3.E-05		3.E-05
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		2.E-06		2.E-06
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,3-DICHLOROBENZENE		--		--	1,3-DICHLOROBENZENE	--		4.E-03		4.E-03
			2,4-DICHLOROPHENOL		--		--	2,4-DICHLOROPHENOL	Immune System		--		--
			4-METHYLPHENOL		--		--	4-METHYLPHENOL	CNS/PNS, Respiratory System		--		--
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		--		--

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TABLE U.9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Air	Indoor Air (continued)	BENZO(B)FLUORANTHENE		--		--	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		--		--
			BIS(2-ETHYLHEXYL)PHTHALATE		--		--	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		--		--
			CARBAZOLE		--		--	CARBAZOLE	Whole body (weight), Liver, Kidney		--		--
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		--		--
			N-NITROSODIPHENYLAMINE (1)		--		--	N-NITROSODIPHENYLAMINE (1)	--		--		--
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		9.E-03		9.E-03
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		1.E-06		1.E-06
			PHENOL		--		--	PHENOL	Reproductive System		--		--
			PYRENE		--		--	PYRENE	Kidney		1.E-05		1.E-05
			(Total)		1E-08		1E-08	(Total)			0.015		0.015
						Total Risk Across Soil	5.E-07					Total Hazard Index Across Soil	0.1
						Total Risk Across Groundwater	1E-08					Total Hazard Across Groundwater	0.015
						Total Risk Across All Media and All Exposure Routes	6.E-07					Total Hazard Across All Media and All Exposure Routes	0.1

Notes:
Ft. = Feet
-- = Not available
bgs = Below ground surface
CTE = Central tendency exposure
COPC = Chemical of potential concern
CNS/PNS = Central nervous system/peripheral nervous system

TABLE J-62

TABLE U.9.3.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Soil	Direct Soil Contact	**METALS**					**METALS**					
			BARIUM	--		--	--	BARIUM	No adverse effect	9.E-03	--	5.E-04	9.E-03
			COBALT	--		--	--	COBALT	--	1.E-03	--	7.E-05	1.E-03
			LEAD	--		--	--	LEAD	--	--	--	--	--
			MOLYBDENUM	--		--	--	MOLYBDENUM	Kidney	4.E-04	--	2.E-05	4.E-04
			SELENIUM	--		--	--	SELENIUM	CNS/PNS, Liver, Skin, Blood	7.E-04	--	4.E-05	7.E-04
			SILVER	--		--	--	SILVER	Skin	4.E-04	--	2.E-05	4.E-04
			THALLIUM	--		--	--	THALLIUM	No adverse effect	4.E-03	--	2.E-04	4.E-03
			TIN	--		--	--	TIN	Liver, Kidney	2.E-04	--	9.E-06	2.E-04
			TITANIUM	--		--	--	TITANIUM	--	--	--	--	--
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			CARBON DISULFIDE	--		--	--	CARBON DISULFIDE	Reproductive System	1.E-07	--	7.E-08	2.E-07
			TOLUENE	--		--	--	TOLUENE	Liver, Kidney	2.E-08	--	1.E-08	3.E-08
			XYLENE (TOTAL)	--		--	--	XYLENE (TOTAL)	Whole body (weight), CNS/PNS	1.E-08	--	7.E-09	2.E-08
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE	--		--	--	1,2,4-TRICHLOROBENZENE	Adrenal	2.E-05	--	1.E-05	4.E-05
			2-METHYLNAPHTHALENE	--		--	--	2-METHYLNAPHTHALENE	No observed effect	5.E-07	--	4.E-07	9.E-07
			ANTHRACENE	--		--	--	ANTHRACENE	No observed effect	3.E-07	--	3.E-07	6.E-07
			BENZO(A)ANTHRACENE	5E-08		3.9E-08	8.E-08	BENZO(A)ANTHRACENE	No observed effect	4.E-07	--	4.E-07	8.E-07
			BENZO(A)PYRENE	4E-07		3.8E-07	8.E-07	BENZO(A)PYRENE	Kidney	4.E-06	--	4.E-06	8.E-06
			BENZO(B)FLUORANTHENE	5E-08		4.1E-08	9.E-08	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood	3.E-06	--	3.E-06	6.E-06
			BENZO(G,H,I)PERYLENE	--		--	--	BENZO(G,H,I)PERYLENE	Kidney	4.E-06	--	4.E-06	8.E-06
			BENZO(K)FLUORANTHENE	5E-08		4.2E-08	9.E-08	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood	4.E-06	--	3.E-06	7.E-06
			BIS(2-ETHYLHEXYL)PHTHALATE	3E-10		1.9E-10	5.E-10	BIS(2-ETHYLHEXYL)PHTHALATE	Liver	4.E-05	--	2.E-05	7.E-05
			CARBAZOLE	3E-10		1.5E-10	4.E-10	CARBAZOLE	Whole body (weight), Liver, Kidney	2.E-05	--	1.E-05	3.E-05
			CHRYSENE	4E-09		3.7E-09	8.E-09	CHRYSENE	No observed effect	4.E-07	--	4.E-07	8.E-07
			DIBENZ(A,H)ANTHRACENE	4E-08		3.9E-08	8.E-08	DIBENZ(A,H)ANTHRACENE	No observed effect	1.E-07	--	1.E-07	2.E-07
			FLUORANTHENE	--		--	--	FLUORANTHENE	Liver, Kidney, Blood	3.E-06	--	3.E-06	6.E-06
			FLUORENE	--		--	--	FLUORENE	Blood	1.E-06	--	1.E-06	2.E-06
			INDENO(1,2,3-CD)PYRENE	3E-08		2.7E-08	6.E-08	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood	2.E-06	--	2.E-06	4.E-06
			PENTACHLOROPHENOL	1E-08		1.6E-08	3.E-08	PENTACHLOROPHENOL	Liver, Kidney	1.E-04	--	2.E-04	3.E-04
			PHENANTHRENE	--		--	--	PHENANTHRENE	No observed effect	5.E-07	--	4.E-07	9.E-07
			PYRENE	--		--	--	PYRENE	Kidney	4.E-06	--	3.E-06	7.E-06
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD	1E-10		3.7E-11	2.E-10	4,4'-DDD	Liver	4.E-05	--	1.E-05	5.E-05
			4,4'-DDE	2E-10		4.6E-11	2.E-10	4,4'-DDE	Liver	3.E-05	--	9.E-06	4.E-05
			4,4'-DDT	6E-10		1.6E-10	7.E-10	4,4'-DDT	Liver	1.E-04	--	3.E-05	2.E-04
			ALDRIN	3E-09		8.9E-10	4.E-09	ALDRIN	Liver	2.E-04	--	6.E-05	3.E-04
			ALPHA-BHC	4E-09		1.2E-09	5.E-09	ALPHA-BHC	Liver, kidney	8.E-06	--	2.E-06	1.E-05
			ALPHA-CHLORDANE	5E-10		1.5E-10	7.E-10	ALPHA-CHLORDANE	Liver	3.E-05	--	9.E-06	4.E-05
			AROCLOR-1254	4E-09		3.5E-09	8.E-09	AROCLOR-1254	Immune System	1.E-03	--	1.E-03	3.E-03
			AROCLOR-1260	1E-08		1.2E-08	3.E-08	AROCLOR-1260	Immune System	5.E-03	--	4.E-03	9.E-03
			BETA-BHC	5E-10		1.4E-10	6.E-10	BETA-BHC	Liver, Kidney	3.E-06	--	9.E-07	4.E-06
			DELTA-BHC	--		--	--	DELTA-BHC	Liver, Kidney	2.E-06	--	7.E-07	3.E-06
			DIELDRIN	6E-09		1.7E-09	8.E-09	DIELDRIN	Liver	3.E-04	--	8.E-05	3.E-04
			ENDOSULFAN I	--		--	--	ENDOSULFAN I	Whole body (weight), Kidney, Blood	1.E-06	--	3.E-07	2.E-06
			ENDOSULFAN II	--		--	--	ENDOSULFAN II	Whole body (weight), Kidney, Blood	2.E-06	--	6.E-07	3.E-06
			ENDOSULFAN SULFATE	--		--	--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood	3.E-06	--	7.E-07	3.E-06
			ENDRIN	--		--	--	ENDRIN	Liver, CNS/PNS	4.E-05	--	1.E-05	5.E-05
			ENDRIN ALDEHYDE	--		--	--	ENDRIN ALDEHYDE	Liver, CNS/PNS	7.E-05	--	2.E-05	9.E-05
			ENDRIN KETONE	--		--	--	ENDRIN KETONE	Liver, CNS/PNS	5.E-05	--	2.E-05	7.E-05
			GAMMA-BHC	4E-10		1.1E-10	5.E-10	GAMMA-BHC	Liver, Kidney	3.E-06	--	1.E-06	5.E-06
			GAMMA-CHLORDANE	5E-10		1.4E-10	6.E-10	GAMMA-CHLORDANE	Liver	2.E-04	--	7.E-05	3.E-04
			HEPTACHLOR	2E-10		6.0E-11	3.E-10	HEPTACHLOR	Liver	3.E-06	--	7.E-07	3.E-06
			HEPTACHLOR EPOXIDE	7E-10		2.0E-10	9.E-10	HEPTACHLOR EPOXIDE	Liver	1.E-04	--	4.E-05	2.E-04
			METHOXYCHLOR	--		--	--	METHOXYCHLOR	Reproductive System	1.E-05	--	4.E-06	2.E-05
			(Total)	7E-07		6E-07	1E-06	(Total)		0.02		0.01	0.03
Soil 0-3 ft. bgs	Air	Indoor Air	**METALS**					**METALS**					
			BARIUM		--		--	BARIUM	Reproductive System		4.E-05		4.E-05
			COBALT		--		--	COBALT	Respiratory System		3.E-03		3.E-03
			LEAD		--		--	LEAD	--		--		--
			MOLYBDENUM		--		--	MOLYBDENUM	--		--		--

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TABLE U.9.3.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY EXPOSURE

FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Air	Indoor Air (continued)	SELENIUM		--		--	SELENIUM	Respiratory System		9.E-06		9.E-06
			SILVER		--		--	SILVER	Skin		2.E-08		2.E-08
			THALLIUM		--		--	THALLIUM	--		--		--
			TIN		--		--	TIN	--		--		--
			TITANIUM		--		--	TITANIUM	--		--		--
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			CARBON DISULFIDE		--		--	CARBON DISULFIDE	CNS/PNS		6.E-02		6.E-02
			TOLUENE		--		--	TOLUENE	CNS/PNS		1.E-01		1.E-01
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		4.E-04		4.E-04
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE		--		--	1,2,4-TRICHLOROBENZENE	Liver		4.E-02		4.E-02
			2-METHYLNAPHTHALENE		--		--	2-METHYLNAPHTHALENE	No observed effect		3.E-02		3.E-02
			ANTHRACENE		--		--	ANTHRACENE	No observed effect		5.E-04		5.E-04
			BENZO(A)ANTHRACENE		9.E-13		9.E-13	BENZO(A)ANTHRACENE	No observed effect		3.E-11		3.E-11
			BENZO(A)PYRENE		9.E-12		9.E-12	BENZO(A)PYRENE	Kidney		3.E-10		3.E-10
			BENZO(B)FLUORANTHENE		1.E-12		1.E-12	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		2.E-10		2.E-10
			BENZO(G,H,I)PERYLENE		--		--	BENZO(G,H,I)PERYLENE	Kidney		3.E-10		3.E-10
			BENZO(K)FLUORANTHENE		1.E-12		1.E-12	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood		2.E-10		2.E-10
			BIS(2-ETHYLHEXYL)PHTHALATE		1.E-14		1.E-14	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		3.E-09		3.E-09
			CARBAZOLE		2.E-14		2.E-14	CARBAZOLE	Whole body (weight), Liver, Kidney		1.E-09		1.E-09
			CHRYSENE		9.E-14		9.E-14	CHRYSENE	No observed effect		3.E-11		3.E-11
			DIBENZ(A,H)ANTHRACENE		3.E-12		3.E-12	DIBENZ(A,H)ANTHRACENE	No observed effect		8.E-12		8.E-12
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		2.E-10		2.E-10
			FLUORENE		--		--	FLUORENE	Blood		5.E-03		5.E-03
			INDENO(1,2,3-CD)PYRENE		6.E-13		6.E-13	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood		1.E-10		1.E-10
			PENTACHLOROPHENOL		7.E-13		7.E-13	PENTACHLOROPHENOL	Liver, Kidney		7.E-09		7.E-09
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		3.E-11		3.E-11
			PYRENE		--		--	PYRENE	Kidney		1.E-03		1.E-03
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD		8.E-15		8.E-15	4,4'-DDD	Liver		2.E-09		2.E-09
			4,4'-DDE		1.E-14		1.E-14	4,4'-DDE	Liver		2.E-09		2.E-09
			4,4'-DDT		4.E-14		4.E-14	4,4'-DDT	Liver		7.E-09		7.E-09
			ALDRIN		2.E-13		2.E-13	ALDRIN	Liver		1.E-08		1.E-08
			ALPHA-BHC		3.E-13		3.E-13	ALPHA-BHC	Liver, Kidney		5.E-10		5.E-10
			ALPHA-CHLORDANE		3.E-14		3.E-14	ALPHA-CHLORDANE	Liver		5.E-10		5.E-10
			AROCLOR-1254		3.E-13		3.E-13	AROCLOR-1254	Immune System		9.E-08		9.E-08
			AROCLOR-1260		9.E-13		9.E-13	AROCLOR-1260	Immune System		3.E-07		3.E-07
			BETA-BHC		3.E-14		3.E-14	BETA-BHC	Liver, Kidney		2.E-10		2.E-10
			DELTA-BHC		--		--	DELTA-BHC	Liver, Kidney		2.E-10		2.E-10
			DIELDRIN		4.E-13		4.E-13	DIELDRIN	Liver		2.E-08		2.E-08
			ENDOSULFAN I		--		--	ENDOSULFAN I	Whole body (weight), Kidney, Blood		8.E-11		8.E-11
			ENDOSULFAN II		--		--	ENDOSULFAN II	Whole body (weight), Kidney, Blood		1.E-10		1.E-10
			ENDOSULFAN SULFATE		--		--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood		2.E-10		2.E-10
			ENDRIN		--		--	ENDRIN	Liver, CNS/PNS		3.E-09		3.E-09
			ENDRIN ALDEHYDE		--		--	ENDRIN ALDEHYDE	Liver, CNS/PNS		4.E-09		4.E-09
			ENDRIN KETONE		--		--	ENDRIN KETONE	Liver, CNS/PNS		3.E-09		3.E-09
			GAMMA-BHC		2.E-14		2.E-14	GAMMA-BHC	Liver, Kidney		2.E-10		2.E-10
			GAMMA-CHLORDANE		3.E-14		3.E-14	GAMMA-CHLORDANE	Liver		5.E-10		5.E-10
			HEPTACHLOR		1.E-14		1.E-14	HEPTACHLOR	Liver		2.E-10		2.E-10
			HEPTACHLOR EPOXIDE		4.E-14		4.E-14	HEPTACHLOR EPOXIDE	Liver		9.E-09		9.E-09
			METHOXYCHLOR		--		--	METHOXYCHLOR	Reproductive System		8.E-10		8.E-10
			(Total)		2E-11		2E-11	(Total)			0.3		0.3
Groundwater	Air	Indoor Air	**VOLATILE ORGANIC COMPOUNDS**					**VOLATILE ORGANIC COMPOUNDS**					
			1,2-DICHLOROETHANE		1.E-08		1.E-08	1,2-DICHLOROETHANE	--		3.E-03		3.E-03
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		2.E-04		2.E-04
			4-METHYL-2-PENTANONE		--		--	4-METHYL-2-PENTANONE	Liver, Kidney		4.E-05		4.E-05
			ACETONE		--		--	ACETONE	Liver, Kidney		4.E-04		4.E-04
			CHLOROMETHANE		--		--	CHLOROMETHANE	CNS/PNS		8.E-05		8.E-05
			ETHYLBENZENE		--		--	ETHYLBENZENE	Reproductive System		3.E-05		3.E-05
			TOLUENE		--		--	TOLUENE	CNS/PNS		1.E-04		1.E-04
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		7.E-06		7.E-06
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,3-DICHLOROBENZENE		--		--	1,3-DICHLOROBENZENE	--		1.E-02		1.E-02

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SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY EXPOSURE

FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Air	Indoor Air (continued)	SELENIUM		--		--	SELENIUM	Respiratory System		9.E-06		9.E-06
			SILVER		--		--	SILVER	Skin		2.E-08		2.E-08
			THALLIUM		--		--	THALLIUM	--		--		--
			TIN		--		--	TIN	--		--		--
			TITANIUM		--		--	TITANIUM	--		--		--
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			CARBON DISULFIDE		--		--	CARBON DISULFIDE	CNS/PNS		6.E-02		6.E-02
			TOLUENE		--		--	TOLUENE	CNS/PNS		1.E-01		1.E-01
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		4.E-04		4.E-04
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE		--		--	1,2,4-TRICHLOROBENZENE	Liver		4.E-02		4.E-02
			2-METHYLNAPHTHALENE		--		--	2-METHYLNAPHTHALENE	No observed effect		3.E-02		3.E-02
			ANTHRACENE		--		--	ANTHRACENE	No observed effect		5.E-04		5.E-04
			BENZO(A)ANTHRACENE		9.E-13		9.E-13	BENZO(A)ANTHRACENE	No observed effect		3.E-11		3.E-11
			BENZO(A)PYRENE		9.E-12		9.E-12	BENZO(A)PYRENE	Kidney		3.E-10		3.E-10
			BENZO(B)FLUORANTHENE		1.E-12		1.E-12	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		2.E-10		2.E-10
			BENZO(G,H,I)PERYLENE		--		--	BENZO(G,H,I)PERYLENE	Kidney		3.E-10		3.E-10
			BENZO(K)FLUORANTHENE		1.E-12		1.E-12	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood		2.E-10		2.E-10
			BIS(2-ETHYLHEXYL)PHTHALATE		1.E-14		1.E-14	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		3.E-09		3.E-09
			CARBAZOLE		2.E-14		2.E-14	CARBAZOLE	Whole body (weight), Liver, Kidney		1.E-09		1.E-09
			CHRYSENE		9.E-14		9.E-14	CHRYSENE	No observed effect		3.E-11		3.E-11
			DIBENZ(A,H)ANTHRACENE		3.E-12		3.E-12	DIBENZ(A,H)ANTHRACENE	No observed effect		8.E-12		8.E-12
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		2.E-10		2.E-10
			FLUORENE		--		--	FLUORENE	Blood		5.E-03		5.E-03
			INDENO(1,2,3-CD)PYRENE		6.E-13		6.E-13	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood		1.E-10		1.E-10
			PENTACHLOROPHENOL		7.E-13		7.E-13	PENTACHLOROPHENOL	Liver, Kidney		7.E-09		7.E-09
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		3.E-11		3.E-11
			PYRENE		--		--	PYRENE	Kidney		1.E-03		1.E-03
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD		8.E-15		8.E-15	4,4'-DDD	Liver		2.E-09		2.E-09
			4,4'-DDE		1.E-14		1.E-14	4,4'-DDE	Liver		2.E-09		2.E-09
			4,4'-DDT		4.E-14		4.E-14	4,4'-DDT	Liver		7.E-09		7.E-09
			ALDRIN		2.E-13		2.E-13	ALDRIN	Liver		1.E-08		1.E-08
			ALPHA-BHC		3.E-13		3.E-13	ALPHA-BHC	Liver, Kidney		5.E-10		5.E-10
			ALPHA-CHLORDANE		3.E-14		3.E-14	ALPHA-CHLORDANE	Liver		5.E-10		5.E-10
			AROCLOR-1254		3.E-13		3.E-13	AROCLOR-1254	Immune System		9.E-08		9.E-08
			AROCLOR-1260		9.E-13		9.E-13	AROCLOR-1260	Immune System		3.E-07		3.E-07
			BETA-BHC		3.E-14		3.E-14	BETA-BHC	Liver, Kidney		2.E-10		2.E-10
			DELTA-BHC		--		--	DELTA-BHC	Liver, Kidney		2.E-10		2.E-10
			DIELDRIN		4.E-13		4.E-13	DIELDRIN	Liver		2.E-08		2.E-08
			ENDOSULFAN I		--		--	ENDOSULFAN I	Whole body (weight), Kidney, Blood		8.E-11		8.E-11
			ENDOSULFAN II		--		--	ENDOSULFAN II	Whole body (weight), Kidney, Blood		1.E-10		1.E-10
			ENDOSULFAN SULFATE		--		--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood		2.E-10		2.E-10
			ENDRIN		--		--	ENDRIN	Liver, CNS/PNS		3.E-09		3.E-09
			ENDRIN ALDEHYDE		--		--	ENDRIN ALDEHYDE	Liver, CNS/PNS		4.E-09		4.E-09
			ENDRIN KETONE		--		--	ENDRIN KETONE	Liver, CNS/PNS		3.E-09		3.E-09
			GAMMA-BHC		2.E-14		2.E-14	GAMMA-BHC	Liver, Kidney		2.E-10		2.E-10
			GAMMA-CHLORDANE		3.E-14		3.E-14	GAMMA-CHLORDANE	Liver		5.E-10		5.E-10
			HEPTACHLOR		1.E-14		1.E-14	HEPTACHLOR	Liver		2.E-10		2.E-10
			HEPTACHLOR EPOXIDE		4.E-14		4.E-14	HEPTACHLOR EPOXIDE	Liver		9.E-09		9.E-09
			METHOXYCHLOR		--		--	METHOXYCHLOR	Reproductive System		8.E-10		8.E-10
			(Total)		2E-11		2E-11	(Total)			0.3		0.3
Groundwater	Air	Indoor Air	**VOLATILE ORGANIC COMPOUNDS**					**VOLATILE ORGANIC COMPOUNDS**					
			1,2-DICHLOROETHANE		1.E-08		1.E-08	1,2-DICHLOROETHANE	--		3.E-03		3.E-03
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		2.E-04		2.E-04
			4-METHYL-2-PENTANONE		--		--	4-METHYL-2-PENTANONE	Liver, Kidney		4.E-05		4.E-05
			ACETONE		--		--	ACETONE	Liver, Kidney		4.E-04		4.E-04
			CHLOROMETHANE		--		--	CHLOROMETHANE	CNS/PNS		8.E-05		8.E-05
			ETHYLBENZENE		--		--	ETHYLBENZENE	Reproductive System		3.E-05		3.E-05
			TOLUENE		--		--	TOLUENE	CNS/PNS		1.E-04		1.E-04
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		7.E-06		7.E-06
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,3-DICHLOROBENZENE		--		--	1,3-DICHLOROBENZENE	--		1.E-02		1.E-02

TABLE J-63

TABLE U.10.2.RME
RISK ASSESSMENT SUMMARY
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Soil	Direct Soil Contact	**SEMIVOLATILE ORGANIC COMPOUNDS**										
			BENZO(A)ANTHRACENE	1E-07		8.3E-08	2.E-07						
			BENZO(A)PYRENE	1E-06		8.4E-07	2.E-06						
			BENZO(B)FLUORANTHENE	1E-07		8.8E-08	2.E-07						
			BENZO(K)FLUORANTHENE	1E-07		8.8E-08	2.E-07						
			CHRYSENE	1E-08		8.2E-09	2.E-08						
			DIBENZ(A,H)ANTHRACENE	1E-07		6.9E-08	2.E-07						
			INDENO(1,2,3-CD)PYRENE	8E-08		4.7E-08	1.E-07						
			(Total)	2E-06		1E-06	3E-06	(Total)		0.02		0.0033	0.02
Soil 0-3 ft. bgs	Air	Indoor Air											
			(Total)		1E-10		1E-10	(Total)			0.5		0.5
Groundwater	Air	Indoor Air											
			(Total)		9E-08		9E-08	(Total)			0.026		0.026
						Total Risk Across Soil	3.E-06					Total Hazard Index Across Soil	0.5
						Total Risk Across Groundwater	9E-08					Total Hazard Across Groundwater	0.026
						Total Risk Across All Media and All Exposure Routes	4.E-06					Total Hazard Across All Media and All Exposure Routes	0.6

Notes:
Ft. = Feet
bgs = Below ground surface
RME = Reasonable maximum exposure

TABLE J-64

TABLE U.10.3.RME
RISK ASSESSMENT SUMMARY
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Soil	Direct Soil Contact	**SEMIVOLATILE ORGANIC COMPOUNDS**										
			BENZO(A)ANTHRACENE	3E-07		1.4E-07	5.E-07						
			BENZO(A)PYRENE	3E-06		1.4E-06	5.E-06						
			BENZO(B)FLUORANTHENE	3E-07		1.5E-07	5.E-07						
			BENZO(K)FLUORANTHENE	3E-07		1.5E-07	5.E-07						
			CHRYSENE	3E-08		1.4E-08	5.E-08						
			DIBENZ(A,H)ANTHRACENE	3E-07		1.2E-07	4.E-07						
			INDENO(1,2,3-CD)PYRENE	2E-07		8.0E-08	3.E-07						
			(Total)	5E-06		2E-06	7E-06	(Total)		0.2		0.02	0.2
Soil 0-3 ft. bgs	Air	Indoor Air											
			(Total)		8E-11		8E-11	(Total)			1		1
Groundwater	Air	Indoor Air											
			(Total)		5E-08		5E-08	(Total)			0.06		0.06

CHILD	Total Risk Across Soil	7.E-06	Total Hazard Index Across Soil 1
	Total Risk Across Groundwater	5E-08	Total Hazard Across Groundwater 0.06
	Total Risk Across All Media and All Exposure Routes	7.E-06	Total Hazard Across All Media and All Exposure Routes 1
ADULT	Total Risk Across Soil	3.E-06	
	Total Risk Across Groundwater	9E-08	
	Total Risk Across All Media and All Exposure Routes	4.E-06	
	Total Residential Cancer Risk	1.E-05	

Notes:
Ft. = Feet
bgs = Below ground surface
RME = Reasonable maximum exposure

TABLE J-65

TABLE U.10.2.CTE
RISK ASSESSMENT SUMMARY
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Soil	Direct Soil Contact											
			(Total)	3E-07		3E-07	5E-07	(Total)		0.002		0.0009	0.003
Soil 0-3 ft. bgs	Air	Indoor Air											
			(Total)		2E-11		2E-11	(Total)			0.09		0.09
Groundwater	Air	Indoor Air											
			(Total)		1E-08		1E-08	(Total)			0.015		0.015
						Total Risk Across Soil	5.E-07					Total Hazard Index Across Soil	0.1
						Total Risk Across Groundwater	1E-08					Total Hazard Across Groundwater	0.015
						Total Risk Across All Media and All Exposure Routes	6.E-07					Total Hazard Across All Media and All Exposure Routes	0.1

Notes:

Ft. = Feet

bgs = Below ground surface

CTE = Central tendency exposure

TABLE J-66

TABLE U.10.3.CTE
RISK ASSESSMENT SUMMARY
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-3 ft. bgs	Soil	Direct Soil Contact											
			SEMIVOLATILE ORGANIC COMPOUNDS										
			BENZO(A)ANTHRACENE	5E-08		3.9E-08	8.E-08						
			BENZO(A)PYRENE	4E-07		3.8E-07	8.E-07						
			BENZO(B)FLUORANTHENE	5E-08		4.1E-08	9.E-08						
			BENZO(K)FLUORANTHENE	5E-08		4.2E-08	9.E-08						
			CHRYSENE	4E-09		3.7E-09	8.E-09						
			DIBENZ(A,H)ANTHRACENE	4E-08		3.9E-08	8.E-08						
			INDENO(1,2,3-CD)PYRENE	3E-08		2.7E-08	6.E-08						
			(Total)	7E-07		6E-07	1E-06	(Total)		0.02		0.0070	0.03
Soil 0-3 ft. bgs	Air	Indoor Air											
			(Total)		2E-11		2E-11	(Total)			0.3		0.3
Groundwater	Air	Indoor Air											
			(Total)		1E-08		1E-08	(Total)			0.043		0.043

CHILD	Total Risk Across Soil	1.E-06	Total Hazard Index Across Soil	0.3
	Total Risk Across Groundwater	1E-08	Total Hazard Across Groundwater	0.043
	Total Risk Across All Media and All Exposure Routes	1.E-06	Total Hazard Across All Media and All Exposure Routes	0.3
ADULT	Total Risk Across Soil	5.E-07		
	Total Risk Across Groundwater	1E-08		
	Total Risk Across All Media and All Exposure Routes	6.E-07		
	Total Residential Cancer Risk	2.E-06		

Notes:
Ft. = Feet
bgs = Below ground surface
CTE = Central tendency exposure

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EPA TABLE M.8.10.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	**METAL**										
	BARIUM	1.09E+02	mg/kg	1.09E+02	mg/kg	M	1.91E-05	mg/kg-day	--	--	--
	COBALT	1.29E+01	mg/kg	1.29E+01	mg/kg	M	2.26E-06	mg/kg-day	--	--	--
	COPPER	7.13E+01	mg/kg	7.13E+01	mg/kg	M	1.25E-05	mg/kg-day	--	--	--
	LEAD	1.47E+02	mg/kg	1.47E+02	mg/kg	M	2.57E-05	mg/kg-day	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	3.81E-01	mg/kg	M	6.66E-08	mg/kg-day	--	--	--
	SELENIUM	5.90E-01	mg/kg	5.90E-01	mg/kg	M	1.03E-07	mg/kg-day	--	--	--
	SILVER	9.22E-01	mg/kg	9.22E-01	mg/kg	M	1.61E-07	mg/kg-day	--	--	--
	THALLIUM	4.51E-01	mg/kg	4.51E-01	mg/kg	M	7.88E-08	mg/kg-day	--	--	--
	TIN	1.78E+01	mg/kg	1.78E+01	mg/kg	M	3.10E-06	mg/kg-day	--	--	--
	TITANIUM	4.77E+03	mg/kg	4.77E+03	mg/kg	M	8.33E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	8.66E-03	mg/kg	8.66E-03	mg/kg	M	1.51E-09	mg/kg-day	--	--	--
	ACETONE	2.34E-02	mg/kg	2.34E-02	mg/kg	M	4.09E-09	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	8.74E-10	mg/kg-day	--	--	--
	TOLUENE	6.37E-03	mg/kg	6.37E-03	mg/kg	M	1.11E-09	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	6.99E-10	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	6.46E-09	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	4.19E-08	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	3.49E-09	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	2.62E-08	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	2.48E-01	mg/kg	M	4.34E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	5.2E-08
	BENZO(A)PYRENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	4.11E-08	mg/kg-day	1.2E+01	(mg/kg-day)-1	4.9E-07
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	2.49E-01	mg/kg	M	4.35E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	5.2E-08
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	2.37E-01	mg/kg	M	4.14E-08	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	2.59E-01	mg/kg	M	4.52E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	5.4E-08
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.44E-01	mg/kg	M	2.52E-08	mg/kg-day	1.4E-02	(mg/kg-day)-1	3.5E-10

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EPA TABLE M.8.10.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	1.28E-08	mg/kg-day	2.0E-02	(mg/kg-day)-1	2.6E-10
	CHRYSENE	2.43E-01	mg/kg	2.43E-01	mg/kg	M	4.25E-08	mg/kg-day	1.2E-01	(mg/kg-day)-1	5.1E-09
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	1.05E-08	mg/kg-day	4.1E+00	(mg/kg-day)-1	4.3E-08
	FLUORANTHENE	2.23E-01	mg/kg	2.23E-01	mg/kg	M	3.89E-08	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	1.43E-08	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	2.45E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	2.9E-08
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	4.19E-08	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	8.74E-08	mg/kg-day	1.2E-01	(mg/kg-day)-1	1.0E-08
	PHENANTHRENE	2.65E-01	mg/kg	2.65E-01	mg/kg	M	4.63E-08	mg/kg-day	--	--	--
	PYRENE	2.05E-01	mg/kg	2.05E-01	mg/kg	M	3.59E-08	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.30E-03	mg/kg	3.30E-03	mg/kg	M	5.77E-10	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.4E-10
	4,4'-DDE	2.82E-03	mg/kg	2.82E-03	mg/kg	M	4.93E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.7E-10
	4,4'-DDT	1.10E-02	mg/kg	1.10E-02	mg/kg	M	1.91E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.5E-10
	ALDRIN	1.03E-03	mg/kg	1.03E-03	mg/kg	M	1.80E-10	mg/kg-day	1.7E+01	(mg/kg-day)-1	3.1E-09
	ALPHA-BHC	4.35E-03	mg/kg	4.35E-03	mg/kg	M	7.60E-10	mg/kg-day	6.3E+00	(mg/kg-day)-1	4.8E-09
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.74E-03	mg/kg	M	4.79E-10	mg/kg-day	1.2E+00	(mg/kg-day)-1	5.7E-10
	AROCLOR-1254	1.40E-02	mg/kg	1.40E-02	mg/kg	M	2.45E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	4.9E-09
	AROCLOR-1260	4.89E-02	mg/kg	4.89E-02	mg/kg	M	8.54E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.7E-08
	BETA-BHC	1.61E-03	mg/kg	1.61E-03	mg/kg	M	2.81E-10	mg/kg-day	1.8E+00	(mg/kg-day)-1	5.1E-10
	DELTA-BHC	1.21E-03	mg/kg	1.21E-03	mg/kg	M	2.11E-10	mg/kg-day	--	--	--
	DIELDRIN	2.17E-03	mg/kg	2.17E-03	mg/kg	M	3.79E-10	mg/kg-day	1.6E+01	(mg/kg-day)-1	6.1E-09
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	2.11E-10	mg/kg-day	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	1.97E-03	mg/kg	M	3.44E-10	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.63E-03	mg/kg	M	4.60E-10	mg/kg-day	--	--	--
	ENDRIN	2.05E-03	mg/kg	2.05E-03	mg/kg	M	3.58E-10	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	3.49E-03	mg/kg	M	6.10E-10	mg/kg-day	--	--	--

TABLE J-67

EPA TABLE M.8.10.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDRIN KETONE	2.69E-03	mg/kg	2.69E-03	mg/kg	M	4.70E-10	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.83E-03	mg/kg	M	3.20E-10	mg/kg-day	1.3E+00	(mg/kg-day)-1	4.2E-10
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	4.63E-10	mg/kg-day	1.2E+00	(mg/kg-day)-1	5.6E-10
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	4.02E-11	mg/kg-day	5.7E+00	(mg/kg-day)-1	2.3E-10
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	3.30E-04	mg/kg	M	5.77E-11	mg/kg-day	1.3E+01	(mg/kg-day)-1	7.5E-10
	METHOXYCHLOR	9.97E-03	mg/kg	9.97E-03	mg/kg	M	1.74E-09	mg/kg-day	--	--	--
Dermal	**METAL**										
	BARIUM	1.09E+02	mg/kg	1.09E+02	mg/kg	M	4.36E-06	mg/kg-day	--	--	--
	COBALT	1.29E+01	mg/kg	1.29E+01	mg/kg	M	5.16E-07	mg/kg-day	--	--	--
	COPPER	7.13E+01	mg/kg	7.13E+01	mg/kg	M	2.84E-06	mg/kg-day	--	--	--
	LEAD	1.47E+02	mg/kg	1.47E+02	mg/kg	M	5.86E-06	mg/kg-day	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	3.81E-01	mg/kg	M	1.52E-08	mg/kg-day	--	--	--
	SELENIUM	5.90E-01	mg/kg	5.90E-01	mg/kg	M	2.35E-08	mg/kg-day	--	--	--
	SILVER	9.22E-01	mg/kg	9.22E-01	mg/kg	M	3.67E-08	mg/kg-day	--	--	--
	THALLIUM	4.51E-01	mg/kg	4.51E-01	mg/kg	M	1.80E-08	mg/kg-day	--	--	--
	TIN	1.78E+01	mg/kg	1.78E+01	mg/kg	M	7.08E-07	mg/kg-day	--	--	--
	TITANIUM	4.77E+03	mg/kg	4.77E+03	mg/kg	M	1.90E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	8.66E-03	mg/kg	8.66E-03	mg/kg	M	3.45E-09	mg/kg-day	--	--	--
	ACETONE	2.34E-02	mg/kg	2.34E-02	mg/kg	M	9.31E-09	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	1.99E-09	mg/kg-day	--	--	--
	TOLUENE	6.37E-03	mg/kg	6.37E-03	mg/kg	M	2.54E-09	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.59E-09	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.47E-08	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.43E-07	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	1.20E-08	mg/kg-day	--	--	--

TABLE J-67

EPA TABLE M.8.10.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	8.96E-08	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	2.48E-01	mg/kg	M	1.48E-07	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.8E-07
	BENZO(A)PYRENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	1.41E-07	mg/kg-day	1.2E+01	(mg/kg-day)-1	1.7E-06
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	2.49E-01	mg/kg	M	1.49E-07	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.8E-07
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	2.37E-01	mg/kg	M	1.42E-07	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	2.59E-01	mg/kg	M	1.55E-07	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.9E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.44E-01	mg/kg	M	5.75E-08	mg/kg-day	1.4E-02	(mg/kg-day)-1	8.0E-10
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	2.91E-08	mg/kg-day	2.0E-02	(mg/kg-day)-1	5.8E-10
	CHRYSENE	2.43E-01	mg/kg	2.43E-01	mg/kg	M	1.45E-07	mg/kg-day	1.2E-01	(mg/kg-day)-1	1.7E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	3.59E-08	mg/kg-day	4.1E+00	(mg/kg-day)-1	1.5E-07
	FLUORANTHENE	2.23E-01	mg/kg	2.23E-01	mg/kg	M	1.33E-07	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	4.90E-08	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	8.37E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.0E-07
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.43E-07	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	4.98E-07	mg/kg-day	1.2E-01	(mg/kg-day)-1	6.0E-08
	PHENANTHRENE	2.65E-01	mg/kg	2.65E-01	mg/kg	M	1.58E-07	mg/kg-day	--	--	--
	PYRENE	2.05E-01	mg/kg	2.05E-01	mg/kg	M	1.23E-07	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.30E-03	mg/kg	3.30E-03	mg/kg	M	6.57E-10	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.6E-10
	4,4'-DDE	2.82E-03	mg/kg	2.82E-03	mg/kg	M	5.62E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.9E-10
	4,4'-DDT	1.10E-02	mg/kg	1.10E-02	mg/kg	M	2.18E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	7.4E-10
	ALDRIN	1.03E-03	mg/kg	1.03E-03	mg/kg	M	2.05E-10	mg/kg-day	1.7E+01	(mg/kg-day)-1	3.5E-09
	ALPHA-BHC	4.35E-03	mg/kg	4.35E-03	mg/kg	M	8.66E-10	mg/kg-day	6.3E+00	(mg/kg-day)-1	5.5E-09
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.74E-03	mg/kg	M	5.46E-10	mg/kg-day	1.2E+00	(mg/kg-day)-1	6.5E-10
	AROCLOR-1254	1.40E-02	mg/kg	1.40E-02	mg/kg	M	8.37E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.7E-08
	AROCLOR-1260	4.89E-02	mg/kg	4.89E-02	mg/kg	M	2.92E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	5.8E-08
	BETA-BHC	1.61E-03	mg/kg	1.61E-03	mg/kg	M	3.21E-10	mg/kg-day	1.8E+00	(mg/kg-day)-1	5.8E-10

TABLE J-67

EPA TABLE M.8.10.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	DELTA-BHC	1.21E-03	mg/kg	1.21E-03	mg/kg	M	2.41E-10	mg/kg-day	--	--	--
	DIELDRIN	2.17E-03	mg/kg	2.17E-03	mg/kg	M	4.32E-10	mg/kg-day	1.6E+01	(mg/kg-day)-1	6.9E-09
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	2.41E-10	mg/kg-day	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	1.97E-03	mg/kg	M	3.92E-10	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.63E-03	mg/kg	M	5.24E-10	mg/kg-day	--	--	--
	ENDRIN	2.05E-03	mg/kg	2.05E-03	mg/kg	M	4.08E-10	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	3.49E-03	mg/kg	M	6.95E-10	mg/kg-day	--	--	--
	ENDRIN KETONE	2.69E-03	mg/kg	2.69E-03	mg/kg	M	5.36E-10	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.83E-03	mg/kg	M	3.65E-10	mg/kg-day	1.3E+00	(mg/kg-day)-1	4.7E-10
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	5.28E-10	mg/kg-day	1.2E+00	(mg/kg-day)-1	6.3E-10
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	4.58E-11	mg/kg-day	5.7E+00	(mg/kg-day)-1	2.6E-10
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	3.30E-04	mg/kg	M	6.57E-11	mg/kg-day	1.3E+01	(mg/kg-day)-1	8.5E-10
	METHOXYCHLOR	9.97E-03	mg/kg	9.97E-03	mg/kg	M	1.99E-09	mg/kg-day	--	--	--
										Total Cancer Risk Across All Direct Contact Exposure Routes/Pathways - Soil	3.4E-06

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

NV = No value available

TABLE J-68

EPA TABLE M.8.11.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation-Dust	**METAL**										
	BARIUM	1.09E+02	mg/kg	8.31E-08	mg/m^3	R	5.81E-09	mg/kg-day	--	--	--
	COBALT	1.29E+01	mg/kg	9.84E-09	mg/m^3	R	6.87E-10	mg/kg-day	--	--	--
	COPPER	7.13E+01	mg/kg	5.42E-08	mg/m^3	R	3.78E-09	mg/kg-day	--	--	--
	LEAD	1.47E+02	mg/kg	1.12E-07	mg/m^3	R	7.82E-09	mg/kg-day	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	2.90E-10	mg/m^3	R	2.03E-11	mg/kg-day	--	--	--
	SELENIUM	5.90E-01	mg/kg	4.49E-10	mg/m^3	R	3.14E-11	mg/kg-day	--	--	--
	SILVER	9.22E-01	mg/kg	7.01E-10	mg/m^3	R	4.90E-11	mg/kg-day	--	--	--
	THALLIUM	4.51E-01	mg/kg	3.43E-10	mg/m^3	R	2.39E-11	mg/kg-day	--	--	--
	TIN	1.78E+01	mg/kg	1.35E-08	mg/m^3	R	9.44E-10	mg/kg-day	--	--	--
	TITANIUM	4.77E+03	mg/kg	3.62E-06	mg/m^3	R	2.53E-07	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	8.66E-03	mg/kg	6.58E-12	mg/m^3	R	4.60E-13	mg/kg-day	--	--	--
	ACETONE	2.34E-02	mg/kg	1.78E-11	mg/m^3	R	1.24E-12	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	3.80E-12	mg/m^3	R	2.66E-13	mg/kg-day	--	--	--
	TOLUENE	6.37E-03	mg/kg	4.84E-12	mg/m^3	R	3.38E-13	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	2.12E-13	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	1.97E-12	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	1.27E-11	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	1.52E-11	mg/m^3	R	1.06E-12	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	7.97E-12	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	1.89E-10	mg/m^3	R	1.32E-11	mg/kg-day	3.9E-01	(mg/kg-day)-1	5.1E-12
	BENZO(A)PYRENE	2.35E-01	mg/kg	1.79E-10	mg/m^3	R	1.25E-11	mg/kg-day	3.9E+00	(mg/kg-day)-1	4.9E-11

TABLE J-68

EPA TABLE M.8.11.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	1.89E-10	mg/m^3	R	1.32E-11	mg/kg-day	3.9E-01	(mg/kg-day)-1	5.1E-12
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	1.80E-10	mg/m^3	R	1.26E-11	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	1.97E-10	mg/m^3	R	1.37E-11	mg/kg-day	3.9E-01	(mg/kg-day)-1	5.4E-12
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.10E-10	mg/m^3	R	7.66E-12	mg/kg-day	8.4E-03	(mg/kg-day)-1	6.4E-14
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	3.88E-12	mg/kg-day	2.0E-02	(mg/kg-day)-1	7.8E-14
	CHRYSENE	2.43E-01	mg/kg	1.85E-10	mg/m^3	R	1.29E-11	mg/kg-day	3.9E-02	(mg/kg-day)-1	5.0E-13
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	3.19E-12	mg/kg-day	4.1E+00	(mg/kg-day)-1	1.3E-11
	FLUORANTHENE	2.23E-01	mg/kg	1.69E-10	mg/m^3	R	1.18E-11	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	4.35E-12	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	7.44E-12	mg/kg-day	3.9E-01	(mg/kg-day)-1	2.9E-12
	NAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	1.27E-11	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	2.66E-11	mg/kg-day	1.2E-01	(mg/kg-day)-1	3.2E-12
	PHENANTHRENE	2.65E-01	mg/kg	2.01E-10	mg/m^3	R	1.41E-11	mg/kg-day	--	--	--
	PYRENE	2.05E-01	mg/kg	1.56E-10	mg/m^3	R	1.09E-11	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.30E-03	mg/kg	2.51E-12	mg/m^3	R	1.75E-13	mg/kg-day	2.4E-01	(mg/kg-day)-1	4.2E-14
	4,4'-DDE	2.82E-03	mg/kg	2.14E-12	mg/m^3	R	1.50E-13	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.1E-14
	4,4'-DDT	1.10E-02	mg/kg	8.32E-12	mg/m^3	R	5.82E-13	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.0E-13
	ALDRIN	1.03E-03	mg/kg	7.83E-13	mg/m^3	R	5.47E-14	mg/kg-day	1.7E+01	(mg/kg-day)-1	9.4E-13
	ALPHA-BHC	4.35E-03	mg/kg	3.31E-12	mg/m^3	R	2.31E-13	mg/kg-day	6.3E+00	(mg/kg-day)-1	1.5E-12
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.08E-12	mg/m^3	R	1.46E-13	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.7E-13
	AROCLOR-1254	1.40E-02	mg/kg	1.06E-11	mg/m^3	R	7.44E-13	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.5E-12
	AROCLOR-1260	4.89E-02	mg/kg	3.72E-11	mg/m^3	R	2.60E-12	mg/kg-day	2.0E+00	(mg/kg-day)-1	5.2E-12
	BETA-BHC	1.61E-03	mg/kg	1.22E-12	mg/m^3	R	8.55E-14	mg/kg-day	1.9E+00	(mg/kg-day)-1	1.6E-13

TABLE J-68

EPA TABLE M.8.11.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	DELTA-BHC	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	6.43E-14	mg/kg-day	--	--	--
	DIELDRIN	2.17E-03	mg/kg	1.65E-12	mg/m^3	R	1.15E-13	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.8E-12
	ENDOSULFAN I	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	6.43E-14	mg/kg-day	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	1.50E-12	mg/m^3	R	1.05E-13	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.00E-12	mg/m^3	R	1.40E-13	mg/kg-day	--	--	--
	ENDRIN	2.05E-03	mg/kg	1.56E-12	mg/m^3	R	1.09E-13	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	2.65E-12	mg/m^3	R	1.85E-13	mg/kg-day	--	--	--
	ENDRIN KETONE	2.69E-03	mg/kg	2.04E-12	mg/m^3	R	1.43E-13	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.39E-12	mg/m^3	R	9.72E-14	mg/kg-day	1.3E+00	(mg/kg-day)-1	1.3E-13
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.01E-12	mg/m^3	R	1.41E-13	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.7E-13
	HEPTACHLOR	2.30E-04	mg/kg	1.75E-13	mg/m^3	R	1.22E-14	mg/kg-day	5.7E+00	(mg/kg-day)-1	7.0E-14
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	2.51E-13	mg/m^3	R	1.75E-14	mg/kg-day	1.3E+01	(mg/kg-day)-1	2.3E-13
	METHOXYCHLOR	9.97E-03	mg/kg	7.58E-12	mg/m^3	R	5.29E-13	mg/kg-day	--	--	--
Inhalation-VOCs	**METAL**										
	BARIUM	1.09E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COBALT	1.29E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COPPER	7.13E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	LEAD	1.47E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SELENIUM	5.90E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SILVER	9.22E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	THALLIUM	4.51E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TIN	1.78E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--

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EPA TABLE M.8.11.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	TITANIUM	4.77E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	8.66E-03	mg/kg	1.98E-04	mg/m^3	R	1.38E-05	mg/kg-day	--	--	--
	ACETONE	2.34E-02	mg/kg	4.76E-04	mg/m^3	R	3.33E-05	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.75E-02	mg/m^3	R	4.02E-03	mg/kg-day	--	--	--
	TOLUENE	6.37E-03	mg/kg	2.80E-02	mg/m^3	R	1.96E-03	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	1.14E-04	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	3.16E-03	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.78E-01	mg/m^3	R	1.24E-02	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	1.31E-02	mg/m^3	R	9.13E-04	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	1.92E-04	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BENZO(A)PYRENE	2.35E-01	mg/kg	--	mg/m^3	R	--	--	3.9E+00	(mg/kg-day)-1	--
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	--	mg/m^3	R	--	--	8.4E-03	(mg/kg-day)-1	--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-02	(mg/kg-day)-1	--
	CHRYSENE	2.43E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-02	(mg/kg-day)-1	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	4.1E+00	(mg/kg-day)-1	--
	FLUORANTHENE	2.23E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	2.37E-04	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	NAPHTHALENE	2.40E-01	mg/kg	*	mg/m^3	R	--	--	--	--	--

TABLE J-68

EPA TABLE M.8.11.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	1.2E-01	(mg/kg-day)-1	--
	PHENANTHRENE	2.65E-01	mg/kg	4.87E-03	mg/m^3	R	3.40E-04	mg/kg-day	--	--	--
	PYRENE	2.05E-01	mg/kg	7.83E-04	mg/m^3	R	5.48E-05	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.30E-03	mg/kg	--	mg/m^3	R	--	--	2.4E-01	(mg/kg-day)-1	--
	4,4'-DDE	2.82E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	(mg/kg-day)-1	--
	4,4'-DDT	1.10E-02	mg/kg	--	mg/m^3	R	--	--	3.4E-01	(mg/kg-day)-1	--
	ALDRIN	1.03E-03	mg/kg	--	mg/m^3	R	--	--	1.7E+01	(mg/kg-day)-1	--
	ALPHA-BHC	4.35E-03	mg/kg	--	mg/m^3	R	--	--	6.3E+00	(mg/kg-day)-1	--
	ALPHA-CHLORDANE	2.74E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	(mg/kg-day)-1	--
	AROCLOR-1254	1.40E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	(mg/kg-day)-1	--
	AROCLOR-1260	4.89E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	(mg/kg-day)-1	--
	BETA-BHC	1.61E-03	mg/kg	--	mg/m^3	R	--	--	1.9E+00	(mg/kg-day)-1	--
	DELTA-BHC	1.21E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	DIELDRIN	2.17E-03	mg/kg	--	mg/m^3	R	--	--	1.6E+01	(mg/kg-day)-1	--
	ENDOSULFAN I	1.21E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN	2.05E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN KETONE	2.69E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	--	mg/m^3	R	--	--	1.3E+00	(mg/kg-day)-1	--
	GAMMA-CHLORDANE	2.65E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	(mg/kg-day)-1	--
	HEPTACHLOR	2.30E-04	mg/kg	--	mg/m^3	R	--	--	5.7E+00	(mg/kg-day)-1	--

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EPA TABLE M.8.11.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	--	mg/m^3	R	--	--	1.3E+01	(mg/kg-day)-1	--
	METHOXYCHLOR	9.97E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--

Total Cancer Risk Across All Air Exposure Routes/Pathways - Soil	9.6E-11
Total Cancer Risk Across All Direct Contact Exposure Routes/Pathways - Soil	3.4E-06
Total Cancer Risk Across All Exposure Routes/Pathways - Soil	3.4E-06
Total Risk Across All Air Exposure Routes/Pathways - Groundwater	6.5E-08
Total Cancer Risk Across All Exposure Routes/Pathways	3.5E-06

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

NV = No value available

VOC = Volatile organic compound

* = Inhalation of VOCs for naphthalane evaluated under groundwater exposures instead of soil due to single detection of naphthalene at 9.5 feet below ground suface, which is below shallow groundwater

TABLE J-69

EPA TABLE M.8.10.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	**METAL**										
	BARIUM	9.67E+01	mg/kg	9.67E+01	mg/kg	M	3.04E-06	mg/kg-day	--	--	--
	COBALT	1.15E+01	mg/kg	1.15E+01	mg/kg	M	3.60E-07	mg/kg-day	--	--	--
	COPPER	5.99E+01	mg/kg	5.99E+01	mg/kg	M	1.88E-06	mg/kg-day	--	--	--
	LEAD	9.96E+01	mg/kg	9.96E+01	mg/kg	M	3.13E-06	mg/kg-day	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.99E-01	mg/kg	M	9.42E-09	mg/kg-day	--	--	--
	SELENIUM	5.18E-01	mg/kg	5.18E-01	mg/kg	M	1.63E-08	mg/kg-day	--	--	--
	SILVER	5.63E-01	mg/kg	5.63E-01	mg/kg	M	1.77E-08	mg/kg-day	--	--	--
	THALLIUM	4.14E-01	mg/kg	4.14E-01	mg/kg	M	1.30E-08	mg/kg-day	--	--	--
	TIN	1.40E+01	mg/kg	1.40E+01	mg/kg	M	4.41E-07	mg/kg-day	--	--	--
	TITANIUM	4.25E+03	mg/kg	4.25E+03	mg/kg	M	1.34E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	7.48E-03	mg/kg	7.48E-03	mg/kg	M	2.35E-10	mg/kg-day	--	--	--
	ACETONE	1.71E-02	mg/kg	1.71E-02	mg/kg	M	5.37E-10	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	1.57E-10	mg/kg-day	--	--	--
	TOLUENE	6.11E-03	mg/kg	6.11E-03	mg/kg	M	1.92E-10	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.26E-10	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.16E-09	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	7.40E-09	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	6.29E-10	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	4.72E-09	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	2.17E-01	mg/kg	M	6.82E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	8.2E-09
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	6.35E-09	mg/kg-day	1.2E+01	(mg/kg-day)-1	7.6E-08
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	2.16E-01	mg/kg	M	6.79E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	8.1E-09
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	2.08E-01	mg/kg	M	6.54E-09	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	2.32E-01	mg/kg	M	7.31E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	8.8E-09

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EPA TABLE M.8.10.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	1.19E-01	mg/kg	M	3.73E-09	mg/kg-day	1.4E-02	(mg/kg-day)-1	5.2E-11
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	2.30E-09	mg/kg-day	2.0E-02	(mg/kg-day)-1	4.6E-11
	CHRYSENE	2.04E-01	mg/kg	2.04E-01	mg/kg	M	6.43E-09	mg/kg-day	1.2E-01	(mg/kg-day)-1	7.7E-10
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	1.89E-09	mg/kg-day	4.1E+00	(mg/kg-day)-1	7.7E-09
	FLUORANTHENE	1.83E-01	mg/kg	1.83E-01	mg/kg	M	5.75E-09	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	2.58E-09	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	4.40E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	5.3E-09
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	7.55E-09	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	1.57E-08	mg/kg-day	1.2E-01	(mg/kg-day)-1	1.9E-09
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	7.19E-09	mg/kg-day	--	--	--
	PYRENE	1.71E-01	mg/kg	1.71E-01	mg/kg	M	5.38E-09	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.86E-03	mg/kg	2.86E-03	mg/kg	M	8.99E-11	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.2E-11
	4,4'-DDE	2.54E-03	mg/kg	2.54E-03	mg/kg	M	7.99E-11	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.7E-11
	4,4'-DDT	8.46E-03	mg/kg	8.46E-03	mg/kg	M	2.66E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	9.0E-11
	ALDRIN	1.01E-03	mg/kg	1.01E-03	mg/kg	M	3.18E-11	mg/kg-day	1.7E+01	(mg/kg-day)-1	5.4E-10
	ALPHA-BHC	3.33E-03	mg/kg	3.33E-03	mg/kg	M	1.05E-10	mg/kg-day	6.3E+00	(mg/kg-day)-1	6.6E-10
	ALPHA-CHLORDANE	2.26E-03	mg/kg	2.26E-03	mg/kg	M	7.11E-11	mg/kg-day	1.2E+00	(mg/kg-day)-1	8.5E-11
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	3.47E-10	mg/kg-day	2.0E+00	(mg/kg-day)-1	6.9E-10
	AROCLOR-1260	3.79E-02	mg/kg	3.79E-02	mg/kg	M	1.19E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.4E-09
	BETA-BHC	1.44E-03	mg/kg	1.44E-03	mg/kg	M	4.53E-11	mg/kg-day	1.8E+00	(mg/kg-day)-1	8.2E-11
	DELTA-BHC	1.13E-03	mg/kg	1.13E-03	mg/kg	M	3.55E-11	mg/kg-day	--	--	--
	DIELDRIN	2.07E-03	mg/kg	2.07E-03	mg/kg	M	6.51E-11	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.0E-09
	ENDOSULFAN I	1.14E-03	mg/kg	1.14E-03	mg/kg	M	3.59E-11	mg/kg-day	--	--	--
	ENDOSULFAN II	1.92E-03	mg/kg	1.92E-03	mg/kg	M	6.04E-11	mg/kg-day	--	--	--

TABLE J-69

EPA TABLE M.8.10.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	7.55E-11	mg/kg-day	--	--	--
	ENDRIN	1.98E-03	mg/kg	1.98E-03	mg/kg	M	6.23E-11	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	3.09E-03	mg/kg	M	9.72E-11	mg/kg-day	--	--	--
	ENDRIN KETONE	2.47E-03	mg/kg	2.47E-03	mg/kg	M	7.77E-11	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.61E-03	mg/kg	M	5.06E-11	mg/kg-day	1.3E+00	(mg/kg-day)-1	6.6E-11
	GAMMA-CHLORDANE	2.18E-03	mg/kg	2.18E-03	mg/kg	M	6.86E-11	mg/kg-day	1.2E+00	(mg/kg-day)-1	8.2E-11
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	6.29E-12	mg/kg-day	5.7E+00	(mg/kg-day)-1	3.6E-11
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.80E-04	mg/kg	M	8.81E-12	mg/kg-day	1.3E+01	(mg/kg-day)-1	1.1E-10
	METHOXYCHLOR	9.68E-03	mg/kg	9.68E-03	mg/kg	M	3.04E-10	mg/kg-day	--	--	--
Dermal	**METAL**										
	BARIUM	9.67E+01	mg/kg	9.67E+01	mg/kg	M	4.02E-07	mg/kg-day	--	--	--
	COBALT	1.15E+01	mg/kg	1.15E+01	mg/kg	M	4.75E-08	mg/kg-day	--	--	--
	COPPER	5.99E+01	mg/kg	5.99E+01	mg/kg	M	2.49E-07	mg/kg-day	--	--	--
	LEAD	9.96E+01	mg/kg	9.96E+01	mg/kg	M	4.13E-07	mg/kg-day	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.99E-01	mg/kg	M	1.24E-09	mg/kg-day	--	--	--
	SELENIUM	5.18E-01	mg/kg	5.18E-01	mg/kg	M	2.15E-09	mg/kg-day	--	--	--
	SILVER	5.63E-01	mg/kg	5.63E-01	mg/kg	M	2.34E-09	mg/kg-day	--	--	--
	THALLIUM	4.14E-01	mg/kg	4.14E-01	mg/kg	M	1.72E-09	mg/kg-day	--	--	--
	TIN	1.40E+01	mg/kg	1.40E+01	mg/kg	M	5.82E-08	mg/kg-day	--	--	--
	TITANIUM	4.25E+03	mg/kg	4.25E+03	mg/kg	M	1.77E-05	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS	0.00E+00									
	2-BUTANONE	7.48E-03	mg/kg	7.48E-03	mg/kg	M	3.11E-10	mg/kg-day	--	--	--
	ACETONE	1.71E-02	mg/kg	1.71E-02	mg/kg	M	7.09E-10	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	2.08E-10	mg/kg-day	--	--	--
	TOLUENE	6.11E-03	mg/kg	6.11E-03	mg/kg	M	2.54E-10	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.66E-10	mg/kg-day	--	--	--

TABLE J-69

EPA TABLE M.8.10.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.54E-09	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	1.47E-08	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	1.25E-09	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	9.34E-09	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	2.17E-01	mg/kg	M	1.35E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.6E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	1.26E-08	mg/kg-day	1.2E+01	(mg/kg-day)-1	1.5E-07
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	2.16E-01	mg/kg	M	1.34E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.6E-08
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	2.08E-01	mg/kg	M	1.30E-08	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	2.32E-01	mg/kg	M	1.45E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.7E-08
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	1.19E-01	mg/kg	M	4.93E-09	mg/kg-day	1.4E-02	(mg/kg-day)-1	6.9E-11
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	3.03E-09	mg/kg-day	2.0E-02	(mg/kg-day)-1	6.1E-11
	CHRYSENE	2.04E-01	mg/kg	2.04E-01	mg/kg	M	1.27E-08	mg/kg-day	1.2E-01	(mg/kg-day)-1	1.5E-09
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	3.74E-09	mg/kg-day	4.1E+00	(mg/kg-day)-1	1.5E-08
	FLUORANTHENE	1.83E-01	mg/kg	1.83E-01	mg/kg	M	1.14E-08	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	5.11E-09	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	8.72E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.0E-08
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.49E-08	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	5.19E-08	mg/kg-day	1.2E-01	(mg/kg-day)-1	6.2E-09
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	1.42E-08	mg/kg-day	--	--	--
	PYRENE	1.71E-01	mg/kg	1.71E-01	mg/kg	M	1.06E-08	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.86E-03	mg/kg	2.86E-03	mg/kg	M	5.94E-11	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.4E-11
	4,4'-DDE	2.54E-03	mg/kg	2.54E-03	mg/kg	M	5.27E-11	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.8E-11
	4,4'-DDT	8.46E-03	mg/kg	8.46E-03	mg/kg	M	1.76E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.0E-11

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EPA TABLE M.8.10.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ALDRIN	1.01E-03	mg/kg	1.01E-03	mg/kg	M	2.10E-11	mg/kg-day	1.7E+01	(mg/kg-day)-1	3.6E-10
	ALPHA-BHC	3.33E-03	mg/kg	3.33E-03	mg/kg	M	6.91E-11	mg/kg-day	6.3E+00	(mg/kg-day)-1	4.4E-10
	ALPHA-CHLORDANE	2.26E-03	mg/kg	2.26E-03	mg/kg	M	4.69E-11	mg/kg-day	1.2E+00	(mg/kg-day)-1	5.6E-11
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	6.86E-10	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.4E-09
	AROCLOR-1260	3.79E-02	mg/kg	3.79E-02	mg/kg	M	2.36E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	4.7E-09
	BETA-BHC	1.44E-03	mg/kg	1.44E-03	mg/kg	M	2.99E-11	mg/kg-day	1.8E+00	(mg/kg-day)-1	5.4E-11
	DELTA-BHC	1.13E-03	mg/kg	1.13E-03	mg/kg	M	2.35E-11	mg/kg-day	--	--	--
	DIELDRIN	2.07E-03	mg/kg	2.07E-03	mg/kg	M	4.30E-11	mg/kg-day	1.6E+01	(mg/kg-day)-1	6.9E-10
	ENDOSULFAN I	1.14E-03	mg/kg	1.14E-03	mg/kg	M	2.37E-11	mg/kg-day	--	--	--
	ENDOSULFAN II	1.92E-03	mg/kg	1.92E-03	mg/kg	M	3.99E-11	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	4.98E-11	mg/kg-day	--	--	--
	ENDRIN	1.98E-03	mg/kg	1.98E-03	mg/kg	M	4.11E-11	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	3.09E-03	mg/kg	M	6.41E-11	mg/kg-day	--	--	--
	ENDRIN KETONE	2.47E-03	mg/kg	2.47E-03	mg/kg	M	5.13E-11	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.61E-03	mg/kg	M	3.34E-11	mg/kg-day	1.3E+00	(mg/kg-day)-1	4.3E-11
	GAMMA-CHLORDANE	2.18E-03	mg/kg	2.18E-03	mg/kg	M	4.53E-11	mg/kg-day	1.2E+00	(mg/kg-day)-1	5.4E-11
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	4.15E-12	mg/kg-day	5.7E+00	(mg/kg-day)-1	2.4E-11
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.80E-04	mg/kg	M	5.81E-12	mg/kg-day	1.3E+01	(mg/kg-day)-1	7.6E-11
	METHOXYCHLOR	9.68E-03	mg/kg	9.68E-03	mg/kg	M	2.01E-10	mg/kg-day	--	--	--
										Total Cancer Risk Across All Direct Contact Exposure Routes/Pathways - Soil	3.7E-07

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

NV = No value available

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EPA TABLE M.8.11.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation-Dust	**METAL**										
	BARIUM	9.67E+01	mg/kg	7.35E-08	mg/m^3	R	4.81E-10	mg/kg-day	--	--	--
	COBALT	1.15E+01	mg/kg	8.70E-09	mg/m^3	R	5.69E-11	mg/kg-day	--	--	--
	COPPER	5.99E+01	mg/kg	4.55E-08	mg/m^3	R	2.98E-10	mg/kg-day	--	--	--
	LEAD	9.96E+01	mg/kg	7.57E-08	mg/m^3	R	4.95E-10	mg/kg-day	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.28E-10	mg/m^3	R	1.49E-12	mg/kg-day	--	--	--
	SELENIUM	5.18E-01	mg/kg	3.94E-10	mg/m^3	R	2.58E-12	mg/kg-day	--	--	--
	SILVER	5.63E-01	mg/kg	4.28E-10	mg/m^3	R	2.80E-12	mg/kg-day	--	--	--
	THALLIUM	4.14E-01	mg/kg	3.15E-10	mg/m^3	R	2.06E-12	mg/kg-day	--	--	--
	TIN	1.40E+01	mg/kg	1.07E-08	mg/m^3	R	6.97E-11	mg/kg-day	--	--	--
	TITANIUM	4.25E+03	mg/kg	3.23E-06	mg/m^3	R	2.11E-08	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	7.48E-03	mg/kg	5.68E-12	mg/m^3	R	3.72E-14	mg/kg-day	--	--	--
	ACETONE	1.71E-02	mg/kg	1.30E-11	mg/m^3	R	8.49E-14	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	3.80E-12	mg/m^3	R	2.49E-14	mg/kg-day	--	--	--
	TOLUENE	6.11E-03	mg/kg	4.64E-12	mg/m^3	R	3.04E-14	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	1.99E-14	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	1.84E-13	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	1.79E-10	mg/m^3	R	1.17E-12	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	1.52E-11	mg/m^3	R	9.94E-14	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	7.46E-13	mg/kg-day	--	--	--

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EPA TABLE M.8.11.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	1.65E-10	mg/m^3	R	1.08E-12	mg/kg-day	3.9E-01	(mg/kg-day)-1	4.2E-13
	BENZO(A)PYRENE	2.02E-01	mg/kg	1.53E-10	mg/m^3	R	1.00E-12	mg/kg-day	3.9E+00	(mg/kg-day)-1	3.9E-12
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	1.64E-10	mg/m^3	R	1.07E-12	mg/kg-day	3.9E-01	(mg/kg-day)-1	4.2E-13
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	1.58E-10	mg/m^3	R	1.03E-12	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	1.77E-10	mg/m^3	R	1.16E-12	mg/kg-day	3.9E-01	(mg/kg-day)-1	4.5E-13
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	9.02E-11	mg/m^3	R	5.90E-13	mg/kg-day	8.4E-03	(mg/kg-day)-1	5.0E-15
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	3.63E-13	mg/kg-day	2.0E-02	(mg/kg-day)-1	7.3E-15
	CHRYSENE	2.04E-01	mg/kg	1.55E-10	mg/m^3	R	1.02E-12	mg/kg-day	3.9E-02	(mg/kg-day)-1	4.0E-14
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	2.98E-13	mg/kg-day	4.1E+00	(mg/kg-day)-1	1.2E-12
	FLUORANTHENE	1.83E-01	mg/kg	1.39E-10	mg/m^3	R	9.09E-13	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	4.08E-13	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	6.96E-13	mg/kg-day	3.9E-01	(mg/kg-day)-1	2.7E-13
	NAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	1.19E-12	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	2.49E-12	mg/kg-day	1.2E-01	(mg/kg-day)-1	3.0E-13
	PHENANTHRENE	2.28E-01	mg/kg	1.74E-10	mg/m^3	R	1.14E-12	mg/kg-day	--	--	--
	PYRENE	1.71E-01	mg/kg	1.30E-10	mg/m^3	R	8.50E-13	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.86E-03	mg/kg	2.17E-12	mg/m^3	R	1.42E-14	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.4E-15
	4,4'-DDE	2.54E-03	mg/kg	1.93E-12	mg/m^3	R	1.26E-14	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.3E-15
	4,4'-DDT	8.46E-03	mg/kg	6.43E-12	mg/m^3	R	4.21E-14	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.4E-14
	ALDRIN	1.01E-03	mg/kg	7.67E-13	mg/m^3	R	5.02E-15	mg/kg-day	1.7E+01	(mg/kg-day)-1	8.6E-14
	ALPHA-BHC	3.33E-03	mg/kg	2.53E-12	mg/m^3	R	1.66E-14	mg/kg-day	6.3E+00	(mg/kg-day)-1	1.0E-13

TABLE J-70

EPA TABLE M.8.11.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ALPHA-CHLORDANE	2.26E-03	mg/kg	1.72E-12	mg/m^3	R	1.12E-14	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.3E-14
	AROCLOR-1254	1.10E-02	mg/kg	8.37E-12	mg/m^3	R	5.48E-14	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.1E-13
	AROCLOR-1260	3.79E-02	mg/kg	2.88E-11	mg/m^3	R	1.88E-13	mg/kg-day	2.0E+00	(mg/kg-day)-1	3.8E-13
	BETA-BHC	1.44E-03	mg/kg	1.09E-12	mg/m^3	R	7.16E-15	mg/kg-day	1.9E+00	(mg/kg-day)-1	1.3E-14
	DELTA-BHC	1.13E-03	mg/kg	8.59E-13	mg/m^3	R	5.62E-15	mg/kg-day	--	--	--
	DIELDRIN	2.07E-03	mg/kg	1.57E-12	mg/m^3	R	1.03E-14	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.6E-13
	ENDOSULFAN I	1.14E-03	mg/kg	8.66E-13	mg/m^3	R	5.67E-15	mg/kg-day	--	--	--
	ENDOSULFAN II	1.92E-03	mg/kg	1.46E-12	mg/m^3	R	9.54E-15	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	1.82E-12	mg/m^3	R	1.19E-14	mg/kg-day	--	--	--
	ENDRIN	1.98E-03	mg/kg	1.50E-12	mg/m^3	R	9.84E-15	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	2.35E-12	mg/m^3	R	1.54E-14	mg/kg-day	--	--	--
	ENDRIN KETONE	2.47E-03	mg/kg	1.88E-12	mg/m^3	R	1.23E-14	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.22E-12	mg/m^3	R	8.00E-15	mg/kg-day	1.3E+00	(mg/kg-day)-1	1.0E-14
	GAMMA-CHLORDANE	2.18E-03	mg/kg	1.66E-12	mg/m^3	R	1.08E-14	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.3E-14
	HEPTACHLOR	2.00E-04	mg/kg	1.52E-13	mg/m^3	R	9.94E-16	mg/kg-day	5.7E+00	(mg/kg-day)-1	5.7E-15
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.13E-13	mg/m^3	R	1.39E-15	mg/kg-day	1.3E+01	(mg/kg-day)-1	1.8E-14
	METHOXYCHLOR	9.68E-03	mg/kg	7.36E-12	mg/m^3	R	4.81E-14	mg/kg-day	--	--	--
Inhalation-VOCs	**METAL**										
	BARIUM	9.67E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COBALT	1.15E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COPPER	5.99E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	LEAD	9.96E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--

TABLE J-70

EPA TABLE M.8.11.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	MOLYBDENUM	2.99E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SELENIUM	5.18E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SILVER	5.63E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	THALLIUM	4.14E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TIN	1.40E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TITANIUM	4.25E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	7.48E-03	mg/kg	1.71E-04	mg/m^3	R	1.12E-06	mg/kg-day	--	--	--
	ACETONE	1.71E-02	mg/kg	3.48E-04	mg/m^3	R	2.27E-06	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.75E-02	mg/m^3	R	3.76E-04	mg/kg-day	--	--	--
	TOLUENE	6.11E-03	mg/kg	2.69E-02	mg/m^3	R	1.76E-04	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	1.07E-05	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	2.95E-04	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	1.74E-01	mg/m^3	R	1.14E-03	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	1.31E-02	mg/m^3	R	8.55E-05	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	1.79E-05	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BENZO(A)PYRENE	2.02E-01	mg/kg	--	mg/m^3	R	--	--	3.9E+00	(mg/kg-day)-1	--
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	--	mg/m^3	R	--	--	8.4E-03	(mg/kg-day)-1	--

TABLE J-70

EPA TABLE M.8.11.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-02	(mg/kg-day)-1	--
	CHRYSENE	2.04E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-02	(mg/kg-day)-1	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	4.1E+00	(mg/kg-day)-1	--
	FLUORANTHENE	1.83E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	2.22E-05	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	NAPHTHALENE	2.40E-01	mg/kg	*	mg/m^3	R	--	--	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	1.2E-01	(mg/kg-day)-1	--
	PHENANTHRENE	2.28E-01	mg/kg	4.20E-03	mg/m^3	R	2.75E-05	mg/kg-day	--	--	--
	PYRENE	1.71E-01	mg/kg	6.52E-04	mg/m^3	R	4.27E-06	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.86E-03	mg/kg	--	mg/m^3	R	--	--	2.4E-01	(mg/kg-day)-1	--
	4,4'-DDE	2.54E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	(mg/kg-day)-1	--
	4,4'-DDT	8.46E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	(mg/kg-day)-1	--
	ALDRIN	1.01E-03	mg/kg	--	mg/m^3	R	--	--	1.7E+01	(mg/kg-day)-1	--
	ALPHA-BHC	3.33E-03	mg/kg	--	mg/m^3	R	--	--	6.3E+00	(mg/kg-day)-1	--
	ALPHA-CHLORDANE	2.26E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	(mg/kg-day)-1	--
	AROCLOR-1254	1.10E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	(mg/kg-day)-1	--
	AROCLOR-1260	3.79E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	(mg/kg-day)-1	--
	BETA-BHC	1.44E-03	mg/kg	--	mg/m^3	R	--	--	1.9E+00	(mg/kg-day)-1	--
	DELTA-BHC	1.13E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	DIELDRIN	2.07E-03	mg/kg	--	mg/m^3	R	--	--	1.6E+01	(mg/kg-day)-1	--

TABLE J-70

EPA TABLE M.8.11.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDOSULFAN I	1.14E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN II	1.92E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN	1.98E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN KETONE	2.47E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	--	mg/m^3	R	--	--	1.3E+00	(mg/kg-day)-1	--
	GAMMA-CHLORDANE	2.18E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	(mg/kg-day)-1	--
	HEPTACHLOR	2.00E-04	mg/kg	--	mg/m^3	R	--	--	5.7E+00	(mg/kg-day)-1	--
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	--	mg/m^3	R	--	--	1.3E+01	(mg/kg-day)-1	--
	METHOXYCHLOR	9.68E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--

Total Cancer Risk Across All Air Exposure Routes/Pathways - Soil	8.0E-12
Total Cancer Risk Across All Direct Contact Exposure Routes/Pathways - Soil	3.7E-07
Total Cancer Risk Across All Exposure Routes/Pathways - Soil	3.7E-07
Total Risk Across All Air Exposure Routes/Pathways - Groundwater	5.2E-09
Total Cancer Risk Across All Exposure Routes/Pathways	3.7E-07

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

NV = No value available

VOC = Volatile organic compound

* = Inhalation of VOCs for naphthalane evaluated under groundwater exposures instead of soil due to single detection of naphthalene at 9.5 feet below ground suface, which is below shallow groundwater

TABLE J-71

EPA TABLE M.7.10.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	**METAL**												
	BARIUM	1.09E+02	mg/kg	1.09E+02	mg/kg	M	5.35E-05	mg/kg-day	7.0E-02	mg/kg-day	--	--	7.6E-04
	COBALT	1.29E+01	mg/kg	1.29E+01	mg/kg	M	6.33E-06	mg/kg-day	6.0E-02	mg/kg-day	--	--	1.1E-04
	COPPER	7.13E+01	mg/kg	7.13E+01	mg/kg	M	3.49E-05	mg/kg-day	3.7E-02	mg/kg-day	--	--	9.4E-04
	LEAD	1.47E+02	mg/kg	1.47E+02	mg/kg	M	7.20E-05	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	3.81E-01	mg/kg	M	1.87E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.7E-05
	SELENIUM	5.90E-01	mg/kg	5.90E-01	mg/kg	M	2.89E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	5.8E-05
	SILVER	9.22E-01	mg/kg	9.22E-01	mg/kg	M	4.51E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	9.0E-05
	THALLIUM	4.51E-01	mg/kg	4.51E-01	mg/kg	M	2.21E-07	mg/kg-day	7.0E-05	mg/kg-day	--	--	3.2E-03
	TIN	1.78E+01	mg/kg	1.78E+01	mg/kg	M	8.69E-06	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.4E-05
	TITANIUM	4.77E+03	mg/kg	4.77E+03	mg/kg	M	2.33E-03	mg/kg-day	3.0E-01	mg/kg-day	--	--	7.8E-03
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	8.66E-03	mg/kg	8.66E-03	mg/kg	M	4.24E-09	mg/kg-day	6.0E-01	mg/kg-day	--	--	7.1E-09
	ACETONE	2.34E-02	mg/kg	2.34E-02	mg/kg	M	1.14E-08	mg/kg-day	1.0E-01	mg/kg-day	--	--	1.1E-07
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	2.45E-09	mg/kg-day	1.0E-01	mg/kg-day	--	--	2.4E-08
	TOLUENE	6.37E-03	mg/kg	6.37E-03	mg/kg	M	3.12E-09	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.6E-08
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.96E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	9.8E-10
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.81E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	1.8E-06
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.17E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.9E-07
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	9.78E-09	mg/kg-day	6.0E-02	mg/kg-day	--	--	1.6E-07
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	7.34E-08	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.4E-07
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	2.48E-01	mg/kg	M	1.21E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.0E-07
	BENZO(A)PYRENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	1.15E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	3.8E-06
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	2.49E-01	mg/kg	M	1.22E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.0E-06
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	2.37E-01	mg/kg	M	1.16E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	3.9E-06
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	2.59E-01	mg/kg	M	1.27E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.2E-06
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.44E-01	mg/kg	M	7.06E-08	mg/kg-day	2.0E-02	mg/kg-day	--	--	3.5E-06
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	3.57E-08	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.4E-06
	CHRYSENE	2.43E-01	mg/kg	2.43E-01	mg/kg	M	1.19E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.0E-07
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	2.94E-08	mg/kg-day	3.0E-01	mg/kg-day	--	--	9.8E-08
	FLUORANTHENE	2.23E-01	mg/kg	2.23E-01	mg/kg	M	1.09E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	2.7E-06
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	4.01E-08	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.0E-06
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	6.85E-08	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.7E-06
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.17E-07	mg/kg-day	2.0E-02	mg/kg-day	--	--	5.9E-06

TABLE J-71

EPA TABLE M.7.10.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	2.45E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	8.2E-06
	PHENANTHRENE	2.65E-01	mg/kg	2.65E-01	mg/kg	M	1.30E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.3E-07
	PYRENE	2.05E-01	mg/kg	2.05E-01	mg/kg	M	1.00E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	3.3E-06
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.30E-03	mg/kg	3.30E-03	mg/kg	M	1.61E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.2E-06
	4,4'-DDE	2.82E-03	mg/kg	2.82E-03	mg/kg	M	1.38E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.8E-06
	4,4'-DDT	1.10E-02	mg/kg	1.10E-02	mg/kg	M	5.36E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.1E-05
	ALDRIN	1.03E-03	mg/kg	1.03E-03	mg/kg	M	5.04E-10	mg/kg-day	3.0E-05	mg/kg-day	--	--	1.7E-05
	ALPHA-BHC	4.35E-03	mg/kg	4.35E-03	mg/kg	M	2.13E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	7.1E-06
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.74E-03	mg/kg	M	1.34E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.7E-06
	AROCLOR-1254	1.40E-02	mg/kg	1.40E-02	mg/kg	M	6.85E-09	mg/kg-day	2.0E-05	mg/kg-day	--	--	3.4E-04
	AROCLOR-1260	4.89E-02	mg/kg	4.89E-02	mg/kg	M	2.39E-08	mg/kg-day	2.0E-05	mg/kg-day	--	--	1.2E-03
	BETA-BHC	1.61E-03	mg/kg	1.61E-03	mg/kg	M	7.88E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.6E-06
	DELTA-BHC	1.21E-03	mg/kg	1.21E-03	mg/kg	M	5.92E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.0E-06
	DIELDRIN	2.17E-03	mg/kg	2.17E-03	mg/kg	M	1.06E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	2.1E-05
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	5.92E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	9.9E-08
	ENDOSULFAN II	1.97E-03	mg/kg	1.97E-03	mg/kg	M	9.64E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.6E-07
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.63E-03	mg/kg	M	1.29E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.1E-07
	ENDRIN	2.05E-03	mg/kg	2.05E-03	mg/kg	M	1.00E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.3E-06
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	3.49E-03	mg/kg	M	1.71E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	5.7E-06
	ENDRIN KETONE	2.69E-03	mg/kg	2.69E-03	mg/kg	M	1.32E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	4.4E-06
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.83E-03	mg/kg	M	8.95E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.0E-06
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	1.30E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.6E-06
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	1.13E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.3E-07
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	3.30E-04	mg/kg	M	1.61E-10	mg/kg-day	1.3E-05	mg/kg-day	--	--	1.2E-05
	METHOXYCHLOR	9.97E-03	mg/kg	9.97E-03	mg/kg	M	4.88E-09	mg/kg-day	5.0E-03	mg/kg-day	--	--	9.8E-07
Dermal	**METAL**												
	BARIUM	1.09E+02	mg/kg	1.09E+02	mg/kg	M	1.22E-05	mg/kg-day	7.0E-02	mg/kg-day	--	--	1.7E-04
	COBALT	1.29E+01	mg/kg	1.29E+01	mg/kg	M	1.44E-06	mg/kg-day	6.0E-02	mg/kg-day	--	--	2.4E-05
	COPPER	7.13E+01	mg/kg	7.13E+01	mg/kg	M	7.95E-06	mg/kg-day	3.7E-02	mg/kg-day	--	--	2.1E-04
	LEAD	1.47E+02	mg/kg	1.47E+02	mg/kg	M	1.64E-05	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	3.81E-01	mg/kg	M	4.25E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	8.5E-06
	SELENIUM	5.90E-01	mg/kg	5.90E-01	mg/kg	M	6.58E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.3E-05
	SILVER	9.22E-01	mg/kg	9.22E-01	mg/kg	M	1.03E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.1E-05
	THALLIUM	4.51E-01	mg/kg	4.51E-01	mg/kg	M	5.03E-08	mg/kg-day	7.0E-05	mg/kg-day	--	--	7.2E-04

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EPA TABLE M.7.10.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	TIN	1.78E+01	mg/kg	1.78E+01	mg/kg	M	1.98E-06	mg/kg-day	6.0E-01	mg/kg-day	--	--	3.3E-06
	TITANIUM	4.77E+03	mg/kg	4.77E+03	mg/kg	M	5.32E-04	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.8E-03
	VOLATILE ORGANIC COMPOUNDS	0.00E+00											
	2-BUTANONE	8.66E-03	mg/kg	8.66E-03	mg/kg	M	9.66E-09	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.6E-08
	ACETONE	2.34E-02	mg/kg	2.34E-02	mg/kg	M	2.61E-08	mg/kg-day	1.0E-01	mg/kg-day	--	--	2.6E-07
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	5.58E-09	mg/kg-day	1.0E-01	mg/kg-day	--	--	5.6E-08
	TOLUENE	6.37E-03	mg/kg	6.37E-03	mg/kg	M	7.11E-09	mg/kg-day	2.0E-01	mg/kg-day	--	--	3.6E-08
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	4.46E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	2.2E-09
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	4.13E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	4.1E-06
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	4.02E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.3E-06
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	3.35E-08	mg/kg-day	6.0E-02	mg/kg-day	--	--	5.6E-07
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	2.51E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	8.4E-07
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	2.48E-01	mg/kg	M	4.15E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.4E-06
	BENZO(A)PYRENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	3.93E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.3E-05
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	2.49E-01	mg/kg	M	4.16E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.0E-05
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	2.37E-01	mg/kg	M	3.96E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.3E-05
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	2.59E-01	mg/kg	M	4.33E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.1E-05
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.44E-01	mg/kg	M	1.61E-07	mg/kg-day	2.0E-02	mg/kg-day	--	--	8.0E-06
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	8.14E-08	mg/kg-day	2.5E-02	mg/kg-day	--	--	3.3E-06
	CHRYSENE	2.43E-01	mg/kg	2.43E-01	mg/kg	M	4.07E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.4E-06
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	1.00E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.3E-07
	FLUORANTHENE	2.23E-01	mg/kg	2.23E-01	mg/kg	M	3.73E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	9.3E-06
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	1.37E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.4E-06
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	2.34E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	5.9E-06
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	4.02E-07	mg/kg-day	2.0E-02	mg/kg-day	--	--	2.0E-05
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	1.39E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	4.6E-05
	PHENANTHRENE	2.65E-01	mg/kg	2.65E-01	mg/kg	M	4.43E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.5E-06
	PYRENE	2.05E-01	mg/kg	2.05E-01	mg/kg	M	3.44E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.1E-05
	PESTICIDE/POLYCHLORINATED BIPHENYLS	0.00E+00											
	4,4'-DDD	3.30E-03	mg/kg	3.30E-03	mg/kg	M	1.84E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.7E-06
	4,4'-DDE	2.82E-03	mg/kg	2.82E-03	mg/kg	M	1.57E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.1E-06
	4,4'-DDT	1.10E-02	mg/kg	1.10E-02	mg/kg	M	6.11E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.2E-05
	ALDRIN	1.03E-03	mg/kg	1.03E-03	mg/kg	M	5.74E-10	mg/kg-day	3.0E-05	mg/kg-day	--	--	1.9E-05
	ALPHA-BHC	4.35E-03	mg/kg	4.35E-03	mg/kg	M	2.43E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	8.1E-06

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EPA TABLE M.7.10.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.74E-03	mg/kg	M	1.53E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.1E-06
	AROCLOR-1254	1.40E-02	mg/kg	1.40E-02	mg/kg	M	2.34E-08	mg/kg-day	2.0E-05	mg/kg-day	--	--	1.2E-03
	AROCLOR-1260	4.89E-02	mg/kg	4.89E-02	mg/kg	M	8.18E-08	mg/kg-day	2.0E-05	mg/kg-day	--	--	4.1E-03
	BETA-BHC	1.61E-03	mg/kg	1.61E-03	mg/kg	M	8.98E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.0E-06
	DELTA-BHC	1.21E-03	mg/kg	1.21E-03	mg/kg	M	6.75E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.2E-06
	DIELDRIN	2.17E-03	mg/kg	2.17E-03	mg/kg	M	1.21E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	2.4E-05
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	6.75E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.1E-07
	ENDOSULFAN II	1.97E-03	mg/kg	1.97E-03	mg/kg	M	1.10E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.8E-07
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.63E-03	mg/kg	M	1.47E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.4E-07
	ENDRIN	2.05E-03	mg/kg	2.05E-03	mg/kg	M	1.14E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.8E-06
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	3.49E-03	mg/kg	M	1.95E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	6.5E-06
	ENDRIN KETONE	2.69E-03	mg/kg	2.69E-03	mg/kg	M	1.50E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	5.0E-06
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.83E-03	mg/kg	M	1.02E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.4E-06
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	1.48E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.0E-06
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	1.28E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.6E-07
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	3.30E-04	mg/kg	M	1.84E-10	mg/kg-day	1.3E-05	mg/kg-day	--	--	1.4E-05
	METHOXYCHLOR	9.97E-03	mg/kg	9.97E-03	mg/kg	M	5.56E-09	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.1E-06
												Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	2.3E-02

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
(2) Chronic Values Used
bgs = Below ground surface
Ft. = Feet
mg/kg = Milligrams per kilogram

TABLE J-72

EPA TABLE M.7.11.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation-Dust	**METAL**												
	BARIUM	1.09E+02	mg/kg	8.31E-08	mg/m^3	R	1.63E-08	mg/kg-day	1.0E-04	mg/kg-day	--	--	1.6E-04
	COBALT	1.29E+01	mg/kg	9.84E-09	mg/m^3	R	1.92E-09	mg/kg-day	1.4E-06	mg/kg-day	--	--	1.3E-03
	COPPER	7.13E+01	mg/kg	5.42E-08	mg/m^3	R	1.06E-08	mg/kg-day	5.7E-06	mg/kg-day	--	--	1.9E-03
	LEAD	1.47E+02	mg/kg	1.12E-07	mg/m^3	R	2.19E-08	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	2.90E-10	mg/m^3	R	5.67E-11	mg/kg-day	--	--	--	--	--
	SELENIUM	5.90E-01	mg/kg	4.49E-10	mg/m^3	R	8.78E-11	mg/kg-day	2.3E-05	mg/kg-day	--	--	3.8E-06
	SILVER	9.22E-01	mg/kg	7.01E-10	mg/m^3	R	1.37E-10	mg/kg-day	5.7E-03	mg/kg-day	--	--	2.4E-08
	THALLIUM	4.51E-01	mg/kg	3.43E-10	mg/m^3	R	6.70E-11	mg/kg-day	--	--	--	--	--
	TIN	1.78E+01	mg/kg	1.35E-08	mg/m^3	R	2.64E-09	mg/kg-day	--	--			--
	TITANIUM	4.77E+03	mg/kg	3.62E-06	mg/m^3	R	7.09E-07	mg/kg-day	2.6E-04	mg/kg-day	--	--	2.7E-03
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	8.66E-03	mg/kg	6.58E-12	mg/m^3	R	1.29E-12	mg/kg-day	2.9E-01	mg/kg-day	--	--	4.4E-12
	ACETONE	2.34E-02	mg/kg	1.78E-11	mg/m^3	R	3.48E-12	mg/kg-day	1.0E-01	mg/kg-day	--	--	3.5E-11
	CARBON DISULFIDE	5.00E-03	mg/kg	3.80E-12	mg/m^3	R	7.44E-13	mg/kg-day	2.0E-01	mg/kg-day	--	--	3.7E-12
	TOLUENE	6.37E-03	mg/kg	4.84E-12	mg/m^3	R	9.47E-13	mg/kg-day	1.1E-01	mg/kg-day	--	--	8.3E-12
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	5.95E-13	mg/kg-day	2.0E-01	mg/kg-day	--	--	3.0E-12
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	5.50E-12	mg/kg-day	5.7E-02	mg/kg-day	--	--	9.6E-11
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	3.57E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.2E-10
	ACENAPHTHENE	2.00E-02	mg/kg	1.52E-11	mg/m^3	R	2.97E-12	mg/kg-day	6.0E-02	mg/kg-day	--	--	5.0E-11
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	2.23E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	7.4E-11
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	1.89E-10	mg/m^3	R	3.69E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.2E-10
	BENZO(A)PYRENE	2.35E-01	mg/kg	1.79E-10	mg/m^3	R	3.50E-11	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.2E-09
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	1.89E-10	mg/m^3	R	3.70E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	9.2E-10
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	1.80E-10	mg/m^3	R	3.52E-11	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.2E-09
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	1.97E-10	mg/m^3	R	3.85E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	9.6E-10
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.10E-10	mg/m^3	R	2.15E-11	mg/kg-day	2.0E-02	mg/kg-day			1.1E-09

TABLE J-72

EPA TABLE M.7.11.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	1.09E-11	mg/kg-day	2.5E-02	mg/kg-day	--	--	4.3E-10
	CHRYSENE	2.43E-01	mg/kg	1.85E-10	mg/m^3	R	3.62E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.2E-10
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	8.92E-12	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.0E-11
	FLUORANTHENE	2.23E-01	mg/kg	1.69E-10	mg/m^3	R	3.31E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	8.3E-10
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	1.22E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.0E-10
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	2.08E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	5.2E-10
	NAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	3.57E-11	mg/kg-day	8.6E-04	mg/kg-day	--	--	4.2E-08
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	7.44E-11	mg/kg-day	3.0E-02	mg/kg-day			2.5E-09
	PHENANTHRENE	2.65E-01	mg/kg	2.01E-10	mg/m^3	R	3.94E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.3E-10
	PYRENE	2.05E-01	mg/kg	1.56E-10	mg/m^3	R	3.05E-11	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.0E-09
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.30E-03	mg/kg	2.51E-12	mg/m^3	R	4.91E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	9.8E-10
	4,4'-DDE	2.82E-03	mg/kg	2.14E-12	mg/m^3	R	4.19E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	8.4E-10
	4,4'-DDT	1.10E-02	mg/kg	8.32E-12	mg/m^3	R	1.63E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.3E-09
	ALDRIN	1.03E-03	mg/kg	7.83E-13	mg/m^3	R	1.53E-13	mg/kg-day	3.0E-05	mg/kg-day	--	--	5.1E-09
	ALPHA-BHC	4.35E-03	mg/kg	3.31E-12	mg/m^3	R	6.47E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.2E-09
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.08E-12	mg/m^3	R	4.07E-13	mg/kg-day	2.0E-04	mg/kg-day	--	--	2.0E-09
	AROCLOR-1254	1.40E-02	mg/kg	1.06E-11	mg/m^3	R	2.08E-12	mg/kg-day	2.0E-05	mg/kg-day	--	--	1.0E-07
	AROCLOR-1260	4.89E-02	mg/kg	3.72E-11	mg/m^3	R	7.27E-12	mg/kg-day	2.0E-05	mg/kg-day	--	--	3.6E-07
	BETA-BHC	1.61E-03	mg/kg	1.22E-12	mg/m^3	R	2.39E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	8.0E-10
	DELTA-BHC	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	1.80E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	6.0E-10
	DIELDRIN	2.17E-03	mg/kg	1.65E-12	mg/m^3	R	3.23E-13	mg/kg-day	5.0E-05	mg/kg-day			6.5E-09
	ENDOSULFAN I	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	1.80E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	3.0E-11
	ENDOSULFAN II	1.97E-03	mg/kg	1.50E-12	mg/m^3	R	2.93E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	4.9E-11
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.00E-12	mg/m^3	R	3.91E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	6.5E-11
	ENDRIN	2.05E-03	mg/kg	1.56E-12	mg/m^3	R	3.05E-13	mg/kg-day	3.0E-04	mg/kg-day			1.0E-09
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	2.65E-12	mg/m^3	R	5.19E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.7E-09
	ENDRIN KETONE	2.69E-03	mg/kg	2.04E-12	mg/m^3	R	4.00E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.3E-09
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.39E-12	mg/m^3	R	2.72E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	9.1E-10

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EPA TABLE M.7.11.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.01E-12	mg/m^3	R	3.94E-13	mg/kg-day	2.0E-04	mg/kg-day	--	--	2.0E-09
	HEPTACHLOR	2.30E-04	mg/kg	1.75E-13	mg/m^3	R	3.42E-14	mg/kg-day	5.0E-04	mg/kg-day	--	--	6.8E-11
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	2.51E-13	mg/m^3	R	4.91E-14	mg/kg-day	1.3E-05	mg/kg-day	--	--	3.8E-09
	METHOXYCHLOR	9.97E-03	mg/kg	7.58E-12	mg/m^3	R	1.48E-12	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.0E-10
Inhalation-VOCs	**METAL**												
	BARIUM	1.09E+02	mg/kg	--	mg/m^3	R	--	--	1.0E-04	mg/kg-day	--	--	--
	COBALT	1.29E+01	mg/kg	--	mg/m^3	R	--	--	1.4E-06	mg/kg-day	--	--	--
	COPPER	7.13E+01	mg/kg	--	mg/m^3	R	--	--	5.7E-06	mg/kg-day	--	--	--
	LEAD	1.47E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	SELENIUM	5.90E-01	mg/kg	--	mg/m^3	R	--	--	2.3E-05	mg/kg-day	--	--	--
	SILVER	9.22E-01	mg/kg	--	mg/m^3	R	--	--	5.7E-03	mg/kg-day	--	--	--
	THALLIUM	4.51E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TIN	1.78E+01	mg/kg	--	mg/m^3	R	--	--	--	--			--
	TITANIUM	4.77E+03	mg/kg	--	mg/m^3	R	--	--	2.6E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	8.66E-03	mg/kg	1.98E-04	mg/m^3	R	3.87E-05	mg/kg-day	2.9E-01	mg/kg-day	--	--	1.3E-04
	ACETONE	2.34E-02	mg/kg	4.76E-04	mg/m^3	R	9.32E-05	mg/kg-day	1.0E-01	mg/kg-day	--	--	9.3E-04
	CARBON DISULFIDE	5.00E-03	mg/kg	5.75E-02	mg/m^3	R	1.13E-02	mg/kg-day	2.0E-01	mg/kg-day	--	--	5.6E-02
	TOLUENE	6.37E-03	mg/kg	2.80E-02	mg/m^3	R	5.48E-03	mg/kg-day	1.1E-01	mg/kg-day	--	--	4.8E-02
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	3.19E-04	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.6E-03
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	8.84E-03	mg/kg-day	5.7E-02	mg/kg-day	--	--	1.5E-01
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.78E-01	mg/m^3	R	3.48E-02	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.2E-01
	ACENAPHTHENE	2.00E-02	mg/kg	1.31E-02	mg/m^3	R	2.56E-03	mg/kg-day	6.0E-02	mg/kg-day	--	--	4.3E-02
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	5.37E-04	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.8E-03
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(A)PYRENE	2.35E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day	--	--	--

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EPA TABLE M.7.11.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day			--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.5E-02	mg/kg-day	--	--	--
	CHRYSENE	2.43E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	FLUORANTHENE	2.23E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	6.65E-04	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.7E-02
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	NAPHTHALENE	2.40E-01	mg/kg	*	mg/m^3	R	--	--	8.6E-04	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day			--
	PHENANTHRENE	2.65E-01	mg/kg	4.87E-03	mg/m^3	R	9.52E-04	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.2E-03
	PYRENE	2.05E-01	mg/kg	7.83E-04	mg/m^3	R	1.53E-04	mg/kg-day	3.0E-02	mg/kg-day	--	--	5.1E-03
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.30E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDE	2.82E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDT	1.10E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	ALDRIN	1.03E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-05	mg/kg-day	--	--	--
	ALPHA-BHC	4.35E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ALPHA-CHLORDANE	2.74E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-04	mg/kg-day	--	--	--
	AROCLOR-1254	1.40E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-05	mg/kg-day	--	--	--
	AROCLOR-1260	4.89E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-05	mg/kg-day	--	--	--
	BETA-BHC	1.61E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	DELTA-BHC	1.21E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	DIELDRIN	2.17E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day			--
	ENDOSULFAN I	1.21E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--

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EPA TABLE M.7.11.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	ENDRIN	2.05E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day			--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ENDRIN KETONE	2.69E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	GAMMA-CHLORDANE	2.65E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-04	mg/kg-day	--	--	--
	HEPTACHLOR	2.30E-04	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	--	mg/m^3	R	--	--	1.3E-05	mg/kg-day	--	--	--
	METHOXYCHLOR	9.97E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-03	mg/kg-day	--	--	--

Total Hazard Index Across All Air Exposure Routes/Pathways - Soil	4.5E-01
Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	2.3E-02
Total Hazard Index Across All Exposure Routes/Pathways - Soil	4.8E-01
Total Hazard Index Across All Air Exposure Routes/Pathways - Groundwater	1.8E-02
Total Hazard Index Across All Exposure Routes/Pathways	4.9E-01

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
(2) Chronic Values Used
bgs = Below ground surface
Ft. = Feet
mg/kg = Milligrams per kilogram
mg/m^3 = Milligrams per cubic meter
NV = No value available
VOC = Volatile Organic Compound
* = Inhalation of VOCs for naphthalane evaluated under groundwater exposures instead of soil due to single detection of naphthalene at 9.5 feet below ground suface, which is below shallow groundwater

TABLE J-73

EPA TABLE M.7.10.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	**METAL**												
	BARIUM	9.67E+01	mg/kg	9.67E+01	mg/kg	M	4.73E-05	mg/kg-day	7.0E-02	mg/kg-day	--	--	6.8E-04
	COBALT	1.15E+01	mg/kg	1.15E+01	mg/kg	M	5.60E-06	mg/kg-day	6.0E-02	mg/kg-day	--	--	9.3E-05
	COPPER	5.99E+01	mg/kg	5.99E+01	mg/kg	M	2.93E-05	mg/kg-day	3.7E-02	mg/kg-day	--	--	7.9E-04
	LEAD	9.96E+01	mg/kg	9.96E+01	mg/kg	M	4.87E-05	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.99E-01	mg/kg	M	1.46E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.9E-05
	SELENIUM	5.18E-01	mg/kg	5.18E-01	mg/kg	M	2.53E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	5.1E-05
	SILVER	5.63E-01	mg/kg	5.63E-01	mg/kg	M	2.75E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	5.5E-05
	THALLIUM	4.14E-01	mg/kg	4.14E-01	mg/kg	M	2.03E-07	mg/kg-day	7.0E-04	mg/kg-day	--	--	2.9E-04
	TIN	1.40E+01	mg/kg	1.40E+01	mg/kg	M	6.86E-06	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.1E-05
	TITANIUM	4.25E+03	mg/kg	4.25E+03	mg/kg	M	2.08E-03	mg/kg-day	3.0E-01	mg/kg-day	--	--	6.9E-03
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	7.48E-03	mg/kg	7.48E-03	mg/kg	M	3.66E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.8E-09
	ACETONE	1.71E-02	mg/kg	1.71E-02	mg/kg	M	8.35E-09	mg/kg-day	1.0E+00	mg/kg-day	--	--	8.3E-09
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	2.45E-09	mg/kg-day	1.0E-01	mg/kg-day	--	--	2.4E-08
	TOLUENE	6.11E-03	mg/kg	6.11E-03	mg/kg	M	2.99E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.5E-09
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.96E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	9.8E-10
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.81E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	1.8E-06
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	1.15E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.8E-08
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	9.78E-09	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.6E-08
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	7.34E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.4E-08
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	2.17E-01	mg/kg	M	1.06E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.5E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	9.88E-08	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.3E-07
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	2.16E-01	mg/kg	M	1.06E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.6E-07
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	2.08E-01	mg/kg	M	1.02E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.4E-07
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	2.32E-01	mg/kg	M	1.14E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.8E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	1.19E-01	mg/kg	M	5.80E-08	mg/kg-day	2.0E-02	mg/kg-day	--	--	2.9E-06
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	3.57E-08	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.4E-06
	CHRYSENE	2.04E-01	mg/kg	2.04E-01	mg/kg	M	9.99E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.3E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	2.93E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	9.8E-09
	FLUORANTHENE	1.83E-01	mg/kg	1.83E-01	mg/kg	M	8.94E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.2E-07
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	4.01E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.0E-07
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	6.85E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.7E-07
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.17E-07	mg/kg-day	2.0E-01	mg/kg-day	--	--	5.9E-07

TABLE J-73

EPA TABLE M.7.10.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	2.45E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	8.2E-06
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	1.12E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.7E-08
	PYRENE	1.71E-01	mg/kg	1.71E-01	mg/kg	M	8.36E-08	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.8E-07
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.86E-03	mg/kg	2.86E-03	mg/kg	M	1.40E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.8E-06
	4,4'-DDE	2.54E-03	mg/kg	2.54E-03	mg/kg	M	1.24E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.5E-06
	4,4'-DDT	8.46E-03	mg/kg	8.46E-03	mg/kg	M	4.14E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	8.3E-06
	ALDRIN	1.01E-03	mg/kg	1.01E-03	mg/kg	M	4.94E-10	mg/kg-day	3.0E-05	mg/kg-day	--	--	1.6E-05
	ALPHA-BHC	3.33E-03	mg/kg	3.33E-03	mg/kg	M	1.63E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	5.4E-07
	ALPHA-CHLORDANE	2.26E-03	mg/kg	2.26E-03	mg/kg	M	1.11E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.2E-06
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	5.39E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.1E-04
	AROCLOR-1260	3.79E-02	mg/kg	3.79E-02	mg/kg	M	1.85E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	3.7E-04
	BETA-BHC	1.44E-03	mg/kg	1.44E-03	mg/kg	M	7.04E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.3E-07
	DELTA-BHC	1.13E-03	mg/kg	1.13E-03	mg/kg	M	5.53E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.8E-07
	DIELDRIN	2.07E-03	mg/kg	2.07E-03	mg/kg	M	1.01E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	2.0E-05
	ENDOSULFAN I	1.14E-03	mg/kg	1.14E-03	mg/kg	M	5.58E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	9.3E-08
	ENDOSULFAN II	1.92E-03	mg/kg	1.92E-03	mg/kg	M	9.39E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.6E-07
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	1.17E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.0E-07
	ENDRIN	1.98E-03	mg/kg	1.98E-03	mg/kg	M	9.68E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.2E-06
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	3.09E-03	mg/kg	M	1.51E-09	mg/kg-day	3.00E-04	mg/kg-day	--	--	5.0E-06
	ENDRIN KETONE	2.47E-03	mg/kg	2.47E-03	mg/kg	M	1.21E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	4.0E-06
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.61E-03	mg/kg	M	7.87E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.6E-07
	GAMMA-CHLORDANE	2.18E-03	mg/kg	2.18E-03	mg/kg	M	1.07E-09	mg/kg-day	6.0E-05	mg/kg-day	--	--	1.8E-05
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	9.78E-11	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.0E-07
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.80E-04	mg/kg	M	1.37E-10	mg/kg-day	1.3E-05	mg/kg-day	--	--	1.1E-05
	METHOXYCHLOR	9.68E-03	mg/kg	9.68E-03	mg/kg	M	4.73E-09	mg/kg-day	5.0E-03	mg/kg-day	--	--	9.5E-07
Dermal	**METAL**												
	BARIUM	9.67E+01	mg/kg	9.67E+01	mg/kg	M	6.25E-06	mg/kg-day	7.0E-02	mg/kg-day	--	--	8.9E-05
	COBALT	1.15E+01	mg/kg	1.15E+01	mg/kg	M	7.39E-07	mg/kg-day	6.0E-02	mg/kg-day	--	--	1.2E-05
	COPPER	5.99E+01	mg/kg	5.99E+01	mg/kg	M	3.87E-06	mg/kg-day	3.7E-02	mg/kg-day	--	--	1.0E-04
	LEAD	9.96E+01	mg/kg	9.96E+01	mg/kg	M	6.43E-06	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.99E-01	mg/kg	M	1.93E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.9E-06
	SELENIUM	5.18E-01	mg/kg	5.18E-01	mg/kg	M	3.35E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	6.7E-06
	SILVER	5.63E-01	mg/kg	5.63E-01	mg/kg	M	3.64E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	7.3E-06
	THALLIUM	4.14E-01	mg/kg	4.14E-01	mg/kg	M	2.67E-08	mg/kg-day	7.0E-04	mg/kg-day	--	--	3.8E-05

TABLE J-73

EPA TABLE M.7.10.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	TIN	1.40E+01	mg/kg	1.40E+01	mg/kg	M	9.05E-07	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.5E-06
	TITANIUM	4.25E+03	mg/kg	4.25E+03	mg/kg	M	2.75E-04	mg/kg-day	3.0E-01	mg/kg-day	--	--	9.2E-04
	VOLATILE ORGANIC COMPOUNDS	0.00E+00											
	2-BUTANONE	7.48E-03	mg/kg	7.48E-03	mg/kg	M	4.83E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	2.4E-09
	ACETONE	1.71E-02	mg/kg	1.71E-02	mg/kg	M	1.10E-08	mg/kg-day	1.0E+00	mg/kg-day	--	--	1.1E-08
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	3.23E-09	mg/kg-day	1.0E-01	mg/kg-day	--	--	3.2E-08
	TOLUENE	6.11E-03	mg/kg	6.11E-03	mg/kg	M	3.94E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	2.0E-09
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	2.58E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.3E-09
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	2.39E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	2.4E-06
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	2.28E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	7.6E-08
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	1.94E-08	mg/kg-day	6.0E-01	mg/kg-day	--	--	3.2E-08
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.45E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.8E-08
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	2.17E-01	mg/kg	M	2.10E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	7.0E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	1.96E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	6.5E-07
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	2.16E-01	mg/kg	M	2.09E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	5.2E-07
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	2.08E-01	mg/kg	M	2.01E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	6.7E-07
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	2.32E-01	mg/kg	M	2.25E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	5.6E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	1.19E-01	mg/kg	M	7.66E-08	mg/kg-day	2.0E-02	mg/kg-day	--	--	3.8E-06
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	4.71E-08	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.9E-06
	CHRYSENE	2.04E-01	mg/kg	2.04E-01	mg/kg	M	1.98E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	6.6E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	5.81E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.9E-08
	FLUORANTHENE	1.83E-01	mg/kg	1.83E-01	mg/kg	M	1.77E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	4.4E-07
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	7.94E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.0E-07
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	1.36E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.4E-07
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	2.32E-07	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.2E-06
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	8.07E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	2.7E-05
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	2.21E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	7.4E-08
	PYRENE	1.71E-01	mg/kg	1.71E-01	mg/kg	M	1.66E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	5.5E-07
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.86E-03	mg/kg	2.86E-03	mg/kg	M	9.23E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.8E-06
	4,4'-DDE	2.54E-03	mg/kg	2.54E-03	mg/kg	M	8.20E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.6E-06
	4,4'-DDT	8.46E-03	mg/kg	8.46E-03	mg/kg	M	2.73E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	5.5E-06
	ALDRIN	1.01E-03	mg/kg	1.01E-03	mg/kg	M	3.26E-10	mg/kg-day	3.0E-05	mg/kg-day	--	--	1.1E-05
	ALPHA-BHC	3.33E-03	mg/kg	3.33E-03	mg/kg	M	1.07E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	3.6E-07

TABLE J-73

EPA TABLE M.7.10.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	ALPHA-CHLORDANE	2.26E-03	mg/kg	2.26E-03	mg/kg	M	7.30E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.5E-06
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	1.07E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	2.1E-04
	AROCLOR-1260	3.79E-02	mg/kg	3.79E-02	mg/kg	M	3.67E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	7.3E-04
	BETA-BHC	1.44E-03	mg/kg	1.44E-03	mg/kg	M	4.65E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.5E-07
	DELTA-BHC	1.13E-03	mg/kg	1.13E-03	mg/kg	M	3.65E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.2E-07
	DIELDRIN	2.07E-03	mg/kg	2.07E-03	mg/kg	M	6.68E-10	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.3E-05
	ENDOSULFAN I	1.14E-03	mg/kg	1.14E-03	mg/kg	M	3.68E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	6.1E-08
	ENDOSULFAN II	1.92E-03	mg/kg	1.92E-03	mg/kg	M	6.20E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.0E-07
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	7.75E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.3E-07
	ENDRIN	1.98E-03	mg/kg	1.98E-03	mg/kg	M	6.39E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.1E-06
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	3.09E-03	mg/kg	M	9.97E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.3E-06
	ENDRIN KETONE	2.47E-03	mg/kg	2.47E-03	mg/kg	M	7.97E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.7E-06
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.61E-03	mg/kg	M	5.20E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.7E-07
	GAMMA-CHLORDANE	2.18E-03	mg/kg	2.18E-03	mg/kg	M	7.04E-10	mg/kg-day	6.0E-05	mg/kg-day	--	--	1.2E-05
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	6.46E-11	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.3E-07
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.80E-04	mg/kg	M	9.04E-11	mg/kg-day	1.3E-05	mg/kg-day	--	--	7.0E-06
	METHOXYCHLOR	9.68E-03	mg/kg	9.68E-03	mg/kg	M	3.12E-09	mg/kg-day	5.0E-03	mg/kg-day	--	--	6.2E-07
												Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	1.2E-02

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
(2) All values are subchronic
bgs = Below ground surface
Ft. = Feet
mg/kg = Milligrams per kilogram
NV = No value available

TABLE J-74

EPA TABLE M.7.11.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation-Dust	**METAL**												
	BARIUM	9.67E+01	mg/kg	7.35E-08	mg/m^3	R	7.48E-09	mg/kg-day	1.0E-03	mg/kg-day	--	--	7.5E-06
	COBALT	1.15E+01	mg/kg	8.70E-09	mg/m^3	R	8.85E-10	mg/kg-day	1.4E-06	mg/kg-day	--	--	6.2E-04
	COPPER	5.99E+01	mg/kg	4.55E-08	mg/m^3	R	4.63E-09	mg/kg-day	5.7E-06	mg/kg-day	--	--	8.1E-04
	LEAD	9.96E+01	mg/kg	7.57E-08	mg/m^3	R	7.70E-09	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.28E-10	mg/m^3	R	2.31E-11	mg/kg-day	--	--	--	--	--
	SELENIUM	5.18E-01	mg/kg	3.94E-10	mg/m^3	R	4.01E-11	mg/kg-day	2.3E-05	mg/kg-day	--	--	1.8E-06
	SILVER	5.63E-01	mg/kg	4.28E-10	mg/m^3	R	4.35E-11	mg/kg-day	5.7E-03	mg/kg-day	--	--	7.6E-09
	THALLIUM	4.14E-01	mg/kg	3.15E-10	mg/m^3	R	3.20E-11	mg/kg-day	--	--	--	--	--
	TIN	1.40E+01	mg/kg	1.07E-08	mg/m^3	R	1.08E-09	mg/kg-day	--	--			--
	TITANIUM	4.25E+03	mg/kg	3.23E-06	mg/m^3	R	3.29E-07	mg/kg-day	2.6E-04	mg/kg-day	--	--	1.3E-03
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	7.48E-03	mg/kg	5.68E-12	mg/m^3	R	5.78E-13	mg/kg-day	2.9E-01	mg/kg-day	--	--	2.0E-12
	ACETONE	1.71E-02	mg/kg	1.30E-11	mg/m^3	R	1.32E-12	mg/kg-day	1.0E+00	mg/kg-day	--	--	1.3E-12
	CARBON DISULFIDE	5.00E-03	mg/kg	3.80E-12	mg/m^3	R	3.87E-13	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.9E-12
	TOLUENE	6.11E-03	mg/kg	4.64E-12	mg/m^3	R	4.72E-13	mg/kg-day	1.1E-01	mg/kg-day	--	--	4.1E-12
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	3.09E-13	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.5E-13
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	2.86E-12	mg/kg-day	5.7E-01	mg/kg-day	--	--	5.0E-12
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	1.79E-10	mg/m^3	R	1.82E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	6.1E-12
	ACENAPHTHENE	2.00E-02	mg/kg	1.52E-11	mg/m^3	R	1.55E-12	mg/kg-day	6.0E-01	mg/kg-day	--	--	2.6E-12
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	1.16E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.9E-12
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	1.65E-10	mg/m^3	R	1.68E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.6E-12
	BENZO(A)PYRENE	2.02E-01	mg/kg	1.53E-10	mg/m^3	R	1.56E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	5.2E-11
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	1.64E-10	mg/m^3	R	1.67E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	4.2E-11
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	1.58E-10	mg/m^3	R	1.61E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	5.4E-11
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	1.77E-10	mg/m^3	R	1.80E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	4.5E-11
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	9.02E-11	mg/m^3	R	9.17E-12	mg/kg-day	2.0E-02	mg/kg-day			4.6E-10

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EPA TABLE M.7.11.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	5.64E-12	mg/kg-day	2.5E-02	mg/kg-day	--	--	2.3E-10
	CHRYSENE	2.04E-01	mg/kg	1.55E-10	mg/m^3	R	1.58E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.3E-12
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	4.64E-12	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.5E-12
	FLUORANTHENE	1.83E-01	mg/kg	1.39E-10	mg/m^3	R	1.41E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.5E-11
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	6.34E-12	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.6E-11
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	1.08E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.7E-11
	NAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	1.86E-11	mg/kg-day	8.6E-04	mg/kg-day	--	--	2.2E-08
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	3.87E-11	mg/kg-day	3.0E-02	mg/kg-day			1.3E-09
	PHENANTHRENE	2.28E-01	mg/kg	1.74E-10	mg/m^3	R	1.77E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.9E-12
	PYRENE	1.71E-01	mg/kg	1.30E-10	mg/m^3	R	1.32E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.4E-11
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.86E-03	mg/kg	2.17E-12	mg/m^3	R	2.21E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	4.4E-10
	4,4'-DDE	2.54E-03	mg/kg	1.93E-12	mg/m^3	R	1.96E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.9E-10
	4,4'-DDT	8.46E-03	mg/kg	6.43E-12	mg/m^3	R	6.54E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.3E-09
	ALDRIN	1.01E-03	mg/kg	7.67E-13	mg/m^3	R	7.81E-14	mg/kg-day	3.0E-05	mg/kg-day	--	--	2.6E-09
	ALPHA-BHC	3.33E-03	mg/kg	2.53E-12	mg/m^3	R	2.57E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	8.6E-11
	ALPHA-CHLORDANE	2.26E-03	mg/kg	1.72E-12	mg/m^3	R	1.75E-13	mg/kg-day	2.0E-03	mg/kg-day	--	--	8.7E-11
	AROCLOR-1254	1.10E-02	mg/kg	8.37E-12	mg/m^3	R	8.52E-13	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.7E-08
	AROCLOR-1260	3.79E-02	mg/kg	2.88E-11	mg/m^3	R	2.93E-12	mg/kg-day	5.0E-05	mg/kg-day	--	--	5.9E-08
	BETA-BHC	1.44E-03	mg/kg	1.09E-12	mg/m^3	R	1.11E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	3.7E-11
	DELTA-BHC	1.13E-03	mg/kg	8.59E-13	mg/m^3	R	8.74E-14	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.9E-11
	DIELDRIN	2.07E-03	mg/kg	1.57E-12	mg/m^3	R	1.60E-13	mg/kg-day	5.0E-05	mg/kg-day			3.2E-09
	ENDOSULFAN I	1.14E-03	mg/kg	8.66E-13	mg/m^3	R	8.81E-14	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.5E-11
	ENDOSULFAN II	1.92E-03	mg/kg	1.46E-12	mg/m^3	R	1.48E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.5E-11
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	1.82E-12	mg/m^3	R	1.86E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	3.1E-11
	ENDRIN	1.98E-03	mg/kg	1.50E-12	mg/m^3	R	1.53E-13	mg/kg-day	3.0E-04	mg/kg-day			5.1E-10
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	2.35E-12	mg/m^3	R	2.39E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	8.0E-10

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EPA TABLE M.7.11.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	ENDRIN KETONE	2.47E-03	mg/kg	1.88E-12	mg/m^3	R	1.91E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	6.4E-10
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.22E-12	mg/m^3	R	1.24E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	4.1E-11
	GAMMA-CHLORDANE	2.18E-03	mg/kg	1.66E-12	mg/m^3	R	1.69E-13	mg/kg-day	2.0E-03	mg/kg-day	--	--	8.4E-11
	HEPTACHLOR	2.00E-04	mg/kg	1.52E-13	mg/m^3	R	1.55E-14	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.1E-11
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.13E-13	mg/m^3	R	2.16E-14	mg/kg-day	1.3E-05	mg/kg-day	--	--	1.7E-09
	METHOXYCHLOR	9.68E-03	mg/kg	7.36E-12	mg/m^3	R	7.48E-13	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.5E-10
Inhalation-VOCs	**METAL**												
	BARIUM	9.67E+01	mg/kg	--	mg/m^3	R	--	--	1.0E-03	mg/kg-day	--	--	--
	COBALT	1.15E+01	mg/kg	--	mg/m^3	R	--	--	1.4E-06	mg/kg-day	--	--	--
	COPPER	5.99E+01	mg/kg	--	mg/m^3	R	--	--	5.7E-06	mg/kg-day	--	--	--
	LEAD	9.96E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	SELENIUM	5.18E-01	mg/kg	--	mg/m^3	R	--	--	2.3E-05	mg/kg-day	--	--	--
	SILVER	5.63E-01	mg/kg	--	mg/m^3	R	--	--	5.7E-03	mg/kg-day	--	--	--
	THALLIUM	4.14E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TIN	1.40E+01	mg/kg	--	mg/m^3	R	--	--	--	--			--
	TITANIUM	4.25E+03	mg/kg	--	mg/m^3	R	--	--	2.6E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	7.48E-03	mg/kg	1.71E-04	mg/m^3	R	1.74E-05	mg/kg-day	2.9E-01	mg/kg-day	--	--	6.1E-05
	ACETONE	1.71E-02	mg/kg	3.48E-04	mg/m^3	R	3.54E-05	mg/kg-day	1.0E+00	mg/kg-day	--	--	3.5E-05
	CARBON DISULFIDE	5.00E-03	mg/kg	5.75E-02	mg/m^3	R	5.85E-03	mg/kg-day	2.0E-01	mg/kg-day	--	--	2.9E-02
	TOLUENE	6.11E-03	mg/kg	2.69E-02	mg/m^3	R	2.73E-03	mg/kg-day	1.1E-01	mg/kg-day	--	--	2.4E-02
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	1.66E-04	mg/kg-day	2.0E+00	mg/kg-day	--	--	8.3E-05
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	4.60E-03	mg/kg-day	5.7E-01	mg/kg-day	--	--	8.0E-03
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	1.74E-01	mg/m^3	R	1.77E-02	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.9E-03
	ACENAPHTHENE	2.00E-02	mg/kg	1.31E-02	mg/m^3	R	1.33E-03	mg/kg-day	6.0E-01	mg/kg-day	--	--	2.2E-03
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	2.79E-04	mg/kg-day	3.0E+00	mg/kg-day	--	--	9.3E-05

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EPA TABLE M.7.11.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	BENZO(A)PYRENE	2.02E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day			--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.5E-02	mg/kg-day	--	--	--
	CHRYSENE	2.04E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	FLUORANTHENE	1.83E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	3.45E-04	mg/kg-day	4.0E-01	mg/kg-day	--	--	8.6E-04
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	NAPHTHALENE	2.40E-01	mg/kg	*	mg/m^3	R	--	--	8.6E-04	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day			--
	PHENANTHRENE	2.28E-01	mg/kg	4.20E-03	mg/m^3	R	4.27E-04	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.4E-04
	PYRENE	1.71E-01	mg/kg	6.52E-04	mg/m^3	R	6.63E-05	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.2E-04
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.86E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDE	2.54E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDT	8.46E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	ALDRIN	1.01E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-05	mg/kg-day	--	--	--
	ALPHA-BHC	3.33E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	ALPHA-CHLORDANE	2.26E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-03	mg/kg-day	--	--	--
	AROCLOR-1254	1.10E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	AROCLOR-1260	3.79E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	BETA-BHC	1.44E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	DELTA-BHC	1.13E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--

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EPA TABLE M.7.11.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	DIELDRIN	2.07E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day			--
	ENDOSULFAN I	1.14E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN II	1.92E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDRIN	1.98E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day			--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ENDRIN KETONE	2.47E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	GAMMA-CHLORDANE	2.18E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-03	mg/kg-day	--	--	--
	HEPTACHLOR	2.00E-04	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	--	mg/m^3	R	--	--	1.3E-05	mg/kg-day	--	--	--
	METHOXYCHLOR	9.68E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-03	mg/kg-day	--	--	--

Total Hazard Index Across All Air Exposure Routes/Pathways - Soil	7.4E-02
Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	1.2E-02
Total Hazard Index Across All Exposure Routes/Pathways - Soil	8.5E-02
Total Hazard Index Across All Air Exposure Routes/Pathways - Groundwater	8.3E-03
Total Hazard Index Across All Exposure Routes/Pathways	9.4E-02

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
(2) All values are subchronic
bgs = Below ground surface
Ft. = Feet
mg/kg = Milligrams per kilogram
mg/m^3 = Milligrams per cubic meter
NV = No value available
VOC = Volatile Organic Compound
* = Inhalation of VOCs for naphthalane evaluated under groundwater exposures instead of soil due to single detection of naphthalene at 9.5 feet below ground suface, which is below shallow groundwater

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TABLE M.9.4.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact	**METAL**					**METAL**					
			BARIUM	--		--	--	BARIUM	No adverse effect	8.E-04	--	2.E-04	9.E-04
			COBALT	--		--	--	COBALT	--	1.E-04	--	2.E-05	1.E-04
			COPPER	--		--	--	COPPER	GI System	9.E-04	--	2.E-04	1.E-03
			LEAD	--		--	--	LEAD	--	--	--	--	--
			MOLYBDENUM	--		--	--	MOLYBDENUM	Kidney	4.E-05	--	9.E-06	5.E-05
			SELENIUM	--		--	--	SELENIUM	CNS/PNS, Liver, Skin, Blood	6.E-05	--	1.E-05	7.E-05
			SILVER	--		--	--	SILVER	Skin	9.E-05	--	2.E-05	1.E-04
			THALLIUM	--		--	--	THALLIUM	No adverse effect	3.E-03	--	7.E-04	4.E-03
			TIN			--		TIN	Liver, Kidney			3.E-06	
			TITANIUM	--		--	--	TITANIUM	Blood	8.E-03	--	2.E-03	1.E-02
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			2-BUTANONE	--		--	--	2-BUTANONE	Reproductive System	7.E-09	--	2.E-08	2.E-08
			ACETONE	--		--	--	ACETONE	Liver, Kidney	1.E-07	--	3.E-07	4.E-07
			CARBON DISULFIDE	--		--	--	CARBON DISULFIDE	Reproductive System	2.E-08	--	6.E-08	8.E-08
			TOLUENE	--		--	--	TOLUENE	Liver, Kidney	2.E-08	--	4.E-08	5.E-08
			XYLENE (TOTAL)	--		--	--	XYLENE (TOTAL)	Whole body (weight), CNS/PNS	1.E-09	--	2.E-09	3.E-09
			SEMIVOLATILE ORGANIC COMPOUNDS				--	**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE	--		--	--	1,2,4-TRICHLOROBENZENE	Adrenal	2.E-06	--	4.E-06	6.E-06
			2-METHYLNAPHTHALENE	--		--	--	2-METHYLNAPHTHALENE	No observed effect	4.E-07	--	1.E-06	2.E-06
			ACENAPHTHENE	--		--	--	ACENAPHTHENE	Liver	2.E-07	--	6.E-07	7.E-07
			ANTHRACENE	--		--	--	ANTHRACENE	No observed effect	2.E-07	--	8.E-07	1.E-06
			BENZO(A)ANTHRACENE	5E-08		1.8E-07	2.E-07	BENZO(A)ANTHRACENE	No observed effect	4.E-07	--	1.E-06	2.E-06
			BENZO(A)PYRENE	5E-07		1.7E-06	2.E-06	BENZO(A)PYRENE	Kidney	4.E-06	--	1.E-05	2.E-05
			BENZO(B)FLUORANTHENE	5E-08		1.8E-07	2.E-07	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood	3.E-06	--	1.E-05	1.E-05
			BENZO(G,H,I)PERYLENE	--		--	--	BENZO(G,H,I)PERYLENE	Kidney	4.E-06	--	1.E-05	2.E-05
			BENZO(K)FLUORANTHENE	5E-08		1.9E-07	2.E-07	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood	3.E-06	--	1.E-05	1.E-05
			BIS(2-ETHYLHEXYL)PHTHALATE	4E-10		8.0E-10	1.E-09	BIS(2-ETHYLHEXYL)PHTHALATE	Liver	4.E-06	--	8.E-06	
			CARBAZOLE	3E-10		5.8E-10	8.E-10	CARBAZOLE	Whole body (weight), Liver, Kidney	1.E-06	--	3.E-06	5.E-06
			CHRYSENE	5E-09		1.7E-08	2.E-08	CHRYSENE	No observed effect	4.E-07	--	1.E-06	2.E-06
			DIBENZ(A,H)ANTHRACENE	4E-08		1.5E-07	2.E-07	DIBENZ(A,H)ANTHRACENE	No observed effect	1.E-07	--	3.E-07	4.E-07
			FLUORANTHENE	--		--	--	FLUORANTHENE	Liver, Kidney, Blood	3.E-06	--	9.E-06	1.E-05
			FLUORENE	--		--	--	FLUORENE	Blood	1.E-06	--	3.E-06	4.E-06
			INDENO(1,2,3-CD)PYRENE	3E-08		1.0E-07	1.E-07	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood	2.E-06	--	6.E-06	8.E-06
			NAPHTHALENE	--		--	--	NAPHTHALENE	Body weight	6.E-06	--	2.E-05	3.E-05
			PENTACHLOROPHENOL	1E-08		6.0E-08	7.E-08	PENTACHLOROPHENOL	Liver, Kidney	8.E-06	--	5.E-05	5.E-05
			PHENANTHRENE	--		--	--	PHENANTHRENE	No observed effect	4.E-07	--	1.E-06	2.E-06
			PYRENE	--		--	--	PYRENE	Kidney	3.E-06	--	1.E-05	1.E-05
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD	1E-10		1.6E-10	3.E-10	4,4'-DDD	Liver	3.E-06	--	4.E-06	7.E-06
			4,4'-DDE	2E-10		1.9E-10	4.E-10	4,4'-DDE	Liver	3.E-06	--	3.E-06	6.E-06
			4,4'-DDT	7E-10		7.4E-10	1.E-09	4,4'-DDT	Liver	1.E-05	--	1.E-05	2.E-05
			ALDRIN	3E-09		3.5E-09	7.E-09	ALDRIN	Liver	2.E-05	--	2.E-05	4.E-05
			ALPHA-BHC	5E-09		5.5E-09	1.E-08	ALPHA-BHC	Liver, kidney	7.E-06	--	8.E-06	2.E-05
			ALPHA-CHLORDANE	6E-10		6.5E-10	1.E-09	ALPHA-CHLORDANE	Liver	3.E-06	--	3.E-06	6.E-06
			AROCLOR-1254	5E-09		1.7E-08	2.E-08	AROCLOR-1254	Immune System	3.E-04	--	1.E-03	2.E-03
			AROCLOR-1260	2E-08		5.8E-08	8.E-08	AROCLOR-1260	Immune System	1.E-03	--	4.E-03	5.E-03
			BETA-BHC	5E-10		5.8E-10	1.E-09	BETA-BHC	Liver, Kidney	3.E-06	--	3.E-06	6.E-06
			DELTA-BHC	--		--	--	DELTA-BHC	Liver, Kidney	2.E-06	--	2.E-06	4.E-06
			DIELDRIN	6E-09		6.9E-09	1.E-08	DIELDRIN	Liver	2.E-05	--	2.E-05	5.E-05
			ENDOSULFAN I	--		--	--	ENDOSULFAN I	Whole body (weight), Kidney, Blood	1.E-07	--	1.E-07	2.E-07
			ENDOSULFAN II	--		--	--	ENDOSULFAN II	Whole body (weight), Kidney, Blood	2.E-07	--	2.E-07	3.E-07
			ENDOSULFAN SULFATE	--		--	--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood	2.E-07	--	2.E-07	5.E-07
			ENDRIN	--		--	--	ENDRIN	Liver, CNS/PNS	3.E-06	--	4.E-06	7.E-06
			ENDRIN ALDEHYDE	--		--	--	ENDRIN ALDEHYDE	Liver, CNS/PNS	6.E-06	--	6.E-06	1.E-05
			ENDRIN KETONE	--		--	--	ENDRIN KETONE	Liver, CNS/PNS	4.E-06	--	5.E-06	9.E-06
			GAMMA-BHC (LINDANE)	4E-10		4.7E-10	9.E-10	GAMMA-BHC (LINDANE)	Liver, Kidney	3.E-06	--	3.E-06	6.E-06
			GAMMA-CHLORDANE	6E-10		6.3E-10	1.E-09	GAMMA-CHLORDANE	Liver	3.E-06	--	3.E-06	6.E-06
			HEPTACHLOR	2E-10		2.6E-10	5.E-10	HEPTACHLOR	Liver	2.E-07	--	3.E-07	5.E-07
			HEPTACHLOR EPOXIDE	7E-10		8.5E-10	2.E-09	HEPTACHLOR EPOXIDE	Liver	1.E-05	--	1.E-05	3.E-05
			METHOXYCHLOR	--		--	--	METHOXYCHLOR	Reproductive System	1.E-06	--	2.E-05	2.E-05
			(Total)	7E-07		2E-06	3E-06	(Total)		0.01		0.0031	0.02

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TABLE M.9.4.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Air	Indoor Air	**METAL**					**METAL**					
			BARIUM		--		--	BARIUM	Reproductive System		2.E-04		2.E-04
			COBALT		--		--	COBALT	Respiratory System		1.E-03		1.E-03
			COPPER		--		--	COPPER	Respiratory System		2.E-03		2.E-03
			LEAD		--		--	LEAD	--		--		--
			MOLYBDENUM		--		--	MOLYBDENUM	--		--		--
			SELENIUM		--		--	SELENIUM	Respiratory System		4.E-06		4.E-06
			SILVER		--		--	SILVER	Skin		2.E-08		2.E-08
			THALLIUM		--		--	THALLIUM	--		--		--
			TIN		--			TIN	--		--		
			TITANIUM		--		--	TITANIUM	Respiratory/Immune System		3.E-03		3.E-03
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**	0.00E+00				
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		1.E-04		1.E-04
			ACETONE		--		--	ACETONE	Liver, Kidney		9.E-04		9.E-04
			CARBON DISULFIDE		--		--	CARBON DISULFIDE	CNS/PNS		6.E-02		6.E-02
			TOLUENE		--		--	TOLUENE	CNS/PNS		5.E-02		5.E-02
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		2.E-03		2.E-03
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE		--		--	1,2,4-TRICHLOROBENZENE	Liver		2.E-01		2.E-01
			2-METHYLNAPHTHALENE		--		--	2-METHYLNAPHTHALENE	No observed effect		1.E-01		1.E-01
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		4.E-02		4.E-02
			ANTHRACENE		--		--	ANTHRACENE	No observed effect		2.E-03		2.E-03
			BENZO(A)ANTHRACENE		5.E-12		5.E-12	BENZO(A)ANTHRACENE	No observed effect		1.E-10		1.E-10
			BENZO(A)PYRENE		5.E-11		5.E-11	BENZO(A)PYRENE	Kidney		1.E-09		1.E-09
			BENZO(B)FLUORANTHENE		5.E-12		5.E-12	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		9.E-10		9.E-10
			BENZO(G,H,I)PERYLENE		--		--	BENZO(G,H,I)PERYLENE	Kidney		1.E-09		1.E-09
			BENZO(K)FLUORANTHENE		5.E-12		5.E-12	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood		1.E-09		1.E-09
			BIS(2-ETHYLHEXYL)PHTHALATE		6.E-14		6.E-14	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		1.E-09		1.E-09
			CARBAZOLE		8.E-14		8.E-14	CARBAZOLE	Whole body (weight), Liver, Kidney		4.E-10		4.E-10
			CHRYSENE		5.E-13		5.E-13	CHRYSENE	No observed effect		1.E-10		1.E-10
			DIBENZ(A,H)ANTHRACENE		1.E-11		1.E-11	DIBENZ(A,H)ANTHRACENE	No observed effect		3.E-11		3.E-11
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		8.E-10		8.E-10
			FLUORENE		--		--	FLUORENE	Blood		2.E-02		2.E-02
			INDENO(1,2,3-CD)PYRENE		3.E-12		3.E-12	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood		5.E-10		5.E-10
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		4.E-08		4.E-08
			PENTACHLOROPHENOL		3.E-12		3.E-12	PENTACHLOROPHENOL	Liver, Kidney		2.E-09		2.E-09
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		3.E-03		3.E-03
			PYRENE		--		--	PYRENE	Kidney		5.E-03		5.E-03
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD		4.E-14		4.E-14	4,4'-DDD	Liver		1.E-09		1.E-09
			4,4'-DDE		5.E-14		5.E-14	4,4'-DDE	Liver		8.E-10		8.E-10
			4,4'-DDT		2.E-13		2.E-13	4,4'-DDT	Liver		3.E-09		3.E-09
			ALDRIN		9.E-13		9.E-13	ALDRIN	Liver		5.E-09		5.E-09
			ALPHA-BHC		1.E-12		1.E-12	ALPHA-BHC	Liver, Kidney		2.E-09		2.E-09
			ALPHA-CHLORDANE		2.E-13		2.E-13	ALPHA-CHLORDANE	Liver		2.E-09		2.E-09
			AROCLOR-1254		1.E-12		1.E-12	AROCLOR-1254	Immune System		1.E-07		1.E-07
			AROCLOR-1260		5.E-12		5.E-12	AROCLOR-1260	Immune System		4.E-07		4.E-07
			BETA-BHC		2.E-13		2.E-13	BETA-BHC	Liver, Kidney		8.E-10		8.E-10
			DELTA-BHC		--		--	DELTA-BHC	Liver, Kidney		6.E-10		6.E-10
			DIELDRIN		2.E-12		2.E-12	DIELDRIN	Liver		6.E-09		6.E-09
			ENDOSULFAN I		--		--	ENDOSULFAN I	Whole body (weight), Kidney, Blood		3.E-11		3.E-11
			ENDOSULFAN II		--		--	ENDOSULFAN II	Whole body (weight), Kidney, Blood		5.E-11		5.E-11
			ENDOSULFAN SULFATE		--		--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood		7.E-11		7.E-11
			ENDRIN		--		--	ENDRIN	Liver, CNS/PNS		1.E-09		1.E-09
			ENDRIN ALDEHYDE		--		--	ENDRIN ALDEHYDE	Liver, CNS/PNS		2.E-09		2.E-09
			ENDRIN KETONE		--		--	ENDRIN KETONE	Liver, CNS/PNS		1.E-09		1.E-09
			GAMMA-BHC (LINDANE)		1.E-13		1.E-13	GAMMA-BHC (LINDANE)	Liver, Kidney		9.E-10		9.E-10
			GAMMA-CHLORDANE		2.E-13		2.E-13	GAMMA-CHLORDANE	Liver		2.E-09		2.E-09
			HEPTACHLOR		7.E-14		7.E-14	HEPTACHLOR	Liver		7.E-11		7.E-11
			HEPTACHLOR EPOXIDE		2.E-13		2.E-13	HEPTACHLOR EPOXIDE	Liver		4.E-09		4.E-09
			METHOXYCHLOR		--		--	METHOXYCHLOR	Reproductive System		3.E-10		3.E-10
			(Total)		1E-10		1E-10	(Total)			0.5		0.5

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TABLE M.9.4.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Air	Indoor Air	**VOLATILE ORGANIC COMPOUNDS**					**VOLATILE ORGANIC COMPOUNDS**					
			1,2-DICHLOROETHANE		7.E-08		7.E-08	1,2-DICHLOROETHANE	--		1.E-03		1.E-03
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		2.E-04		2.E-04
			4-METHYL-2-PENTANONE		--		--	4-METHYL-2-PENTANONE	Liver, Kidney		1.E-04		1.E-04
			ACETONE		--		--	ACETONE	Liver, Kidney		2.E-03		2.E-03
			CHLOROMETHANE		--		--	CHLOROMETHANE	CNS/PNS		1.E-04		1.E-04
			ETHYLBENZENE		--		--	ETHYLBENZENE	Reproductive System		1.E-05		1.E-05
			TOLUENE		--		--	TOLUENE	CNS/PNS		4.E-05		4.E-05
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		3.E-05		3.E-05
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,3-DICHLOROBENZENE		--		--	1,3-DICHLOROBENZENE	--		5.E-03		5.E-03
			2,4-DICHLOROPHENOL		--		--	2,4-DICHLOROPHENOL	Immune System		--		--
			4-METHYLPHENOL		--		--	4-METHYLPHENOL	CNS/PNS, Respiratory System		--		--
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		--		--
			BENZO(B)FLUORANTHENE		--		--	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		--		--
			BIS(2-ETHYLHEXYL)PHTHALATE		--		--	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		--		--
			CARBAZOLE		--		--	CARBAZOLE	Whole body (weight), Liver, Kidney		--		--
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		--		--
			N-NITROSODIPHENYLAMINE (1)		--		--	N-NITROSODIPHENYLAMINE (1)	--		--		--
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		1.E-02		1.E-02
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		1.E-05		1.E-05
			PHENOL		--		--	PHENOL	Reproductive System		--		--
			PYRENE		--		--	PYRENE	Kidney		2.E-04		2.E-04
			(Total)		7E-08		7E-08	(Total)			0.018		0.018
						Total Risk Across Soil	3.E-06					Total Hazard Index Across Soil	0.5
						Total Risk Across Groundwater	7E-08					Total Hazard Across Groundwater	0.018
						Total Risk Across All Media and All Exposure Routes	3.E-06					Total Hazard Across All Media and All Exposure Routes	0.5

Notes:
Ft. = Feet
-- = Not available
bgs = Below ground surface
RME = Reasonable maximum exposure
COPC = Chemical of potential concern
CNS/PNS = Central nervous system/peripheral nervous system
GI = Gastrointestinal

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TABLE M.9.4.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact	**METAL**					**METAL**					
			BARIUM	--		--	--	BARIUM	No adverse effect	7.E-04	--	9.E-05	8.E-04
			COBALT	--		--	--	COBALT	--	9.E-05	--	1.E-05	1.E-04
			COPPER	--		--	--	COPPER	GI System	8.E-04	--	1.E-04	9.E-04
			LEAD	--		--	--	LEAD	--	--	--	--	--
			MOLYBDENUM	--		--	--	MOLYBDENUM	Kidney	3.E-05	--	4.E-06	3.E-05
			SELENIUM	--		--	--	SELENIUM	CNS/PNS, Liver, Skin, Blood	5.E-05	--	7.E-06	6.E-05
			SILVER	--		--	--	SILVER	Skin	6.E-05	--	7.E-06	6.E-05
			THALLIUM	--		--	--	THALLIUM	No adverse effect	3.E-04	--	4.E-05	3.E-04
			TIN			--		TIN	Liver, Kidney			2.E-06	
			TITANIUM	--		--	--	TITANIUM	Blood	7.E-03	--	9.E-04	8.E-03
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			2-BUTANONE	--		--	--	2-BUTANONE	Reproductive System	2.E-09	--	2.E-09	4.E-09
			ACETONE	--		--	--	ACETONE	Liver, Kidney	8.E-09	--	1.E-08	2.E-08
			CARBON DISULFIDE	--		--	--	CARBON DISULFIDE	Reproductive System	2.E-08	--	3.E-08	6.E-08
			TOLUENE	--		--	--	TOLUENE	Liver, Kidney	1.E-09	--	2.E-09	3.E-09
			XYLENE (TOTAL)	--		--	--	XYLENE (TOTAL)	Whole body (weight), CNS/PNS	1.E-09	--	1.E-09	2.E-09
			SEMIVOLATILE ORGANIC COMPOUNDS				--	**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE	--		--	--	1,2,4-TRICHLOROBENZENE	Adrenal	2.E-06	--	2.E-06	4.E-06
			2-METHYLNAPHTHALENE	--		--	--	2-METHYLNAPHTHALENE	No observed effect	4.E-08	--	8.E-08	1.E-07
			ACENAPHTHENE	--		--	--	ACENAPHTHENE	Liver	2.E-08	--	3.E-08	5.E-08
			ANTHRACENE	--		--	--	ANTHRACENE	No observed effect	2.E-08	--	5.E-08	7.E-08
			BENZO(A)ANTHRACENE	8E-09		1.6E-08	2.E-08	BENZO(A)ANTHRACENE	No observed effect	4.E-08	--	7.E-08	1.E-07
			BENZO(A)PYRENE	8E-08		1.5E-07	2.E-07	BENZO(A)PYRENE	Kidney	3.E-07	--	7.E-07	1.E-06
			BENZO(B)FLUORANTHENE	8E-09		1.6E-08	2.E-08	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood	3.E-07	--	5.E-07	8.E-07
			BENZO(G,H,I)PERYLENE	--		--	--	BENZO(G,H,I)PERYLENE	Kidney	3.E-07	--	7.E-07	1.E-06
			BENZO(K)FLUORANTHENE	9E-09		1.7E-08	3.E-08	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood	3.E-07	--	6.E-07	8.E-07
			BIS(2-ETHYLHEXYL)PHTHALATE	5E-11		6.9E-11	1.E-10	BIS(2-ETHYLHEXYL)PHTHALATE	Liver	3.E-06	--	4.E-06	7.E-06
			CARBAZOLE	5E-11		6.1E-11	1.E-10	CARBAZOLE	Whole body (weight), Liver, Kidney	1.E-06	--	2.E-06	3.E-06
			CHRYSENE	8E-10		1.5E-09	2.E-09	CHRYSENE	No observed effect	3.E-08	--	7.E-08	1.E-07
			DIBENZ(A,H)ANTHRACENE	8E-09		1.5E-08	2.E-08	DIBENZ(A,H)ANTHRACENE	No observed effect	1.E-08	--	2.E-08	3.E-08
			FLUORANTHENE	--		--	--	FLUORANTHENE	Liver, Kidney, Blood	2.E-07	--	4.E-07	7.E-07
			FLUORENE	--		--	--	FLUORENE	Blood	1.E-07	--	2.E-07	3.E-07
			INDENO(1,2,3-CD)PYRENE	5E-09		1.0E-08	2.E-08	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood	2.E-07	--	3.E-07	5.E-07
			NAPHTHALENE	--		--	--	NAPHTHALENE	Body weight	6.E-07	--	1.E-06	2.E-06
			PENTACHLOROPHENOL	2E-09		6.2E-09	8.E-09	PENTACHLOROPHENOL	Liver, Kidney	8.E-06	--	3.E-05	4.E-05
			PHENANTHRENE	--		--	--	PHENANTHRENE	No observed effect	4.E-08	--	7.E-08	1.E-07
			PYRENE	--		--	--	PYRENE	Kidney	3.E-07	--	6.E-07	8.E-07
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD	2E-11		1.4E-11	4.E-11	4,4'-DDD	Liver	3.E-06	--	2.E-06	5.E-06
			4,4'-DDE	3E-11		1.8E-11	5.E-11	4,4'-DDE	Liver	2.E-06	--	2.E-06	4.E-06
			4,4'-DDT	9E-11		6.0E-11	2.E-10	4,4'-DDT	Liver	8.E-06	--	5.E-06	1.E-05
			ALDRIN	5E-10		3.6E-10	9.E-10	ALDRIN	Liver	2.E-05	--	1.E-05	3.E-05
			ALPHA-BHC	7E-10		4.4E-10	1.E-09	ALPHA-BHC	Liver, kidney	5.E-07	--	4.E-07	9.E-07
			ALPHA-CHLORDANE	9E-11		5.6E-11	1.E-10	ALPHA-CHLORDANE	Liver	2.E-06	--	1.E-06	4.E-06
			AROCLOR-1254	7E-10		1.4E-09	2.E-09	AROCLOR-1254	Immune System	1.E-04	--	2.E-04	3.E-04
			AROCLOR-1260	2E-09		4.7E-09	7.E-09	AROCLOR-1260	Immune System	4.E-04	--	7.E-04	1.E-03
			BETA-BHC	8E-11		5.4E-11	1.E-10	BETA-BHC	Liver, Kidney	2.E-07	--	2.E-07	4.E-07
			DELTA-BHC	--		--	--	DELTA-BHC	Liver, Kidney	2.E-07	--	1.E-07	3.E-07
			DIELDRIN	1E-09		6.9E-10	2.E-09	DIELDRIN	Liver	2.E-05	--	1.E-05	3.E-05
			ENDOSULFAN I	--		--	--	ENDOSULFAN I	Whole body (weight), Kidney, Blood	9.E-08	--	6.E-08	2.E-07
			ENDOSULFAN II	--		--	--	ENDOSULFAN II	Whole body (weight), Kidney, Blood	2.E-07	--	1.E-07	3.E-07
			ENDOSULFAN SULFATE	--		--	--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood	2.E-07	--	1.E-07	3.E-07
			ENDRIN	--		--	--	ENDRIN	Liver, CNS/PNS	3.E-06	--	2.E-06	5.E-06
			ENDRIN ALDEHYDE	--		--	--	ENDRIN ALDEHYDE	Liver, CNS/PNS	5.E-06	--	3.E-06	8.E-06
			ENDRIN KETONE	--		--	--	ENDRIN KETONE	Liver, CNS/PNS	4.E-06	--	3.E-06	7.E-06
			GAMMA-BHC (LINDANE)	7E-11		4.3E-11	1.E-10	GAMMA-BHC (LINDANE)	Liver, Kidney	3.E-07	--	2.E-07	4.E-07
			GAMMA-CHLORDANE	8E-11		5.4E-11	1.E-10	GAMMA-CHLORDANE	Liver	2.E-05	--	1.E-05	3.E-05
			HEPTACHLOR	4E-11		2.4E-11	6.E-11	HEPTACHLOR	Liver	2.E-07	--	1.E-07	3.E-07
			HEPTACHLOR EPOXIDE	1E-10		7.6E-11	2.E-10	HEPTACHLOR EPOXIDE	Liver	1.E-05	--	7.E-06	2.E-05
			METHOXYCHLOR	--		--	--	METHOXYCHLOR	Reproductive System	9.E-07	--	1.E-06	2.E-06
			(Total)	1E-07		2E-07	3E-07	(Total)		0.009		0.0012	0.010

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TABLE M.9.4.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Air	Indoor Air	**METAL**					**METAL**					
			BARIUM		--		--	BARIUM	Reproductive System		7.E-06		7.E-06
			COBALT		--		--	COBALT	Respiratory System		6.E-04		6.E-04
			COPPER		--		--	COPPER	Respiratory System		8.E-04		8.E-04
			LEAD		--		--	LEAD	--		--		--
			MOLYBDENUM		--		--	MOLYBDENUM	--		--		--
			SELENIUM		--		--	SELENIUM	Respiratory System		2.E-06		2.E-06
			SILVER		--		--	SILVER	Skin		8.E-09		8.E-09
			THALLIUM		--		--	THALLIUM	--		--		--
			TIN		--			TIN	--		--		
			TITANIUM		--		--	TITANIUM	Respiratory/Immune System		1.E-03		1.E-03
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		6.E-05		6.E-05
			ACETONE		--		--	ACETONE	Liver, Kidney		4.E-05		4.E-05
			CARBON DISULFIDE		--		--	CARBON DISULFIDE	CNS/PNS		3.E-02		3.E-02
			TOLUENE		--		--	TOLUENE	CNS/PNS		2.E-02		2.E-02
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		8.E-05		8.E-05
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE		--		--	1,2,4-TRICHLOROBENZENE	Liver		8.E-03		8.E-03
			2-METHYLNAPHTHALENE		--		--	2-METHYLNAPHTHALENE	No observed effect		6.E-03		6.E-03
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		2.E-03		2.E-03
			ANTHRACENE		--		--	ANTHRACENE	No observed effect		9.E-05		9.E-05
			BENZO(A)ANTHRACENE		4.E-13		4.E-13	BENZO(A)ANTHRACENE	No observed effect		6.E-12		6.E-12
			BENZO(A)PYRENE		4.E-12		4.E-12	BENZO(A)PYRENE	Kidney		5.E-11		5.E-11
			BENZO(B)FLUORANTHENE		4.E-13		4.E-13	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		4.E-11		4.E-11
			BENZO(G,H,I)PERYLENE		--		--	BENZO(G,H,I)PERYLENE	Kidney		5.E-11		5.E-11
			BENZO(K)FLUORANTHENE		5.E-13		5.E-13	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood		4.E-11		4.E-11
			BIS(2-ETHYLHEXYL)PHTHALATE		5.E-15		5.E-15	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		5.E-10		5.E-10
			CARBAZOLE		7.E-15		7.E-15	CARBAZOLE	Whole body (weight), Liver, Kidney		2.E-10		2.E-10
			CHRYSENE		4.E-14		4.E-14	CHRYSENE	No observed effect		5.E-12		5.E-12
			DIBENZ(A,H)ANTHRACENE		1.E-12		1.E-12	DIBENZ(A,H)ANTHRACENE	No observed effect		2.E-12		2.E-12
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		4.E-11		4.E-11
			FLUORENE		--		--	FLUORENE	Blood		9.E-04		9.E-04
			INDENO(1,2,3-CD)PYRENE		3.E-13		3.E-13	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood		3.E-11		3.E-11
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		2.E-08		2.E-08
			PENTACHLOROPHENOL		3.E-13		3.E-13	PENTACHLOROPHENOL	Liver, Kidney		1.E-09		1.E-09
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		1.E-04		1.E-04
			PYRENE		--		--	PYRENE	Kidney		2.E-04		2.E-04
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD		3.E-15		3.E-15	4,4'-DDD	Liver		4.E-10		4.E-10
			4,4'-DDE		4.E-15		4.E-15	4,4'-DDE	Liver		4.E-10		4.E-10
			4,4'-DDT		1.E-14		1.E-14	4,4'-DDT	Liver		1.E-09		1.E-09
			ALDRIN		9.E-14		9.E-14	ALDRIN	Liver		3.E-09		3.E-09
			ALPHA-BHC		1.E-13		1.E-13	ALPHA-BHC	Liver, Kidney		9.E-11		9.E-11
			ALPHA-CHLORDANE		1.E-14		1.E-14	ALPHA-CHLORDANE	Liver		9.E-11		9.E-11
			AROCLOR-1254		1.E-13		1.E-13	AROCLOR-1254	Immune System		2.E-08		2.E-08
			AROCLOR-1260		4.E-13		4.E-13	AROCLOR-1260	Immune System		6.E-08		6.E-08
			BETA-BHC		1.E-14		1.E-14	BETA-BHC	Liver, Kidney		4.E-11		4.E-11
			DELTA-BHC		--		--	DELTA-BHC	Liver, Kidney		3.E-11		3.E-11
			DIELDRIN		2.E-13		2.E-13	DIELDRIN	Liver		3.E-09		3.E-09
			ENDOSULFAN I		--		--	ENDOSULFAN I	Whole body (weight), Kidney, Blood		1.E-11		1.E-11
			ENDOSULFAN II		--		--	ENDOSULFAN II	Whole body (weight), Kidney, Blood		2.E-11		2.E-11
			ENDOSULFAN SULFATE		--		--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood		3.E-11		3.E-11
			ENDRIN		--		--	ENDRIN	Liver, CNS/PNS		5.E-10		5.E-10
			ENDRIN ALDEHYDE		--		--	ENDRIN ALDEHYDE	Liver, CNS/PNS		8.E-10		8.E-10
			ENDRIN KETONE		--		--	ENDRIN KETONE	Liver, CNS/PNS		6.E-10		6.E-10
			GAMMA-BHC (LINDANE)		1.E-14		1.E-14	GAMMA-BHC (LINDANE)	Liver, Kidney		4.E-11		4.E-11
			GAMMA-CHLORDANE		1.E-14		1.E-14	GAMMA-CHLORDANE	Liver		8.E-11		8.E-11
			HEPTACHLOR		6.E-15		6.E-15	HEPTACHLOR	Liver		3.E-11		3.E-11
			HEPTACHLOR EPOXIDE		2.E-14		2.E-14	HEPTACHLOR EPOXIDE	Liver		2.E-09		2.E-09
			METHOXYCHLOR		--		--	METHOXYCHLOR	Reproductive System		1.E-10		1.E-10
			(Total)		8E-12		8E-12	(Total)			0.1		0.1

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TABLE M.9.4.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Air	Indoor Air	**VOLATILE ORGANIC COMPOUNDS**					**VOLATILE ORGANIC COMPOUNDS**					
			1,2-DICHLOROETHANE		5.E-09		5.E-09	1,2-DICHLOROETHANE	--		6.E-04		6.E-04
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		4.E-05		4.E-05
			4-METHYL-2-PENTANONE		--		--	4-METHYL-2-PENTANONE	Liver, Kidney		7.E-06		7.E-06
			ACETONE		--		--	ACETONE	Liver, Kidney		8.E-05		8.E-05
			CHLOROMETHANE		--		--	CHLOROMETHANE	CNS/PNS		2.E-05		2.E-05
			ETHYLBENZENE		--		--	ETHYLBENZENE	Reproductive System		6.E-06		6.E-06
			TOLUENE		--		--	TOLUENE	CNS/PNS		2.E-05		2.E-05
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		1.E-06		1.E-06
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,3-DICHLOROBENZENE		--		--	1,3-DICHLOROBENZENE	--		2.E-03		2.E-03
			2,4-DICHLOROPHENOL		--		--	2,4-DICHLOROPHENOL	Immune System		--		--
			4-METHYLPHENOL		--		--	4-METHYLPHENOL	CNS/PNS, Respiratory System		--		--
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		--		--
			BENZO(B)FLUORANTHENE		--		--	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		--		--
			BIS(2-ETHYLHEXYL)PHTHALATE		--		--	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		--		--
			CARBAZOLE		--		--	CARBAZOLE	Whole body (weight), Liver, Kidney		--		--
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		--		--
			N-NITROSODIPHENYLAMINE (1)		--		--	N-NITROSODIPHENYLAMINE (1)	--		--		--
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		5.E-03		5.E-03
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		5.E-07		5.E-07
			PHENOL		--		--	PHENOL	Reproductive System		--		--
			PYRENE		--		--	PYRENE	Kidney		8.E-06		8.E-06
			(Total)		5E-09		5E-09	(Total)			0.008		0.008
						Total Risk Across Soil	3.E-07					Total Hazard Index Across Soil	0.1
						Total Risk Across Groundwater	5E-09					Total Hazard Across Groundwater	0.008
						Total Risk Across All Media and All Exposure Routes	3.E-07					Total Hazard Across All Media and All Exposure Routes	0.1

Notes:
Ft. = Feet
-- = Not available
bgs = Below ground surface
CTE = Central tendency exposure
COPC = Chemical of potential concern
CNS/PNS = Central nervous system/peripheral nervous system
GI = Gastrointestinal

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TABLE M.10.4.RME
RISK ASSESSMENT SUMMARY
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact	**SEMIVOLATILE ORGANIC COMPOUNDS**				--						
			BENZO(A)PYRENE	5E-07		2E-06	2.E-06						
			(Total)	7E-07		2E-06	3E-06	(Total)		0.01		0.003	0.02
Soil 0-10 ft. bgs	Air	Indoor Air											
			(Total)		1E-10		1E-10	(Total)			0.5		0.5
Groundwater	Air	Indoor Air											
			(Total)		7E-08		7E-08	(Total)			0.018		0.018
						Total Risk Across Soil	3.E-06					Total Hazard Index Across Soil	0.5
						Total Risk Across Groundwater	7E-08					Total Hazard Across Groundwater	0.018
						Total Risk Across All Media and All Exposure Routes	3.E-06					Total Hazard Across All Media and All Exposure Routes	0.5

Notes:
Ft. = Feet
bgs = Below ground surface
RME = Reasonable maximum exposure

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TABLE M.10.4.CTE
RISK ASSESSMENT SUMMARY
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Commercial/Industrial
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact											
			(Total)	1E-07		2E-07	3E-07	(Total)		0.009		0.0012	0.010
Soil 0-10 ft. bgs	Air	Indoor Air											
			(Total)		8E-12		8E-12	(Total)			0.1		0.1
Groundwater	Air	Indoor Air											
			(Total)		5E-09		5E-09	(Total)			0.008		0.008
						Total Risk Across Soil	3.E-07					Total Hazard Index Across Soil	0.1
						Total Risk Across Groundwater	5E-09					Total Hazard Across Groundwater	0.008
						Total Risk Across All Media and All Exposure Routes	3.E-07					Total Hazard Across All Media and All Exposure Routes	0.1

Notes:

Ft. = Feet

bgs = Below ground surface

CTE = Central tendency exposure

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EPA TABLE M.8.12.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND,CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	**METAL**										
	BARIUM	1.09E+02	mg/kg	1.09E+02	mg/kg	M	5.13E-05	mg/kg-day	--	--	--
	COBALT	1.29E+01	mg/kg	1.29E+01	mg/kg	M	6.08E-06	mg/kg-day	--	--	--
	COPPER	7.13E+01	mg/kg	7.13E+01	mg/kg	M	3.35E-05	mg/kg-day	--	--	--
	LEAD	1.47E+02	mg/kg	1.47E+02	mg/kg	M	6.91E-05	mg/kg-day	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	3.81E-01	mg/kg	M	1.79E-07	mg/kg-day	--	--	--
	SELENIUM	5.90E-01	mg/kg	5.90E-01	mg/kg	M	2.77E-07	mg/kg-day	--	--	--
	SILVER	9.22E-01	mg/kg	9.22E-01	mg/kg	M	4.33E-07	mg/kg-day	--	--	--
	THALLIUM	4.51E-01	mg/kg	4.51E-01	mg/kg	M	2.12E-07	mg/kg-day	--	--	--
	TIN	1.78E+01	mg/kg	1.78E+01	mg/kg	M	8.35E-06	mg/kg-day	--	--	--
	TITANIUM	4.77E+03	mg/kg	4.77E+03	mg/kg	M	2.24E-03	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	8.66E-03	mg/kg	8.66E-03	mg/kg	M	4.07E-09	mg/kg-day	--	--	--
	ACETONE	2.34E-02	mg/kg	2.34E-02	mg/kg	M	1.10E-08	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	2.35E-09	mg/kg-day	--	--	--
	TOLUENE	6.37E-03	mg/kg	6.37E-03	mg/kg	M	2.99E-09	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.88E-09	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.74E-08	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.13E-07	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	9.39E-09	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	7.05E-08	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	2.48E-01	mg/kg	M	1.17E-07	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.4E-07
	BENZO(A)PYRENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	1.10E-07	mg/kg-day	1.2E+01	(mg/kg-day)-1	1.3E-06
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	2.49E-01	mg/kg	M	1.17E-07	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.4E-07
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	2.37E-01	mg/kg	M	1.11E-07	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	2.59E-01	mg/kg	M	1.22E-07	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.5E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.44E-01	mg/kg	M	6.78E-08	mg/kg-day	1.4E-02	(mg/kg-day)-1	9.5E-10

TABLE J-79

EPA TABLE M.8.12.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND,CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	3.43E-08	mg/kg-day	2.0E-02	(mg/kg-day)-1	6.9E-10
	CHRYSENE	2.43E-01	mg/kg	2.43E-01	mg/kg	M	1.14E-07	mg/kg-day	1.2E-01	(mg/kg-day)-1	1.4E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	2.82E-08	mg/kg-day	4.1E+00	(mg/kg-day)-1	1.2E-07
	FLUORANTHENE	2.23E-01	mg/kg	2.23E-01	mg/kg	M	1.05E-07	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	3.85E-08	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	6.58E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	7.9E-08
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.13E-07	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	2.35E-07	mg/kg-day	1.2E-01	(mg/kg-day)-1	2.8E-08
	PHENANTHRENE	2.65E-01	mg/kg	2.65E-01	mg/kg	M	1.24E-07	mg/kg-day	--	--	--
	PYRENE	2.05E-01	mg/kg	2.05E-01	mg/kg	M	9.65E-08	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.30E-03	mg/kg	3.30E-03	mg/kg	M	1.55E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.7E-10
	4,4'-DDE	2.82E-03	mg/kg	2.82E-03	mg/kg	M	1.32E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.5E-10
	4,4'-DDT	1.10E-02	mg/kg	1.10E-02	mg/kg	M	5.14E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.7E-09
	ALDRIN	1.03E-03	mg/kg	1.03E-03	mg/kg	M	4.84E-10	mg/kg-day	1.7E+01	(mg/kg-day)-1	8.2E-09
	ALPHA-BHC	4.35E-03	mg/kg	4.35E-03	mg/kg	M	2.04E-09	mg/kg-day	6.3E+00	(mg/kg-day)-1	1.3E-08
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.74E-03	mg/kg	M	1.29E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.5E-09
	AROCLOR-1254	1.40E-02	mg/kg	1.40E-02	mg/kg	M	6.58E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.3E-08
	AROCLOR-1260	4.89E-02	mg/kg	4.89E-02	mg/kg	M	2.30E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	4.6E-08
	BETA-BHC	1.61E-03	mg/kg	1.61E-03	mg/kg	M	7.56E-10	mg/kg-day	1.8E+00	(mg/kg-day)-1	1.4E-09
	DELTA-BHC	1.21E-03	mg/kg	1.21E-03	mg/kg	M	5.68E-10	mg/kg-day	--	--	--
	DIELDRIN	2.17E-03	mg/kg	2.17E-03	mg/kg	M	1.02E-09	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.6E-08
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	5.68E-10	mg/kg-day	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	1.97E-03	mg/kg	M	9.25E-10	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.63E-03	mg/kg	M	1.24E-09	mg/kg-day	--	--	--
	ENDRIN	2.05E-03	mg/kg	2.05E-03	mg/kg	M	9.63E-10	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	3.49E-03	mg/kg	M	1.64E-09	mg/kg-day	--	--	--
	ENDRIN KETONE	2.69E-03	mg/kg	2.69E-03	mg/kg	M	1.26E-09	mg/kg-day	--	--	--

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EPA TABLE M.8.12.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND,CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.83E-03	mg/kg	M	8.59E-10	mg/kg-day	1.3E+00	(mg/kg-day)-1	1.1E-09
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	1.24E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.5E-09
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	1.08E-10	mg/kg-day	5.7E+00	(mg/kg-day)-1	6.2E-10
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	3.30E-04	mg/kg	M	1.55E-10	mg/kg-day	1.3E+01	(mg/kg-day)-1	2.0E-09
	METHOXYCHLOR	9.97E-03	mg/kg	9.97E-03	mg/kg	M	4.68E-09	mg/kg-day	--	--	--
Dermal	**METAL**										
	BARIUM	1.09E+02	mg/kg	1.09E+02	mg/kg	M	2.05E-06	mg/kg-day	--	--	--
	COBALT	1.29E+01	mg/kg	1.29E+01	mg/kg	M	2.43E-07	mg/kg-day	--	--	--
	COPPER	7.13E+01	mg/kg	7.13E+01	mg/kg	M	1.34E-06	mg/kg-day	--	--	--
	LEAD	1.47E+02	mg/kg	1.47E+02	mg/kg	M	2.76E-06	mg/kg-day	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	3.81E-01	mg/kg	M	7.15E-09	mg/kg-day	--	--	--
	SELENIUM	5.90E-01	mg/kg	5.90E-01	mg/kg	M	1.11E-08	mg/kg-day	--	--	--
	SILVER	9.22E-01	mg/kg	9.22E-01	mg/kg	M	1.73E-08	mg/kg-day	--	--	--
	THALLIUM	4.51E-01	mg/kg	4.51E-01	mg/kg	M	8.45E-09	mg/kg-day	--	--	--
	TIN	1.78E+01	mg/kg	1.78E+01	mg/kg	M	3.33E-07	mg/kg-day	--	--	--
	TITANIUM	4.77E+03	mg/kg	4.77E+03	mg/kg	M	8.93E-05	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	8.66E-03	mg/kg	8.66E-03	mg/kg	M	1.62E-09	mg/kg-day	--	--	--
	ACETONE	2.34E-02	mg/kg	2.34E-02	mg/kg	M	4.38E-09	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	9.37E-10	mg/kg-day	--	--	--
	TOLUENE	6.37E-03	mg/kg	6.37E-03	mg/kg	M	1.19E-09	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	7.50E-10	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	6.93E-09	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	6.75E-08	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	5.62E-09	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	4.22E-08	mg/kg-day	--	--	--

TABLE J-79

EPA TABLE M.8.12.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND,CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	2.48E-01	mg/kg	M	6.98E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	8.4E-08
	BENZO(A)PYRENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	6.61E-08	mg/kg-day	1.2E+01	(mg/kg-day)-1	7.9E-07
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	2.49E-01	mg/kg	M	6.99E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	8.4E-08
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	2.37E-01	mg/kg	M	6.66E-08	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	2.59E-01	mg/kg	M	7.27E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	8.7E-08
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.44E-01	mg/kg	M	2.70E-08	mg/kg-day	1.4E-02	(mg/kg-day)-1	3.8E-10
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	1.37E-08	mg/kg-day	2.0E-02	(mg/kg-day)-1	2.7E-10
	CHRYSENE	2.43E-01	mg/kg	2.43E-01	mg/kg	M	6.84E-08	mg/kg-day	1.2E-01	(mg/kg-day)-1	8.2E-09
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	1.69E-08	mg/kg-day	4.1E+00	(mg/kg-day)-1	6.9E-08
	FLUORANTHENE	2.23E-01	mg/kg	2.23E-01	mg/kg	M	6.26E-08	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	2.30E-08	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	3.94E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	4.7E-08
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	6.75E-08	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	2.34E-07	mg/kg-day	1.2E-01	(mg/kg-day)-1	2.8E-08
	PHENANTHRENE	2.65E-01	mg/kg	2.65E-01	mg/kg	M	7.45E-08	mg/kg-day	--	--	--
	PYRENE	2.05E-01	mg/kg	2.05E-01	mg/kg	M	5.77E-08	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.30E-03	mg/kg	3.30E-03	mg/kg	M	3.09E-10	mg/kg-day	2.4E-01	(mg/kg-day)-1	7.4E-11
	4,4'-DDE	2.82E-03	mg/kg	2.82E-03	mg/kg	M	2.64E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	9.0E-11
	4,4'-DDT	1.10E-02	mg/kg	1.10E-02	mg/kg	M	1.03E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.5E-10
	ALDRIN	1.03E-03	mg/kg	1.03E-03	mg/kg	M	9.65E-11	mg/kg-day	1.7E+01	(mg/kg-day)-1	1.6E-09
	ALPHA-BHC	4.35E-03	mg/kg	4.35E-03	mg/kg	M	4.08E-10	mg/kg-day	6.3E+00	(mg/kg-day)-1	2.6E-09
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.74E-03	mg/kg	M	2.57E-10	mg/kg-day	1.2E+00	(mg/kg-day)-1	3.1E-10
	AROCLOR-1254	1.40E-02	mg/kg	1.40E-02	mg/kg	M	3.94E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	7.9E-09
	AROCLOR-1260	4.89E-02	mg/kg	4.89E-02	mg/kg	M	1.37E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.7E-08
	BETA-BHC	1.61E-03	mg/kg	1.61E-03	mg/kg	M	1.51E-10	mg/kg-day	1.8E+00	(mg/kg-day)-1	2.7E-10
	DELTA-BHC	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.13E-10	mg/kg-day	--	--	--
	DIELDRIN	2.17E-03	mg/kg	2.17E-03	mg/kg	M	2.03E-10	mg/kg-day	1.6E+01	(mg/kg-day)-1	3.3E-09

TABLE J-79

EPA TABLE M.8.12.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND,CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.13E-10	mg/kg-day	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	1.97E-03	mg/kg	M	1.85E-10	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.63E-03	mg/kg	M	2.46E-10	mg/kg-day	--	--	--
	ENDRIN	2.05E-03	mg/kg	2.05E-03	mg/kg	M	1.92E-10	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	3.49E-03	mg/kg	M	3.27E-10	mg/kg-day	--	--	--
	ENDRIN KETONE	2.69E-03	mg/kg	2.69E-03	mg/kg	M	2.52E-10	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.83E-03	mg/kg	M	1.71E-10	mg/kg-day	1.3E+00	(mg/kg-day)-1	2.2E-10
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	2.48E-10	mg/kg-day	1.2E+00	(mg/kg-day)-1	3.0E-10
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	2.16E-11	mg/kg-day	5.7E+00	(mg/kg-day)-1	1.2E-10
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	3.30E-04	mg/kg	M	3.09E-11	mg/kg-day	1.3E+01	(mg/kg-day)-1	4.0E-10
	METHOXYCHLOR	9.97E-03	mg/kg	9.97E-03	mg/kg	M	9.34E-10	mg/kg-day	--	--	--
										Total Cancer Risk Across All Direct Contact Exposure Routes/Pathways - Soil	3.3E-06

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
bgs = Below ground surface
Ft. = Feet
mg/kg = Milligrams per kilogram
NV = No value available

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EPA TABLE M.8.13.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	**METAL**										
	BARIUM	1.09E+02	mg/kg	1.09E+02	mg/kg	M	1.20E-04	mg/kg-day	--	--	--
	COBALT	1.29E+01	mg/kg	1.29E+01	mg/kg	M	1.42E-05	mg/kg-day	--	--	--
	COPPER	7.13E+01	mg/kg	7.13E+01	mg/kg	M	7.81E-05	mg/kg-day	--	--	--
	LEAD	1.47E+02	mg/kg	1.47E+02	mg/kg	M	1.61E-04	mg/kg-day	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	3.81E-01	mg/kg	M	4.18E-07	mg/kg-day	--	--	--
	SELENIUM	5.90E-01	mg/kg	5.90E-01	mg/kg	M	6.47E-07	mg/kg-day	--	--	--
	SILVER	9.22E-01	mg/kg	9.22E-01	mg/kg	M	1.01E-06	mg/kg-day	--	--	--
	THALLIUM	4.51E-01	mg/kg	4.51E-01	mg/kg	M	4.94E-07	mg/kg-day	--	--	--
	TIN	1.78E+01	mg/kg	1.78E+01	mg/kg	M	1.95E-05	mg/kg-day	--	--	--
	TITANIUM	4.77E+03	mg/kg	4.77E+03	mg/kg	M	5.22E-03	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	8.66E-03	mg/kg	8.66E-03	mg/kg	M	9.49E-09	mg/kg-day	--	--	--
	ACETONE	2.34E-02	mg/kg	2.34E-02	mg/kg	M	2.56E-08	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	5.48E-09	mg/kg-day	--	--	--
	TOLUENE	6.37E-03	mg/kg	6.37E-03	mg/kg	M	6.98E-09	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	4.38E-09	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	4.05E-08	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	2.63E-07	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	2.19E-08	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.64E-07	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	2.48E-01	mg/kg	M	2.72E-07	mg/kg-day	1.2E+00	(mg/kg-day)-1	3.3E-07
	BENZO(A)PYRENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	2.58E-07	mg/kg-day	1.2E+01	(mg/kg-day)-1	3.1E-06
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	2.49E-01	mg/kg	M	2.73E-07	mg/kg-day	1.2E+00	(mg/kg-day)-1	3.3E-07
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	2.37E-01	mg/kg	M	2.60E-07	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	2.59E-01	mg/kg	M	2.84E-07	mg/kg-day	1.2E+00	(mg/kg-day)-1	3.4E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.44E-01	mg/kg	M	1.58E-07	mg/kg-day	1.4E-02	(mg/kg-day)-1	2.2E-09

TABLE J-80

EPA TABLE M.8.13.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	8.00E-08	mg/kg-day	2.0E-02	(mg/kg-day)-1	1.6E-09
	CHRYSENE	2.43E-01	mg/kg	2.43E-01	mg/kg	M	2.67E-07	mg/kg-day	1.2E-01	(mg/kg-day)-1	3.2E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	6.58E-08	mg/kg-day	4.1E+00	(mg/kg-day)-1	2.7E-07
	FLUORANTHENE	2.23E-01	mg/kg	2.23E-01	mg/kg	M	2.44E-07	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	8.99E-08	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	1.53E-07	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.8E-07
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	2.63E-07	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	5.48E-07	mg/kg-day	1.2E-01	(mg/kg-day)-1	6.6E-08
	PHENANTHRENE	2.65E-01	mg/kg	2.65E-01	mg/kg	M	2.90E-07	mg/kg-day	--	--	--
	PYRENE	2.05E-01	mg/kg	2.05E-01	mg/kg	M	2.25E-07	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.30E-03	mg/kg	3.30E-03	mg/kg	M	3.62E-09	mg/kg-day	2.4E-01	(mg/kg-day)-1	8.7E-10
	4,4'-DDE	2.82E-03	mg/kg	2.82E-03	mg/kg	M	3.09E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.1E-09
	4,4'-DDT	1.10E-02	mg/kg	1.10E-02	mg/kg	M	1.20E-08	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.1E-09
	ALDRIN	1.03E-03	mg/kg	1.03E-03	mg/kg	M	1.13E-09	mg/kg-day	1.7E+01	(mg/kg-day)-1	1.9E-08
	ALPHA-BHC	4.35E-03	mg/kg	4.35E-03	mg/kg	M	4.77E-09	mg/kg-day	6.3E+00	(mg/kg-day)-1	3.0E-08
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.74E-03	mg/kg	M	3.00E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	3.6E-09
	AROCLOR-1254	1.40E-02	mg/kg	1.40E-02	mg/kg	M	1.53E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	3.1E-08
	AROCLOR-1260	4.89E-02	mg/kg	4.89E-02	mg/kg	M	5.36E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.1E-07
	BETA-BHC	1.61E-03	mg/kg	1.61E-03	mg/kg	M	1.76E-09	mg/kg-day	1.8E+00	(mg/kg-day)-1	3.2E-09
	DELTA-BHC	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.33E-09	mg/kg-day	--	--	--
	DIELDRIN	2.17E-03	mg/kg	2.17E-03	mg/kg	M	2.38E-09	mg/kg-day	1.6E+01	(mg/kg-day)-1	3.8E-08
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.33E-09	mg/kg-day	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	1.97E-03	mg/kg	M	2.16E-09	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.63E-03	mg/kg	M	2.88E-09	mg/kg-day	--	--	--
	ENDRIN	2.05E-03	mg/kg	2.05E-03	mg/kg	M	2.25E-09	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	3.49E-03	mg/kg	M	3.82E-09	mg/kg-day	--	--	--

TABLE J-80

EPA TABLE M.8.13.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDRIN KETONE	2.69E-03	mg/kg	2.69E-03	mg/kg	M	2.95E-09	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.83E-03	mg/kg	M	2.01E-09	mg/kg-day	1.3E+00	(mg/kg-day)-1	2.6E-09
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	2.90E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	3.5E-09
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	2.52E-10	mg/kg-day	5.7E+00	(mg/kg-day)-1	1.4E-09
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	3.30E-04	mg/kg	M	3.62E-10	mg/kg-day	1.3E+01	(mg/kg-day)-1	4.7E-09
	METHOXYCHLOR	9.97E-03	mg/kg	9.97E-03	mg/kg	M	1.09E-08	mg/kg-day	--	--	--
Dermal	**METAL**										
	BARIUM	1.09E+02	mg/kg	1.09E+02	mg/kg	M	3.47E-06	mg/kg-day	--	--	--
	COBALT	1.29E+01	mg/kg	1.29E+01	mg/kg	M	4.11E-07	mg/kg-day	--	--	--
	COPPER	7.13E+01	mg/kg	7.13E+01	mg/kg	M	2.26E-06	mg/kg-day	--	--	--
	LEAD	1.47E+02	mg/kg	1.47E+02	mg/kg	M	4.68E-06	mg/kg-day	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	3.81E-01	mg/kg	M	1.21E-08	mg/kg-day	--	--	--
	SELENIUM	5.90E-01	mg/kg	5.90E-01	mg/kg	M	1.88E-08	mg/kg-day	--	--	--
	SILVER	9.22E-01	mg/kg	9.22E-01	mg/kg	M	2.93E-08	mg/kg-day	--	--	--
	THALLIUM	4.51E-01	mg/kg	4.51E-01	mg/kg	M	1.43E-08	mg/kg-day	--	--	--
	TIN	1.78E+01	mg/kg	1.78E+01	mg/kg	M	5.65E-07	mg/kg-day	--	--	--
	TITANIUM	4.77E+03	mg/kg	4.77E+03	mg/kg	M	1.51E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	8.66E-03	mg/kg	8.66E-03	mg/kg	M	2.75E-09	mg/kg-day	--	--	--
	ACETONE	2.34E-02	mg/kg	2.34E-02	mg/kg	M	7.43E-09	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	1.59E-09	mg/kg-day	--	--	--
	TOLUENE	6.37E-03	mg/kg	6.37E-03	mg/kg	M	2.02E-09	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.27E-09	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.18E-08	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.14E-07	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	9.53E-09	mg/kg-day	--	--	--

TABLE J-80

EPA TABLE M.8.13.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	7.15E-08	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	2.48E-01	mg/kg	M	1.18E-07	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.4E-07
	BENZO(A)PYRENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	1.12E-07	mg/kg-day	1.2E+01	(mg/kg-day)-1	1.3E-06
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	2.49E-01	mg/kg	M	1.19E-07	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.4E-07
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	2.37E-01	mg/kg	M	1.13E-07	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	2.59E-01	mg/kg	M	1.23E-07	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.5E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.44E-01	mg/kg	M	4.58E-08	mg/kg-day	1.4E-02	(mg/kg-day)-1	6.4E-10
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	2.32E-08	mg/kg-day	2.0E-02	(mg/kg-day)-1	4.6E-10
	CHRYSENE	2.43E-01	mg/kg	2.43E-01	mg/kg	M	1.16E-07	mg/kg-day	1.2E-01	(mg/kg-day)-1	1.4E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	2.86E-08	mg/kg-day	4.1E+00	(mg/kg-day)-1	1.2E-07
	FLUORANTHENE	2.23E-01	mg/kg	2.23E-01	mg/kg	M	1.06E-07	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	3.91E-08	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	6.67E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	8.0E-08
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.14E-07	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	3.97E-07	mg/kg-day	1.2E-01	(mg/kg-day)-1	4.8E-08
	PHENANTHRENE	2.65E-01	mg/kg	2.65E-01	mg/kg	M	1.26E-07	mg/kg-day	--	--	--
	PYRENE	2.05E-01	mg/kg	2.05E-01	mg/kg	M	9.79E-08	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.30E-03	mg/kg	3.30E-03	mg/kg	M	5.24E-10	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.3E-10
	4,4'-DDE	2.82E-03	mg/kg	2.82E-03	mg/kg	M	4.48E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.5E-10
	4,4'-DDT	1.10E-02	mg/kg	1.10E-02	mg/kg	M	1.74E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.9E-10
	ALDRIN	1.03E-03	mg/kg	1.03E-03	mg/kg	M	1.64E-10	mg/kg-day	1.7E+01	(mg/kg-day)-1	2.8E-09
	ALPHA-BHC	4.35E-03	mg/kg	4.35E-03	mg/kg	M	6.91E-10	mg/kg-day	6.3E+00	(mg/kg-day)-1	4.4E-09
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.74E-03	mg/kg	M	4.35E-10	mg/kg-day	1.2E+00	(mg/kg-day)-1	5.2E-10
	AROCLOR-1254	1.40E-02	mg/kg	1.40E-02	mg/kg	M	6.67E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.3E-08
	AROCLOR-1260	4.89E-02	mg/kg	4.89E-02	mg/kg	M	2.33E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	4.7E-08
	BETA-BHC	1.61E-03	mg/kg	1.61E-03	mg/kg	M	2.56E-10	mg/kg-day	1.8E+00	(mg/kg-day)-1	4.6E-10

TABLE J-80

EPA TABLE M.8.13.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	DELTA-BHC	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.92E-10	mg/kg-day	--	--	--
	DIELDRIN	2.17E-03	mg/kg	2.17E-03	mg/kg	M	3.45E-10	mg/kg-day	1.6E+01	(mg/kg-day)-1	5.5E-09
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.92E-10	mg/kg-day	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	1.97E-03	mg/kg	M	3.13E-10	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.63E-03	mg/kg	M	4.18E-10	mg/kg-day	--	--	--
	ENDRIN	2.05E-03	mg/kg	2.05E-03	mg/kg	M	3.26E-10	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	3.49E-03	mg/kg	M	5.55E-10	mg/kg-day	--	--	--
	ENDRIN KETONE	2.69E-03	mg/kg	2.69E-03	mg/kg	M	4.27E-10	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.83E-03	mg/kg	M	2.91E-10	mg/kg-day	1.3E+00	(mg/kg-day)-1	3.8E-10
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	4.21E-10	mg/kg-day	1.2E+00	(mg/kg-day)-1	5.1E-10
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	3.65E-11	mg/kg-day	5.7E+00	(mg/kg-day)-1	2.1E-10
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	3.30E-04	mg/kg	M	5.24E-11	mg/kg-day	1.3E+01	(mg/kg-day)-1	6.8E-10
	METHOXYCHLOR	9.97E-03	mg/kg	9.97E-03	mg/kg	M	1.58E-09	mg/kg-day	--	--	--
										Total Cancer Risk Across All Direct Contact Exposure Routes/Pathways - Soil	7.0E-06

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

NV = No value available

TABLE J-81

EPA TABLE M.8.14.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation-Dust	**METAL**										
	BARIUM	1.09E+02	mg/kg	8.31E-08	mg/m^3	R	7.80E-09	mg/kg-day	--	--	--
	COBALT	1.29E+01	mg/kg	9.84E-09	mg/m^3	R	9.24E-10	mg/kg-day	--	--	--
	COPPER	7.13E+01	mg/kg	5.42E-08	mg/m^3	R	5.09E-09	mg/kg-day	--	--	--
	LEAD	1.47E+02	mg/kg	1.12E-07	mg/m^3	R	1.05E-08	mg/kg-day	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	2.90E-10	mg/m^3	R	2.72E-11	mg/kg-day	--	--	--
	SELENIUM	5.90E-01	mg/kg	4.49E-10	mg/m^3	R	4.21E-11	mg/kg-day	--	--	--
	SILVER	9.22E-01	mg/kg	7.01E-10	mg/m^3	R	6.58E-11	mg/kg-day	--	--	--
	THALLIUM	4.51E-01	mg/kg	3.43E-10	mg/m^3	R	3.22E-11	mg/kg-day	--	--	--
	TIN	1.78E+01	mg/kg	1.35E-08	mg/m^3	R	1.27E-09	mg/kg-day	--	--	--
	TITANIUM	4.77E+03	mg/kg	3.62E-06	mg/m^3	R	3.40E-07	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	8.66E-03	mg/kg	6.58E-12	mg/m^3	R	6.18E-13	mg/kg-day	--	--	--
	ACETONE	2.34E-02	mg/kg	1.78E-11	mg/m^3	R	1.67E-12	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	3.80E-12	mg/m^3	R	3.57E-13	mg/kg-day	--	--	--
	TOLUENE	6.37E-03	mg/kg	4.84E-12	mg/m^3	R	4.55E-13	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	2.86E-13	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	2.64E-12	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	1.71E-11	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	1.52E-11	mg/m^3	R	1.43E-12	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	1.07E-11	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	1.89E-10	mg/m^3	R	1.77E-11	mg/kg-day	3.9E-01	(mg/kg-day)-1	6.9E-12

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EPA TABLE M.8.14.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BENZO(A)PYRENE	2.35E-01	mg/kg	1.79E-10	mg/m^3	R	1.68E-11	mg/kg-day	3.9E+00	(mg/kg-day)-1	6.5E-11
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	1.89E-10	mg/m^3	R	1.78E-11	mg/kg-day	3.9E-01	(mg/kg-day)-1	6.9E-12
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	1.80E-10	mg/m^3	R	1.69E-11	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	1.97E-10	mg/m^3	R	1.85E-11	mg/kg-day	3.9E-01	(mg/kg-day)-1	7.2E-12
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.10E-10	mg/m^3	R	1.03E-11	mg/kg-day	8.4E-03	(mg/kg-day)-1	8.6E-14
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	5.21E-12	mg/kg-day	2.0E-02	(mg/kg-day)-1	1.0E-13
	CHRYSENE	2.43E-01	mg/kg	1.85E-10	mg/m^3	R	1.74E-11	mg/kg-day	3.9E-02	(mg/kg-day)-1	6.8E-13
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	4.28E-12	mg/kg-day	4.1E+00	(mg/kg-day)-1	1.8E-11
	FLUORANTHENE	2.23E-01	mg/kg	1.69E-10	mg/m^3	R	1.59E-11	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	5.85E-12	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	9.99E-12	mg/kg-day	3.9E-01	(mg/kg-day)-1	3.9E-12
	NAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	1.71E-11	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	3.57E-11	mg/kg-day	1.2E-01	(mg/kg-day)-1	4.3E-12
	PHENANTHRENE	2.65E-01	mg/kg	2.01E-10	mg/m^3	R	1.89E-11	mg/kg-day	--	--	--
	PYRENE	2.05E-01	mg/kg	1.56E-10	mg/m^3	R	1.47E-11	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.30E-03	mg/kg	2.51E-12	mg/m^3	R	2.36E-13	mg/kg-day	2.4E-01	(mg/kg-day)-1	5.7E-14
	4,4'-DDE	2.82E-03	mg/kg	2.14E-12	mg/m^3	R	2.01E-13	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.8E-14
	4,4'-DDT	1.10E-02	mg/kg	8.32E-12	mg/m^3	R	7.82E-13	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.7E-13
	ALDRIN	1.03E-03	mg/kg	7.83E-13	mg/m^3	R	7.35E-14	mg/kg-day	1.7E+01	(mg/kg-day)-1	1.3E-12
	ALPHA-BHC	4.35E-03	mg/kg	3.31E-12	mg/m^3	R	3.10E-13	mg/kg-day	6.3E+00	(mg/kg-day)-1	2.0E-12
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.08E-12	mg/m^3	R	1.96E-13	mg/kg-day	1.2E+00	(mg/kg-day)-1	2.3E-13
	AROCLOR-1254	1.40E-02	mg/kg	1.06E-11	mg/m^3	R	9.99E-13	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.0E-12

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EPA TABLE M.8.14.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	AROCLOR-1260	4.89E-02	mg/kg	3.72E-11	mg/m^3	R	3.49E-12	mg/kg-day	2.0E+00	(mg/kg-day)-1	7.0E-12
	BETA-BHC	1.61E-03	mg/kg	1.22E-12	mg/m^3	R	1.15E-13	mg/kg-day	1.9E+00	(mg/kg-day)-1	2.1E-13
	DELTA-BHC	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	8.64E-14	mg/kg-day	--	--	--
	DIELDRIN	2.17E-03	mg/kg	1.65E-12	mg/m^3	R	1.55E-13	mg/kg-day	1.6E+01	(mg/kg-day)-1	2.5E-12
	ENDOSULFAN I	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	8.64E-14	mg/kg-day	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	1.50E-12	mg/m^3	R	1.41E-13	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.00E-12	mg/m^3	R	1.88E-13	mg/kg-day	--	--	--
	ENDRIN	2.05E-03	mg/kg	1.56E-12	mg/m^3	R	1.46E-13	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	2.65E-12	mg/m^3	R	2.49E-13	mg/kg-day	--	--	--
	ENDRIN KETONE	2.69E-03	mg/kg	2.04E-12	mg/m^3	R	1.92E-13	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.39E-12	mg/m^3	R	1.31E-13	mg/kg-day	1.3E+00	(mg/kg-day)-1	1.7E-13
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.01E-12	mg/m^3	R	1.89E-13	mg/kg-day	1.2E+00	(mg/kg-day)-1	2.3E-13
	HEPTACHLOR	2.30E-04	mg/kg	1.75E-13	mg/m^3	R	1.64E-14	mg/kg-day	5.7E+00	(mg/kg-day)-1	9.4E-14
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	2.51E-13	mg/m^3	R	2.36E-14	mg/kg-day	1.3E+01	(mg/kg-day)-1	3.1E-13
	METHOXYCHLOR	9.97E-03	mg/kg	7.58E-12	mg/m^3	R	7.12E-13	mg/kg-day	--	--	--
Inhalation-VOCs	**METAL**										
	BARIUM	1.09E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COBALT	1.29E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COPPER	7.13E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	LEAD	1.47E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SELENIUM	5.90E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--

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EPA TABLE M.8.14.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	SILVER	9.22E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	THALLIUM	4.51E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TIN	1.78E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TITANIUM	4.77E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	8.66E-03	mg/kg	1.98E-04	mg/m^3	R	1.86E-05	mg/kg-day	--	--	--
	ACETONE	2.34E-02	mg/kg	4.76E-04	mg/m^3	R	4.47E-05	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.75E-02	mg/m^3	R	5.40E-03	mg/kg-day	--	--	--
	TOLUENE	6.37E-03	mg/kg	2.80E-02	mg/m^3	R	2.63E-03	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	1.53E-04	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	4.24E-03	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.78E-01	mg/m^3	R	1.67E-02	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	1.31E-02	mg/m^3	R	1.23E-03	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	2.58E-04	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BENZO(A)PYRENE	2.35E-01	mg/kg	--	mg/m^3	R	--	--	3.9E+00	(mg/kg-day)-1	--
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	--	mg/m^3	R	--	--	8.4E-03	(mg/kg-day)-1	--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-02	(mg/kg-day)-1	--
	CHRYSENE	2.43E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-02	(mg/kg-day)-1	--

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EPA TABLE M.8.14.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	4.1E+00	(mg/kg-day)-1	--
	FLUORANTHENE	2.23E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	3.19E-04	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	NAPHTHALENE	2.40E-01	mg/kg	*	mg/m^3	R	--	--	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	1.2E-01	(mg/kg-day)-1	--
	PHENANTHRENE	2.65E-01	mg/kg	4.87E-03	mg/m^3	R	4.57E-04	mg/kg-day	--	--	--
	PYRENE	2.05E-01	mg/kg	7.83E-04	mg/m^3	R	7.36E-05	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.30E-03	mg/kg	--	mg/m^3	R	--	--	2.4E-01	(mg/kg-day)-1	--
	4,4'-DDE	2.82E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	(mg/kg-day)-1	--
	4,4'-DDT	1.10E-02	mg/kg	--	mg/m^3	R	--	--	3.4E-01	(mg/kg-day)-1	--
	ALDRIN	1.03E-03	mg/kg	--	mg/m^3	R	--	--	1.7E+01	(mg/kg-day)-1	--
	ALPHA-BHC	4.35E-03	mg/kg	--	mg/m^3	R	--	--	6.3E+00	(mg/kg-day)-1	--
	ALPHA-CHLORDANE	2.74E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	(mg/kg-day)-1	--
	AROCLOR-1254	1.40E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	(mg/kg-day)-1	--
	AROCLOR-1260	4.89E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	(mg/kg-day)-1	--
	BETA-BHC	1.61E-03	mg/kg	--	mg/m^3	R	--	--	1.9E+00	(mg/kg-day)-1	--
	DELTA-BHC	1.21E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	DIELDRIN	2.17E-03	mg/kg	--	mg/m^3	R	--	--	1.6E+01	(mg/kg-day)-1	--
	ENDOSULFAN I	1.21E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--

TABLE J-81

EPA TABLE M.8.14.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDRIN	2.05E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN KETONE	2.69E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	--	mg/m^3	R	--	--	1.3E+00	(mg/kg-day)-1	--
	GAMMA-CHLORDANE	2.65E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	(mg/kg-day)-1	--
	HEPTACHLOR	2.30E-04	mg/kg	--	mg/m^3	R	--	--	5.7E+00	(mg/kg-day)-1	--
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	--	mg/m^3	R	--	--	1.3E+01	(mg/kg-day)-1	--
	METHOXYCHLOR	9.97E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--

Total Cancer Risk Across All Air Exposure Routes/Pathways - Soil	1.3E-10
Total Cancer Risk Across All Direct Contact Exposure Routes/Pathways - Soil	3.3E-06
Total Cancer Risk Across All Exposure Routes/Pathways - Soil	3.3E-06
Total Risk Across All Exposure Routes/Pathways - Groundwater	8.8E-08
Total Cancer Risk Across All Exposure Routes/Pathways	3.4E-06

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

NV = No value available

VOC = Volatile organic compound

* = Inhalation of VOCs for naphthalane evaluated under groundwater exposures instead of soil due to single detection of naphthalene at 9.5 feet below ground suface, which is below shallow groundwater

TABLE J-82

EPA TABLE M.8.15.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation-Dust	**METAL**										
	BARIUM	1.09E+02	mg/kg	8.31E-08	mg/m^3	R	4.55E-09	mg/kg-day	--	--	--
	COBALT	1.29E+01	mg/kg	9.84E-09	mg/m^3	R	5.39E-10	mg/kg-day	--	--	--
	COPPER	7.13E+01	mg/kg	5.42E-08	mg/m^3	R	2.97E-09	mg/kg-day	--	--	--
	LEAD	1.47E+02	mg/kg	1.12E-07	mg/m^3	R	6.13E-09	mg/kg-day	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	2.90E-10	mg/m^3	R	1.59E-11	mg/kg-day	--	--	--
	SELENIUM	5.90E-01	mg/kg	4.49E-10	mg/m^3	R	2.46E-11	mg/kg-day	--	--	--
	SILVER	9.22E-01	mg/kg	7.01E-10	mg/m^3	R	3.84E-11	mg/kg-day	--	--	--
	THALLIUM	4.51E-01	mg/kg	3.43E-10	mg/m^3	R	1.88E-11	mg/kg-day	--	--	--
	TIN	1.78E+01	mg/kg	1.35E-08	mg/m^3	R	7.40E-10	mg/kg-day	--	--	--
	TITANIUM	4.77E+03	mg/kg	3.62E-06	mg/m^3	R	1.98E-07	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	8.66E-03	mg/kg	6.58E-12	mg/m^3	R	3.61E-13	mg/kg-day	--	--	--
	ACETONE	2.34E-02	mg/kg	1.78E-11	mg/m^3	R	9.73E-13	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	3.80E-12	mg/m^3	R	2.08E-13	mg/kg-day	--	--	--
	TOLUENE	6.37E-03	mg/kg	4.84E-12	mg/m^3	R	2.65E-13	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	1.67E-13	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	1.54E-12	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	9.99E-12	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	1.52E-11	mg/m^3	R	8.33E-13	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	6.25E-12	mg/kg-day	--	--	--

TABLE J-82

EPA TABLE M.8.15.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	1.89E-10	mg/m^3	R	1.03E-11	mg/kg-day	3.9E-01	(mg/kg-day)-1	4.0E-12
	BENZO(A)PYRENE	2.35E-01	mg/kg	1.79E-10	mg/m^3	R	9.79E-12	mg/kg-day	3.9E+00	(mg/kg-day)-1	3.8E-11
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	1.89E-10	mg/m^3	R	1.04E-11	mg/kg-day	3.9E-01	(mg/kg-day)-1	4.0E-12
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	1.80E-10	mg/m^3	R	9.87E-12	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	1.97E-10	mg/m^3	R	1.08E-11	mg/kg-day	3.9E-01	(mg/kg-day)-1	4.2E-12
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.10E-10	mg/m^3	R	6.01E-12	mg/kg-day	8.4E-03	(mg/kg-day)-1	5.0E-14
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	3.04E-12	mg/kg-day	2.0E-02	(mg/kg-day)-1	6.1E-14
	CHRYSENE	2.43E-01	mg/kg	1.85E-10	mg/m^3	R	1.01E-11	mg/kg-day	3.9E-02	(mg/kg-day)-1	3.9E-13
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	2.50E-12	mg/kg-day	4.1E+00	(mg/kg-day)-1	1.0E-11
	FLUORANTHENE	2.23E-01	mg/kg	1.69E-10	mg/m^3	R	9.28E-12	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	3.41E-12	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	5.83E-12	mg/kg-day	3.9E-01	(mg/kg-day)-1	2.3E-12
	NAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	9.99E-12	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	2.08E-11	mg/kg-day	1.2E-01	(mg/kg-day)-1	2.5E-12
	PHENANTHRENE	2.65E-01	mg/kg	2.01E-10	mg/m^3	R	1.10E-11	mg/kg-day	--	--	--
	PYRENE	2.05E-01	mg/kg	1.56E-10	mg/m^3	R	8.55E-12	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.30E-03	mg/kg	2.51E-12	mg/m^3	R	1.37E-13	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.3E-14
	4,4'-DDE	2.82E-03	mg/kg	2.14E-12	mg/m^3	R	1.17E-13	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.0E-14
	4,4'-DDT	1.10E-02	mg/kg	8.32E-12	mg/m^3	R	4.56E-13	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.6E-13
	ALDRIN	1.03E-03	mg/kg	7.83E-13	mg/m^3	R	4.29E-14	mg/kg-day	1.7E+01	(mg/kg-day)-1	7.4E-13
	ALPHA-BHC	4.35E-03	mg/kg	3.31E-12	mg/m^3	R	1.81E-13	mg/kg-day	6.3E+00	(mg/kg-day)-1	1.1E-12
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.08E-12	mg/m^3	R	1.14E-13	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.4E-13

TABLE J-82

EPA TABLE M.8.15.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	AROCLOR-1254	1.40E-02	mg/kg	1.06E-11	mg/m^3	R	5.83E-13	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.2E-12
	AROCLOR-1260	4.89E-02	mg/kg	3.72E-11	mg/m^3	R	2.04E-12	mg/kg-day	2.0E+00	(mg/kg-day)-1	4.1E-12
	BETA-BHC	1.61E-03	mg/kg	1.22E-12	mg/m^3	R	6.70E-14	mg/kg-day	1.9E+00	(mg/kg-day)-1	1.2E-13
	DELTA-BHC	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	5.04E-14	mg/kg-day	--	--	--
	DIELDRIN	2.17E-03	mg/kg	1.65E-12	mg/m^3	R	9.04E-14	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.4E-12
	ENDOSULFAN I	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	5.04E-14	mg/kg-day	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	1.50E-12	mg/m^3	R	8.20E-14	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.00E-12	mg/m^3	R	1.10E-13	mg/kg-day	--	--	--
	ENDRIN	2.05E-03	mg/kg	1.56E-12	mg/m^3	R	8.54E-14	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	2.65E-12	mg/m^3	R	1.45E-13	mg/kg-day	--	--	--
	ENDRIN KETONE	2.69E-03	mg/kg	2.04E-12	mg/m^3	R	1.12E-13	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.39E-12	mg/m^3	R	7.62E-14	mg/kg-day	1.3E+00	(mg/kg-day)-1	9.9E-14
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.01E-12	mg/m^3	R	1.10E-13	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.3E-13
	HEPTACHLOR	2.30E-04	mg/kg	1.75E-13	mg/m^3	R	9.58E-15	mg/kg-day	5.7E+00	(mg/kg-day)-1	5.5E-14
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	2.51E-13	mg/m^3	R	1.37E-14	mg/kg-day	1.3E+01	(mg/kg-day)-1	1.8E-13
	METHOXYCHLOR	9.97E-03	mg/kg	7.58E-12	mg/m^3	R	4.15E-13	mg/kg-day	--	--	--
Inhalation-VOCs	**METAL**										
	BARIUM	1.09E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COBALT	1.29E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COPPER	7.13E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	LEAD	1.47E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--

TABLE J-82

EPA TABLE M.8.15.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	SELENIUM	5.90E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SILVER	9.22E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	THALLIUM	4.51E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TIN	1.78E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TITANIUM	4.77E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	8.66E-03	mg/kg	1.98E-04	mg/m^3	R	1.08E-05	mg/kg-day	--	--	--
	ACETONE	2.34E-02	mg/kg	4.76E-04	mg/m^3	R	2.61E-05	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.75E-02	mg/m^3	R	3.15E-03	mg/kg-day	--	--	--
	TOLUENE	6.37E-03	mg/kg	2.80E-02	mg/m^3	R	1.54E-03	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	8.94E-05	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	2.47E-03	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.78E-01	mg/m^3	R	9.75E-03	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	1.31E-02	mg/m^3	R	7.16E-04	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	1.50E-04	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BENZO(A)PYRENE	2.35E-01	mg/kg	--	mg/m^3	R	--	--	3.9E+00	(mg/kg-day)-1	--
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	--	mg/m^3	R	--	--	8.4E-03	(mg/kg-day)-1	--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-02	(mg/kg-day)-1	--

TABLE J-82

EPA TABLE M.8.15.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	CHRYSENE	2.43E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-02	(mg/kg-day)-1	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	4.1E+00	(mg/kg-day)-1	--
	FLUORANTHENE	2.23E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	1.86E-04	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	NAPHTHALENE	2.40E-01	mg/kg	5.18E-03	mg/m^3	R	--	--	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	1.2E-01	(mg/kg-day)-1	--
	PHENANTHRENE	2.65E-01	mg/kg	4.87E-03	mg/m^3	R	2.67E-04	mg/kg-day	--	--	--
	PYRENE	2.05E-01	mg/kg	7.83E-04	mg/m^3	R	4.29E-05	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.30E-03	mg/kg	--	mg/m^3	R	--	--	2.4E-01	(mg/kg-day)-1	--
	4,4'-DDE	2.82E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	(mg/kg-day)-1	--
	4,4'-DDT	1.10E-02	mg/kg	--	mg/m^3	R	--	--	3.4E-01	(mg/kg-day)-1	--
	ALDRIN	1.03E-03	mg/kg	--	mg/m^3	R	--	--	1.7E+01	(mg/kg-day)-1	--
	ALPHA-BHC	4.35E-03	mg/kg	--	mg/m^3	R	--	--	6.3E+00	(mg/kg-day)-1	--
	ALPHA-CHLORDANE	2.74E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	(mg/kg-day)-1	--
	AROCLOR-1254	1.40E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	(mg/kg-day)-1	--
	AROCLOR-1260	4.89E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	(mg/kg-day)-1	--
	BETA-BHC	1.61E-03	mg/kg	--	mg/m^3	R	--	--	1.9E+00	(mg/kg-day)-1	--
	DELTA-BHC	1.21E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	DIELDRIN	2.17E-03	mg/kg	--	mg/m^3	R	--	--	1.6E+01	(mg/kg-day)-1	--
	ENDOSULFAN I	1.21E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--

TABLE J-82

EPA TABLE M.8.15.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN	2.05E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN KETONE	2.69E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	--	mg/m^3	R	--	--	1.3E+00	(mg/kg-day)-1	--
	GAMMA-CHLORDANE	2.65E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	(mg/kg-day)-1	--
	HEPTACHLOR	2.30E-04	mg/kg	--	mg/m^3	R	--	--	5.7E+00	(mg/kg-day)-1	--
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	--	mg/m^3	R	--	--	1.3E+01	(mg/kg-day)-1	--
	METHOXYCHLOR	9.97E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--

Total Cancer Risk Across All Air Exposure Routes/Pathways - Soil	7.5E-11
Total Cancer Risk Across All Direct Contact Exposure Routes/Pathways - Soil	7.0E-06
Total Cancer Risk Across All Exposure Routes/Pathways - Soil	7.0E-06
Total Risk Across All Air Exposure Routes/Pathways - Groundwater	5.1E-08
Total Cancer Risk Across All Exposure Routes/Pathways	7.1E-06

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

NV = No value available

VOC = Volatile organic compound

* = Inhalation of VOCs for naphthalane evaluated under groundwater exposures instead of soil due to single detection of naphthalene at 9.5 feet below ground suface, which is below shallow groundwater

TABLE J-83

EPA TABLE M.8.12.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	**METAL**										
	BARIUM	9.67E+01	mg/kg	9.67E+01	mg/kg	M	6.63E-06	mg/kg-day	--	--	--
	COBALT	1.15E+01	mg/kg	1.15E+01	mg/kg	M	7.84E-07	mg/kg-day	--	--	--
	COPPER	5.99E+01	mg/kg	5.99E+01	mg/kg	M	4.10E-06	mg/kg-day	--	--	--
	LEAD	9.96E+01	mg/kg	9.96E+01	mg/kg	M	6.82E-06	mg/kg-day	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.99E-01	mg/kg	M	2.05E-08	mg/kg-day	--	--	--
	SELENIUM	5.18E-01	mg/kg	5.18E-01	mg/kg	M	3.55E-08	mg/kg-day	--	--	--
	SILVER	5.63E-01	mg/kg	5.63E-01	mg/kg	M	3.86E-08	mg/kg-day	--	--	--
	THALLIUM	4.14E-01	mg/kg	4.14E-01	mg/kg	M	2.84E-08	mg/kg-day	--	--	--
	TIN	1.40E+01	mg/kg	1.40E+01	mg/kg	M	9.61E-07	mg/kg-day	--	--	--
	TITANIUM	4.25E+03	mg/kg	4.25E+03	mg/kg	M	2.91E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	7.48E-03	mg/kg	7.48E-03	mg/kg	M	5.12E-10	mg/kg-day	--	--	--
	ACETONE	1.71E-02	mg/kg	1.71E-02	mg/kg	M	1.17E-09	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	3.42E-10	mg/kg-day	--	--	--
	TOLUENE	6.11E-03	mg/kg	6.11E-03	mg/kg	M	4.18E-10	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	2.74E-10	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	2.53E-09	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	1.61E-08	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	1.37E-09	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.03E-08	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	2.17E-01	mg/kg	M	1.49E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.8E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	1.38E-08	mg/kg-day	1.2E+01	(mg/kg-day)-1	1.7E-07
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	2.16E-01	mg/kg	M	1.48E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.8E-08
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	2.08E-01	mg/kg	M	1.42E-08	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	2.32E-01	mg/kg	M	1.59E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.9E-08
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	1.19E-01	mg/kg	M	8.13E-09	mg/kg-day	1.4E-02	(mg/kg-day)-1	1.1E-10
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	5.00E-09	mg/kg-day	2.0E-02	(mg/kg-day)-1	1.0E-10

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EPA TABLE M.8.12.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	CHRYSENE	2.04E-01	mg/kg	2.04E-01	mg/kg	M	1.40E-08	mg/kg-day	1.2E-01	(mg/kg-day)-1	1.7E-09
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	4.11E-09	mg/kg-day	4.1E+00	(mg/kg-day)-1	1.7E-08
	FLUORANTHENE	1.83E-01	mg/kg	1.83E-01	mg/kg	M	1.25E-08	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	5.62E-09	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	9.59E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.2E-08
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.64E-08	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	3.42E-08	mg/kg-day	1.2E-01	(mg/kg-day)-1	4.1E-09
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	1.56E-08	mg/kg-day	--	--	--
	PYRENE	1.71E-01	mg/kg	1.71E-01	mg/kg	M	1.17E-08	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.86E-03	mg/kg	2.86E-03	mg/kg	M	1.96E-10	mg/kg-day	2.4E-01	(mg/kg-day)-1	4.7E-11
	4,4'-DDE	2.54E-03	mg/kg	2.54E-03	mg/kg	M	1.74E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.9E-11
	4,4'-DDT	8.46E-03	mg/kg	8.46E-03	mg/kg	M	5.79E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.0E-10
	ALDRIN	1.01E-03	mg/kg	1.01E-03	mg/kg	M	6.92E-11	mg/kg-day	1.7E+01	(mg/kg-day)-1	1.2E-09
	ALPHA-BHC	3.33E-03	mg/kg	3.33E-03	mg/kg	M	2.28E-10	mg/kg-day	6.3E+00	(mg/kg-day)-1	1.4E-09
	ALPHA-CHLORDANE	2.26E-03	mg/kg	2.26E-03	mg/kg	M	1.55E-10	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.9E-10
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	7.55E-10	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.5E-09
	AROCLOR-1260	3.79E-02	mg/kg	3.79E-02	mg/kg	M	2.59E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	5.2E-09
	BETA-BHC	1.44E-03	mg/kg	1.44E-03	mg/kg	M	9.86E-11	mg/kg-day	1.8E+00	(mg/kg-day)-1	1.8E-10
	DELTA-BHC	1.13E-03	mg/kg	1.13E-03	mg/kg	M	7.74E-11	mg/kg-day	--	--	--
	DIELDRIN	2.07E-03	mg/kg	2.07E-03	mg/kg	M	1.42E-10	mg/kg-day	1.6E+01	(mg/kg-day)-1	2.3E-09
	ENDOSULFAN I	1.14E-03	mg/kg	1.14E-03	mg/kg	M	7.81E-11	mg/kg-day	--	--	--
	ENDOSULFAN II	1.92E-03	mg/kg	1.92E-03	mg/kg	M	1.32E-10	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	1.64E-10	mg/kg-day	--	--	--
	ENDRIN	1.98E-03	mg/kg	1.98E-03	mg/kg	M	1.36E-10	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	3.09E-03	mg/kg	M	2.12E-10	mg/kg-day	--	--	--
	ENDRIN KETONE	2.47E-03	mg/kg	2.47E-03	mg/kg	M	1.69E-10	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.61E-03	mg/kg	M	1.10E-10	mg/kg-day	1.3E+00	(mg/kg-day)-1	1.4E-10
	GAMMA-CHLORDANE	2.18E-03	mg/kg	2.18E-03	mg/kg	M	1.49E-10	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.8E-10

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EPA TABLE M.8.12.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	1.37E-11	mg/kg-day	5.7E+00	(mg/kg-day)-1	7.8E-11
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.80E-04	mg/kg	M	1.92E-11	mg/kg-day	1.3E+01	(mg/kg-day)-1	2.5E-10
	METHOXYCHLOR	9.68E-03	mg/kg	9.68E-03	mg/kg	M	6.63E-10	mg/kg-day	--	--	--
Dermal	**METAL**										
	BARIUM	9.67E+01	mg/kg	9.67E+01	mg/kg	M	4.64E-07	mg/kg-day	--	--	--
	COBALT	1.15E+01	mg/kg	1.15E+01	mg/kg	M	5.49E-08	mg/kg-day	--	--	--
	COPPER	5.99E+01	mg/kg	5.99E+01	mg/kg	M	2.87E-07	mg/kg-day	--	--	--
	LEAD	9.96E+01	mg/kg	9.96E+01	mg/kg	M	4.77E-07	mg/kg-day	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.99E-01	mg/kg	M	1.44E-09	mg/kg-day	--	--	--
	SELENIUM	5.18E-01	mg/kg	5.18E-01	mg/kg	M	2.49E-09	mg/kg-day	--	--	--
	SILVER	5.63E-01	mg/kg	5.63E-01	mg/kg	M	2.70E-09	mg/kg-day	--	--	--
	THALLIUM	4.14E-01	mg/kg	4.14E-01	mg/kg	M	1.99E-09	mg/kg-day	--	--	--
	TIN	1.40E+01	mg/kg	1.40E+01	mg/kg	M	6.72E-08	mg/kg-day	--	--	--
	TITANIUM	4.25E+03	mg/kg	4.25E+03	mg/kg	M	2.04E-05	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS	0.00E+00									
	2-BUTANONE	7.48E-03	mg/kg	7.48E-03	mg/kg	M	3.59E-10	mg/kg-day	--	--	--
	ACETONE	1.71E-02	mg/kg	1.71E-02	mg/kg	M	8.18E-10	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	2.40E-10	mg/kg-day	--	--	--
	TOLUENE	6.11E-03	mg/kg	6.11E-03	mg/kg	M	2.93E-10	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.92E-10	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.77E-09	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	1.69E-08	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	1.44E-09	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.08E-08	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	2.17E-01	mg/kg	M	1.56E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.9E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	1.45E-08	mg/kg-day	1.2E+01	(mg/kg-day)-1	1.7E-07
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	2.16E-01	mg/kg	M	1.55E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.9E-08
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	2.08E-01	mg/kg	M	1.50E-08	mg/kg-day	--	--	--

TABLE J-83

EPA TABLE M.8.12.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	2.32E-01	mg/kg	M	1.67E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	2.0E-08
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	1.19E-01	mg/kg	M	5.69E-09	mg/kg-day	1.4E-02	(mg/kg-day)-1	8.0E-11
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	3.50E-09	mg/kg-day	2.0E-02	(mg/kg-day)-1	7.0E-11
	CHRYSENE	2.04E-01	mg/kg	2.04E-01	mg/kg	M	1.47E-08	mg/kg-day	1.2E-01	(mg/kg-day)-1	1.8E-09
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	4.32E-09	mg/kg-day	4.1E+00	(mg/kg-day)-1	1.8E-08
	FLUORANTHENE	1.83E-01	mg/kg	1.83E-01	mg/kg	M	1.31E-08	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	5.90E-09	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	1.01E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.2E-08
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.73E-08	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	5.99E-08	mg/kg-day	1.2E-01	(mg/kg-day)-1	7.2E-09
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	1.64E-08	mg/kg-day	--	--	--
	PYRENE	1.71E-01	mg/kg	1.71E-01	mg/kg	M	1.23E-08	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.86E-03	mg/kg	2.86E-03	mg/kg	M	6.86E-11	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.6E-11
	4,4'-DDE	2.54E-03	mg/kg	2.54E-03	mg/kg	M	6.09E-11	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.1E-11
	4,4'-DDT	8.46E-03	mg/kg	8.46E-03	mg/kg	M	2.03E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	6.9E-11
	ALDRIN	1.01E-03	mg/kg	1.01E-03	mg/kg	M	2.42E-11	mg/kg-day	1.7E+01	(mg/kg-day)-1	4.1E-10
	ALPHA-BHC	3.33E-03	mg/kg	3.33E-03	mg/kg	M	7.98E-11	mg/kg-day	6.3E+00	(mg/kg-day)-1	5.0E-10
	ALPHA-CHLORDANE	2.26E-03	mg/kg	2.26E-03	mg/kg	M	5.42E-11	mg/kg-day	1.2E+00	(mg/kg-day)-1	6.5E-11
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	7.93E-10	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.6E-09
	AROCLOR-1260	3.79E-02	mg/kg	3.79E-02	mg/kg	M	2.72E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	5.4E-09
	BETA-BHC	1.44E-03	mg/kg	1.44E-03	mg/kg	M	3.45E-11	mg/kg-day	1.8E+00	(mg/kg-day)-1	6.2E-11
	DELTA-BHC	1.13E-03	mg/kg	1.13E-03	mg/kg	M	2.71E-11	mg/kg-day	--	--	--
	DIELDRIN	2.07E-03	mg/kg	2.07E-03	mg/kg	M	4.96E-11	mg/kg-day	1.6E+01	(mg/kg-day)-1	7.9E-10
	ENDOSULFAN I	1.14E-03	mg/kg	1.14E-03	mg/kg	M	2.73E-11	mg/kg-day	--	--	--
	ENDOSULFAN II	1.92E-03	mg/kg	1.92E-03	mg/kg	M	4.60E-11	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	5.75E-11	mg/kg-day	--	--	--
	ENDRIN	1.98E-03	mg/kg	1.98E-03	mg/kg	M	4.75E-11	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	3.09E-03	mg/kg	M	7.41E-11	mg/kg-day	--	--	--

TABLE J-83

EPA TABLE M.8.12.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDRIN KETONE	2.47E-03	mg/kg	2.47E-03	mg/kg	M	5.92E-11	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.61E-03	mg/kg	M	3.86E-11	mg/kg-day	1.3E+00	(mg/kg-day)-1	5.0E-11
	GAMMA-CHLORDANE	2.18E-03	mg/kg	2.18E-03	mg/kg	M	5.23E-11	mg/kg-day	1.2E+00	(mg/kg-day)-1	6.3E-11
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	4.79E-12	mg/kg-day	5.7E+00	(mg/kg-day)-1	2.7E-11
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.80E-04	mg/kg	M	6.71E-12	mg/kg-day	1.3E+01	(mg/kg-day)-1	8.7E-11
	METHOXYCHLOR	9.68E-03	mg/kg	9.68E-03	mg/kg	M	2.32E-10	mg/kg-day	--	--	--
										Total Cancer Risk Across All Direct Contact Exposure Routes/Pathways - Soil	5.5E-07

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

NV = No value available

TABLE J-84

EPA TABLE M.8.13.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	**METAL**										
	BARIUM	9.67E+01	mg/kg	9.67E+01	mg/kg	M	1.77E-05	mg/kg-day	--	--	--
	COBALT	1.15E+01	mg/kg	1.15E+01	mg/kg	M	2.09E-06	mg/kg-day	--	--	--
	COPPER	5.99E+01	mg/kg	5.99E+01	mg/kg	M	1.09E-05	mg/kg-day	--	--	--
	LEAD	9.96E+01	mg/kg	9.96E+01	mg/kg	M	1.82E-05	mg/kg-day	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.99E-01	mg/kg	M	5.47E-08	mg/kg-day	--	--	--
	SELENIUM	5.18E-01	mg/kg	5.18E-01	mg/kg	M	9.47E-08	mg/kg-day	--	--	--
	SILVER	5.63E-01	mg/kg	5.63E-01	mg/kg	M	1.03E-07	mg/kg-day	--	--	--
	THALLIUM	4.14E-01	mg/kg	4.14E-01	mg/kg	M	7.56E-08	mg/kg-day	--	--	--
	TIN	1.40E+01	mg/kg	1.40E+01	mg/kg	M	2.56E-06	mg/kg-day	--	--	--
	TITANIUM	4.25E+03	mg/kg	4.25E+03	mg/kg	M	7.77E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	7.48E-03	mg/kg	7.48E-03	mg/kg	M	1.37E-09	mg/kg-day	--	--	--
	ACETONE	1.71E-02	mg/kg	1.71E-02	mg/kg	M	3.12E-09	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	9.13E-10	mg/kg-day	--	--	--
	TOLUENE	6.11E-03	mg/kg	6.11E-03	mg/kg	M	1.12E-09	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	7.31E-10	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	6.76E-09	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	4.30E-08	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	3.65E-09	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	2.74E-08	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	2.17E-01	mg/kg	M	3.96E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	4.8E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	3.69E-08	mg/kg-day	1.2E+01	(mg/kg-day)-1	4.4E-07
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	2.16E-01	mg/kg	M	3.94E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	4.7E-08
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	2.08E-01	mg/kg	M	3.80E-08	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	2.32E-01	mg/kg	M	4.25E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	5.1E-08
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	1.19E-01	mg/kg	M	2.17E-08	mg/kg-day	1.4E-02	(mg/kg-day)-1	3.0E-10

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EPA TABLE M.8.13.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	1.33E-08	mg/kg-day	2.0E-02	(mg/kg-day)-1	2.7E-10
	CHRYSENE	2.04E-01	mg/kg	2.04E-01	mg/kg	M	3.73E-08	mg/kg-day	1.2E-01	(mg/kg-day)-1	4.5E-09
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	1.10E-08	mg/kg-day	4.1E+00	(mg/kg-day)-1	4.5E-08
	FLUORANTHENE	1.83E-01	mg/kg	1.83E-01	mg/kg	M	3.34E-08	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	1.50E-08	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	2.56E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	3.1E-08
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	4.38E-08	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	9.13E-08	mg/kg-day	1.2E-01	(mg/kg-day)-1	1.1E-08
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	4.17E-08	mg/kg-day	--	--	--
	PYRENE	1.71E-01	mg/kg	1.71E-01	mg/kg	M	3.12E-08	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.86E-03	mg/kg	2.86E-03	mg/kg	M	5.22E-10	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.3E-10
	4,4'-DDE	2.54E-03	mg/kg	2.54E-03	mg/kg	M	4.64E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.6E-10
	4,4'-DDT	8.46E-03	mg/kg	8.46E-03	mg/kg	M	1.55E-09	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.3E-10
	ALDRIN	1.01E-03	mg/kg	1.01E-03	mg/kg	M	1.84E-10	mg/kg-day	1.7E+01	(mg/kg-day)-1	3.1E-09
	ALPHA-BHC	3.33E-03	mg/kg	3.33E-03	mg/kg	M	6.08E-10	mg/kg-day	6.3E+00	(mg/kg-day)-1	3.8E-09
	ALPHA-CHLORDANE	2.26E-03	mg/kg	2.26E-03	mg/kg	M	4.13E-10	mg/kg-day	1.2E+00	(mg/kg-day)-1	5.0E-10
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	2.01E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	4.0E-09
	AROCLOR-1260	3.79E-02	mg/kg	3.79E-02	mg/kg	M	6.92E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.4E-08
	BETA-BHC	1.44E-03	mg/kg	1.44E-03	mg/kg	M	2.63E-10	mg/kg-day	1.8E+00	(mg/kg-day)-1	4.7E-10
	DELTA-BHC	1.13E-03	mg/kg	1.13E-03	mg/kg	M	2.06E-10	mg/kg-day	--	--	--
	DIELDRIN	2.07E-03	mg/kg	2.07E-03	mg/kg	M	3.78E-10	mg/kg-day	1.6E+01	(mg/kg-day)-1	6.0E-09
	ENDOSULFAN I	1.14E-03	mg/kg	1.14E-03	mg/kg	M	2.08E-10	mg/kg-day	--	--	--
	ENDOSULFAN II	1.92E-03	mg/kg	1.92E-03	mg/kg	M	3.51E-10	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	4.38E-10	mg/kg-day	--	--	--
	ENDRIN	1.98E-03	mg/kg	1.98E-03	mg/kg	M	3.62E-10	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	3.09E-03	mg/kg	M	5.64E-10	mg/kg-day	--	--	--
	ENDRIN KETONE	2.47E-03	mg/kg	2.47E-03	mg/kg	M	4.51E-10	mg/kg-day	--	--	--

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EPA TABLE M.8.13.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.61E-03	mg/kg	M	2.94E-10	mg/kg-day	1.3E+00	(mg/kg-day)-1	3.8E-10
	GAMMA-CHLORDANE	2.18E-03	mg/kg	2.18E-03	mg/kg	M	3.98E-10	mg/kg-day	1.2E+00	(mg/kg-day)-1	4.8E-10
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	3.65E-11	mg/kg-day	5.7E+00	(mg/kg-day)-1	2.1E-10
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.80E-04	mg/kg	M	5.11E-11	mg/kg-day	1.3E+01	(mg/kg-day)-1	6.6E-10
	METHOXYCHLOR	9.68E-03	mg/kg	9.68E-03	mg/kg	M	1.77E-09	mg/kg-day	--	--	--
Dermal	**METAL**										
	BARIUM	9.67E+01	mg/kg	9.67E+01	mg/kg	M	1.02E-06	mg/kg-day	--	--	--
	COBALT	1.15E+01	mg/kg	1.15E+01	mg/kg	M	1.21E-07	mg/kg-day	--	--	--
	COPPER	5.99E+01	mg/kg	5.99E+01	mg/kg	M	6.35E-07	mg/kg-day	--	--	--
	LEAD	9.96E+01	mg/kg	9.96E+01	mg/kg	M	1.05E-06	mg/kg-day	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.99E-01	mg/kg	M	3.17E-09	mg/kg-day	--	--	--
	SELENIUM	5.18E-01	mg/kg	5.18E-01	mg/kg	M	5.49E-09	mg/kg-day	--	--	--
	SILVER	5.63E-01	mg/kg	5.63E-01	mg/kg	M	5.96E-09	mg/kg-day	--	--	--
	THALLIUM	4.14E-01	mg/kg	4.14E-01	mg/kg	M	4.39E-09	mg/kg-day	--	--	--
	TIN	1.40E+01	mg/kg	1.40E+01	mg/kg	M	1.49E-07	mg/kg-day	--	--	--
	TITANIUM	4.25E+03	mg/kg	4.25E+03	mg/kg	M	4.51E-05	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS	0.00E+00									
	2-BUTANONE	7.48E-03	mg/kg	7.48E-03	mg/kg	M	7.92E-10	mg/kg-day	--	--	--
	ACETONE	1.71E-02	mg/kg	1.71E-02	mg/kg	M	1.81E-09	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	5.30E-10	mg/kg-day	--	--	--
	TOLUENE	6.11E-03	mg/kg	6.11E-03	mg/kg	M	6.47E-10	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	4.24E-10	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	3.92E-09	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	3.74E-08	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	3.18E-09	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	2.38E-08	mg/kg-day	--	--	--

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EPA TABLE M.8.13.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	2.17E-01	mg/kg	M	3.45E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	4.1E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	3.21E-08	mg/kg-day	1.2E+01	(mg/kg-day)-1	3.9E-07
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	2.16E-01	mg/kg	M	3.43E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	4.1E-08
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	2.08E-01	mg/kg	M	3.30E-08	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	2.32E-01	mg/kg	M	3.69E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	4.4E-08
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	1.19E-01	mg/kg	M	1.26E-08	mg/kg-day	1.4E-02	(mg/kg-day)-1	1.8E-10
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	7.73E-09	mg/kg-day	2.0E-02	(mg/kg-day)-1	1.5E-10
	CHRYSENE	2.04E-01	mg/kg	2.04E-01	mg/kg	M	3.25E-08	mg/kg-day	1.2E-01	(mg/kg-day)-1	3.9E-09
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	9.53E-09	mg/kg-day	4.1E+00	(mg/kg-day)-1	3.9E-08
	FLUORANTHENE	1.83E-01	mg/kg	1.83E-01	mg/kg	M	2.90E-08	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	1.30E-08	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	2.22E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	2.7E-08
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	3.81E-08	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	1.32E-07	mg/kg-day	1.2E-01	(mg/kg-day)-1	1.6E-08
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	3.63E-08	mg/kg-day	--	--	--
	PYRENE	1.71E-01	mg/kg	1.71E-01	mg/kg	M	2.72E-08	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.86E-03	mg/kg	2.86E-03	mg/kg	M	1.51E-10	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.6E-11
	4,4'-DDE	2.54E-03	mg/kg	2.54E-03	mg/kg	M	1.35E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.6E-11
	4,4'-DDT	8.46E-03	mg/kg	8.46E-03	mg/kg	M	4.48E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.5E-10
	ALDRIN	1.01E-03	mg/kg	1.01E-03	mg/kg	M	5.35E-11	mg/kg-day	1.7E+01	(mg/kg-day)-1	9.1E-10
	ALPHA-BHC	3.33E-03	mg/kg	3.33E-03	mg/kg	M	1.76E-10	mg/kg-day	6.3E+00	(mg/kg-day)-1	1.1E-09
	ALPHA-CHLORDANE	2.26E-03	mg/kg	2.26E-03	mg/kg	M	1.20E-10	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.4E-10
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	1.75E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	3.5E-09
	AROCLOR-1260	3.79E-02	mg/kg	3.79E-02	mg/kg	M	6.02E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.2E-08
	BETA-BHC	1.44E-03	mg/kg	1.44E-03	mg/kg	M	7.63E-11	mg/kg-day	1.8E+00	(mg/kg-day)-1	1.4E-10
	DELTA-BHC	1.13E-03	mg/kg	1.13E-03	mg/kg	M	5.99E-11	mg/kg-day	--	--	--
	DIELDRIN	2.07E-03	mg/kg	2.07E-03	mg/kg	M	1.10E-10	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.8E-09

TABLE J-84

EPA TABLE M.8.13.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDOSULFAN I	1.14E-03	mg/kg	1.14E-03	mg/kg	M	6.04E-11	mg/kg-day	--	--	--
	ENDOSULFAN II	1.92E-03	mg/kg	1.92E-03	mg/kg	M	1.02E-10	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	1.27E-10	mg/kg-day	--	--	--
	ENDRIN	1.98E-03	mg/kg	1.98E-03	mg/kg	M	1.05E-10	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	3.09E-03	mg/kg	M	1.64E-10	mg/kg-day	--	--	--
	ENDRIN KETONE	2.47E-03	mg/kg	2.47E-03	mg/kg	M	1.31E-10	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.61E-03	mg/kg	M	8.53E-11	mg/kg-day	1.3E+00	(mg/kg-day)-1	1.1E-10
	GAMMA-CHLORDANE	2.18E-03	mg/kg	2.18E-03	mg/kg	M	1.15E-10	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.4E-10
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	1.06E-11	mg/kg-day	5.7E+00	(mg/kg-day)-1	6.0E-11
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.80E-04	mg/kg	M	1.48E-11	mg/kg-day	1.3E+01	(mg/kg-day)-1	1.9E-10
	METHOXYCHLOR	9.68E-03	mg/kg	9.68E-03	mg/kg	M	5.13E-10	mg/kg-day	--	--	--
										Total Cancer Risk Across All Direct Contact Exposure Routes/Pathways - Soil	1.3E-06

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
bgs = Below ground surface
Ft. = Feet
mg/kg = Milligrams per kilogram
NV = No value available

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EPA TABLE M.8.14.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation-Dust	**METAL**										
	BARIUM	9.67E+01	mg/kg	7.35E-08	mg/m^3	R	1.34E-09	mg/kg-day	--	--	--
	COBALT	1.15E+01	mg/kg	8.70E-09	mg/m^3	R	1.59E-10	mg/kg-day	--	--	--
	COPPER	5.99E+01	mg/kg	4.55E-08	mg/m^3	R	8.30E-10	mg/kg-day	--	--	--
	LEAD	9.96E+01	mg/kg	7.57E-08	mg/m^3	R	1.38E-09	mg/kg-day	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.28E-10	mg/m^3	R	4.15E-12	mg/kg-day	--	--	--
	SELENIUM	5.18E-01	mg/kg	3.94E-10	mg/m^3	R	7.18E-12	mg/kg-day	--	--	--
	SILVER	5.63E-01	mg/kg	4.28E-10	mg/m^3	R	7.80E-12	mg/kg-day	--	--	--
	THALLIUM	4.14E-01	mg/kg	3.15E-10	mg/m^3	R	5.73E-12	mg/kg-day	--	--	--
	TIN	1.40E+01	mg/kg	1.07E-08	mg/m^3	R	1.94E-10	mg/kg-day	--	--	--
	TITANIUM	4.25E+03	mg/kg	3.23E-06	mg/m^3	R	5.89E-08	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	7.48E-03	mg/kg	5.68E-12	mg/m^3	R	1.04E-13	mg/kg-day	--	--	--
	ACETONE	1.71E-02	mg/kg	1.30E-11	mg/m^3	R	2.36E-13	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	3.80E-12	mg/m^3	R	6.92E-14	mg/kg-day	--	--	--
	TOLUENE	6.11E-03	mg/kg	4.64E-12	mg/m^3	R	8.46E-14	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	5.54E-14	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	5.12E-13	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	1.79E-10	mg/m^3	R	3.26E-12	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	1.52E-11	mg/m^3	R	2.77E-13	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	2.08E-12	mg/kg-day	--	--	--

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EPA TABLE M.8.14.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	1.65E-10	mg/m^3	R	3.00E-12	mg/kg-day	3.9E-01	(mg/kg-day)-1	1.2E-12
	BENZO(A)PYRENE	2.02E-01	mg/kg	1.53E-10	mg/m^3	R	2.80E-12	mg/kg-day	3.9E+00	(mg/kg-day)-1	1.1E-11
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	1.64E-10	mg/m^3	R	2.99E-12	mg/kg-day	3.9E-01	(mg/kg-day)-1	1.2E-12
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	1.58E-10	mg/m^3	R	2.88E-12	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	1.77E-10	mg/m^3	R	3.22E-12	mg/kg-day	3.9E-01	(mg/kg-day)-1	1.3E-12
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	9.02E-11	mg/m^3	R	1.64E-12	mg/kg-day	8.4E-03	(mg/kg-day)-1	1.4E-14
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	1.01E-12	mg/kg-day	2.0E-02	(mg/kg-day)-1	2.0E-14
	CHRYSENE	2.04E-01	mg/kg	1.55E-10	mg/m^3	R	2.83E-12	mg/kg-day	3.9E-02	(mg/kg-day)-1	1.1E-13
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	8.31E-13	mg/kg-day	4.1E+00	(mg/kg-day)-1	3.4E-12
	FLUORANTHENE	1.83E-01	mg/kg	1.39E-10	mg/m^3	R	2.53E-12	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	1.14E-12	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	1.94E-12	mg/kg-day	3.9E-01	(mg/kg-day)-1	7.6E-13
	NAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	3.32E-12	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	6.92E-12	mg/kg-day	1.2E-01	(mg/kg-day)-1	8.3E-13
	PHENANTHRENE	2.28E-01	mg/kg	1.74E-10	mg/m^3	R	3.16E-12	mg/kg-day	--	--	--
	PYRENE	1.71E-01	mg/kg	1.30E-10	mg/m^3	R	2.37E-12	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.86E-03	mg/kg	2.17E-12	mg/m^3	R	3.96E-14	mg/kg-day	2.4E-01	(mg/kg-day)-1	9.5E-15
	4,4'-DDE	2.54E-03	mg/kg	1.93E-12	mg/m^3	R	3.52E-14	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.2E-14
	4,4'-DDT	8.46E-03	mg/kg	6.43E-12	mg/m^3	R	1.17E-13	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.0E-14
	ALDRIN	1.01E-03	mg/kg	7.67E-13	mg/m^3	R	1.40E-14	mg/kg-day	1.7E+01	(mg/kg-day)-1	2.4E-13
	ALPHA-BHC	3.33E-03	mg/kg	2.53E-12	mg/m^3	R	4.61E-14	mg/kg-day	6.3E+00	(mg/kg-day)-1	2.9E-13
	ALPHA-CHLORDANE	2.26E-03	mg/kg	1.72E-12	mg/m^3	R	3.13E-14	mg/kg-day	1.2E+00	(mg/kg-day)-1	3.8E-14

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EPA TABLE M.8.14.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	AROCLOR-1254	1.10E-02	mg/kg	8.37E-12	mg/m^3	R	1.53E-13	mg/kg-day	2.0E+00	(mg/kg-day)-1	3.1E-13
	AROCLOR-1260	3.79E-02	mg/kg	2.88E-11	mg/m^3	R	5.24E-13	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.0E-12
	BETA-BHC	1.44E-03	mg/kg	1.09E-12	mg/m^3	R	1.99E-14	mg/kg-day	1.9E+00	(mg/kg-day)-1	3.7E-14
	DELTA-BHC	1.13E-03	mg/kg	8.59E-13	mg/m^3	R	1.56E-14	mg/kg-day	--	--	--
	DIELDRIN	2.07E-03	mg/kg	1.57E-12	mg/m^3	R	2.87E-14	mg/kg-day	1.6E+01	(mg/kg-day)-1	4.6E-13
	ENDOSULFAN I	1.14E-03	mg/kg	8.66E-13	mg/m^3	R	1.58E-14	mg/kg-day	--	--	--
	ENDOSULFAN II	1.92E-03	mg/kg	1.46E-12	mg/m^3	R	2.66E-14	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	1.82E-12	mg/m^3	R	3.32E-14	mg/kg-day	--	--	--
	ENDRIN	1.98E-03	mg/kg	1.50E-12	mg/m^3	R	2.74E-14	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	2.35E-12	mg/m^3	R	4.28E-14	mg/kg-day	--	--	--
	ENDRIN KETONE	2.47E-03	mg/kg	1.88E-12	mg/m^3	R	3.42E-14	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.22E-12	mg/m^3	R	2.23E-14	mg/kg-day	1.3E+00	(mg/kg-day)-1	2.9E-14
	GAMMA-CHLORDANE	2.18E-03	mg/kg	1.66E-12	mg/m^3	R	3.02E-14	mg/kg-day	1.2E+00	(mg/kg-day)-1	3.6E-14
	HEPTACHLOR	2.00E-04	mg/kg	1.52E-13	mg/m^3	R	2.77E-15	mg/kg-day	5.7E+00	(mg/kg-day)-1	1.6E-14
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.13E-13	mg/m^3	R	3.88E-15	mg/kg-day	1.3E+01	(mg/kg-day)-1	5.0E-14
	METHOXYCHLOR	9.68E-03	mg/kg	7.36E-12	mg/m^3	R	1.34E-13	mg/kg-day	--	--	--
Inhalation-VOCs	**METAL**										
	BARIUM	9.67E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COBALT	1.15E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COPPER	5.99E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	LEAD	9.96E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--

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EPA TABLE M.8.14.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	SELENIUM	5.18E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SILVER	5.63E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	THALLIUM	4.14E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TIN	1.40E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TITANIUM	4.25E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	7.48E-03	mg/kg	1.71E-04	mg/m^3	R	3.11E-06	mg/kg-day	--	--	--
	ACETONE	1.71E-02	mg/kg	3.48E-04	mg/m^3	R	6.33E-06	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.75E-02	mg/m^3	R	1.05E-03	mg/kg-day	--	--	--
	TOLUENE	6.11E-03	mg/kg	2.69E-02	mg/m^3	R	4.90E-04	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	2.97E-05	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	8.23E-04	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	1.74E-01	mg/m^3	R	3.18E-03	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	1.31E-02	mg/m^3	R	2.38E-04	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	5.00E-05	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BENZO(A)PYRENE	2.02E-01	mg/kg	--	mg/m^3	R	--	--	3.9E+00	(mg/kg-day)-1	--
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	--	mg/m^3	R	--	--	8.4E-03	(mg/kg-day)-1	--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-02	(mg/kg-day)-1	--

TABLE J-85

EPA TABLE M.8.14.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	CHRYSENE	2.04E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-02	(mg/kg-day)-1	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	4.1E+00	(mg/kg-day)-1	--
	FLUORANTHENE	1.83E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	6.19E-05	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	NAPHTHALENE	2.40E-01	mg/kg	*	mg/m^3	R	--	--	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	1.2E-01	(mg/kg-day)-1	--
	PHENANTHRENE	2.28E-01	mg/kg	4.20E-03	mg/m^3	R	7.65E-05	mg/kg-day	--	--	--
	PYRENE	1.71E-01	mg/kg	6.52E-04	mg/m^3	R	1.19E-05	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.86E-03	mg/kg	--	mg/m^3	R	--	--	2.4E-01	(mg/kg-day)-1	--
	4,4'-DDE	2.54E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	(mg/kg-day)-1	--
	4,4'-DDT	8.46E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	(mg/kg-day)-1	--
	ALDRIN	1.01E-03	mg/kg	--	mg/m^3	R	--	--	1.7E+01	(mg/kg-day)-1	--
	ALPHA-BHC	3.33E-03	mg/kg	--	mg/m^3	R	--	--	6.3E+00	(mg/kg-day)-1	--
	ALPHA-CHLORDANE	2.26E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	(mg/kg-day)-1	--
	AROCLOR-1254	1.10E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	(mg/kg-day)-1	--
	AROCLOR-1260	3.79E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	(mg/kg-day)-1	--
	BETA-BHC	1.44E-03	mg/kg	--	mg/m^3	R	--	--	1.9E+00	(mg/kg-day)-1	--
	DELTA-BHC	1.13E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	DIELDRIN	2.07E-03	mg/kg	--	mg/m^3	R	--	--	1.6E+01	(mg/kg-day)-1	--
	ENDOSULFAN I	1.14E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN II	1.92E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--

TABLE J-85

EPA TABLE M.8.14.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN	1.98E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN KETONE	2.47E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	--	mg/m^3	R	--	--	1.3E+00	(mg/kg-day)-1	--
	GAMMA-CHLORDANE	2.18E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	(mg/kg-day)-1	--
	HEPTACHLOR	2.00E-04	mg/kg	--	mg/m^3	R	--	--	5.7E+00	(mg/kg-day)-1	--
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	--	mg/m^3	R	--	--	1.3E+01	(mg/kg-day)-1	--
	METHOXYCHLOR	9.68E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--

Total Cancer Risk Across All Air Exposure Routes/Pathways - Soil	2.2E-11
Total Cancer Risk Across All Direct Contact Exposure Routes/Pathways - Soil	5.5E-07
Total Cancer Risk Across All Exposure Routes/Pathways - Soil	5.5E-07
Total Hazard Index Across All Air Exposure Routes/Pathways - Groundwater	1.5E-02
Total Cancer Risk Across All Exposure Routes/Pathways	1.5E-02

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

NV = No value available

VOC = Volatile organic compound

* = Inhalation of VOCs for naphthalane evaluated under groundwater exposures instead of soil due to single detection of naphthalene at 9.5 feet below ground suface, which is below shallow groundwater

TABLE J-86

EPA TABLE M.8.15.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation-Dust	**METAL**										
	BARIUM	9.67E+01	mg/kg	7.35E-08	mg/m^3	R	1.11E-09	mg/kg-day	--	--	--
	COBALT	1.15E+01	mg/kg	8.70E-09	mg/m^3	R	1.32E-10	mg/kg-day	--	--	--
	COPPER	5.99E+01	mg/kg	4.55E-08	mg/m^3	R	6.90E-10	mg/kg-day	--	--	--
	LEAD	9.96E+01	mg/kg	7.57E-08	mg/m^3	R	1.15E-09	mg/kg-day	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.28E-10	mg/m^3	R	3.45E-12	mg/kg-day	--	--	--
	SELENIUM	5.18E-01	mg/kg	3.94E-10	mg/m^3	R	5.97E-12	mg/kg-day	--	--	--
	SILVER	5.63E-01	mg/kg	4.28E-10	mg/m^3	R	6.49E-12	mg/kg-day	--	--	--
	THALLIUM	4.14E-01	mg/kg	3.15E-10	mg/m^3	R	4.77E-12	mg/kg-day	--	--	--
	TIN	1.40E+01	mg/kg	1.07E-08	mg/m^3	R	1.62E-10	mg/kg-day	--	--	--
	TITANIUM	4.25E+03	mg/kg	3.23E-06	mg/m^3	R	4.90E-08	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	7.48E-03	mg/kg	5.68E-12	mg/m^3	R	8.62E-14	mg/kg-day	--	--	--
	ACETONE	1.71E-02	mg/kg	1.30E-11	mg/m^3	R	1.97E-13	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	3.80E-12	mg/m^3	R	5.76E-14	mg/kg-day	--	--	--
	TOLUENE	6.11E-03	mg/kg	4.64E-12	mg/m^3	R	7.04E-14	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	4.61E-14	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	4.26E-13	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	1.79E-10	mg/m^3	R	2.71E-12	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	1.52E-11	mg/m^3	R	2.30E-13	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	1.73E-12	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	1.65E-10	mg/m^3	R	2.50E-12	mg/kg-day	3.9E-01	(mg/kg-day)-1	9.7E-13

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EPA TABLE M.8.15.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BENZO(A)PYRENE	2.02E-01	mg/kg	1.53E-10	mg/m^3	R	2.33E-12	mg/kg-day	3.9E+00	(mg/kg-day)-1	9.1E-12
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	1.64E-10	mg/m^3	R	2.49E-12	mg/kg-day	3.9E-01	(mg/kg-day)-1	9.7E-13
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	1.58E-10	mg/m^3	R	2.40E-12	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	1.77E-10	mg/m^3	R	2.68E-12	mg/kg-day	3.9E-01	(mg/kg-day)-1	1.0E-12
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	9.02E-11	mg/m^3	R	1.37E-12	mg/kg-day	8.4E-03	(mg/kg-day)-1	1.1E-14
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	8.41E-13	mg/kg-day	2.0E-02	(mg/kg-day)-1	1.7E-14
	CHRYSENE	2.04E-01	mg/kg	1.55E-10	mg/m^3	R	2.35E-12	mg/kg-day	3.9E-02	(mg/kg-day)-1	9.2E-14
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	6.91E-13	mg/kg-day	4.1E+00	(mg/kg-day)-1	2.8E-12
	FLUORANTHENE	1.83E-01	mg/kg	1.39E-10	mg/m^3	R	2.11E-12	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	9.45E-13	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	1.61E-12	mg/kg-day	3.9E-01	(mg/kg-day)-1	6.3E-13
	NAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	2.76E-12	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	5.76E-12	mg/kg-day	1.2E-01	(mg/kg-day)-1	6.9E-13
	PHENANTHRENE	2.28E-01	mg/kg	1.74E-10	mg/m^3	R	2.63E-12	mg/kg-day	--	--	--
	PYRENE	1.71E-01	mg/kg	1.30E-10	mg/m^3	R	1.97E-12	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.86E-03	mg/kg	2.17E-12	mg/m^3	R	3.29E-14	mg/kg-day	2.4E-01	(mg/kg-day)-1	7.9E-15
	4,4'-DDE	2.54E-03	mg/kg	1.93E-12	mg/m^3	R	2.93E-14	mg/kg-day	3.4E-01	(mg/kg-day)-1	9.9E-15
	4,4'-DDT	8.46E-03	mg/kg	6.43E-12	mg/m^3	R	9.75E-14	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.3E-14
	ALDRIN	1.01E-03	mg/kg	7.67E-13	mg/m^3	R	1.16E-14	mg/kg-day	1.7E+01	(mg/kg-day)-1	2.0E-13
	ALPHA-BHC	3.33E-03	mg/kg	2.53E-12	mg/m^3	R	3.84E-14	mg/kg-day	6.3E+00	(mg/kg-day)-1	2.4E-13
	ALPHA-CHLORDANE	2.26E-03	mg/kg	1.72E-12	mg/m^3	R	2.60E-14	mg/kg-day	1.2E+00	(mg/kg-day)-1	3.1E-14
	AROCLOR-1254	1.10E-02	mg/kg	8.37E-12	mg/m^3	R	1.27E-13	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.5E-13
	AROCLOR-1260	3.79E-02	mg/kg	2.88E-11	mg/m^3	R	4.36E-13	mg/kg-day	2.0E+00	(mg/kg-day)-1	8.7E-13

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EPA TABLE M.8.15.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BETA-BHC	1.44E-03	mg/kg	1.09E-12	mg/m^3	R	1.66E-14	mg/kg-day	1.9E+00	(mg/kg-day)-1	3.1E-14
	DELTA-BHC	1.13E-03	mg/kg	8.59E-13	mg/m^3	R	1.30E-14	mg/kg-day	--	--	--
	DIELDRIN	2.07E-03	mg/kg	1.57E-12	mg/m^3	R	2.38E-14	mg/kg-day	1.6E+01	(mg/kg-day)-1	3.8E-13
	ENDOSULFAN I	1.14E-03	mg/kg	8.66E-13	mg/m^3	R	1.31E-14	mg/kg-day	--	--	--
	ENDOSULFAN II	1.92E-03	mg/kg	1.46E-12	mg/m^3	R	2.21E-14	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	1.82E-12	mg/m^3	R	2.76E-14	mg/kg-day	--	--	--
	ENDRIN	1.98E-03	mg/kg	1.50E-12	mg/m^3	R	2.28E-14	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	2.35E-12	mg/m^3	R	3.56E-14	mg/kg-day	--	--	--
	ENDRIN KETONE	2.47E-03	mg/kg	1.88E-12	mg/m^3	R	2.85E-14	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.22E-12	mg/m^3	R	1.85E-14	mg/kg-day	1.3E+00	(mg/kg-day)-1	2.4E-14
	GAMMA-CHLORDANE	2.18E-03	mg/kg	1.66E-12	mg/m^3	R	2.51E-14	mg/kg-day	1.2E+00	(mg/kg-day)-1	3.0E-14
	HEPTACHLOR	2.00E-04	mg/kg	1.52E-13	mg/m^3	R	2.30E-15	mg/kg-day	5.7E+00	(mg/kg-day)-1	1.3E-14
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.13E-13	mg/m^3	R	3.23E-15	mg/kg-day	1.3E+01	(mg/kg-day)-1	4.2E-14
	METHOXYCHLOR	9.68E-03	mg/kg	7.36E-12	mg/m^3	R	1.12E-13	mg/kg-day	--	--	--
Inhalation-VOCs	**METAL**										
	BARIUM	9.67E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COBALT	1.15E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COPPER	5.99E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	LEAD	9.96E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SELENIUM	5.18E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SILVER	5.63E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	THALLIUM	4.14E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--

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EPA TABLE M.8.15.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	TIN	1.40E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TITANIUM	4.25E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	7.48E-03	mg/kg	1.71E-04	mg/m^3	R	2.59E-06	mg/kg-day	--	--	--
	ACETONE	1.71E-02	mg/kg	3.48E-04	mg/m^3	R	5.27E-06	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.75E-02	mg/m^3	R	8.72E-04	mg/kg-day	--	--	--
	TOLUENE	6.11E-03	mg/kg	2.69E-02	mg/m^3	R	4.07E-04	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	2.47E-05	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	6.85E-04	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	1.74E-01	mg/m^3	R	2.64E-03	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	1.31E-02	mg/m^3	R	1.98E-04	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	4.16E-05	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BENZO(A)PYRENE	2.02E-01	mg/kg	--	mg/m^3	R	--	--	3.9E+00	(mg/kg-day)-1	--
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	--	mg/m^3	R	--	--	8.4E-03	(mg/kg-day)-1	--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-02	(mg/kg-day)-1	--
	CHRYSENE	2.04E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-02	(mg/kg-day)-1	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	4.1E+00	(mg/kg-day)-1	--
	FLUORANTHENE	1.83E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	5.15E-05	mg/kg-day	--	--	--

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EPA TABLE M.8.15.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	NAPHTHALENE	2.40E-01	mg/kg	*	mg/m^3	R	--	--	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	1.2E-01	(mg/kg-day)-1	--
	PHENANTHRENE	2.28E-01	mg/kg	4.20E-03	mg/m^3	R	6.36E-05	mg/kg-day	--	--	--
	PYRENE	1.71E-01	mg/kg	6.52E-04	mg/m^3	R	9.89E-06	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.86E-03	mg/kg	--	mg/m^3	R	--	--	2.4E-01	(mg/kg-day)-1	--
	4,4'-DDE	2.54E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	(mg/kg-day)-1	--
	4,4'-DDT	8.46E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	(mg/kg-day)-1	--
	ALDRIN	1.01E-03	mg/kg	--	mg/m^3	R	--	--	1.7E+01	(mg/kg-day)-1	--
	ALPHA-BHC	3.33E-03	mg/kg	--	mg/m^3	R	--	--	6.3E+00	(mg/kg-day)-1	--
	ALPHA-CHLORDANE	2.26E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	(mg/kg-day)-1	--
	AROCLOR-1254	1.10E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	(mg/kg-day)-1	--
	AROCLOR-1260	3.79E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	(mg/kg-day)-1	--
	BETA-BHC	1.44E-03	mg/kg	--	mg/m^3	R	--	--	1.9E+00	(mg/kg-day)-1	--
	DELTA-BHC	1.13E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	DIELDRIN	2.07E-03	mg/kg	--	mg/m^3	R	--	--	1.6E+01	(mg/kg-day)-1	--
	ENDOSULFAN I	1.14E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN II	1.92E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN	1.98E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN KETONE	2.47E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	--	mg/m^3	R	--	--	1.3E+00	(mg/kg-day)-1	--

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EPA TABLE M.8.15.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	GAMMA-CHLORDANE	2.18E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	(mg/kg-day)-1	--
	HEPTACHLOR	2.00E-04	mg/kg	--	mg/m^3	R	--	--	5.7E+00	(mg/kg-day)-1	--
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	--	mg/m^3	R	--	--	1.3E+01	(mg/kg-day)-1	--
	METHOXYCHLOR	9.68E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--

Total Cancer Risk Across All Air Exposure Routes/Pathways - Soil	1.9E-11
Total Cancer Risk Across All Direct Contact Exposure Routes/Pathways - Soil	1.3E-06
Total Cancer Risk Across All Exposure Routes/Pathways - Soil	1.3E-06
Total Risk Across All Air Exposure Routes/Pathways - Groundwater	1.4E-08
Total Cancer Risk Across All Exposure Routes/Pathways	1.3E-06

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

NV = No value available

VOC = Volatile organic compound

* = Inhalation of VOCs for naphthalane evaluated under groundwater exposures instead of soil due to single detection of naphthalene at 9.5 feet below ground suface, which is below shallow groundwater

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EPA TABLE M.7.12.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	**METAL**												
	BARIUM	1.09E+02	mg/kg	1.09E+02	mg/kg	M	1.50E-04	mg/kg-day	7.0E-02	mg/kg-day	--	--	2.1E-03
	COBALT	1.29E+01	mg/kg	1.29E+01	mg/kg	M	1.77E-05	mg/kg-day	6.0E-02	mg/kg-day	--	--	3.0E-04
	COPPER	7.13E+01	mg/kg	7.13E+01	mg/kg	M	9.76E-05	mg/kg-day	3.7E-02	mg/kg-day	--	--	2.6E-03
	LEAD	1.47E+02	mg/kg	1.47E+02	mg/kg	M	2.02E-04	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	3.81E-01	mg/kg	M	5.22E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.0E-04
	SELENIUM	5.90E-01	mg/kg	5.90E-01	mg/kg	M	8.09E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.6E-04
	SILVER	9.22E-01	mg/kg	9.22E-01	mg/kg	M	1.26E-06	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.5E-04
	THALLIUM	4.51E-01	mg/kg	4.51E-01	mg/kg	M	6.18E-07	mg/kg-day	7.0E-05	mg/kg-day	--	--	8.8E-03
	TIN	1.78E+01	mg/kg	1.78E+01	mg/kg	M	2.43E-05	mg/kg-day	6.0E-01	mg/kg-day	--	--	4.1E-05
	TITANIUM	4.77E+03	mg/kg	4.77E+03	mg/kg	M	6.53E-03	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.2E-02
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	8.66E-03	mg/kg	8.66E-03	mg/kg	M	1.19E-08	mg/kg-day	6.0E-01	mg/kg-day	--	--	2.0E-08
	ACETONE	2.34E-02	mg/kg	2.34E-02	mg/kg	M	3.20E-08	mg/kg-day	1.0E-01	mg/kg-day	--	--	3.2E-07
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	6.85E-09	mg/kg-day	1.0E-01	mg/kg-day	--	--	6.8E-08
	TOLUENE	6.37E-03	mg/kg	6.37E-03	mg/kg	M	8.73E-09	mg/kg-day	2.0E-01	mg/kg-day	--	--	4.4E-08
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	5.48E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	2.7E-09
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	5.07E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	5.1E-06
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	3.29E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.1E-06
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	2.74E-08	mg/kg-day	6.0E-02	mg/kg-day	--	--	4.6E-07
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	2.05E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	6.8E-07
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	2.48E-01	mg/kg	M	3.40E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.1E-06
	BENZO(A)PYRENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	3.22E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.1E-05
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	2.49E-01	mg/kg	M	3.41E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	8.5E-06
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	2.37E-01	mg/kg	M	3.25E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.1E-05
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	2.59E-01	mg/kg	M	3.54E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	8.9E-06
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.44E-01	mg/kg	M	1.98E-07	mg/kg-day	2.0E-02	mg/kg-day	--	--	9.9E-06
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	1.00E-07	mg/kg-day	2.5E-02	mg/kg-day	--	--	4.0E-06
	CHRYSENE	2.43E-01	mg/kg	2.43E-01	mg/kg	M	3.33E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.1E-06
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	8.22E-08	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.7E-07
	FLUORANTHENE	2.23E-01	mg/kg	2.23E-01	mg/kg	M	3.05E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	7.6E-06
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	1.12E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	2.8E-06
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	1.92E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	4.8E-06

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EPA TABLE M.7.12.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	3.29E-07	mg/kg-day	2.0E-02	mg/kg-day	--	--	1.6E-05
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	6.85E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	2.3E-05
	PHENANTHRENE	2.65E-01	mg/kg	2.65E-01	mg/kg	M	3.63E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.2E-06
	PYRENE	2.05E-01	mg/kg	2.05E-01	mg/kg	M	2.81E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	9.4E-06
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.30E-03	mg/kg	3.30E-03	mg/kg	M	4.52E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	9.0E-06
	4,4'-DDE	2.82E-03	mg/kg	2.82E-03	mg/kg	M	3.86E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	7.7E-06
	4,4'-DDT	1.10E-02	mg/kg	1.10E-02	mg/kg	M	1.50E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.0E-05
	ALDRIN	1.03E-03	mg/kg	1.03E-03	mg/kg	M	1.41E-09	mg/kg-day	3.0E-05	mg/kg-day	--	--	4.7E-05
	ALPHA-BHC	4.35E-03	mg/kg	4.35E-03	mg/kg	M	5.96E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.0E-05
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.74E-03	mg/kg	M	3.75E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	7.5E-06
	AROCLOR-1254	1.40E-02	mg/kg	1.40E-02	mg/kg	M	1.92E-08	mg/kg-day	2.0E-05	mg/kg-day	--	--	9.6E-04
	AROCLOR-1260	4.89E-02	mg/kg	4.89E-02	mg/kg	M	6.70E-08	mg/kg-day	2.0E-05	mg/kg-day	--	--	3.3E-03
	BETA-BHC	1.61E-03	mg/kg	1.61E-03	mg/kg	M	2.21E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	7.4E-06
	DELTA-BHC	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.66E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	5.5E-06
	DIELDRIN	2.17E-03	mg/kg	2.17E-03	mg/kg	M	2.97E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	5.9E-05
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.66E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.8E-07
	ENDOSULFAN II	1.97E-03	mg/kg	1.97E-03	mg/kg	M	2.70E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	4.5E-07
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.63E-03	mg/kg	M	3.60E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	6.0E-07
	ENDRIN	2.05E-03	mg/kg	2.05E-03	mg/kg	M	2.81E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	9.4E-06
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	3.49E-03	mg/kg	M	4.78E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.6E-05
	ENDRIN KETONE	2.69E-03	mg/kg	2.69E-03	mg/kg	M	3.68E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.2E-05
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.83E-03	mg/kg	M	2.51E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	8.4E-06
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	3.63E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	7.3E-06
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	3.15E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	6.3E-07
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	3.30E-04	mg/kg	M	4.52E-10	mg/kg-day	1.3E-05	mg/kg-day	--	--	3.5E-05
	METHOXYCHLOR	9.97E-03	mg/kg	9.97E-03	mg/kg	M	1.37E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.7E-06
Dermal	**METAL**												
	BARIUM	1.09E+02	mg/kg	1.09E+02	mg/kg	M	5.98E-06	mg/kg-day	7.0E-02	mg/kg-day	--	--	8.5E-05
	COBALT	1.29E+01	mg/kg	1.29E+01	mg/kg	M	7.07E-07	mg/kg-day	6.0E-02	mg/kg-day	--	--	1.2E-05
	COPPER	7.13E+01	mg/kg	7.13E+01	mg/kg	M	3.90E-06	mg/kg-day	3.7E-02	mg/kg-day	--	--	1.1E-04
	LEAD	1.47E+02	mg/kg	1.47E+02	mg/kg	M	8.04E-06	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	3.81E-01	mg/kg	M	2.08E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	4.2E-06
	SELENIUM	5.90E-01	mg/kg	5.90E-01	mg/kg	M	3.23E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	6.5E-06

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EPA TABLE M.7.12.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	SILVER	9.22E-01	mg/kg	9.22E-01	mg/kg	M	5.04E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.0E-05
	THALLIUM	4.51E-01	mg/kg	4.51E-01	mg/kg	M	2.46E-08	mg/kg-day	7.0E-05	mg/kg-day	--	--	3.5E-04
	TIN	1.78E+01	mg/kg	1.78E+01	mg/kg	M	9.71E-07	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.6E-06
	TITANIUM	4.77E+03	mg/kg	4.77E+03	mg/kg	M	2.61E-04	mg/kg-day	3.0E-01	mg/kg-day	--	--	8.7E-04
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	8.66E-03	mg/kg	8.66E-03	mg/kg	M	4.73E-09	mg/kg-day	6.0E-01	mg/kg-day	--	--	7.9E-09
	ACETONE	2.34E-02	mg/kg	2.34E-02	mg/kg	M	1.28E-08	mg/kg-day	1.0E-01	mg/kg-day	--	--	1.3E-07
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	2.73E-09	mg/kg-day	1.0E-01	mg/kg-day	--	--	2.7E-08
	TOLUENE	6.37E-03	mg/kg	6.37E-03	mg/kg	M	3.48E-09	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.7E-08
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	2.19E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.1E-09
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	2.02E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	2.0E-06
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.97E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	6.6E-07
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	1.64E-08	mg/kg-day	6.0E-02	mg/kg-day	--	--	2.7E-07
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.23E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.1E-07
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	2.48E-01	mg/kg	M	2.04E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	6.8E-07
	BENZO(A)PYRENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	1.93E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	6.4E-06
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	2.49E-01	mg/kg	M	2.04E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	5.1E-06
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	2.37E-01	mg/kg	M	1.94E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	6.5E-06
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	2.59E-01	mg/kg	M	2.12E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	5.3E-06
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.44E-01	mg/kg	M	7.88E-08	mg/kg-day	2.0E-02	mg/kg-day	--	--	3.9E-06
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	3.99E-08	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.6E-06
	CHRYSENE	2.43E-01	mg/kg	2.43E-01	mg/kg	M	1.99E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	6.6E-07
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	4.92E-08	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.6E-07
	FLUORANTHENE	2.23E-01	mg/kg	2.23E-01	mg/kg	M	1.83E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	4.6E-06
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	6.72E-08	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.7E-06
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	1.15E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	2.9E-06
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.97E-07	mg/kg-day	2.0E-02	mg/kg-day	--	--	9.8E-06
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	6.83E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	2.3E-05
	PHENANTHRENE	2.65E-01	mg/kg	2.65E-01	mg/kg	M	2.17E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	7.2E-07
	PYRENE	2.05E-01	mg/kg	2.05E-01	mg/kg	M	1.68E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	5.6E-06
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.30E-03	mg/kg	3.30E-03	mg/kg	M	9.02E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.8E-06
	4,4'-DDE	2.82E-03	mg/kg	2.82E-03	mg/kg	M	7.71E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.5E-06

TABLE J-87

EPA TABLE M.7.12.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	4,4'-DDT	1.10E-02	mg/kg	1.10E-02	mg/kg	M	2.99E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	6.0E-06
	ALDRIN	1.03E-03	mg/kg	1.03E-03	mg/kg	M	2.81E-10	mg/kg-day	3.0E-05	mg/kg-day	--	--	9.4E-06
	ALPHA-BHC	4.35E-03	mg/kg	4.35E-03	mg/kg	M	1.19E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	4.0E-06
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.74E-03	mg/kg	M	7.49E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.5E-06
	AROCLOR-1254	1.40E-02	mg/kg	1.40E-02	mg/kg	M	1.15E-08	mg/kg-day	2.0E-05	mg/kg-day	--	--	5.7E-04
	AROCLOR-1260	4.89E-02	mg/kg	4.89E-02	mg/kg	M	4.01E-08	mg/kg-day	2.0E-05	mg/kg-day	--	--	2.0E-03
	BETA-BHC	1.61E-03	mg/kg	1.61E-03	mg/kg	M	4.40E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.5E-06
	DELTA-BHC	1.21E-03	mg/kg	1.21E-03	mg/kg	M	3.31E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.1E-06
	DIELDRIN	2.17E-03	mg/kg	2.17E-03	mg/kg	M	5.93E-10	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.2E-05
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	3.31E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	5.5E-08
	ENDOSULFAN II	1.97E-03	mg/kg	1.97E-03	mg/kg	M	5.38E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	9.0E-08
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.63E-03	mg/kg	M	7.19E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.2E-07
	ENDRIN	2.05E-03	mg/kg	2.05E-03	mg/kg	M	5.60E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.9E-06
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	3.49E-03	mg/kg	M	9.54E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.2E-06
	ENDRIN KETONE	2.69E-03	mg/kg	2.69E-03	mg/kg	M	7.35E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.5E-06
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.83E-03	mg/kg	M	5.00E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.7E-06
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	7.24E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.4E-06
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	6.29E-11	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.3E-07
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	3.30E-04	mg/kg	M	9.02E-11	mg/kg-day	1.3E-05	mg/kg-day	--	--	6.9E-06
	METHOXYCHLOR	9.97E-03	mg/kg	9.97E-03	mg/kg	M	2.72E-09	mg/kg-day	5.0E-03	mg/kg-day	--	--	5.4E-07
												Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	4.5E-02

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) Chronic Values Used

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

TABLE J-88

EPA TABLE M.7.13.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	**METAL**												
	BARIUM	1.09E+02	mg/kg	1.09E+02	mg/kg	M	1.40E-03	mg/kg-day	7.0E-02	mg/kg-day	--	--	2.0E-02
	COBALT	1.29E+01	mg/kg	1.29E+01	mg/kg	M	1.65E-04	mg/kg-day	6.0E-02	mg/kg-day	--	--	2.8E-03
	COPPER	7.13E+01	mg/kg	7.13E+01	mg/kg	M	9.11E-04	mg/kg-day	3.7E-02	mg/kg-day	--	--	2.5E-02
	LEAD	1.47E+02	mg/kg	1.47E+02	mg/kg	M	1.88E-03	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	3.81E-01	mg/kg	M	4.88E-06	mg/kg-day	5.0E-03	mg/kg-day	--	--	9.8E-04
	SELENIUM	5.90E-01	mg/kg	5.90E-01	mg/kg	M	7.55E-06	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.5E-03
	SILVER	9.22E-01	mg/kg	9.22E-01	mg/kg	M	1.18E-05	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.4E-03
	THALLIUM	4.51E-01	mg/kg	4.51E-01	mg/kg	M	5.76E-06	mg/kg-day	7.0E-05	mg/kg-day	--	--	8.2E-02
	TIN	1.78E+01	mg/kg	1.78E+01	mg/kg	M	2.27E-04	mg/kg-day	6.0E-01	mg/kg-day	--	--	3.8E-04
	TITANIUM	4.77E+03	mg/kg	4.77E+03	mg/kg	M	6.09E-02	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.0E-01
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	8.66E-03	mg/kg	8.66E-03	mg/kg	M	1.11E-07	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.8E-07
	ACETONE	2.34E-02	mg/kg	2.34E-02	mg/kg	M	2.99E-07	mg/kg-day	1.0E-01	mg/kg-day	--	--	3.0E-06
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	6.39E-08	mg/kg-day	1.0E-01	mg/kg-day	--	--	6.4E-07
	TOLUENE	6.37E-03	mg/kg	6.37E-03	mg/kg	M	8.14E-08	mg/kg-day	2.0E-01	mg/kg-day	--	--	4.1E-07
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	5.11E-08	mg/kg-day	2.0E+00	mg/kg-day	--	--	2.6E-08
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	4.73E-07	mg/kg-day	1.0E-02	mg/kg-day	--	--	4.7E-05
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	3.07E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.0E-05
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	2.56E-07	mg/kg-day	6.0E-02	mg/kg-day	--	--	4.3E-06
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.92E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	6.4E-06
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	2.48E-01	mg/kg	M	3.17E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.1E-05
	BENZO(A)PYRENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	3.01E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.0E-04
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	2.49E-01	mg/kg	M	3.18E-06	mg/kg-day	4.0E-02	mg/kg-day	--	--	8.0E-05
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	2.37E-01	mg/kg	M	3.03E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.0E-04
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	2.59E-01	mg/kg	M	3.31E-06	mg/kg-day	4.0E-02	mg/kg-day	--	--	8.3E-05
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.44E-01	mg/kg	M	1.84E-06	mg/kg-day	2.0E-02	mg/kg-day	--	--	9.2E-05
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	9.33E-07	mg/kg-day	2.5E-02	mg/kg-day	--	--	3.7E-05
	CHRYSENE	2.43E-01	mg/kg	2.43E-01	mg/kg	M	3.11E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.0E-05
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	7.67E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.6E-06
	FLUORANTHENE	2.23E-01	mg/kg	2.23E-01	mg/kg	M	2.85E-06	mg/kg-day	4.0E-02	mg/kg-day	--	--	7.1E-05
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	1.05E-06	mg/kg-day	4.0E-02	mg/kg-day	--	--	2.6E-05
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	1.79E-06	mg/kg-day	4.0E-02	mg/kg-day	--	--	4.5E-05
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	3.07E-06	mg/kg-day	2.0E-02	mg/kg-day	--	--	1.5E-04
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	6.39E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	2.1E-04

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EPA TABLE M.7.13.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	PHENANTHRENE	2.65E-01	mg/kg	2.65E-01	mg/kg	M	3.39E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.1E-05
	PYRENE	2.05E-01	mg/kg	2.05E-01	mg/kg	M	2.63E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	8.8E-05
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.30E-03	mg/kg	3.30E-03	mg/kg	M	4.22E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	8.4E-05
	4,4'-DDE	2.82E-03	mg/kg	2.82E-03	mg/kg	M	3.61E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	7.2E-05
	4,4'-DDT	1.10E-02	mg/kg	1.10E-02	mg/kg	M	1.40E-07	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.8E-04
	ALDRIN	1.03E-03	mg/kg	1.03E-03	mg/kg	M	1.32E-08	mg/kg-day	3.0E-05	mg/kg-day	--	--	4.4E-04
	ALPHA-BHC	4.35E-03	mg/kg	4.35E-03	mg/kg	M	5.56E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.9E-04
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.74E-03	mg/kg	M	3.50E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	7.0E-05
	AROCLOR-1254	1.40E-02	mg/kg	1.40E-02	mg/kg	M	1.79E-07	mg/kg-day	2.0E-05	mg/kg-day	--	--	8.9E-03
	AROCLOR-1260	4.89E-02	mg/kg	4.89E-02	mg/kg	M	6.25E-07	mg/kg-day	2.0E-05	mg/kg-day	--	--	3.1E-02
	BETA-BHC	1.61E-03	mg/kg	1.61E-03	mg/kg	M	2.06E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	6.9E-05
	DELTA-BHC	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.55E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	5.2E-05
	DIELDRIN	2.17E-03	mg/kg	2.17E-03	mg/kg	M	2.77E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	5.5E-04
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.55E-08	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.6E-06
	ENDOSULFAN II	1.97E-03	mg/kg	1.97E-03	mg/kg	M	2.52E-08	mg/kg-day	6.0E-03	mg/kg-day	--	--	4.2E-06
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.63E-03	mg/kg	M	3.36E-08	mg/kg-day	6.0E-03	mg/kg-day	--	--	5.6E-06
	ENDRIN	2.05E-03	mg/kg	2.05E-03	mg/kg	M	2.62E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	8.7E-05
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	3.49E-03	mg/kg	M	4.46E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.5E-04
	ENDRIN KETONE	2.69E-03	mg/kg	2.69E-03	mg/kg	M	3.44E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.1E-04
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.83E-03	mg/kg	M	2.34E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	7.8E-05
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	3.39E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	6.8E-05
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	2.94E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	5.9E-06
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	3.30E-04	mg/kg	M	4.22E-09	mg/kg-day	1.3E-05	mg/kg-day	--	--	3.2E-04
	METHOXYCHLOR	9.97E-03	mg/kg	9.97E-03	mg/kg	M	1.27E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.5E-05
Dermal	**METAL**												
	BARIUM	1.09E+02	mg/kg	1.09E+02	mg/kg	M	4.05E-05	mg/kg-day	7.0E-02	mg/kg-day	--	--	5.8E-04
	COBALT	1.29E+01	mg/kg	1.29E+01	mg/kg	M	4.80E-06	mg/kg-day	6.0E-02	mg/kg-day	--	--	8.0E-05
	COPPER	7.13E+01	mg/kg	7.13E+01	mg/kg	M	2.64E-05	mg/kg-day	3.7E-02	mg/kg-day	--	--	7.1E-04
	LEAD	1.47E+02	mg/kg	1.47E+02	mg/kg	M	5.46E-05	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	3.81E-01	mg/kg	M	1.41E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.8E-05
	SELENIUM	5.90E-01	mg/kg	5.90E-01	mg/kg	M	2.19E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	4.4E-05
	SILVER	9.22E-01	mg/kg	9.22E-01	mg/kg	M	3.42E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	6.8E-05
	THALLIUM	4.51E-01	mg/kg	4.51E-01	mg/kg	M	1.67E-07	mg/kg-day	7.0E-05	mg/kg-day	--	--	2.4E-03
	TIN	1.78E+01	mg/kg	1.78E+01	mg/kg	M	6.59E-06	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.1E-05
	TITANIUM	4.77E+03	mg/kg	4.77E+03	mg/kg	M	1.77E-03	mg/kg-day	3.0E-01	mg/kg-day	--	--	5.9E-03

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CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	8.66E-03	mg/kg	8.66E-03	mg/kg	M	3.21E-08	mg/kg-day	6.0E-01	mg/kg-day	--	--	5.4E-08
	ACETONE	2.34E-02	mg/kg	2.34E-02	mg/kg	M	8.67E-08	mg/kg-day	1.0E-01	mg/kg-day	--	--	8.7E-07
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	1.85E-08	mg/kg-day	1.0E-01	mg/kg-day	--	--	1.9E-07
	TOLUENE	6.37E-03	mg/kg	6.37E-03	mg/kg	M	2.36E-08	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.2E-07
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.48E-08	mg/kg-day	2.0E+00	mg/kg-day	--	--	7.4E-09
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.37E-07	mg/kg-day	1.0E-02	mg/kg-day	--	--	1.4E-05
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.33E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.4E-06
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	1.11E-07	mg/kg-day	6.0E-02	mg/kg-day	--	--	1.9E-06
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	8.34E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.8E-06
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	2.48E-01	mg/kg	M	1.38E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.6E-06
	BENZO(A)PYRENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	1.31E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	4.4E-05
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	2.49E-01	mg/kg	M	1.38E-06	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.5E-05
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	2.37E-01	mg/kg	M	1.32E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	4.4E-05
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	2.59E-01	mg/kg	M	1.44E-06	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.6E-05
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.44E-01	mg/kg	M	5.35E-07	mg/kg-day	2.0E-02	mg/kg-day	--	--	2.7E-05
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	2.71E-07	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.1E-05
	CHRYSENE	2.43E-01	mg/kg	2.43E-01	mg/kg	M	1.35E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.5E-06
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	3.34E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.1E-06
	FLUORANTHENE	2.23E-01	mg/kg	2.23E-01	mg/kg	M	1.24E-06	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.1E-05
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	4.56E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.1E-05
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	7.79E-07	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.9E-05
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.33E-06	mg/kg-day	2.0E-02	mg/kg-day	--	--	6.7E-05
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	4.63E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.5E-04
	PHENANTHRENE	2.65E-01	mg/kg	2.65E-01	mg/kg	M	1.47E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.9E-06
	PYRENE	2.05E-01	mg/kg	2.05E-01	mg/kg	M	1.14E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	3.8E-05
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.30E-03	mg/kg	3.30E-03	mg/kg	M	6.12E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.2E-05
	4,4'-DDE	2.82E-03	mg/kg	2.82E-03	mg/kg	M	5.23E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.0E-05
	4,4'-DDT	1.10E-02	mg/kg	1.10E-02	mg/kg	M	2.03E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	4.1E-05
	ALDRIN	1.03E-03	mg/kg	1.03E-03	mg/kg	M	1.91E-09	mg/kg-day	3.0E-05	mg/kg-day	--	--	6.4E-05
	ALPHA-BHC	4.35E-03	mg/kg	4.35E-03	mg/kg	M	8.06E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.7E-05
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.74E-03	mg/kg	M	5.08E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.0E-05
	AROCLOR-1254	1.40E-02	mg/kg	1.40E-02	mg/kg	M	7.79E-08	mg/kg-day	2.0E-05	mg/kg-day	--	--	3.9E-03
	AROCLOR-1260	4.89E-02	mg/kg	4.89E-02	mg/kg	M	2.72E-07	mg/kg-day	2.0E-05	mg/kg-day	--	--	1.4E-02

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Medium:	Soil 0-10 ft. bgs
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Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	BETA-BHC	1.61E-03	mg/kg	1.61E-03	mg/kg	M	2.98E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	9.9E-06
	DELTA-BHC	1.21E-03	mg/kg	1.21E-03	mg/kg	M	2.24E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	7.5E-06
	DIELDRIN	2.17E-03	mg/kg	2.17E-03	mg/kg	M	4.02E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	8.0E-05
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	2.24E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	3.7E-07
	ENDOSULFAN II	1.97E-03	mg/kg	1.97E-03	mg/kg	M	3.65E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	6.1E-07
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.63E-03	mg/kg	M	4.88E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	8.1E-07
	ENDRIN	2.05E-03	mg/kg	2.05E-03	mg/kg	M	3.80E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.3E-05
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	3.49E-03	mg/kg	M	6.47E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.2E-05
	ENDRIN KETONE	2.69E-03	mg/kg	2.69E-03	mg/kg	M	4.99E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.7E-05
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.83E-03	mg/kg	M	3.39E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.1E-05
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	4.91E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	9.8E-06
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	4.26E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	8.5E-07
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	3.30E-04	mg/kg	M	6.12E-10	mg/kg-day	1.3E-05	mg/kg-day	--	--	4.7E-05
	METHOXYCHLOR	9.97E-03	mg/kg	9.97E-03	mg/kg	M	1.85E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.7E-06
												Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	4.1E-01

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
(2) Chronic Values Used
bgs = Below ground surface
Ft. = Feet
mg/kg = Milligrams per kilogram

TABLE J-89

EPA TABLE M.7.14.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation-Dust	**METAL**												
	BARIUM	1.09E+02	mg/kg	8.31E-08	mg/m^3	R	2.28E-08	mg/kg-day	1.0E-04	mg/kg-day	--	--	2.3E-04
	COBALT	1.29E+01	mg/kg	9.84E-09	mg/m^3	R	2.69E-09	mg/kg-day	1.4E-06	mg/kg-day	--	--	1.9E-03
	COPPER	7.13E+01	mg/kg	5.42E-08	mg/m^3	R	1.48E-08	mg/kg-day	5.7E-06	mg/kg-day	--	--	2.6E-03
	LEAD	1.47E+02	mg/kg	1.12E-07	mg/m^3	R	3.06E-08	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	2.90E-10	mg/m^3	R	7.94E-11	mg/kg-day	--	--	--	--	--
	SELENIUM	5.90E-01	mg/kg	4.49E-10	mg/m^3	R	1.23E-10	mg/kg-day	2.3E-05	mg/kg-day	--	--	5.4E-06
	SILVER	9.22E-01	mg/kg	7.01E-10	mg/m^3	R	1.92E-10	mg/kg-day	5.7E-03	mg/kg-day	--	--	3.4E-08
	THALLIUM	4.51E-01	mg/kg	3.43E-10	mg/m^3	R	9.39E-11	mg/kg-day	--	--	--	--	--
	TIN	1.78E+01	mg/kg	1.35E-08	mg/m^3	R	3.70E-09	mg/kg-day	--	--			--
	TITANIUM	4.77E+03	mg/kg	3.62E-06	mg/m^3	R	9.92E-07	mg/kg-day	2.6E-04	mg/kg-day	--	--	3.8E-03
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	8.66E-03	mg/kg	6.58E-12	mg/m^3	R	1.80E-12	mg/kg-day	2.9E-01	mg/kg-day	--	--	6.2E-12
	ACETONE	2.34E-02	mg/kg	1.78E-11	mg/m^3	R	4.87E-12	mg/kg-day	1.0E-01	mg/kg-day	--	--	4.9E-11
	CARBON DISULFIDE	5.00E-03	mg/kg	3.80E-12	mg/m^3	R	1.04E-12	mg/kg-day	2.0E-01	mg/kg-day	--	--	5.2E-12
	TOLUENE	6.37E-03	mg/kg	4.84E-12	mg/m^3	R	1.33E-12	mg/kg-day	1.1E-01	mg/kg-day	--	--	1.2E-11
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	8.33E-13	mg/kg-day	2.0E-01	mg/kg-day	--	--	4.2E-12
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	7.70E-12	mg/kg-day	5.7E-02	mg/kg-day	--	--	1.3E-10
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	5.00E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.7E-10
	ACENAPHTHENE	2.00E-02	mg/kg	1.52E-11	mg/m^3	R	4.16E-12	mg/kg-day	6.0E-02	mg/kg-day	--	--	6.9E-11
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	3.12E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.0E-10
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	1.89E-10	mg/m^3	R	5.17E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.7E-10
	BENZO(A)PYRENE	2.35E-01	mg/kg	1.79E-10	mg/m^3	R	4.90E-11	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.6E-09
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	1.89E-10	mg/m^3	R	5.18E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.3E-09
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	1.80E-10	mg/m^3	R	4.93E-11	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.6E-09
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	1.97E-10	mg/m^3	R	5.39E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.3E-09
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.10E-10	mg/m^3	R	3.00E-11	mg/kg-day	2.0E-02	mg/kg-day			1.5E-09
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	1.52E-11	mg/kg-day	2.5E-02	mg/kg-day	--	--	6.1E-10

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EPA TABLE M.7.14.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	CHRYSENE	2.43E-01	mg/kg	1.85E-10	mg/m^3	R	5.06E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.7E-10
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	1.25E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.2E-11
	FLUORANTHENE	2.23E-01	mg/kg	1.69E-10	mg/m^3	R	4.64E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.2E-09
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	1.71E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	4.3E-10
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	2.91E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	7.3E-10
	NAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	5.00E-11	mg/kg-day	8.6E-04	mg/kg-day	--	--	5.8E-08
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	1.04E-10	mg/kg-day	3.0E-02	mg/kg-day			3.5E-09
	PHENANTHRENE	2.65E-01	mg/kg	2.01E-10	mg/m^3	R	5.51E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.8E-10
	PYRENE	2.05E-01	mg/kg	1.56E-10	mg/m^3	R	4.28E-11	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.4E-09
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.30E-03	mg/kg	2.51E-12	mg/m^3	R	6.87E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.4E-09
	4,4'-DDE	2.82E-03	mg/kg	2.14E-12	mg/m^3	R	5.87E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.2E-09
	4,4'-DDT	1.10E-02	mg/kg	8.32E-12	mg/m^3	R	2.28E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	4.6E-09
	ALDRIN	1.03E-03	mg/kg	7.83E-13	mg/m^3	R	2.14E-13	mg/kg-day	3.0E-05	mg/kg-day	--	--	7.1E-09
	ALPHA-BHC	4.35E-03	mg/kg	3.31E-12	mg/m^3	R	9.06E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.0E-09
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.08E-12	mg/m^3	R	5.70E-13	mg/kg-day	2.0E-04	mg/kg-day	--	--	2.9E-09
	AROCLOR-1254	1.40E-02	mg/kg	1.06E-11	mg/m^3	R	2.91E-12	mg/kg-day	2.0E-05	mg/kg-day	--	--	1.5E-07
	AROCLOR-1260	4.89E-02	mg/kg	3.72E-11	mg/m^3	R	1.02E-11	mg/kg-day	2.0E-05	mg/kg-day	--	--	5.1E-07
	BETA-BHC	1.61E-03	mg/kg	1.22E-12	mg/m^3	R	3.35E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.1E-09
	DELTA-BHC	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	2.52E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	8.4E-10
	DIELDRIN	2.17E-03	mg/kg	1.65E-12	mg/m^3	R	4.52E-13	mg/kg-day	5.0E-05	mg/kg-day			9.0E-09
	ENDOSULFAN I	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	2.52E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	4.2E-11
	ENDOSULFAN II	1.97E-03	mg/kg	1.50E-12	mg/m^3	R	4.10E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	6.8E-11
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.00E-12	mg/m^3	R	5.48E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	9.1E-11
	ENDRIN	2.05E-03	mg/kg	1.56E-12	mg/m^3	R	4.27E-13	mg/kg-day	3.0E-04	mg/kg-day			1.4E-09
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	2.65E-12	mg/m^3	R	7.27E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.4E-09
	ENDRIN KETONE	2.69E-03	mg/kg	2.04E-12	mg/m^3	R	5.60E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.9E-09
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.39E-12	mg/m^3	R	3.81E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.3E-09
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.01E-12	mg/m^3	R	5.52E-13	mg/kg-day	2.0E-04	mg/kg-day	--	--	2.8E-09

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EPA TABLE M.7.14.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	HEPTACHLOR	2.30E-04	mg/kg	1.75E-13	mg/m^3	R	4.79E-14	mg/kg-day	5.0E-04	mg/kg-day	--	--	9.6E-11
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	2.51E-13	mg/m^3	R	6.87E-14	mg/kg-day	1.3E-05	mg/kg-day	--	--	5.3E-09
	METHOXYCHLOR	9.97E-03	mg/kg	7.58E-12	mg/m^3	R	2.08E-12	mg/kg-day	5.0E-03	mg/kg-day	--	--	4.2E-10
Inhalation-VOCs	**METAL**												
	BARIUM	1.09E+02	mg/kg	--	mg/m^3	R	--	--	1.0E-04	mg/kg-day	--	--	--
	COBALT	1.29E+01	mg/kg	--	mg/m^3	R	--	--	1.4E-06	mg/kg-day	--	--	--
	COPPER	7.13E+01	mg/kg	--	mg/m^3	R	--	--	5.7E-06	mg/kg-day	--	--	--
	LEAD	1.47E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	SELENIUM	5.90E-01	mg/kg	--	mg/m^3	R	--	--	2.3E-05	mg/kg-day	--	--	--
	SILVER	9.22E-01	mg/kg	--	mg/m^3	R	--	--	5.7E-03	mg/kg-day	--	--	--
	THALLIUM	4.51E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TIN	1.78E+01	mg/kg	--	mg/m^3	R	--	--	--	--			--
	TITANIUM	4.77E+03	mg/kg	--	mg/m^3	R	--	--	2.6E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	8.66E-03	mg/kg	1.98E-04	mg/m^3	R	5.42E-05	mg/kg-day	2.9E-01	mg/kg-day	--	--	1.9E-04
	ACETONE	2.34E-02	mg/kg	4.76E-04	mg/m^3	R	1.30E-04	mg/kg-day	1.0E-01	mg/kg-day	--	--	1.3E-03
	CARBON DISULFIDE	5.00E-03	mg/kg	5.75E-02	mg/m^3	R	1.58E-02	mg/kg-day	2.0E-01	mg/kg-day	--	--	7.9E-02
	TOLUENE	6.37E-03	mg/kg	2.80E-02	mg/m^3	R	7.68E-03	mg/kg-day	1.1E-01	mg/kg-day	--	--	6.7E-02
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	4.47E-04	mg/kg-day	2.0E-01	mg/kg-day	--	--	2.2E-03
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	1.24E-02	mg/kg-day	5.7E-02	mg/kg-day	--	--	2.2E-01
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.78E-01	mg/m^3	R	4.87E-02	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.6E-01
	ACENAPHTHENE	2.00E-02	mg/kg	1.31E-02	mg/m^3	R	3.58E-03	mg/kg-day	6.0E-02	mg/kg-day	--	--	6.0E-02
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	7.51E-04	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.5E-03
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(A)PYRENE	2.35E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day	--	--	--

TABLE J-89

EPA TABLE M.7.14.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day			--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.5E-02	mg/kg-day	--	--	--
	CHRYSENE	2.43E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	FLUORANTHENE	2.23E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	9.30E-04	mg/kg-day	4.0E-02	mg/kg-day	--	--	2.3E-02
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	NAPHTHALENE	2.40E-01	mg/kg	*	mg/m^3	R	--	--	8.6E-04	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day		--	--
	PHENANTHRENE	2.65E-01	mg/kg	4.87E-03	mg/m^3	R	1.33E-03	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.4E-03
	PYRENE	2.05E-01	mg/kg	7.83E-04	mg/m^3	R	2.15E-04	mg/kg-day	3.0E-02	mg/kg-day	--	--	7.2E-03
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.30E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDE	2.82E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDT	1.10E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	ALDRIN	1.03E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-05	mg/kg-day	--	--	--
	ALPHA-BHC	4.35E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ALPHA-CHLORDANE	2.74E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-04	mg/kg-day	--	--	--
	AROCLOR-1254	1.40E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-05	mg/kg-day	--	--	--
	AROCLOR-1260	4.89E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-05	mg/kg-day	--	--	--
	BETA-BHC	1.61E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	DELTA-BHC	1.21E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	DIELDRIN	2.17E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day			--
	ENDOSULFAN I	1.21E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDRIN	2.05E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day			--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--

TABLE J-89

EPA TABLE M.7.14.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	ENDRIN KETONE	2.69E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	GAMMA-CHLORDANE	2.65E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-04	mg/kg-day	--	--	--
	HEPTACHLOR	2.30E-04	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	--	mg/m^3	R	--	--	1.3E-05	mg/kg-day	--	--	--
	METHOXYCHLOR	9.97E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-03	mg/kg-day	--	--	--

Total Hazard Index Across All Air Exposure Routes/Pathways - Soil	6.3E-01
Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	4.5E-02
Total Hazard Index Across All Exposure Routes/Pathways - Soil	6.8E-01
Total Hazard Index Across All Air Exposure Routes/Pathways - Groundwater	2.6E-02
Total Hazard Index Across All Exposure Routes/Pathways	7.1E-01

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) Chronic Values Used

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

NV = No value available

VOC = Volatile Organic Compound

* = Inhalation of VOCs for naphthalane evaluated under groundwater exposures instead of soil due to single detection of naphthalene at 9.5 feet below ground suface, which is below shallow groundwater

TABLE J-90

EPA TABLE M.7.15.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation-Dust	**METAL**												
	BARIUM	1.09E+02	mg/kg	8.31E-08	mg/m^3	R	5.31E-08	mg/kg-day	1.0E-04	mg/kg-day	--	--	5.3E-04
	COBALT	1.29E+01	mg/kg	9.84E-09	mg/m^3	R	6.29E-09	mg/kg-day	1.4E-06	mg/kg-day	--	--	4.4E-03
	COPPER	7.13E+01	mg/kg	5.42E-08	mg/m^3	R	3.46E-08	mg/kg-day	5.7E-06	mg/kg-day	--	--	6.1E-03
	LEAD	1.47E+02	mg/kg	1.12E-07	mg/m^3	R	7.15E-08	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	2.90E-10	mg/m^3	R	1.85E-10	mg/kg-day	--	--	--	--	--
	SELENIUM	5.90E-01	mg/kg	4.49E-10	mg/m^3	R	2.87E-10	mg/kg-day	2.3E-05	mg/kg-day	--	--	1.3E-05
	SILVER	9.22E-01	mg/kg	7.01E-10	mg/m^3	R	4.48E-10	mg/kg-day	5.7E-03	mg/kg-day	--	--	7.8E-08
	THALLIUM	4.51E-01	mg/kg	3.43E-10	mg/m^3	R	2.19E-10	mg/kg-day	--	--	--	--	--
	TIN	1.78E+01	mg/kg	1.35E-08	mg/m^3	R	8.63E-09	mg/kg-day	--	--			--
	TITANIUM	4.77E+03	mg/kg	3.62E-06	mg/m^3	R	2.32E-06	mg/kg-day	2.6E-04	mg/kg-day	--	--	8.9E-03
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	8.66E-03	mg/kg	6.58E-12	mg/m^3	R	4.21E-12	mg/kg-day	2.9E-01	mg/kg-day	--	--	1.5E-11
	ACETONE	2.34E-02	mg/kg	1.78E-11	mg/m^3	R	1.14E-11	mg/kg-day	1.0E-01	mg/kg-day	--	--	1.1E-10
	CARBON DISULFIDE	5.00E-03	mg/kg	3.80E-12	mg/m^3	R	2.43E-12	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.2E-11
	TOLUENE	6.37E-03	mg/kg	4.84E-12	mg/m^3	R	3.09E-12	mg/kg-day	1.1E-01	mg/kg-day	--	--	2.7E-11
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	1.94E-12	mg/kg-day	2.0E-01	mg/kg-day	--	--	9.7E-12
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	1.80E-11	mg/kg-day	5.7E-02	mg/kg-day	--	--	3.1E-10
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	1.17E-10	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.9E-10
	ACENAPHTHENE	2.00E-02	mg/kg	1.52E-11	mg/m^3	R	9.72E-12	mg/kg-day	6.0E-02	mg/kg-day	--	--	1.6E-10
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	7.29E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.4E-10
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	1.89E-10	mg/m^3	R	1.21E-10	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.0E-10
	BENZO(A)PYRENE	2.35E-01	mg/kg	1.79E-10	mg/m^3	R	1.14E-10	mg/kg-day	3.0E-02	mg/kg-day	--	--	3.8E-09
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	1.89E-10	mg/m^3	R	1.21E-10	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.0E-09
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	1.80E-10	mg/m^3	R	1.15E-10	mg/kg-day	3.0E-02	mg/kg-day	--	--	3.8E-09
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	1.97E-10	mg/m^3	R	1.26E-10	mg/kg-day	4.0E-02	mg/kg-day	--	--	3.1E-09

TABLE J-90

EPA TABLE M.7.15.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.10E-10	mg/m^3	R	7.01E-11	mg/kg-day	2.0E-02	mg/kg-day			3.5E-09
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	3.55E-11	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.4E-09
	CHRYSENE	2.43E-01	mg/kg	1.85E-10	mg/m^3	R	1.18E-10	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.9E-10
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	2.91E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	9.7E-11
	FLUORANTHENE	2.23E-01	mg/kg	1.69E-10	mg/m^3	R	1.08E-10	mg/kg-day	4.0E-02	mg/kg-day	--	--	2.7E-09
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	3.98E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.0E-09
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	6.80E-11	mg/kg-day	4.0E-02	mg/kg-day	--	--	1.7E-09
	NAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	1.17E-10	mg/kg-day	8.6E-04	mg/kg-day	--	--	1.4E-07
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	2.43E-10	mg/kg-day	3.0E-02	mg/kg-day			8.1E-09
	PHENANTHRENE	2.65E-01	mg/kg	2.01E-10	mg/m^3	R	1.29E-10	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.3E-10
	PYRENE	2.05E-01	mg/kg	1.56E-10	mg/m^3	R	9.98E-11	mg/kg-day	3.0E-02	mg/kg-day	--	--	3.3E-09
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.30E-03	mg/kg	2.51E-12	mg/m^3	R	1.60E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.2E-09
	4,4'-DDE	2.82E-03	mg/kg	2.14E-12	mg/m^3	R	1.37E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.7E-09
	4,4'-DDT	1.10E-02	mg/kg	8.32E-12	mg/m^3	R	5.32E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.1E-08
	ALDRIN	1.03E-03	mg/kg	7.83E-13	mg/m^3	R	5.00E-13	mg/kg-day	3.0E-05	mg/kg-day	--	--	1.7E-08
	ALPHA-BHC	4.35E-03	mg/kg	3.31E-12	mg/m^3	R	2.11E-12	mg/kg-day	3.0E-04	mg/kg-day	--	--	7.0E-09
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.08E-12	mg/m^3	R	1.33E-12	mg/kg-day	2.0E-04	mg/kg-day	--	--	6.7E-09
	AROCLOR-1254	1.40E-02	mg/kg	1.06E-11	mg/m^3	R	6.80E-12	mg/kg-day	2.0E-05	mg/kg-day	--	--	3.4E-07
	AROCLOR-1260	4.89E-02	mg/kg	3.72E-11	mg/m^3	R	2.38E-11	mg/kg-day	2.0E-05	mg/kg-day	--	--	1.2E-06
	BETA-BHC	1.61E-03	mg/kg	1.22E-12	mg/m^3	R	7.82E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.6E-09
	DELTA-BHC	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	5.88E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.0E-09
	DIELDRIN	2.17E-03	mg/kg	1.65E-12	mg/m^3	R	1.05E-12	mg/kg-day	5.0E-05	mg/kg-day			2.1E-08
	ENDOSULFAN I	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	5.88E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	9.8E-11
	ENDOSULFAN II	1.97E-03	mg/kg	1.50E-12	mg/m^3	R	9.57E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.6E-10
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.00E-12	mg/m^3	R	1.28E-12	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.1E-10
	ENDRIN	2.05E-03	mg/kg	1.56E-12	mg/m^3	R	9.96E-13	mg/kg-day	3.0E-04	mg/kg-day			3.3E-09

TABLE J-90

EPA TABLE M.7.15.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	2.65E-12	mg/m^3	R	1.70E-12	mg/kg-day	3.0E-04	mg/kg-day	--	--	5.7E-09
	ENDRIN KETONE	2.69E-03	mg/kg	2.04E-12	mg/m^3	R	1.31E-12	mg/kg-day	3.0E-04	mg/kg-day	--	--	4.4E-09
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.39E-12	mg/m^3	R	8.89E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.0E-09
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.01E-12	mg/m^3	R	1.29E-12	mg/kg-day	2.0E-04	mg/kg-day	--	--	6.4E-09
	HEPTACHLOR	2.30E-04	mg/kg	1.75E-13	mg/m^3	R	1.12E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.2E-10
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	2.51E-13	mg/m^3	R	1.60E-13	mg/kg-day	1.3E-05	mg/kg-day	--	--	1.2E-08
	METHOXYCHLOR	9.97E-03	mg/kg	7.58E-12	mg/m^3	R	4.84E-12	mg/kg-day	5.0E-03	mg/kg-day	--	--	9.7E-10
Inhalation-VOCs	**METAL**												
	BARIUM	1.09E+02	mg/kg	--	mg/m^3	R	--	--	1.0E-04	mg/kg-day	--	--	--
	COBALT	1.29E+01	mg/kg	--	mg/m^3	R	--	--	1.4E-06	mg/kg-day	--	--	--
	COPPER	7.13E+01	mg/kg	--	mg/m^3	R	--	--	5.7E-06	mg/kg-day	--	--	--
	LEAD	1.47E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	SELENIUM	5.90E-01	mg/kg	--	mg/m^3	R	--	--	2.3E-05	mg/kg-day	--	--	--
	SILVER	9.22E-01	mg/kg	--	mg/m^3	R	--	--	5.7E-03	mg/kg-day	--	--	--
	THALLIUM	4.51E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TIN	1.78E+01	mg/kg	--	mg/m^3	R	--	--	--	--			--
	TITANIUM	4.77E+03	mg/kg	--	mg/m^3	R	--	--	2.6E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	8.66E-03	mg/kg	1.98E-04	mg/m^3	R	1.26E-04	mg/kg-day	2.9E-01	mg/kg-day	--	--	4.4E-04
	ACETONE	2.34E-02	mg/kg	4.76E-04	mg/m^3	R	3.04E-04	mg/kg-day	1.0E-01	mg/kg-day	--	--	3.0E-03
	CARBON DISULFIDE	5.00E-03	mg/kg	5.75E-02	mg/m^3	R	3.68E-02	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.8E-01
	TOLUENE	6.37E-03	mg/kg	2.80E-02	mg/m^3	R	1.79E-02	mg/kg-day	1.1E-01	mg/kg-day	--	--	1.6E-01
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	1.04E-03	mg/kg-day	2.0E-01	mg/kg-day	--	--	5.2E-03
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	2.89E-02	mg/kg-day	5.7E-02	mg/kg-day	--	--	5.1E-01
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.78E-01	mg/m^3	R	1.14E-01	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.8E-01

TABLE J-90

EPA TABLE M.7.15.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	ACENAPHTHENE	2.00E-02	mg/kg	1.31E-02	mg/m^3	R	8.35E-03	mg/kg-day	6.0E-02	mg/kg-day	--	--	1.4E-01
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	1.75E-03	mg/kg-day	3.0E-01	mg/kg-day	--	--	5.8E-03
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(A)PYRENE	2.35E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day			--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.5E-02	mg/kg-day	--	--	--
	CHRYSENE	2.43E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	FLUORANTHENE	2.23E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	2.17E-03	mg/kg-day	4.0E-02	mg/kg-day	--	--	5.4E-02
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-02	mg/kg-day	--	--	--
	NAPHTHALENE	2.40E-01	mg/kg	*	mg/m^3	R	--	--	8.6E-04	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day			--
	PHENANTHRENE	2.65E-01	mg/kg	4.87E-03	mg/m^3	R	3.11E-03	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.0E-02
	PYRENE	2.05E-01	mg/kg	7.83E-04	mg/m^3	R	5.01E-04	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.7E-02
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.30E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDE	2.82E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDT	1.10E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	ALDRIN	1.03E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-05	mg/kg-day	--	--	--
	ALPHA-BHC	4.35E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ALPHA-CHLORDANE	2.74E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-04	mg/kg-day	--	--	--
	AROCLOR-1254	1.40E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-05	mg/kg-day	--	--	--
	AROCLOR-1260	4.89E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-05	mg/kg-day	--	--	--

TABLE J-90

EPA TABLE M.7.15.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	BETA-BHC	1.61E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	DELTA-BHC	1.21E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	DIELDRIN	2.17E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day			--
	ENDOSULFAN I	1.21E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDRIN	2.05E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day			--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ENDRIN KETONE	2.69E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	GAMMA-CHLORDANE	2.65E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-04	mg/kg-day	--	--	--
	HEPTACHLOR	2.30E-04	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	--	mg/m^3	R	--	--	1.3E-05	mg/kg-day	--	--	--
	METHOXYCHLOR	9.97E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-03	mg/kg-day	--	--	--

Total Hazard Index Across All Air Exposure Routes/Pathways - Soil	1.E+00
Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	4.E-01
Total Hazard Index Across All Exposure Routes/Pathways - Soil	2.E+00
Total Hazard Index Across All Air Exposure Routes/Pathways - Groundwater	6.E-02
Total Hazard Index Across All Exposure Routes/Pathways	2.E+00

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) Chronic Values Used

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

NV = No value available

VOC = Volatile Organic Compound

* = Inhalation of VOCs for naphthalane evaluated under groundwater exposures instead of soil due to single detection of naphthalene at 9.5 feet below ground suface, which is below shallow groundwater

TABLE J-91

EPA TABLE M.7.12.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	**METAL**												
	BARIUM	9.67E+01	mg/kg	9.67E+01	mg/kg	M	6.63E-05	mg/kg-day	7.0E-02	mg/kg-day	--	--	9.5E-04
	COBALT	1.15E+01	mg/kg	1.15E+01	mg/kg	M	7.84E-06	mg/kg-day	6.0E-02	mg/kg-day	--	--	1.3E-04
	COPPER	5.99E+01	mg/kg	5.99E+01	mg/kg	M	4.10E-05	mg/kg-day	3.7E-02	mg/kg-day	--	--	1.1E-03
	LEAD	9.96E+01	mg/kg	9.96E+01	mg/kg	M	6.82E-05	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.99E-01	mg/kg	M	2.05E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	4.1E-05
	SELENIUM	5.18E-01	mg/kg	5.18E-01	mg/kg	M	3.55E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	7.1E-05
	SILVER	5.63E-01	mg/kg	5.63E-01	mg/kg	M	3.86E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	7.7E-05
	THALLIUM	4.14E-01	mg/kg	4.14E-01	mg/kg	M	2.84E-07	mg/kg-day	7.0E-04	mg/kg-day	--	--	4.1E-04
	TIN	1.40E+01	mg/kg	1.40E+01	mg/kg	M	9.61E-06	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.6E-05
	TITANIUM	4.25E+03	mg/kg	4.25E+03	mg/kg	M	2.91E-03	mg/kg-day	3.0E-01	mg/kg-day	--	--	9.7E-03
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	7.48E-03	mg/kg	7.48E-03	mg/kg	M	5.12E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	2.6E-09
	ACETONE	1.71E-02	mg/kg	1.71E-02	mg/kg	M	1.17E-08	mg/kg-day	1.0E+00	mg/kg-day	--	--	1.2E-08
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	3.42E-09	mg/kg-day	1.0E-01	mg/kg-day	--	--	3.4E-08
	TOLUENE	6.11E-03	mg/kg	6.11E-03	mg/kg	M	4.18E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	2.1E-09
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	2.74E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.4E-09
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	2.53E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	2.5E-06
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	1.61E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.4E-08
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	1.37E-08	mg/kg-day	6.0E-01	mg/kg-day	--	--	2.3E-08
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.03E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.4E-08
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	2.17E-01	mg/kg	M	1.49E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.0E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	1.38E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.6E-07
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	2.16E-01	mg/kg	M	1.48E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.7E-07
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	2.08E-01	mg/kg	M	1.42E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.7E-07
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	2.32E-01	mg/kg	M	1.59E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	4.0E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	1.19E-01	mg/kg	M	8.13E-08	mg/kg-day	2.0E-02	mg/kg-day	--	--	4.1E-06
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	5.00E-08	mg/kg-day	2.5E-02	mg/kg-day	--	--	2.0E-06
	CHRYSENE	2.04E-01	mg/kg	2.04E-01	mg/kg	M	1.40E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.7E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	4.11E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.4E-08
	FLUORANTHENE	1.83E-01	mg/kg	1.83E-01	mg/kg	M	1.25E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.1E-07
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	5.62E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.4E-07
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	9.59E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.4E-07
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.64E-07	mg/kg-day	2.0E-01	mg/kg-day	--	--	8.2E-07

TABLE J-91

EPA TABLE M.7.12.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	3.42E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.1E-05
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	1.56E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.2E-08
	PYRENE	1.71E-01	mg/kg	1.71E-01	mg/kg	M	1.17E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.9E-07
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.86E-03	mg/kg	2.86E-03	mg/kg	M	1.96E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.9E-06
	4,4'-DDE	2.54E-03	mg/kg	2.54E-03	mg/kg	M	1.74E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.5E-06
	4,4'-DDT	8.46E-03	mg/kg	8.46E-03	mg/kg	M	5.79E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.2E-05
	ALDRIN	1.01E-03	mg/kg	1.01E-03	mg/kg	M	6.92E-10	mg/kg-day	3.0E-05	mg/kg-day	--	--	2.3E-05
	ALPHA-BHC	3.33E-03	mg/kg	3.33E-03	mg/kg	M	2.28E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	7.6E-07
	ALPHA-CHLORDANE	2.26E-03	mg/kg	2.26E-03	mg/kg	M	1.55E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.1E-06
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	7.55E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.5E-04
	AROCLOR-1260	3.79E-02	mg/kg	3.79E-02	mg/kg	M	2.59E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	5.2E-04
	BETA-BHC	1.44E-03	mg/kg	1.44E-03	mg/kg	M	9.86E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	3.3E-07
	DELTA-BHC	1.13E-03	mg/kg	1.13E-03	mg/kg	M	7.74E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.6E-07
	DIELDRIN	2.07E-03	mg/kg	2.07E-03	mg/kg	M	1.42E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	2.8E-05
	ENDOSULFAN I	1.14E-03	mg/kg	1.14E-03	mg/kg	M	7.81E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.3E-07
	ENDOSULFAN II	1.92E-03	mg/kg	1.92E-03	mg/kg	M	1.32E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.2E-07
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	1.64E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.7E-07
	ENDRIN	1.98E-03	mg/kg	1.98E-03	mg/kg	M	1.36E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	4.5E-06
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	3.09E-03	mg/kg	M	2.12E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	7.1E-06
	ENDRIN KETONE	2.47E-03	mg/kg	2.47E-03	mg/kg	M	1.69E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	5.6E-06
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.61E-03	mg/kg	M	1.10E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	3.7E-07
	GAMMA-CHLORDANE	2.18E-03	mg/kg	2.18E-03	mg/kg	M	1.49E-09	mg/kg-day	6.0E-05	mg/kg-day	--	--	2.5E-05
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	1.37E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.7E-07
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.80E-04	mg/kg	M	1.92E-10	mg/kg-day	1.3E-05	mg/kg-day	--	--	1.5E-05
	METHOXYCHLOR	9.68E-03	mg/kg	9.68E-03	mg/kg	M	6.63E-09	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.3E-06
Dermal	**METAL**												
	BARIUM	9.67E+01	mg/kg	9.67E+01	mg/kg	M	4.64E-06	mg/kg-day	7.0E-02	mg/kg-day	--	--	6.6E-05
	COBALT	1.15E+01	mg/kg	1.15E+01	mg/kg	M	5.49E-07	mg/kg-day	6.0E-02	mg/kg-day	--	--	9.2E-06
	COPPER	5.99E+01	mg/kg	5.99E+01	mg/kg	M	2.87E-06	mg/kg-day	3.7E-02	mg/kg-day	--	--	7.8E-05
	LEAD	9.96E+01	mg/kg	9.96E+01	mg/kg	M	4.77E-06	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.99E-01	mg/kg	M	1.44E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.9E-06
	SELENIUM	5.18E-01	mg/kg	5.18E-01	mg/kg	M	2.49E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	5.0E-06
	SILVER	5.63E-01	mg/kg	5.63E-01	mg/kg	M	2.70E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	5.4E-06
	THALLIUM	4.14E-01	mg/kg	4.14E-01	mg/kg	M	1.99E-08	mg/kg-day	7.0E-04	mg/kg-day	--	--	2.8E-05

TABLE J-91

EPA TABLE M.7.12.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	TIN	1.40E+01	mg/kg	1.40E+01	mg/kg	M	6.72E-07	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.1E-06
	TITANIUM	4.25E+03	mg/kg	4.25E+03	mg/kg	M	2.04E-04	mg/kg-day	3.0E-01	mg/kg-day	--	--	6.8E-04
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	7.48E-03	mg/kg	7.48E-03	mg/kg	M	3.59E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.8E-09
	ACETONE	1.71E-02	mg/kg	1.71E-02	mg/kg	M	8.18E-09	mg/kg-day	1.0E+00	mg/kg-day	--	--	8.2E-09
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	2.40E-09	mg/kg-day	1.0E-01	mg/kg-day	--	--	2.4E-08
	TOLUENE	6.11E-03	mg/kg	6.11E-03	mg/kg	M	2.93E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.5E-09
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.92E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	9.6E-10
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.77E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	1.8E-06
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	1.69E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.6E-08
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	1.44E-08	mg/kg-day	6.0E-01	mg/kg-day	--	--	2.4E-08
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.08E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.6E-08
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	2.17E-01	mg/kg	M	1.56E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.2E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	1.45E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.8E-07
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	2.16E-01	mg/kg	M	1.55E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.9E-07
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	2.08E-01	mg/kg	M	1.50E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	5.0E-07
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	2.32E-01	mg/kg	M	1.67E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	4.2E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	1.19E-01	mg/kg	M	5.69E-08	mg/kg-day	2.0E-02	mg/kg-day	--	--	2.8E-06
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	3.50E-08	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.4E-06
	CHRYSENE	2.04E-01	mg/kg	2.04E-01	mg/kg	M	1.47E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.9E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	4.32E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.4E-08
	FLUORANTHENE	1.83E-01	mg/kg	1.83E-01	mg/kg	M	1.31E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.3E-07
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	5.90E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.5E-07
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	1.01E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.5E-07
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.73E-07	mg/kg-day	2.0E-01	mg/kg-day	--	--	8.6E-07
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	5.99E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	2.0E-05
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	1.64E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.5E-08
	PYRENE	1.71E-01	mg/kg	1.71E-01	mg/kg	M	1.23E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.1E-07
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.86E-03	mg/kg	2.86E-03	mg/kg	M	6.86E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.4E-06
	4,4'-DDE	2.54E-03	mg/kg	2.54E-03	mg/kg	M	6.09E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.2E-06
	4,4'-DDT	8.46E-03	mg/kg	8.46E-03	mg/kg	M	2.03E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	4.1E-06
	ALDRIN	1.01E-03	mg/kg	1.01E-03	mg/kg	M	2.42E-10	mg/kg-day	3.0E-05	mg/kg-day	--	--	8.1E-06
	ALPHA-BHC	3.33E-03	mg/kg	3.33E-03	mg/kg	M	7.98E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.7E-07

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EPA TABLE M.7.12.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	ALPHA-CHLORDANE	2.26E-03	mg/kg	2.26E-03	mg/kg	M	5.42E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.1E-06
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	7.93E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.6E-04
	AROCLOR-1260	3.79E-02	mg/kg	3.79E-02	mg/kg	M	2.72E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	5.4E-04
	BETA-BHC	1.44E-03	mg/kg	1.44E-03	mg/kg	M	3.45E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.2E-07
	DELTA-BHC	1.13E-03	mg/kg	1.13E-03	mg/kg	M	2.71E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	9.0E-08
	DIELDRIN	2.07E-03	mg/kg	2.07E-03	mg/kg	M	4.96E-10	mg/kg-day	5.0E-05	mg/kg-day	--	--	9.9E-06
	ENDOSULFAN I	1.14E-03	mg/kg	1.14E-03	mg/kg	M	2.73E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	4.6E-08
	ENDOSULFAN II	1.92E-03	mg/kg	1.92E-03	mg/kg	M	4.60E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	7.7E-08
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	5.75E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	9.6E-08
	ENDRIN	1.98E-03	mg/kg	1.98E-03	mg/kg	M	4.75E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.6E-06
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	3.09E-03	mg/kg	M	7.41E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.5E-06
	ENDRIN KETONE	2.47E-03	mg/kg	2.47E-03	mg/kg	M	5.92E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.0E-06
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.61E-03	mg/kg	M	3.86E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.3E-07
	GAMMA-CHLORDANE	2.18E-03	mg/kg	2.18E-03	mg/kg	M	5.23E-10	mg/kg-day	6.0E-05	mg/kg-day	--	--	8.7E-06
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	4.79E-11	mg/kg-day	5.0E-04	mg/kg-day	--	--	9.6E-08
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.80E-04	mg/kg	M	6.71E-11	mg/kg-day	1.3E-05	mg/kg-day	--	--	5.2E-06
	METHOXYCHLOR	9.68E-03	mg/kg	9.68E-03	mg/kg	M	2.32E-09	mg/kg-day	5.0E-03	mg/kg-day	--	--	4.6E-07
												Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	1.5E-02

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
(2) All values are subchronic
bgs = Below ground surface
Ft. = Feet
mg/kg = Milligrams per kilogram
NV = No value available

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EPA TABLE M.7.13.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	**METAL**												
	BARIUM	9.67E+01	mg/kg	9.67E+01	mg/kg	M	6.18E-04	mg/kg-day	7.0E-02	mg/kg-day	--	--	8.8E-03
	COBALT	1.15E+01	mg/kg	1.15E+01	mg/kg	M	7.32E-05	mg/kg-day	6.0E-02	mg/kg-day	--	--	1.2E-03
	COPPER	5.99E+01	mg/kg	5.99E+01	mg/kg	M	3.83E-04	mg/kg-day	3.7E-02	mg/kg-day	--	--	1.0E-02
	LEAD	9.96E+01	mg/kg	9.96E+01	mg/kg	M	6.37E-04	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.99E-01	mg/kg	M	1.91E-06	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.8E-04
	SELENIUM	5.18E-01	mg/kg	5.18E-01	mg/kg	M	3.31E-06	mg/kg-day	5.0E-03	mg/kg-day	--	--	6.6E-04
	SILVER	5.63E-01	mg/kg	5.63E-01	mg/kg	M	3.60E-06	mg/kg-day	5.0E-03	mg/kg-day	--	--	7.2E-04
	THALLIUM	4.14E-01	mg/kg	4.14E-01	mg/kg	M	2.65E-06	mg/kg-day	7.0E-04	mg/kg-day	--	--	3.8E-03
	TIN	1.40E+01	mg/kg	1.40E+01	mg/kg	M	8.97E-05	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.5E-04
	TITANIUM	4.25E+03	mg/kg	4.25E+03	mg/kg	M	2.72E-02	mg/kg-day	3.0E-01	mg/kg-day	--	--	9.1E-02
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	7.48E-03	mg/kg	7.48E-03	mg/kg	M	4.78E-08	mg/kg-day	2.0E+00	mg/kg-day	--	--	2.4E-08
	ACETONE	1.71E-02	mg/kg	1.71E-02	mg/kg	M	1.09E-07	mg/kg-day	1.0E+00	mg/kg-day	--	--	1.1E-07
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	3.20E-08	mg/kg-day	1.0E-01	mg/kg-day	--	--	3.2E-07
	TOLUENE	6.11E-03	mg/kg	6.11E-03	mg/kg	M	3.91E-08	mg/kg-day	2.0E+00	mg/kg-day	--	--	2.0E-08
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	2.56E-08	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.3E-08
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	2.37E-07	mg/kg-day	1.0E-02	mg/kg-day	--	--	2.4E-05
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	1.50E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.0E-07
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	1.28E-07	mg/kg-day	6.0E-01	mg/kg-day	--	--	2.1E-07
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	9.59E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.2E-07
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	2.17E-01	mg/kg	M	1.39E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.6E-07
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	1.29E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.3E-06
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	2.16E-01	mg/kg	M	1.38E-06	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.4E-06
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	2.08E-01	mg/kg	M	1.33E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.4E-06
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	2.32E-01	mg/kg	M	1.49E-06	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.7E-06
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	1.19E-01	mg/kg	M	7.59E-07	mg/kg-day	2.0E-02	mg/kg-day	--	--	3.8E-05
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	4.67E-07	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.9E-05
	CHRYSENE	2.04E-01	mg/kg	2.04E-01	mg/kg	M	1.31E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.4E-07
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	3.84E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.3E-07
	FLUORANTHENE	1.83E-01	mg/kg	1.83E-01	mg/kg	M	1.17E-06	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.9E-06
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	5.24E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.3E-06
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	8.95E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.2E-06
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.53E-06	mg/kg-day	2.0E-01	mg/kg-day	--	--	7.7E-06

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EPA TABLE M.7.13.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	3.20E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.1E-04
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	1.46E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.9E-07
	PYRENE	1.71E-01	mg/kg	1.71E-01	mg/kg	M	1.09E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.6E-06
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.86E-03	mg/kg	2.86E-03	mg/kg	M	1.83E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.7E-05
	4,4'-DDE	2.54E-03	mg/kg	2.54E-03	mg/kg	M	1.62E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.2E-05
	4,4'-DDT	8.46E-03	mg/kg	8.46E-03	mg/kg	M	5.41E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.1E-04
	ALDRIN	1.01E-03	mg/kg	1.01E-03	mg/kg	M	6.46E-09	mg/kg-day	3.0E-05	mg/kg-day	--	--	2.2E-04
	ALPHA-BHC	3.33E-03	mg/kg	3.33E-03	mg/kg	M	2.13E-08	mg/kg-day	3.0E-03	mg/kg-day	--	--	7.1E-06
	ALPHA-CHLORDANE	2.26E-03	mg/kg	2.26E-03	mg/kg	M	1.44E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.9E-05
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	7.04E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.4E-03
	AROCLOR-1260	3.79E-02	mg/kg	3.79E-02	mg/kg	M	2.42E-07	mg/kg-day	5.0E-05	mg/kg-day	--	--	4.8E-03
	BETA-BHC	1.44E-03	mg/kg	1.44E-03	mg/kg	M	9.21E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	3.1E-06
	DELTA-BHC	1.13E-03	mg/kg	1.13E-03	mg/kg	M	7.22E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.4E-06
	DIELDRIN	2.07E-03	mg/kg	2.07E-03	mg/kg	M	1.32E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	2.6E-04
	ENDOSULFAN I	1.14E-03	mg/kg	1.14E-03	mg/kg	M	7.29E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.2E-06
	ENDOSULFAN II	1.92E-03	mg/kg	1.92E-03	mg/kg	M	1.23E-08	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.0E-06
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	1.53E-08	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.6E-06
	ENDRIN	1.98E-03	mg/kg	1.98E-03	mg/kg	M	1.27E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	4.2E-05
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	3.09E-03	mg/kg	M	1.98E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	6.6E-05
	ENDRIN KETONE	2.47E-03	mg/kg	2.47E-03	mg/kg	M	1.58E-08	mg/kg-day	3.0E-04	mg/kg-day	--	--	5.3E-05
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.61E-03	mg/kg	M	1.03E-08	mg/kg-day	3.0E-03	mg/kg-day	--	--	3.4E-06
	GAMMA-CHLORDANE	2.18E-03	mg/kg	2.18E-03	mg/kg	M	1.39E-08	mg/kg-day	6.0E-05	mg/kg-day	--	--	2.3E-04
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	1.28E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.6E-06
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.80E-04	mg/kg	M	1.79E-09	mg/kg-day	1.3E-05	mg/kg-day	--	--	1.4E-04
	METHOXYCHLOR	9.68E-03	mg/kg	9.68E-03	mg/kg	M	6.19E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.2E-05
Dermal	**METAL**												
	BARIUM	9.67E+01	mg/kg	9.67E+01	mg/kg	M	3.59E-05	mg/kg-day	7.0E-02	mg/kg-day	--	--	5.1E-04
	COBALT	1.15E+01	mg/kg	1.15E+01	mg/kg	M	4.25E-06	mg/kg-day	6.0E-02	mg/kg-day	--	--	7.1E-05
	COPPER	5.99E+01	mg/kg	5.99E+01	mg/kg	M	2.22E-05	mg/kg-day	3.7E-02	mg/kg-day	--	--	6.0E-04
	LEAD	9.96E+01	mg/kg	9.96E+01	mg/kg	M	3.69E-05	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.99E-01	mg/kg	M	1.11E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.2E-05
	SELENIUM	5.18E-01	mg/kg	5.18E-01	mg/kg	M	1.92E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.8E-05
	SILVER	5.63E-01	mg/kg	5.63E-01	mg/kg	M	2.09E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	4.2E-05

TABLE J-92

EPA TABLE M.7.13.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	THALLIUM	4.14E-01	mg/kg	4.14E-01	mg/kg	M	1.54E-07	mg/kg-day	7.0E-04	mg/kg-day	--	--	2.2E-04
	TIN	1.40E+01	mg/kg	1.40E+01	mg/kg	M	5.20E-06	mg/kg-day	6.0E-01	mg/kg-day	--	--	8.7E-06
	TITANIUM	4.25E+03	mg/kg	4.25E+03	mg/kg	M	1.58E-03	mg/kg-day	3.0E-01	mg/kg-day	--	--	5.3E-03
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	7.48E-03	mg/kg	7.48E-03	mg/kg	M	2.77E-08	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.4E-08
	ACETONE	1.71E-02	mg/kg	1.71E-02	mg/kg	M	6.33E-08	mg/kg-day	1.0E+00	mg/kg-day	--	--	6.3E-08
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	1.85E-08	mg/kg-day	1.0E-01	mg/kg-day	--	--	1.9E-07
	TOLUENE	6.11E-03	mg/kg	6.11E-03	mg/kg	M	2.27E-08	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.1E-08
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.48E-08	mg/kg-day	2.0E+00	mg/kg-day	--	--	7.4E-09
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.37E-07	mg/kg-day	1.0E-02	mg/kg-day	--	--	1.4E-05
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	1.31E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.4E-07
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	1.11E-07	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.9E-07
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	8.34E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.8E-07
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	2.17E-01	mg/kg	M	1.21E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.0E-07
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	1.12E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.7E-06
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	2.16E-01	mg/kg	M	1.20E-06	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.0E-06
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	2.08E-01	mg/kg	M	1.16E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.9E-06
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	2.32E-01	mg/kg	M	1.29E-06	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.2E-06
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	1.19E-01	mg/kg	M	4.40E-07	mg/kg-day	2.0E-02	mg/kg-day	--	--	2.2E-05
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	2.71E-07	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.1E-05
	CHRYSENE	2.04E-01	mg/kg	2.04E-01	mg/kg	M	1.14E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.8E-07
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	3.34E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.1E-07
	FLUORANTHENE	1.83E-01	mg/kg	1.83E-01	mg/kg	M	1.02E-06	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.5E-06
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	4.56E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.1E-06
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	7.79E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.9E-06
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.33E-06	mg/kg-day	2.0E-01	mg/kg-day	--	--	6.7E-06
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	4.63E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.5E-04
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	1.27E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.2E-07
	PYRENE	1.71E-01	mg/kg	1.71E-01	mg/kg	M	9.51E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	3.2E-06
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.86E-03	mg/kg	2.86E-03	mg/kg	M	5.30E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.1E-05

TABLE J-92

EPA TABLE M.7.13.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	4,4'-DDE	2.54E-03	mg/kg	2.54E-03	mg/kg	M	4.71E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	9.4E-06
	4,4'-DDT	8.46E-03	mg/kg	8.46E-03	mg/kg	M	1.57E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.1E-05
	ALDRIN	1.01E-03	mg/kg	1.01E-03	mg/kg	M	1.87E-09	mg/kg-day	3.0E-05	mg/kg-day	--	--	6.2E-05
	ALPHA-BHC	3.33E-03	mg/kg	3.33E-03	mg/kg	M	6.17E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.1E-06
	ALPHA-CHLORDANE	2.26E-03	mg/kg	2.26E-03	mg/kg	M	4.19E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	8.4E-06
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	6.13E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.2E-03
	AROCLOR-1260	3.79E-02	mg/kg	3.79E-02	mg/kg	M	2.11E-07	mg/kg-day	5.0E-05	mg/kg-day	--	--	4.2E-03
	BETA-BHC	1.44E-03	mg/kg	1.44E-03	mg/kg	M	2.67E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	8.9E-07
	DELTA-BHC	1.13E-03	mg/kg	1.13E-03	mg/kg	M	2.09E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	7.0E-07
	DIELDRIN	2.07E-03	mg/kg	2.07E-03	mg/kg	M	3.84E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	7.7E-05
	ENDOSULFAN I	1.14E-03	mg/kg	1.14E-03	mg/kg	M	2.11E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	3.5E-07
	ENDOSULFAN II	1.92E-03	mg/kg	1.92E-03	mg/kg	M	3.56E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	5.9E-07
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	4.45E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	7.4E-07
	ENDRIN	1.98E-03	mg/kg	1.98E-03	mg/kg	M	3.67E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.2E-05
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	3.09E-03	mg/kg	M	5.73E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.9E-05
	ENDRIN KETONE	2.47E-03	mg/kg	2.47E-03	mg/kg	M	4.58E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.5E-05
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.61E-03	mg/kg	M	2.98E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	9.9E-07
	GAMMA-CHLORDANE	2.18E-03	mg/kg	2.18E-03	mg/kg	M	4.04E-09	mg/kg-day	6.0E-05	mg/kg-day	--	--	6.7E-05
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	3.71E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	7.4E-07
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.80E-04	mg/kg	M	5.19E-10	mg/kg-day	1.3E-05	mg/kg-day	--	--	4.0E-05
	METHOXYCHLOR	9.68E-03	mg/kg	9.68E-03	mg/kg	M	1.79E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.6E-06
												Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	1.4E-01

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) All values are subchronic

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

NV = No value available

TABLE J-93

EPA TABLE M.7.14.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation-Dust	**METAL**												
	BARIUM	9.67E+01	mg/kg	7.35E-08	mg/m^3	R	1.34E-08	mg/kg-day	1.0E-03	mg/kg-day	--	--	1.3E-05
	COBALT	1.15E+01	mg/kg	8.70E-09	mg/m^3	R	1.59E-09	mg/kg-day	1.4E-06	mg/kg-day	--	--	1.1E-03
	COPPER	5.99E+01	mg/kg	4.55E-08	mg/m^3	R	8.30E-09	mg/kg-day	5.7E-06	mg/kg-day	--	--	1.5E-03
	LEAD	9.96E+01	mg/kg	7.57E-08	mg/m^3	R	1.38E-08	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.28E-10	mg/m^3	R	4.15E-11	mg/kg-day	--	--	--	--	--
	SELENIUM	5.18E-01	mg/kg	3.94E-10	mg/m^3	R	7.18E-11	mg/kg-day	2.3E-05	mg/kg-day	--	--	3.1E-06
	SILVER	5.63E-01	mg/kg	4.28E-10	mg/m^3	R	7.80E-11	mg/kg-day	5.7E-03	mg/kg-day	--	--	1.4E-08
	THALLIUM	4.14E-01	mg/kg	3.15E-10	mg/m^3	R	5.73E-11	mg/kg-day	--	--	--	--	--
	TIN	1.40E+01	mg/kg	1.07E-08	mg/m^3	R	1.94E-09	mg/kg-day	--	--			--
	TITANIUM	4.25E+03	mg/kg	3.23E-06	mg/m^3	R	5.89E-07	mg/kg-day	2.6E-04	mg/kg-day	--	--	2.3E-03
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	7.48E-03	mg/kg	5.68E-12	mg/m^3	R	1.04E-12	mg/kg-day	2.9E-01	mg/kg-day	--	--	3.6E-12
	ACETONE	1.71E-02	mg/kg	1.30E-11	mg/m^3	R	2.36E-12	mg/kg-day	1.0E+00	mg/kg-day	--	--	2.4E-12
	CARBON DISULFIDE	5.00E-03	mg/kg	3.80E-12	mg/m^3	R	6.92E-13	mg/kg-day	2.0E-01	mg/kg-day	--	--	3.5E-12
	TOLUENE	6.11E-03	mg/kg	4.64E-12	mg/m^3	R	8.46E-13	mg/kg-day	1.1E-01	mg/kg-day	--	--	7.4E-12
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	5.54E-13	mg/kg-day	2.0E+00	mg/kg-day	--	--	2.8E-13
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	5.12E-12	mg/kg-day	5.7E-01	mg/kg-day	--	--	9.0E-12
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	1.79E-10	mg/m^3	R	3.26E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.1E-11
	ACENAPHTHENE	2.00E-02	mg/kg	1.52E-11	mg/m^3	R	2.77E-12	mg/kg-day	6.0E-01	mg/kg-day	--	--	4.6E-12
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	2.08E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	6.9E-12
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	1.65E-10	mg/m^3	R	3.00E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.0E-11
	BENZO(A)PYRENE	2.02E-01	mg/kg	1.53E-10	mg/m^3	R	2.80E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	9.3E-11
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	1.64E-10	mg/m^3	R	2.99E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	7.5E-11
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	1.58E-10	mg/m^3	R	2.88E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	9.6E-11
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	1.77E-10	mg/m^3	R	3.22E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	8.0E-11

TABLE J-93

EPA TABLE M.7.14.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	9.02E-11	mg/m^3	R	1.64E-11	mg/kg-day	2.0E-02	mg/kg-day			8.2E-10
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	1.01E-11	mg/kg-day	2.5E-02	mg/kg-day	--	--	4.0E-10
	CHRYSENE	2.04E-01	mg/kg	1.55E-10	mg/m^3	R	2.83E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	9.4E-12
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	8.31E-12	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.8E-12
	FLUORANTHENE	1.83E-01	mg/kg	1.39E-10	mg/m^3	R	2.53E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	6.3E-11
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	1.14E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.8E-11
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	1.94E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	4.8E-11
	NAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	3.32E-11	mg/kg-day	8.6E-04	mg/kg-day	--	--	3.9E-08
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	6.92E-11	mg/kg-day	3.0E-02	mg/kg-day			2.3E-09
	PHENANTHRENE	2.28E-01	mg/kg	1.74E-10	mg/m^3	R	3.16E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.1E-11
	PYRENE	1.71E-01	mg/kg	1.30E-10	mg/m^3	R	2.37E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	7.9E-11
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.86E-03	mg/kg	2.17E-12	mg/m^3	R	3.96E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	7.9E-10
	4,4'-DDE	2.54E-03	mg/kg	1.93E-12	mg/m^3	R	3.52E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	7.0E-10
	4,4'-DDT	8.46E-03	mg/kg	6.43E-12	mg/m^3	R	1.17E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.3E-09
	ALDRIN	1.01E-03	mg/kg	7.67E-13	mg/m^3	R	1.40E-13	mg/kg-day	3.0E-05	mg/kg-day	--	--	4.7E-09
	ALPHA-BHC	3.33E-03	mg/kg	2.53E-12	mg/m^3	R	4.61E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.5E-10
	ALPHA-CHLORDANE	2.26E-03	mg/kg	1.72E-12	mg/m^3	R	3.13E-13	mg/kg-day	2.0E-03	mg/kg-day	--	--	1.6E-10
	AROCLOR-1254	1.10E-02	mg/kg	8.37E-12	mg/m^3	R	1.53E-12	mg/kg-day	5.0E-05	mg/kg-day	--	--	3.1E-08
	AROCLOR-1260	3.79E-02	mg/kg	2.88E-11	mg/m^3	R	5.24E-12	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.0E-07
	BETA-BHC	1.44E-03	mg/kg	1.09E-12	mg/m^3	R	1.99E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	6.6E-11
	DELTA-BHC	1.13E-03	mg/kg	8.59E-13	mg/m^3	R	1.56E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	5.2E-11
	DIELDRIN	2.07E-03	mg/kg	1.57E-12	mg/m^3	R	2.87E-13	mg/kg-day	5.0E-05	mg/kg-day			5.7E-09
	ENDOSULFAN I	1.14E-03	mg/kg	8.66E-13	mg/m^3	R	1.58E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.6E-11
	ENDOSULFAN II	1.92E-03	mg/kg	1.46E-12	mg/m^3	R	2.66E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	4.4E-11
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	1.82E-12	mg/m^3	R	3.32E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	5.5E-11
	ENDRIN	1.98E-03	mg/kg	1.50E-12	mg/m^3	R	2.74E-13	mg/kg-day	3.0E-04	mg/kg-day			9.1E-10

TABLE J-93

EPA TABLE M.7.14.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	2.35E-12	mg/m^3	R	4.28E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.4E-09
	ENDRIN KETONE	2.47E-03	mg/kg	1.88E-12	mg/m^3	R	3.42E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.1E-09
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.22E-12	mg/m^3	R	2.23E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	7.4E-11
	GAMMA-CHLORDANE	2.18E-03	mg/kg	1.66E-12	mg/m^3	R	3.02E-13	mg/kg-day	2.0E-03	mg/kg-day	--	--	1.5E-10
	HEPTACHLOR	2.00E-04	mg/kg	1.52E-13	mg/m^3	R	2.77E-14	mg/kg-day	5.0E-04	mg/kg-day	--	--	5.5E-11
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.13E-13	mg/m^3	R	3.88E-14	mg/kg-day	1.3E-05	mg/kg-day	--	--	3.0E-09
	METHOXYCHLOR	9.68E-03	mg/kg	7.36E-12	mg/m^3	R	1.34E-12	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.7E-10
Inhalation-VOCs	**METAL**												
	BARIUM	9.67E+01	mg/kg	--	mg/m^3	R	--	--	1.0E-03	mg/kg-day	--	--	--
	COBALT	1.15E+01	mg/kg	--	mg/m^3	R	--	--	1.4E-06	mg/kg-day	--	--	--
	COPPER	5.99E+01	mg/kg	--	mg/m^3	R	--	--	5.7E-06	mg/kg-day	--	--	--
	LEAD	9.96E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	SELENIUM	5.18E-01	mg/kg	--	mg/m^3	R	--	--	2.3E-05	mg/kg-day	--	--	--
	SILVER	5.63E-01	mg/kg	--	mg/m^3	R	--	--	5.7E-03	mg/kg-day	--	--	--
	THALLIUM	4.14E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TIN	1.40E+01	mg/kg	--	mg/m^3	R	--	--	--	--			--
	TITANIUM	4.25E+03	mg/kg	--	mg/m^3	R	--	--	2.6E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	7.48E-03	mg/kg	1.71E-04	mg/m^3	R	3.11E-05	mg/kg-day	2.9E-01	mg/kg-day	--	--	1.1E-04
	ACETONE	1.71E-02	mg/kg	3.48E-04	mg/m^3	R	6.33E-05	mg/kg-day	1.0E+00	mg/kg-day	--	--	6.3E-05
	CARBON DISULFIDE	5.00E-03	mg/kg	5.75E-02	mg/m^3	R	1.05E-02	mg/kg-day	2.0E-01	mg/kg-day	--	--	5.2E-02
	TOLUENE	6.11E-03	mg/kg	2.69E-02	mg/m^3	R	4.90E-03	mg/kg-day	1.1E-01	mg/kg-day	--	--	4.3E-02
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	2.97E-04	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.5E-04
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	8.23E-03	mg/kg-day	5.7E-01	mg/kg-day	--	--	1.4E-02
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	1.74E-01	mg/m^3	R	3.18E-02	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.1E-02

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EPA TABLE M.7.14.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	ACENAPHTHENE	2.00E-02	mg/kg	1.31E-02	mg/m^3	R	2.38E-03	mg/kg-day	6.0E-01	mg/kg-day	--	--	4.0E-03
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	5.00E-04	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.7E-04
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	BENZO(A)PYRENE	2.02E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day			--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.5E-02	mg/kg-day	--	--	--
	CHRYSENE	2.04E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	FLUORANTHENE	1.83E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	6.19E-04	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.5E-03
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	NAPHTHALENE	2.40E-01	mg/kg	*	mg/m^3	R	--	--	8.6E-04	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day			--
	PHENANTHRENE	2.28E-01	mg/kg	4.20E-03	mg/m^3	R	7.65E-04	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.5E-04
	PYRENE	1.71E-01	mg/kg	6.52E-04	mg/m^3	R	1.19E-04	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.0E-04
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.86E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDE	2.54E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDT	8.46E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	ALDRIN	1.01E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-05	mg/kg-day	--	--	--
	ALPHA-BHC	3.33E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	ALPHA-CHLORDANE	2.26E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-03	mg/kg-day	--	--	--
	AROCLOR-1254	1.10E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	AROCLOR-1260	3.79E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--

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EPA TABLE M.7.14.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	BETA-BHC	1.44E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	DELTA-BHC	1.13E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	DIELDRIN	2.07E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day			--
	ENDOSULFAN I	1.14E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN II	1.92E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDRIN	1.98E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day			--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ENDRIN KETONE	2.47E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	GAMMA-CHLORDANE	2.18E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-03	mg/kg-day	--	--	--
	HEPTACHLOR	2.00E-04	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	--	mg/m^3	R	--	--	1.3E-05	mg/kg-day	--	--	--
	METHOXYCHLOR	9.68E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-03	mg/kg-day	--	--	--

Total Hazard Index Across All Air Exposure Routes/Pathways - Soil	1.3E-01
Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	1.5E-02
Total Hazard Index Across All Exposure Routes/Pathways - Soil	1.5E-01
Total Hazard Index Across All Air Exposure Routes/Pathways - Groundwater	1.5E-02
Total Hazard Index Across All Exposure Routes/Pathways	1.6E-01

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) All values are subchronic

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

NV = No value available

VOC = Volatile Organic Compound

* = Inhalation of VOCs for naphthalane evaluated under groundwater exposures instead of soil due to single detection of naphthalene at 9.5 feet below ground suface, which is below shallow groundwater

TABLE J-94

EPA TABLE M.7.15.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation-Dust	**METAL**												
	BARIUM	9.67E+01	mg/kg	7.35E-08	mg/m^3	R	3.90E-08	mg/kg-day	1.0E-03	mg/kg-day	--	--	3.9E-05
	COBALT	1.15E+01	mg/kg	8.70E-09	mg/m^3	R	4.62E-09	mg/kg-day	1.4E-06	mg/kg-day	--	--	3.2E-03
	COPPER	5.99E+01	mg/kg	4.55E-08	mg/m^3	R	2.42E-08	mg/kg-day	5.7E-06	mg/kg-day	--	--	4.2E-03
	LEAD	9.96E+01	mg/kg	7.57E-08	mg/m^3	R	4.01E-08	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.28E-10	mg/m^3	R	1.21E-10	mg/kg-day	--	--	--	--	--
	SELENIUM	5.18E-01	mg/kg	3.94E-10	mg/m^3	R	2.09E-10	mg/kg-day	2.3E-05	mg/kg-day	--	--	9.1E-06
	SILVER	5.63E-01	mg/kg	4.28E-10	mg/m^3	R	2.27E-10	mg/kg-day	5.7E-03	mg/kg-day	--	--	4.0E-08
	THALLIUM	4.14E-01	mg/kg	3.15E-10	mg/m^3	R	1.67E-10	mg/kg-day	--	--	--	--	--
	TIN	1.40E+01	mg/kg	1.07E-08	mg/m^3	R	5.65E-09	mg/kg-day	--	--			--
	TITANIUM	4.25E+03	mg/kg	3.23E-06	mg/m^3	R	1.71E-06	mg/kg-day	2.6E-04	mg/kg-day	--	--	6.6E-03
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	7.48E-03	mg/kg	5.68E-12	mg/m^3	R	3.02E-12	mg/kg-day	2.9E-01	mg/kg-day	--	--	1.1E-11
	ACETONE	1.71E-02	mg/kg	1.30E-11	mg/m^3	R	6.88E-12	mg/kg-day	1.0E+00	mg/kg-day	--	--	6.9E-12
	CARBON DISULFIDE	5.00E-03	mg/kg	3.80E-12	mg/m^3	R	2.02E-12	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.0E-11
	TOLUENE	6.11E-03	mg/kg	4.64E-12	mg/m^3	R	2.46E-12	mg/kg-day	1.1E-01	mg/kg-day	--	--	2.2E-11
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	1.61E-12	mg/kg-day	2.0E+00	mg/kg-day	--	--	8.1E-13
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	1.49E-11	mg/kg-day	5.7E-01	mg/kg-day	--	--	2.6E-11
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	1.79E-10	mg/m^3	R	9.49E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.2E-11
	ACENAPHTHENE	2.00E-02	mg/kg	1.52E-11	mg/m^3	R	8.06E-12	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.3E-11
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	6.05E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.0E-11
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	1.65E-10	mg/m^3	R	8.74E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.9E-11
	BENZO(A)PYRENE	2.02E-01	mg/kg	1.53E-10	mg/m^3	R	8.14E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.7E-10
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	1.64E-10	mg/m^3	R	8.70E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.2E-10
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	1.58E-10	mg/m^3	R	8.38E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.8E-10
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	1.77E-10	mg/m^3	R	9.37E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.3E-10
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	9.02E-11	mg/m^3	R	4.78E-11	mg/kg-day	2.0E-02	mg/kg-day			2.4E-09

TABLE J-94

EPA TABLE M.7.15.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	2.94E-11	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.2E-09
	CHRYSENE	2.04E-01	mg/kg	1.55E-10	mg/m^3	R	8.24E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.7E-11
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	2.42E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	8.1E-12
	FLUORANTHENE	1.83E-01	mg/kg	1.39E-10	mg/m^3	R	7.37E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.8E-10
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	3.31E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	8.3E-11
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	5.64E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.4E-10
	NAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	9.68E-11	mg/kg-day	8.6E-04	mg/kg-day	--	--	1.1E-07
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	2.02E-10	mg/kg-day	3.0E-02	mg/kg-day			6.7E-09
	PHENANTHRENE	2.28E-01	mg/kg	1.74E-10	mg/m^3	R	9.21E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.1E-11
	PYRENE	1.71E-01	mg/kg	1.30E-10	mg/m^3	R	6.89E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.3E-10
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.86E-03	mg/kg	2.17E-12	mg/m^3	R	1.15E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.3E-09
	4,4'-DDE	2.54E-03	mg/kg	1.93E-12	mg/m^3	R	1.02E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.0E-09
	4,4'-DDT	8.46E-03	mg/kg	6.43E-12	mg/m^3	R	3.41E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	6.8E-09
	ALDRIN	1.01E-03	mg/kg	7.67E-13	mg/m^3	R	4.07E-13	mg/kg-day	3.0E-05	mg/kg-day	--	--	1.4E-08
	ALPHA-BHC	3.33E-03	mg/kg	2.53E-12	mg/m^3	R	1.34E-12	mg/kg-day	3.0E-03	mg/kg-day	--	--	4.5E-10
	ALPHA-CHLORDANE	2.26E-03	mg/kg	1.72E-12	mg/m^3	R	9.11E-13	mg/kg-day	2.0E-03	mg/kg-day	--	--	4.6E-10
	AROCLOR-1254	1.10E-02	mg/kg	8.37E-12	mg/m^3	R	4.44E-12	mg/kg-day	5.0E-05	mg/kg-day	--	--	8.9E-08
	AROCLOR-1260	3.79E-02	mg/kg	2.88E-11	mg/m^3	R	1.53E-11	mg/kg-day	5.0E-05	mg/kg-day	--	--	3.1E-07
	BETA-BHC	1.44E-03	mg/kg	1.09E-12	mg/m^3	R	5.81E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.9E-10
	DELTA-BHC	1.13E-03	mg/kg	8.59E-13	mg/m^3	R	4.56E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.5E-10
	DIELDRIN	2.07E-03	mg/kg	1.57E-12	mg/m^3	R	8.35E-13	mg/kg-day	5.0E-05	mg/kg-day			1.7E-08
	ENDOSULFAN I	1.14E-03	mg/kg	8.66E-13	mg/m^3	R	4.60E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	7.7E-11
	ENDOSULFAN II	1.92E-03	mg/kg	1.46E-12	mg/m^3	R	7.74E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.3E-10
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	1.82E-12	mg/m^3	R	9.68E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.6E-10
	ENDRIN	1.98E-03	mg/kg	1.50E-12	mg/m^3	R	7.98E-13	mg/kg-day	3.0E-04	mg/kg-day			2.7E-09
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	2.35E-12	mg/m^3	R	1.25E-12	mg/kg-day	3.0E-04	mg/kg-day	--	--	4.2E-09
	ENDRIN KETONE	2.47E-03	mg/kg	1.88E-12	mg/m^3	R	9.96E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.3E-09

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EPA TABLE M.7.15.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.22E-12	mg/m^3	R	6.49E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.2E-10
	GAMMA-CHLORDANE	2.18E-03	mg/kg	1.66E-12	mg/m^3	R	8.79E-13	mg/kg-day	2.0E-03	mg/kg-day	--	--	4.4E-10
	HEPTACHLOR	2.00E-04	mg/kg	1.52E-13	mg/m^3	R	8.06E-14	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.6E-10
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.13E-13	mg/m^3	R	1.13E-13	mg/kg-day	1.3E-05	mg/kg-day	--	--	8.7E-09
	METHOXYCHLOR	9.68E-03	mg/kg	7.36E-12	mg/m^3	R	3.90E-12	mg/kg-day	5.0E-03	mg/kg-day	--	--	7.8E-10
Inhalation-VOCs	**METAL**												
	BARIUM	9.67E+01	mg/kg	--	mg/m^3	R	--	--	1.0E-03	mg/kg-day	--	--	--
	COBALT	1.15E+01	mg/kg	--	mg/m^3	R	--	--	1.4E-06	mg/kg-day	--	--	--
	COPPER	5.99E+01	mg/kg	--	mg/m^3	R	--	--	5.7E-06	mg/kg-day	--	--	--
	LEAD	9.96E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	SELENIUM	5.18E-01	mg/kg	--	mg/m^3	R	--	--	2.3E-05	mg/kg-day	--	--	--
	SILVER	5.63E-01	mg/kg	--	mg/m^3	R	--	--	5.7E-03	mg/kg-day	--	--	--
	THALLIUM	4.14E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TIN	1.40E+01	mg/kg	--	mg/m^3	R	--	--	--	--			--
	TITANIUM	4.25E+03	mg/kg	--	mg/m^3	R	--	--	2.6E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	7.48E-03	mg/kg	1.71E-04	mg/m^3	R	9.06E-05	mg/kg-day	2.9E-01	mg/kg-day	--	--	3.2E-04
	ACETONE	1.71E-02	mg/kg	3.48E-04	mg/m^3	R	1.84E-04	mg/kg-day	1.0E+00	mg/kg-day	--	--	1.8E-04
	CARBON DISULFIDE	5.00E-03	mg/kg	5.75E-02	mg/m^3	R	3.05E-02	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.5E-01
	TOLUENE	6.11E-03	mg/kg	2.69E-02	mg/m^3	R	1.43E-02	mg/kg-day	1.1E-01	mg/kg-day	--	--	1.2E-01
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	8.65E-04	mg/kg-day	2.0E+00	mg/kg-day	--	--	4.3E-04
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	2.40E-02	mg/kg-day	5.7E-01	mg/kg-day	--	--	4.2E-02
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	1.74E-01	mg/m^3	R	9.26E-02	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.1E-02
	ACENAPHTHENE	2.00E-02	mg/kg	1.31E-02	mg/m^3	R	6.93E-03	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.2E-02
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	1.46E-03	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.9E-04
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--

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EPA TABLE M.7.15.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	BENZO(A)PYRENE	2.02E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day			--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.5E-02	mg/kg-day	--	--	--
	CHRYSENE	2.04E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	FLUORANTHENE	1.83E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	1.80E-03	mg/kg-day	4.0E-01	mg/kg-day	--	--	4.5E-03
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	NAPHTHALENE	2.40E-01	mg/kg	*	mg/m^3	R	--	--	8.6E-04	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day			--
	PHENANTHRENE	2.28E-01	mg/kg	4.20E-03	mg/m^3	R	2.23E-03	mg/kg-day	3.0E+00	mg/kg-day	--	--	7.4E-04
	PYRENE	1.71E-01	mg/kg	6.52E-04	mg/m^3	R	3.46E-04	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.2E-03
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.86E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDE	2.54E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDT	8.46E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	ALDRIN	1.01E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-05	mg/kg-day	--	--	--
	ALPHA-BHC	3.33E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	ALPHA-CHLORDANE	2.26E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-03	mg/kg-day	--	--	--
	AROCLOR-1254	1.10E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	AROCLOR-1260	3.79E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	BETA-BHC	1.44E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	DELTA-BHC	1.13E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	DIELDRIN	2.07E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day			--
	ENDOSULFAN I	1.14E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--

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EPA TABLE M.7.15.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Residential
Receptor Age:	Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	ENDOSULFAN II	1.92E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDRIN	1.98E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day			--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ENDRIN KETONE	2.47E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	GAMMA-CHLORDANE	2.18E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-03	mg/kg-day	--	--	--
	HEPTACHLOR	2.00E-04	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	--	mg/m^3	R	--	--	1.3E-05	mg/kg-day	--	--	--
	METHOXYCHLOR	9.68E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-03	mg/kg-day	--	--	--

Total Hazard Index Across All Air Exposure Routes/Pathways - Soil	3.8E-01
Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	1.4E-01
Total Hazard Index Across All Exposure Routes/Pathways - Soil	5.2E-01
Total Hazard Index Across All Air Exposure Routes/Pathways - Groundwater	4.3E-02
Total Hazard Index Across All Exposure Routes/Pathways	5.6E-01

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) All values are subchronic

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

NV = No value available

VOC = Volatile Organic Compound

* = Inhalation of VOCs for naphthalane evaluated under groundwater exposures instead of soil due to single detection of naphthalene at 9.5 feet below ground suface, which is below shallow groundwater

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TABLE M.9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact	**METAL**					**METAL**					
			BARIUM	--		--	--	BARIUM	No adverse effect	2.E-03	--	9.E-05	2.E-03
			COBALT	--		--	--	COBALT	--	3.E-04	--	1.E-05	3.E-04
			COPPER	--		--	--	COPPER	GI System	3.E-03	--	1.E-04	3.E-03
			LEAD	--		--	--	LEAD	--	--	--	--	--
			MOLYBDENUM	--		--	--	MOLYBDENUM	Kidney	1.E-04	--	4.E-06	1.E-04
			SELENIUM	--		--	--	SELENIUM	CNS/PNS, Liver, Skin, Blood	2.E-04	--	6.E-06	2.E-04
			SILVER	--		--	--	SILVER	Skin	3.E-04	--	1.E-05	3.E-04
			THALLIUM	--		--	--	THALLIUM	No adverse effect	9.E-03	--	4.E-04	9.E-03
			TIN			--		TIN	Liver, Kidney			2.E-06	
			TITANIUM	--		--	--	TITANIUM	Blood	2.E-02	--	9.E-04	2.E-02
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			2-BUTANONE	--		--	--	2-BUTANONE	Reproductive System	2.E-08	--	8.E-09	3.E-08
			ACETONE	--		--	--	ACETONE	Liver, Kidney	3.E-07	--	1.E-07	4.E-07
			CARBON DISULFIDE	--		--	--	CARBON DISULFIDE	Reproductive System	7.E-08	--	3.E-08	1.E-07
			TOLUENE	--		--	--	TOLUENE	Liver, Kidney	4.E-08	--	2.E-08	6.E-08
			XYLENE (TOTAL)	--		--	--	XYLENE (TOTAL)	Whole body (weight), CNS/PNS	3.E-09	--	1.E-09	4.E-09
			SEMIVOLATILE ORGANIC COMPOUNDS				--	**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE	--		--	--	1,2,4-TRICHLOROBENZENE	Adrenal	5.E-06	--	2.E-06	7.E-06
			2-METHYLNAPHTHALENE	--		--	--	2-METHYLNAPHTHALENE	No observed effect	1.E-06	--	7.E-07	2.E-06
			ACENAPHTHENE	--		--	--	ACENAPHTHENE	Liver	5.E-07	--	3.E-07	7.E-07
			ANTHRACENE	--		--	--	ANTHRACENE	No observed effect	7.E-07	--	4.E-07	1.E-06
			BENZO(A)ANTHRACENE	1E-07		8.4E-08	2.E-07	BENZO(A)ANTHRACENE	No observed effect	1.E-06	--	7.E-07	2.E-06
			BENZO(A)PYRENE	1E-06		7.9E-07	2.E-06	BENZO(A)PYRENE	Kidney	1.E-05	--	6.E-06	2.E-05
			BENZO(B)FLUORANTHENE	1E-07		8.4E-08	2.E-07	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood	9.E-06	--	5.E-06	1.E-05
			BENZO(G,H,I)PERYLENE	--		--	--	BENZO(G,H,I)PERYLENE	Kidney	1.E-05	--	6.E-06	2.E-05
			BENZO(K)FLUORANTHENE	1E-07		8.7E-08	2.E-07	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood	9.E-06	--	5.E-06	1.E-05
			BIS(2-ETHYLHEXYL)PHTHALATE	9E-10		3.8E-10	1.E-09	BIS(2-ETHYLHEXYL)PHTHALATE	Liver	1.E-05	--	4.E-06	1.E-05
			CARBAZOLE	7E-10		2.7E-10	1.E-09	CARBAZOLE	Whole body (weight), Liver, Kidney	4.E-06	--	2.E-06	6.E-06
			CHRYSENE	1E-08		8.2E-09	2.E-08	CHRYSENE	No observed effect	1.E-06	--	7.E-07	2.E-06
			DIBENZ(A,H)ANTHRACENE	1E-07		6.9E-08	2.E-07	DIBENZ(A,H)ANTHRACENE	No observed effect	3.E-07	--	2.E-07	4.E-07
			FLUORANTHENE	--		--	--	FLUORANTHENE	Liver, Kidney, Blood	8.E-06	--	5.E-06	1.E-05
			FLUORENE	--		--	--	FLUORENE	Blood	3.E-06	--	2.E-06	4.E-06
			INDENO(1,2,3-CD)PYRENE	8E-08		4.7E-08	1.E-07	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood	5.E-06	--	3.E-06	8.E-06
			NAPHTHALENE	--		--	--	NAPHTHALENE	Body weight	2.E-05	--	1.E-05	3.E-05
			PENTACHLOROPHENOL	3E-08		2.8E-08	6.E-08	PENTACHLOROPHENOL	Liver, Kidney	2.E-05	--	2.E-05	5.E-05
			PHENANTHRENE	--		--	--	PHENANTHRENE	No observed effect	1.E-06	--	7.E-07	2.E-06
			PYRENE	--		--	--	PYRENE	Kidney	9.E-06	--	6.E-06	1.E-05
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD	4E-10		7.4E-11	4.E-10	4,4'-DDD	Liver	9.E-06	--	2.E-06	1.E-05
			4,4'-DDE	5E-10		9.0E-11	5.E-10	4,4'-DDE	Liver	8.E-06	--	2.E-06	9.E-06
			4,4'-DDT	2E-09		3.5E-10	2.E-09	4,4'-DDT	Liver	3.E-05	--	6.E-06	4.E-05
			ALDRIN	8E-09		1.6E-09	1.E-08	ALDRIN	Liver	5.E-05	--	9.E-06	6.E-05
			ALPHA-BHC	1E-08		2.6E-09	2.E-08	ALPHA-BHC	Liver, kidney	2.E-05	--	4.E-06	2.E-05
			ALPHA-CHLORDANE	2E-09		3.1E-10	2.E-09	ALPHA-CHLORDANE	Liver	8.E-06	--	1.E-06	9.E-06
			AROCLOR-1254	1E-08		7.9E-09	2.E-08	AROCLOR-1254	Immune System	1.E-03	--	6.E-04	2.E-03
			AROCLOR-1260	5E-08		2.7E-08	7.E-08	AROCLOR-1260	Immune System	3.E-03	--	2.E-03	5.E-03
			BETA-BHC	1E-09		2.7E-10	2.E-09	BETA-BHC	Liver, Kidney	7.E-06	--	1.E-06	9.E-06
			DELTA-BHC	--		--	--	DELTA-BHC	Liver, Kidney	6.E-06	--	1.E-06	7.E-06
			DIELDRIN	2E-08		3.3E-09	2.E-08	DIELDRIN	Liver	6.E-05	--	1.E-05	7.E-05
			ENDOSULFAN I	--		--	--	ENDOSULFAN I	Whole body (weight), Kidney, Blood	3.E-07	--	6.E-08	3.E-07
			ENDOSULFAN II	--		--	--	ENDOSULFAN II	Whole body (weight), Kidney, Blood	4.E-07	--	9.E-08	5.E-07
			ENDOSULFAN SULFATE	--		--	--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood	6.E-07	--	1.E-07	7.E-07
			ENDRIN	--		--	--	ENDRIN	Liver, CNS/PNS	9.E-06	--	2.E-06	1.E-05
			ENDRIN ALDEHYDE	--		--	--	ENDRIN ALDEHYDE	Liver, CNS/PNS	2.E-05	--	3.E-06	2.E-05
			ENDRIN KETONE	--		--	--	ENDRIN KETONE	Liver, CNS/PNS	1.E-05	--	2.E-06	1.E-05
			GAMMA-BHC (LINDANE)	1E-09		2.2E-10	1.E-09	GAMMA-BHC (LINDANE)	Liver, Kidney	8.E-06	--	2.E-06	1.E-05
			GAMMA-CHLORDANE	1E-09		3.0E-10	2.E-09	GAMMA-CHLORDANE	Liver	7.E-06	--	1.E-06	9.E-06
			HEPTACHLOR	6E-10		1.2E-10	7.E-10	HEPTACHLOR	Liver	6.E-07	--	1.E-07	8.E-07
			HEPTACHLOR EPOXIDE	2E-09		4.0E-10	2.E-09	HEPTACHLOR EPOXIDE	Liver	3.E-05	--	7.E-06	4.E-05

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TABLE M.9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact	METHOXYCHLOR	--		--	--	METHOXYCHLOR	Reproductive System	3.E-06	--	1.E-05	1.E-05
		(continued)	(Total)	2E-06		1E-06	3E-06	(Total)		0.04		0.001	0.04
Soil 0-10 ft. bgs	Air	Indoor Air	**METAL**					**METAL**					
			BARIUM		--		--	BARIUM	Reproductive System		2.E-04		2.E-04
			COBALT		--		--	COBALT	Respiratory System		2.E-03		2.E-03
			COPPER		--		--	COPPER	Respiratory System		3.E-03		3.E-03
			LEAD		--		--	LEAD	--		--		--
			MOLYBDENUM		--		--	MOLYBDENUM	--		--		--
			SELENIUM		--		--	SELENIUM	Respiratory System		5.E-06		5.E-06
			SILVER		--		--	SILVER	Skin		3.E-08		3.E-08
			THALLIUM		--		--	THALLIUM	--		--		--
			TIN		--			TIN	--		--		
			TITANIUM		--		--	TITANIUM	Respiratory/Immune System		4.E-03		4.E-03
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		2.E-04		2.E-04
			ACETONE		--		--	ACETONE	Liver, Kidney		1.E-03		1.E-03
			CARBON DISULFIDE		--		--	CARBON DISULFIDE	CNS/PNS		8.E-02		8.E-02
			TOLUENE		--		--	TOLUENE	CNS/PNS		7.E-02		7.E-02
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		2.E-03		2.E-03
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE		--		--	1,2,4-TRICHLOROBENZENE	Liver		2.E-01		2.E-01
			2-METHYLNAPHTHALENE		--		--	2-METHYLNAPHTHALENE	No observed effect		2.E-01		2.E-01
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		6.E-02		6.E-02
			ANTHRACENE		--		--	ANTHRACENE	No observed effect		3.E-03		3.E-03
			BENZO(A)ANTHRACENE		7.E-12		7.E-12	BENZO(A)ANTHRACENE	No observed effect		2.E-10		2.E-10
			BENZO(A)PYRENE		7.E-11		7.E-11	BENZO(A)PYRENE	Kidney		2.E-09		2.E-09
			BENZO(B)FLUORANTHENE		7.E-12		7.E-12	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		1.E-09		1.E-09
			BENZO(G,H,I)PERYLENE		--		--	BENZO(G,H,I)PERYLENE	Kidney		2.E-09		2.E-09
			BENZO(K)FLUORANTHENE		7.E-12		7.E-12	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood		1.E-09		1.E-09
			BIS(2-ETHYLHEXYL)PHTHALATE		9.E-14		9.E-14	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		2.E-09		2.E-09
			CARBAZOLE		1.E-13		1.E-13	CARBAZOLE	Whole body (weight), Liver, Kidney		6.E-10		6.E-10
			CHRYSENE		7.E-13		7.E-13	CHRYSENE	No observed effect		2.E-10		2.E-10
			DIBENZ(A,H)ANTHRACENE		2.E-11		2.E-11	DIBENZ(A,H)ANTHRACENE	No observed effect		4.E-11		4.E-11
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		1.E-09		1.E-09
			FLUORENE		--		--	FLUORENE	Blood		2.E-02		2.E-02
			INDENO(1,2,3-CD)PYRENE		4.E-12		4.E-12	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood		7.E-10		7.E-10
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		6.E-08		6.E-08
			PENTACHLOROPHENOL		4.E-12		4.E-12	PENTACHLOROPHENOL	Liver, Kidney		3.E-09		3.E-09
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		4.E-03		4.E-03
			PYRENE		--		--	PYRENE	Kidney		7.E-03		7.E-03
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD		6.E-14		6.E-14	4,4'-DDD	Liver		1.E-09		1.E-09
			4,4'-DDE		7.E-14		7.E-14	4,4'-DDE	Liver		1.E-09		1.E-09
			4,4'-DDT		3.E-13		3.E-13	4,4'-DDT	Liver		5.E-09		5.E-09
			ALDRIN		1.E-12		1.E-12	ALDRIN	Liver		7.E-09		7.E-09
			ALPHA-BHC		2.E-12		2.E-12	ALPHA-BHC	Liver, Kidney		3.E-09		3.E-09
			ALPHA-CHLORDANE		2.E-13		2.E-13	ALPHA-CHLORDANE	Liver		3.E-09		3.E-09
			AROCLOR-1254		2.E-12		2.E-12	AROCLOR-1254	Immune System		1.E-07		1.E-07
			AROCLOR-1260		7.E-12		7.E-12	AROCLOR-1260	Immune System		5.E-07		5.E-07
			BETA-BHC		2.E-13		2.E-13	BETA-BHC	Liver, Kidney		1.E-09		1.E-09
			DELTA-BHC		--		--	DELTA-BHC	Liver, Kidney		8.E-10		8.E-10
			DIELDRIN		2.E-12		2.E-12	DIELDRIN	Liver		9.E-09		9.E-09
			ENDOSULFAN I		--		--	ENDOSULFAN I	Whole body (weight), Kidney, Blood		4.E-11		4.E-11
			ENDOSULFAN II		--		--	ENDOSULFAN II	Whole body (weight), Kidney, Blood		7.E-11		7.E-11
			ENDOSULFAN SULFATE		--		--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood		9.E-11		9.E-11
			ENDRIN		--		--	ENDRIN	Liver, CNS/PNS		1.E-09		1.E-09
			ENDRIN ALDEHYDE		--		--	ENDRIN ALDEHYDE	Liver, CNS/PNS		2.E-09		2.E-09
			ENDRIN KETONE		--		--	ENDRIN KETONE	Liver, CNS/PNS		2.E-09		2.E-09
			GAMMA-BHC (LINDANE)		2.E-13		2.E-13	GAMMA-BHC (LINDANE)	Liver, Kidney		1.E-09		1.E-09
			GAMMA-CHLORDANE		2.E-13		2.E-13	GAMMA-CHLORDANE	Liver		3.E-09		3.E-09
			HEPTACHLOR		9.E-14		9.E-14	HEPTACHLOR	Liver		1.E-10		1.E-10

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TABLE M.9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Air	Indoor Air (continued)	HEPTACHLOR EPOXIDE		3.E-13		3.E-13	HEPTACHLOR EPOXIDE	Liver		5.E-09		5.E-09
			METHOXYCHLOR		--		--	METHOXYCHLOR	Reproductive System		4.E-10		4.E-10
			(Total)		1E-10		1E-10	(Total)			0.6		0.6
Groundwater	Air	Indoor Air	**VOLATILE ORGANIC COMPOUNDS**					**VOLATILE ORGANIC COMPOUNDS**					
			1,2-DICHLOROETHANE		9.E-08		9.E-08	1,2-DICHLOROETHANE	--		2.E-03		2.E-03
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		2.E-04		2.E-04
			4-METHYL-2-PENTANONE		--		--	4-METHYL-2-PENTANONE	Liver, Kidney		2.E-04		2.E-04
			ACETONE		--		--	ACETONE	Liver, Kidney		3.E-03		3.E-03
			CHLOROMETHANE		--		--	CHLOROMETHANE	CNS/PNS		1.E-04		1.E-04
			ETHYLBENZENE		--		--	ETHYLBENZENE	Reproductive System		2.E-05		2.E-05
			TOLUENE		--		--	TOLUENE	CNS/PNS		6.E-05		6.E-05
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		5.E-05		5.E-05
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,3-DICHLOROBENZENE		--		--	1,3-DICHLOROBENZENE	--		6.E-03		6.E-03
			2,4-DICHLOROPHENOL		--		--	2,4-DICHLOROPHENOL	Immune System		--		--
			4-METHYLPHENOL		--		--	4-METHYLPHENOL	CNS/PNS, Respiratory System		--		--
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		--		--
			BENZO(B)FLUORANTHENE		--		--	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		--		--
			BIS(2-ETHYLHEXYL)PHTHALATE		--		--	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		--		--
			CARBAZOLE		--		--	CARBAZOLE	Whole body (weight), Liver, Kidney		--		--
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		--		--
			N-NITROSODIPHENYLAMINE (1)		--		--	N-NITROSODIPHENYLAMINE (1)	--		--		--
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		1.E-02		1.E-02
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		1.E-05		1.E-05
			PHENOL		--		--	PHENOL	Reproductive System		--		--
			PYRENE		--		--	PYRENE	Kidney		3.E-04		3.E-04
			(Total)		9E-08		9E-08	(Total)			0.026		0.026
						Total Risk Across Soil	3.E-06					Total Hazard Index Across Soil	0.7
						Total Risk Across Groundwater	9E-08					Total Hazard Across Groundwater	0.026
						Total Risk Across All Media and All Exposure Routes	3.E-06					Total Hazard Across All Media and All Exposure Routes	0.7

Notes:
Ft. = Feet
-- = Not available
bgs = Below ground surface
RME = Reasonable maximum exposure
COPC = Chemical of potential concern
CNS/PNS = Central nervous system/peripheral nervous system
GI = Gastrointestinal

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TABLE M.9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe: Future
Receptor Population: Residential
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact	**METAL**					**METAL**					
			BARIUM	--		--	--	BARIUM	No adverse effect	2.E-02	--	6.E-04	2.E-02
			COBALT	--		--	--	COBALT	--	3.E-03	--	8.E-05	3.E-03
			COPPER	--		--	--	COPPER	GI System	2.E-02	--	7.E-04	3.E-02
			LEAD	--		--	--	LEAD	--	--	--	--	--
			MOLYBDENUM	--		--	--	MOLYBDENUM	Kidney	1.E-03	--	3.E-05	1.E-03
			SELENIUM	--		--	--	SELENIUM	CNS/PNS, Liver, Skin, Blood	2.E-03	--	4.E-05	2.E-03
			SILVER	--		--	--	SILVER	Skin	2.E-03	--	7.E-05	2.E-03
			THALLIUM	--		--	--	THALLIUM	No adverse effect	8.E-02	--	2.E-03	8.E-02
			TIN			--		TIN	Liver, Kidney	4.E-04	--	1.E-05	4.E-04
			TITANIUM	--		--	--	TITANIUM	Blood	2.E-01	--	6.E-03	2.E-01
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			2-BUTANONE	--		--	--	2-BUTANONE	Reproductive System	2.E-07	--	5.E-08	2.E-07
			ACETONE	--		--	--	ACETONE	Liver, Kidney	3.E-06	--	9.E-07	4.E-06
			CARBON DISULFIDE	--		--	--	CARBON DISULFIDE	Reproductive System	6.E-07	--	2.E-07	8.E-07
			TOLUENE	--		--	--	TOLUENE	Liver, Kidney	4.E-07	--	1.E-07	5.E-07
			XYLENE (TOTAL)	--		--	--	XYLENE (TOTAL)	Whole body (weight), CNS/PNS	3.E-08	--	7.E-09	3.E-08
			SEMIVOLATILE ORGANIC COMPOUNDS				--	**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE	--		--	--	1,2,4-TRICHLOROBENZENE	Adrenal	5.E-05	--	1.E-05	6.E-05
			2-METHYLNAPHTHALENE	--		--	--	2-METHYLNAPHTHALENE	No observed effect	1.E-05	--	4.E-06	1.E-05
			ACENAPHTHENE	--		--	--	ACENAPHTHENE	Liver	4.E-06	--	2.E-06	6.E-06
			ANTHRACENE	--		--	--	ANTHRACENE	No observed effect	6.E-06	--	3.E-06	9.E-06
			BENZO(A)ANTHRACENE	3E-07		1.4E-07	5.E-07	BENZO(A)ANTHRACENE	No observed effect	1.E-05	--	5.E-06	2.E-05
			BENZO(A)PYRENE	3E-06		1.3E-06	4.E-06	BENZO(A)PYRENE	Kidney	1.E-04	--	4.E-05	1.E-04
			BENZO(B)FLUORANTHENE	3E-07		1.4E-07	5.E-07	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood	8.E-05	--	3.E-05	1.E-04
			BENZO(G,H,I)PERYLENE	--		--	--	BENZO(G,H,I)PERYLENE	Kidney	1.E-04	--	4.E-05	1.E-04
			BENZO(K)FLUORANTHENE	3E-07		1.5E-07	5.E-07	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood	8.E-05	--	4.E-05	1.E-04
			BIS(2-ETHYLHEXYL)PHTHALATE	2E-09		6.4E-10	3.E-09	BIS(2-ETHYLHEXYL)PHTHALATE	Liver	9.E-05	--	3.E-05	1.E-04
			CARBAZOLE	2E-09		4.6E-10	2.E-09	CARBAZOLE	Whole body (weight), Liver, Kidney	4.E-05	--	1.E-05	5.E-05
			CHRYSENE	3E-08		1.4E-08	5.E-08	CHRYSENE	No observed effect	1.E-05	--	5.E-06	1.E-05
			DIBENZ(A,H)ANTHRACENE	3E-07		1.2E-07	4.E-07	DIBENZ(A,H)ANTHRACENE	No observed effect	3.E-06	--	1.E-06	4.E-06
			FLUORANTHENE	--		--	--	FLUORANTHENE	Liver, Kidney, Blood	7.E-05	--	3.E-05	1.E-04
			FLUORENE	--		--	--	FLUORENE	Blood	3.E-05	--	1.E-05	4.E-05
			INDENO(1,2,3-CD)PYRENE	2E-07		8.0E-08	3.E-07	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood	4.E-05	--	2.E-05	6.E-05
			NAPHTHALENE	--		--	--	NAPHTHALENE	Body weight	2.E-04	--	7.E-05	2.E-04
			PENTACHLOROPHENOL	7E-08		4.8E-08	1.E-07	PENTACHLOROPHENOL	Liver, Kidney	2.E-04	--	2.E-04	4.E-04
			PHENANTHRENE	--		--	--	PHENANTHRENE	No observed effect	1.E-05	--	5.E-06	2.E-05
			PYRENE	--		--	--	PYRENE	Kidney	9.E-05	--	4.E-05	1.E-04
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD	9E-10		1.3E-10	1.E-09	4,4'-DDD	Liver	8.E-05	--	1.E-05	1.E-04
			4,4'-DDE	1E-09		1.5E-10	1.E-09	4,4'-DDE	Liver	7.E-05	--	1.E-05	8.E-05
			4,4'-DDT	4E-09		5.9E-10	5.E-09	4,4'-DDT	Liver	3.E-04	--	4.E-05	3.E-04
			ALDRIN	2E-08		2.8E-09	2.E-08	ALDRIN	Liver	4.E-04	--	6.E-05	5.E-04
			ALPHA-BHC	3E-08		4.4E-09	3.E-08	ALPHA-BHC	Liver, kidney	2.E-04	--	3.E-05	2.E-04
			ALPHA-CHLORDANE	4E-09		5.2E-10	4.E-09	ALPHA-CHLORDANE	Liver	7.E-05	--	1.E-05	8.E-05
			AROCLOR-1254	3E-08		1.3E-08	4.E-08	AROCLOR-1254	Immune System	9.E-03	--	4.E-03	1.E-02
			AROCLOR-1260	1E-07		4.7E-08	2.E-07	AROCLOR-1260	Immune System	3.E-02	--	1.E-02	4.E-02
			BETA-BHC	3E-09		4.6E-10	4.E-09	BETA-BHC	Liver, Kidney	7.E-05	--	1.E-05	8.E-05
			DELTA-BHC	--		--	--	DELTA-BHC	Liver, Kidney	5.E-05	--	7.E-06	6.E-05
			DIELDRIN	4E-08		5.5E-09	4.E-08	DIELDRIN	Liver	6.E-04	--	8.E-05	6.E-04
			ENDOSULFAN I	--		--	--	ENDOSULFAN I	Whole body (weight), Kidney, Blood	3.E-06	--	4.E-07	3.E-06
			ENDOSULFAN II	--		--	--	ENDOSULFAN II	Whole body (weight), Kidney, Blood	4.E-06	--	6.E-07	5.E-06
			ENDOSULFAN SULFATE	--		--	--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood	6.E-06	--	8.E-07	6.E-06
			ENDRIN	--		--	--	ENDRIN	Liver, CNS/PNS	9.E-05	--	1.E-05	1.E-04
			ENDRIN ALDEHYDE	--		--	--	ENDRIN ALDEHYDE	Liver, CNS/PNS	1.E-04	--	2.E-05	2.E-04
			ENDRIN KETONE	--		--	--	ENDRIN KETONE	Liver, CNS/PNS	1.E-04	--	2.E-05	1.E-04
			GAMMA-BHC (LINDANE)	3E-09		3.8E-10	3.E-09	GAMMA-BHC (LINDANE)	Liver, Kidney	8.E-05	--	1.E-05	9.E-05
			GAMMA-CHLORDANE	3E-09		5.1E-10	4.E-09	GAMMA-CHLORDANE	Liver	7.E-05	--	1.E-05	8.E-05
			HEPTACHLOR	1E-09		2.1E-10	2.E-09	HEPTACHLOR	Liver	6.E-06	--	9.E-07	7.E-06
			HEPTACHLOR EPOXIDE	5E-09		6.8E-10	5.E-09	HEPTACHLOR EPOXIDE	Liver	3.E-04	--	5.E-05	4.E-04

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TABLE M.9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe: Future
Receptor Population: Residential
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact	METHOXYCHLOR	--		--	--	METHOXYCHLOR	Reproductive System	3.E-05	--	7.E-05	9.E-05
		(continued)	(Total)	5E-06		2E-06	7E-06	(Total)		0.3		0.01	0.3
Soil 0-10 ft. bgs	Air	Indoor Air	**METAL**					**METAL**					
			BARIUM		--		--	BARIUM	Reproductive System		5.E-04		5.E-04
			COBALT		--		--	COBALT	Respiratory System		4.E-03		4.E-03
			COPPER		--		--	COPPER	Respiratory System		6.E-03		6.E-03
			LEAD		--		--	LEAD	--		--		--
			MOLYBDENUM		--		--	MOLYBDENUM	--		--		--
			SELENIUM		--		--	SELENIUM	Respiratory System		1.E-05		1.E-05
			SILVER		--		--	SILVER	Skin		8.E-08		8.E-08
			THALLIUM		--		--	THALLIUM	--		--		--
			TIN		--			TIN	--		--		--
			TITANIUM		--		--	TITANIUM	Respiratory/Immune System		9.E-03		9.E-03
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		4.E-04		4.E-04
			ACETONE		--		--	ACETONE	Liver, Kidney		3.E-03		3.E-03
			CARBON DISULFIDE		--		--	CARBON DISULFIDE	CNS/PNS		2.E-01		2.E-01
			TOLUENE		--		--	TOLUENE	CNS/PNS		2.E-01		2.E-01
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		5.E-03		5.E-03
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE		--		--	1,2,4-TRICHLOROBENZENE	Liver		5.E-01		5.E-01
			2-METHYLNAPHTHALENE		--		--	2-METHYLNAPHTHALENE	No observed effect		4.E-01		4.E-01
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		1.E-01		1.E-01
			ANTHRACENE		--		--	ANTHRACENE	No observed effect		6.E-03		6.E-03
			BENZO(A)ANTHRACENE		4.E-12		4.E-12	BENZO(A)ANTHRACENE	No observed effect		4.E-10		4.E-10
			BENZO(A)PYRENE		4.E-11		4.E-11	BENZO(A)PYRENE	Kidney		4.E-09		4.E-09
			BENZO(B)FLUORANTHENE		4.E-12		4.E-12	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		3.E-09		3.E-09
			BENZO(G,H,I)PERYLENE		--		--	BENZO(G,H,I)PERYLENE	Kidney		4.E-09		4.E-09
			BENZO(K)FLUORANTHENE		4.E-12		4.E-12	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood		3.E-09		3.E-09
			BIS(2-ETHYLHEXYL)PHTHALATE		5.E-14		5.E-14	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		4.E-09		4.E-09
			CARBAZOLE		6.E-14		6.E-14	CARBAZOLE	Whole body (weight), Liver, Kidney		1.E-09		1.E-09
			CHRYSENE		4.E-13		4.E-13	CHRYSENE	No observed effect		4.E-10		4.E-10
			DIBENZ(A,H)ANTHRACENE		1.E-11		1.E-11	DIBENZ(A,H)ANTHRACENE	No observed effect		1.E-10		1.E-10
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		3.E-09		3.E-09
			FLUORENE		--		--	FLUORENE	Blood		5.E-02		5.E-02
			INDENO(1,2,3-CD)PYRENE		2.E-12		2.E-12	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood		2.E-09		2.E-09
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		1.E-07		1.E-07
			PENTACHLOROPHENOL		2.E-12		2.E-12	PENTACHLOROPHENOL	Liver, Kidney		8.E-09		8.E-09
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		1.E-02		1.E-02
			PYRENE		--		--	PYRENE	Kidney		2.E-02		2.E-02
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD		3.E-14		3.E-14	4,4'-DDD	Liver		3.E-09		3.E-09
			4,4'-DDE		4.E-14		4.E-14	4,4'-DDE	Liver		3.E-09		3.E-09
			4,4'-DDT		2.E-13		2.E-13	4,4'-DDT	Liver		1.E-08		1.E-08
			ALDRIN		7.E-13		7.E-13	ALDRIN	Liver		2.E-08		2.E-08
			ALPHA-BHC		1.E-12		1.E-12	ALPHA-BHC	Liver, Kidney		7.E-09		7.E-09
			ALPHA-CHLORDANE		1.E-13		1.E-13	ALPHA-CHLORDANE	Liver		7.E-09		7.E-09
			AROCLOR-1254		1.E-12		1.E-12	AROCLOR-1254	Immune System		3.E-07		3.E-07
			AROCLOR-1260		4.E-12		4.E-12	AROCLOR-1260	Immune System		1.E-06		1.E-06
			BETA-BHC		1.E-13		1.E-13	BETA-BHC	Liver, Kidney		3.E-09		3.E-09
			DELTA-BHC		--		--	DELTA-BHC	Liver, Kidney		2.E-09		2.E-09
			DIELDRIN		1.E-12		1.E-12	DIELDRIN	Liver		2.E-08		2.E-08
			ENDOSULFAN I		--		--	ENDOSULFAN I	Whole body (weight), Kidney, Blood		1.E-10		1.E-10
			ENDOSULFAN II		--		--	ENDOSULFAN II	Whole body (weight), Kidney, Blood		2.E-10		2.E-10
			ENDOSULFAN SULFATE		--		--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood		2.E-10		2.E-10
			ENDRIN		--		--	ENDRIN	Liver, CNS/PNS		3.E-09		3.E-09
			ENDRIN ALDEHYDE		--		--	ENDRIN ALDEHYDE	Liver, CNS/PNS		6.E-09		6.E-09
			ENDRIN KETONE		--		--	ENDRIN KETONE	Liver, CNS/PNS		4.E-09		4.E-09
			GAMMA-BHC (LINDANE)		1.E-13		1.E-13	GAMMA-BHC (LINDANE)	Liver, Kidney		3.E-09		3.E-09
			GAMMA-CHLORDANE		1.E-13		1.E-13	GAMMA-CHLORDANE	Liver		6.E-09		6.E-09
			HEPTACHLOR		5.E-14		5.E-14	HEPTACHLOR	Liver		2.E-10		2.E-10

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TABLE M.9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Air	Indoor Air (continued)	HEPTACHLOR EPOXIDE		2.E-13		2.E-13	HEPTACHLOR EPOXIDE	Liver		1.E-08		1.E-08
			METHOXYCHLOR		--		--	METHOXYCHLOR	Reproductive System		1.E-09		1.E-09
			(Total)		8E-11		8E-11	(Total)			1		1.48
Groundwater	Air	Indoor Air	**VOLATILE ORGANIC COMPOUNDS**					**VOLATILE ORGANIC COMPOUNDS**					
			1,2-DICHLOROETHANE		5.E-08		5.E-08	1,2-DICHLOROETHANE	--		5.E-03		5.E-03
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		5.E-04		5.E-04
			4-METHYL-2-PENTANONE		--		--	4-METHYL-2-PENTANONE	Liver, Kidney		4.E-04		4.E-04
			ACETONE		--		--	ACETONE	Liver, Kidney		6.E-03		6.E-03
			CHLOROMETHANE		--		--	CHLOROMETHANE	CNS/PNS		3.E-04		3.E-04
			ETHYLBENZENE		--		--	ETHYLBENZENE	Reproductive System		4.E-05		4.E-05
			TOLUENE		--		--	TOLUENE	CNS/PNS		1.E-04		1.E-04
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		1.E-04		1.E-04
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,3-DICHLOROBENZENE		--		--	1,3-DICHLOROBENZENE	--		1.E-02		1.E-02
			2,4-DICHLOROPHENOL		--		--	2,4-DICHLOROPHENOL	Immune System		--		--
			4-METHYLPHENOL		--		--	4-METHYLPHENOL	CNS/PNS, Respiratory System		--		--
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		--		--
			BENZO(B)FLUORANTHENE		--		--	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		--		--
			BIS(2-ETHYLHEXYL)PHTHALATE		--		--	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		--		--
			CARBAZOLE		--		--	CARBAZOLE	Whole body (weight), Liver, Kidney		--		--
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		--		--
			N-NITROSODIPHENYLAMINE (1)		--		--	N-NITROSODIPHENYLAMINE (1)	--		--		--
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		3.E-02		3.E-02
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		3.E-05		3.E-05
			PHENOL		--		--	PHENOL	Reproductive System		--		--
			PYRENE		--		--	PYRENE	Kidney		6.E-04		6.E-04
			(Total)		5E-08		5E-08	(Total)			0.060		0.060

Total Risk Across Soil	7.E-06
Total Risk Across Groundwater	5E-08
Total Risk Across All Media and All Exposure Routes	7.E-06

Total Hazard Index Across Soil	2
Total Hazard Across Groundwater	0.06
Total Hazard Across All Media and All Exposure Routes	2

Notes:
Ft. = Feet
-- = Not available
bgs = Below ground surface
RME = Reasonable maximum exposure
COPC = Chemical of potential concern
CNS/PNS = Central nervous system/peripheral nervous system
GI = Gastrointestinal

Separation of Hazard Index by Target Organ Analysis	SUM
Adrenal	0.0001
Blood	0.3
Body Weight	0.0003
CNS/PNS	0.3
GI System	0.03
Immune System	0.07
Kidney	0.03
Liver	0.7
Reproductive System	0.002
Respiratory System	0.05
Skin	0.004
Other	0.03
NOEL	0.5

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TABLE M.9.5.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact	**METAL**					**METAL**					
			BARIUM	–		–	–	BARIUM	No adverse effect	9.E-04	–	7.E-05	1.E-03
			COBALT	–		–	–	COBALT	–	1.E-04	–	9.E-06	1.E-04
			COPPER	–		–	–	COPPER	GI System	1.E-03	–	8.E-05	1.E-03
			LEAD	–		–	–	LEAD	–	–	–	–	–
			MOLYBDENUM	–		–	–	MOLYBDENUM	Kidney	4.E-05	–	3.E-06	4.E-05
			SELENIUM	–		–	–	SELENIUM	CNS/PNS, Liver, Skin, Blood	7.E-05	–	5.E-06	8.E-05
			SILVER	–		–	–	SILVER	Skin	8.E-05	–	5.E-06	8.E-05
			THALLIUM	–		–	–	THALLIUM	No adverse effect	4.E-04	–	3.E-05	4.E-04
			TIN			–		TIN	Liver, Kidney			1.E-06	
			TITANIUM	–		–	–	TITANIUM	Blood	1.E-02	–	7.E-04	1.E-02
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			2-BUTANONE	–		–	–	2-BUTANONE	Reproductive System	3.E-09	–	2.E-09	4.E-09
			ACETONE	–		–	–	ACETONE	Liver, Kidney	1.E-08	–	8.E-09	2.E-08
			CARBON DISULFIDE	–		–	–	CARBON DISULFIDE	Reproductive System	3.E-08	–	2.E-08	6.E-08
			TOLUENE	–		–	–	TOLUENE	Liver, Kidney	2.E-09	–	1.E-09	4.E-09
			XYLENE (TOTAL)	–		–	–	XYLENE (TOTAL)	Whole body (weight), CNS/PNS	1.E-09	–	1.E-09	2.E-09
			SEMIVOLATILE ORGANIC COMPOUNDS				–	***SEMIVOLATILE ORGANIC COMPOUNDS***					
			1,2,4-TRICHLOROBENZENE	–		–	–	1,2,4-TRICHLOROBENZENE	Adrenal	3.E-06	–	2.E-06	4.E-06
			2-METHYLNAPHTHALENE	–		–	–	2-METHYLNAPHTHALENE	No observed effect	5.E-08	–	6.E-08	1.E-07
			ACENAPHTHENE	–		–	–	ACENAPHTHENE	Liver	2.E-08	–	2.E-08	5.E-08
			ANTHRACENE	–		–	–	ANTHRACENE	No observed effect	3.E-08	–	4.E-08	7.E-08
			BENZO(A)ANTHRACENE	2E-08		1.9E-08	4.E-08	BENZO(A)ANTHRACENE	No observed effect	5.E-08	–	5.E-08	1.E-07
			BENZO(A)PYRENE	2E-07		1.7E-07	3.E-07	BENZO(A)PYRENE	Kidney	5.E-07	–	5.E-07	9.E-07
			BENZO(B)FLUORANTHENE	2E-08		1.9E-08	4.E-08	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood	4.E-07	–	4.E-07	8.E-07
			BENZO(G,H,I)PERYLENE	–		–	–	BENZO(G,H,I)PERYLENE	Kidney	5.E-07	–	5.E-07	1.E-06
			BENZO(K)FLUORANTHENE	2E-08		2.0E-08	4.E-08	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood	4.E-07	–	4.E-07	8.E-07
			BIS(2-ETHYLHEXYL)PHTHALATE	1E-10		8.0E-11	2.E-10	BIS(2-ETHYLHEXYL)PHTHALATE	Liver	4.E-06	–	3.E-06	7.E-06
			CARBAZOLE	*1E-10*		*7.0E-11*	*2.E-10*	*CARBAZOLE*	Whole body (weight), Liver, Kidney	2.E-06	–	1.E-06	3.E-06
			CHRYSENE	2E-09		1.8E-09	3.E-09	CHRYSENE	No observed effect	5.E-08	–	5.E-08	1.E-07
			DIBENZ(A,H)ANTHRACENE	2E-08		1.8E-08	3.E-08	DIBENZ(A,H)ANTHRACENE	No observed effect	1.E-08	–	1.E-08	3.E-08
			FLUORANTHENE	–		–	–	FLUORANTHENE	Liver, Kidney, Blood	3.E-07	–	3.E-07	6.E-07
			FLUORENE	–		–	–	FLUORENE	Blood	1.E-07	–	1.E-07	3.E-07
			INDENO(1,2,3-CD)PYRENE	1E-08		1.2E-08	2.E-08	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood	2.E-07	–	3.E-07	5.E-07
			NAPHTHALENE	–		–	–	NAPHTHALENE	Body weight	8.E-07	–	9.E-07	2.E-06
			PENTACHLOROPHENOL	4E-09		7.2E-09	1.E-08	PENTACHLOROPHENOL	Liver, Kidney	1.E-05	–	2.E-05	3.E-05
			PHENANTHRENE	–		–	–	PHENANTHRENE	No observed effect	5.E-08	–	5.E-08	1.E-07
			PYRENE	–		–	–	PYRENE	Kidney	4.E-07	–	4.E-07	8.E-07
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD	5E-11		*1.6E-11*	*6.E-11*	*4,4'-DDD*	Liver	4.E-06	–	1.E-06	5.E-06
			4,4'-DDE	6E-11		2.1E-11	8.E-11	4,4'-DDE	Liver	3.E-06	–	1.E-06	5.E-06
			4,4'-DDT	2E-10		6.9E-11	3.E-10	4,4'-DDT	Liver	1.E-05	–	4.E-06	2.E-05
			ALDRIN	1E-09		4.1E-10	2.E-09	ALDRIN	Liver	2.E-05	–	8.E-06	3.E-05
			ALPHA-BHC	1E-09		5.0E-10	2.E-09	ALPHA-BHC	Liver, kidney	8.E-07	–	3.E-07	1.E-06
			ALPHA-CHLORDANE	2E-10		6.5E-11	3.E-10	ALPHA-CHLORDANE	Liver	3.E-06	–	1.E-06	4.E-06
			AROCLOR-1254	2E-09		1.6E-09	3.E-09	AROCLOR-1254	Immune System	2.E-04	–	2.E-04	3.E-04
			AROCLOR-1260	5E-09		5.4E-09	1.E-08	AROCLOR-1260	Immune System	5.E-04	–	5.E-04	1.E-03
			BETA-BHC	2E-10		6.2E-11	2.E-10	BETA-BHC	Liver, Kidney	3.E-07	–	1.E-07	4.E-07
			DELTA-BHC	–		–	–	DELTA-BHC	Liver, Kidney	3.E-07	–	9.E-08	3.E-07
			DIELDRIN	2E-09		7.9E-10	3.E-09	DIELDRIN	Liver	3.E-05	–	1.E-05	4.E-05
			ENDOSULFAN I	–		–	–	ENDOSULFAN I	Whole body (weight), Kidney, Blood	1.E-07	–	5.E-08	2.E-07
			ENDOSULFAN II	–		–	–	ENDOSULFAN II	Whole body (weight), Kidney, Blood	2.E-07	–	8.E-08	3.E-07
			ENDOSULFAN SULFATE	–		–	–	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood	3.E-07	–	1.E-07	4.E-07
			ENDRIN	–		–	–	ENDRIN	Liver, CNS/PNS	5.E-06	–	2.E-06	6.E-06
			ENDRIN ALDEHYDE	–		–	–	ENDRIN ALDEHYDE	Liver, CNS/PNS	7.E-06	–	2.E-06	1.E-05
			ENDRIN KETONE	–		–	–	ENDRIN KETONE	Liver, CNS/PNS	6.E-06	–	2.E-06	8.E-06
			GAMMA-BHC (LINDANE)	1E-10		5.0E-11	2.E-10	GAMMA-BHC (LINDANE)	Liver, Kidney	4.E-07	–	1.E-07	5.E-07
			GAMMA-CHLORDANE	2E-10		6.3E-11	2.E-10	GAMMA-CHLORDANE	Liver	2.E-05	–	9.E-06	3.E-05
			HEPTACHLOR	8E-11		2.7E-11	1.E-10	HEPTACHLOR	Liver	3.E-07	–	1.E-07	4.E-07
			HEPTACHLOR EPOXIDE	2E-10		8.7E-11	3.E-10	HEPTACHLOR EPOXIDE	Liver	1.E-05	–	5.E-06	2.E-05
			METHOXYCHLOR	–		–	–	METHOXYCHLOR	Reproductive System	1.E-06	–	9.E-07	2.E-06
			(Total)	3E-07		3E-07	5E-07	(Total)		*0.013*		*0.0009*	0.013

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TABLE M.9.5.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Air	Indoor Air	**METAL**					**METAL**					
			BARIUM		--		--	BARIUM	Reproductive System		1.E-05		1.E-05
			COBALT		--		--	COBALT	Respiratory System		1.E-03		1.E-03
			COPPER		--		--	COPPER	Respiratory System		1.E-03		1.E-03
			LEAD		--		--	LEAD	--		--		--
			MOLYBDENUM		--		--	MOLYBDENUM	--		--		--
			SELENIUM		--		--	SELENIUM	Respiratory System		3.E-06		3.E-06
			SILVER		--		--	SILVER	Skin		1.E-08		1.E-08
			THALLIUM		--		--	THALLIUM	--		--		--
			TIN		--			TIN	--		--		
			TITANIUM		--		--	TITANIUM	Respiratory/Immune System		2.E-03		2.E-03
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		1.E-04		1.E-04
			ACETONE		--		--	ACETONE	Liver, Kidney		6.E-05		6.E-05
			CARBON DISULFIDE		--		--	CARBON DISULFIDE	CNS/PNS		5.E-02		5.E-02
			TOLUENE		--		--	TOLUENE	CNS/PNS		4.E-02		4.E-02
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		1.E-04		1.E-04
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE		--		--	1,2,4-TRICHLOROBENZENE	Liver		1.E-02		1.E-02
			2-METHYLNAPHTHALENE		--		--	2-METHYLNAPHTHALENE	No observed effect		1.E-02		1.E-02
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		4.E-03		4.E-03
			ANTHRACENE		--		--	ANTHRACENE	No observed effect		2.E-04		2.E-04
			BENZO(A)ANTHRACENE		1.E-12		1.E-12	BENZO(A)ANTHRACENE	No observed effect		1.E-11		1.E-11
			BENZO(A)PYRENE		1.E-11		1.E-11	BENZO(A)PYRENE	Kidney		9.E-11		9.E-11
			BENZO(B)FLUORANTHENE		1.E-12		1.E-12	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		7.E-11		7.E-11
			BENZO(G,H,I)PERYLENE		--		--	BENZO(G,H,I)PERYLENE	Kidney		1.E-10		1.E-10
			BENZO(K)FLUORANTHENE		1.E-12		1.E-12	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood		8.E-11		8.E-11
			BIS(2-ETHYLHEXYL)PHTHALATE		1.E-14		1.E-14	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		8.E-10		8.E-10
			CARBAZOLE		2.E-14		2.E-14	CARBAZOLE	Whole body (weight), Liver, Kidney		4.E-10		4.E-10
			CHRYSENE		1.E-13		1.E-13	CHRYSENE	No observed effect		9.E-12		9.E-12
			DIBENZ(A,H)ANTHRACENE		3.E-12		3.E-12	DIBENZ(A,H)ANTHRACENE	No observed effect		3.E-12		3.E-12
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		6.E-11		6.E-11
			FLUORENE		--		--	FLUORENE	Blood		2.E-03		2.E-03
			INDENO(1,2,3-CD)PYRENE		8.E-13		8.E-13	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood		5.E-11		5.E-11
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		4.E-08		4.E-08
			PENTACHLOROPHENOL		8.E-13		8.E-13	PENTACHLOROPHENOL	Liver, Kidney		2.E-09		2.E-09
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		3.E-04		3.E-04
			PYRENE		--		--	PYRENE	Kidney		4.E-04		4.E-04
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD		1.E-14		1.E-14	4,4'-DDD	Liver		8.E-10		8.E-10
			4,4'-DDE		1.E-14		1.E-14	4,4'-DDE	Liver		7.E-10		7.E-10
			4,4'-DDT		4.E-14		4.E-14	4,4'-DDT	Liver		2.E-09		2.E-09
			ALDRIN		2.E-13		2.E-13	ALDRIN	Liver		5.E-09		5.E-09
			ALPHA-BHC		3.E-13		3.E-13	ALPHA-BHC	Liver, Kidney		2.E-10		2.E-10
			ALPHA-CHLORDANE		4.E-14		4.E-14	ALPHA-CHLORDANE	Liver		2.E-10		2.E-10
			AROCLOR-1254		3.E-13		3.E-13	AROCLOR-1254	Immune System		3.E-08		3.E-08
			AROCLOR-1260		1.E-12		1.E-12	AROCLOR-1260	Immune System		1.E-07		1.E-07
			BETA-BHC		4.E-14		4.E-14	BETA-BHC	Liver, Kidney		7.E-11		7.E-11
			DELTA-BHC		--		--	DELTA-BHC	Liver, Kidney		5.E-11		5.E-11
			DIELDRIN		5.E-13		5.E-13	DIELDRIN	Liver		6.E-09		6.E-09
			ENDOSULFAN I		--		--	ENDOSULFAN I	Whole body (weight), Kidney, Blood		3.E-11		3.E-11
			ENDOSULFAN II		--		--	ENDOSULFAN II	Whole body (weight), Kidney, Blood		4.E-11		4.E-11
			ENDOSULFAN SULFATE		--		--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood		6.E-11		6.E-11
			ENDRIN		--		--	ENDRIN	Liver, CNS/PNS		9.E-10		9.E-10
			ENDRIN ALDEHYDE		--		--	ENDRIN ALDEHYDE	Liver, CNS/PNS		1.E-09		1.E-09
			ENDRIN KETONE		--		--	ENDRIN KETONE	Liver, CNS/PNS		1.E-09		1.E-09
			GAMMA-BHC (LINDANE)		3.E-14		3.E-14	GAMMA-BHC (LINDANE)	Liver, Kidney		7.E-11		7.E-11
			GAMMA-CHLORDANE		4.E-14		4.E-14	GAMMA-CHLORDANE	Liver		2.E-10		2.E-10
			HEPTACHLOR		2.E-14		2.E-14	HEPTACHLOR	Liver		6.E-11		6.E-11
			HEPTACHLOR EPOXIDE		5.E-14		5.E-14	HEPTACHLOR EPOXIDE	Liver		3.E-09		3.E-09
			METHOXYCHLOR		--		--	METHOXYCHLOR	Reproductive System		3.E-10		3.E-10
			(Total)		2E-11		2E-11	(Total)			0.1		0.1

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TABLE M.9.5.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Air	Indoor Air	**VOLATILE ORGANIC COMPOUNDS**					**VOLATILE ORGANIC COMPOUNDS**					
			1,2-DICHLOROETHANE		1.E-08		1.E-08	1,2-DICHLOROETHANE	--		1.E-03		1.E-03
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		7.E-05		7.E-05
			4-METHYL-2-PENTANONE		--		--	4-METHYL-2-PENTANONE	Liver, Kidney		1.E-05		1.E-05
			ACETONE		--		--	ACETONE	Liver, Kidney		1.E-04		1.E-04
			CHLOROMETHANE		--		--	CHLOROMETHANE	CNS/PNS		3.E-05		3.E-05
			ETHYLBENZENE		--		--	ETHYLBENZENE	Reproductive System		1.E-05		1.E-05
			TOLUENE		--		--	TOLUENE	CNS/PNS		3.E-05		3.E-05
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		2.E-06		2.E-06
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,3-DICHLOROBENZENE		--		--	1,3-DICHLOROBENZENE	--		4.E-03		4.E-03
			2,4-DICHLOROPHENOL		--		--	2,4-DICHLOROPHENOL	Immune System		--		--
			4-METHYLPHENOL		--		--	4-METHYLPHENOL	CNS/PNS, Respiratory System		--		--
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		--		--
			BENZO(B)FLUORANTHENE		--		--	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		--		--
			BIS(2-ETHYLHEXYL)PHTHALATE		--		--	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		--		--
			CARBAZOLE		--		--	CARBAZOLE	Whole body (weight), Liver, Kidney		--		--
			FLUORANTHENE		--		--	*FLUORANTHENE*	Liver, Kidney, Blood		--		--
			N-NITROSODIPHENYLAMINE (1)		--		--	N-NITROSODIPHENYLAMINE (1)	--		--		--
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		9.E-03		9.E-03
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		1.E-06		1.E-06
			PHENOL		--		--	PHENOL	Reproductive System		--		--
			PYRENE		--		--	PYRENE	Kidney		1.E-05		1.E-05
			(Total)		1E-08		1E-08	(Total)			*0.015*		*0.015*
						Total Risk Across Soil	5.E-07					Total Hazard Index Across Soil	0.1
						Total Risk Across Groundwater	1E-08					Total Hazard Across Groundwater	0.015
						Total Risk Across All Media and All Exposure Routes	5.E-07					Total Hazard Across All Media and All Exposure Routes	0.2

Notes:
Ft. = Feet
-- = Not available
bgs = Below ground surface
CTE = Central tendency exposure
COPC = Chemical of potential concern
CNS/PNS = Central nervous system/peripheral nervous system
GI = Gastrointestinal

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TABLE M~~9.6~~CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY EXPOSURE

FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact	**METAL**					**METAL**					
			BARIUM	--		--	--	BARIUM	No adverse effect	9.E-03	--	5.E-04	9.E-03
			COBALT	--		--	--	COBALT	--	1.E-03	--	7.E-05	1.E-03
			COPPER	--		--	--	COPPER	GI System	1.E-02	--	6.E-04	1.E-02
			LEAD	--		--	--	LEAD	--	--	--	--	--
			MOLYBDENUM	--		--	--	MOLYBDENUM	Kidney	4.E-04	--	2.E-05	4.E-04
			SELENIUM	--		--	--	SELENIUM	CNS/PNS, Liver, Skin, Blood	7.E-04	--	4.E-05	7.E-04
			SILVER	--		--	--	SILVER	Skin	7.E-04	--	4.E-05	8.E-04
			THALLIUM	--		--	--	THALLIUM	No adverse effect	4.E-03	--	2.E-04	4.E-03
			TIN			--		TIN	Liver, Kidney			9.E-06	
			TITANIUM	--		--	--	TITANIUM	Blood	9.E-02	--	5.E-03	1.E-01
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			2-BUTANONE	--		--	--	2-BUTANONE	Reproductive System	2.E-08	--	1.E-08	4.E-08
			ACETONE	--		--	--	ACETONE	Liver, Kidney	1.E-07	--	6.E-08	2.E-07
			CARBON DISULFIDE	--		--	--	CARBON DISULFIDE	Reproductive System	3.E-07	--	2.E-07	5.E-07
			TOLUENE	--		--	--	TOLUENE	Liver, Kidney	2.E-08	--	1.E-08	3.E-08
			XYLENE (TOTAL)	--		--	--	XYLENE (TOTAL)	Whole body (weight), CNS/PNS	1.E-08	--	7.E-09	2.E-08
			SEMIVOLATILE ORGANIC COMPOUNDS				--	**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE	--		--	--	1,2,4-TRICHLOROBENZENE	Adrenal	2.E-05	--	1.E-05	4.E-05
			2-METHYLNAPHTHALENE	--		--	--	2-METHYLNAPHTHALENE	No observed effect	5.E-07	--	4.E-07	9.E-07
			ACENAPHTHENE	--		--	--	ACENAPHTHENE	Liver	2.E-07	--	2.E-07	4.E-07
			ANTHRACENE	--		--	--	ANTHRACENE	No observed effect	3.E-07	--	3.E-07	6.E-07
			BENZO(A)ANTHRACENE	5E-08		4.1E-08	9.E-08	BENZO(A)ANTHRACENE	No observed effect	5.E-07	--	4.E-07	9.E-07
			BENZO(A)PYRENE	4E-07		3.9E-07	8.E-07	BENZO(A)PYRENE	Kidney	4.E-06	--	4.E-06	8.E-06
			BENZO(B)FLUORANTHENE	5E-08		4.1E-08	9.E-08	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood	3.E-06	--	3.E-06	6.E-06
			BENZO(G,H,I)PERYLENE	--		--	--	BENZO(G,H,I)PERYLENE	Kidney	4.E-06	--	4.E-06	8.E-06
			BENZO(K)FLUORANTHENE	5E-08		4.4E-08	1.E-07	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood	4.E-06	--	3.E-06	7.E-06
			BIS(2-ETHYLHEXYL)PHTHALATE	3E-10		1.8E-10	5.E-10	BIS(2-ETHYLHEXYL)PHTHALATE	Liver	4.E-05	--	2.E-05	6.E-05
			CARBAZOLE	3E-10		1.5E-10	4.E-10	CARBAZOLE	Whole body (weight), Liver, Kidney	2.E-05	--	1.E-05	3.E-05
			CHRYSENE	4E-09		3.9E-09	8.E-09	CHRYSENE	No observed effect	4.E-07	--	4.E-07	8.E-07
			DIBENZ(A,H)ANTHRACENE	4E-08		3.9E-08	8.E-08	DIBENZ(A,H)ANTHRACENE	No observed effect	1.E-07	--	1.E-07	2.E-07
			FLUORANTHENE	--		--	--	FLUORANTHENE	Liver, Kidney, Blood	3.E-06	--	3.E-06	5.E-06
			FLUORENE	--		--	--	FLUORENE	Blood	1.E-06	--	1.E-06	2.E-06
			INDENO(1,2,3-CD)PYRENE	3E-08		2.7E-08	6.E-08	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood	2.E-06	--	2.E-06	4.E-06
			NAPHTHALENE	--		--	--	NAPHTHALENE	Body weight	8.E-06	--	7.E-06	1.E-05
			PENTACHLOROPHENOL	1E-08		1.6E-08	3.E-08	PENTACHLOROPHENOL	Liver, Kidney	1.E-04	--	2.E-04	3.E-04
			PHENANTHRENE	--		--	--	PHENANTHRENE	No observed effect	5.E-07	--	4.E-07	9.E-07
			PYRENE	--		--	--	PYRENE	Kidney	4.E-06	--	3.E-06	7.E-06
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD	1E-10		3.6E-11	2.E-10	4,4'-DDD	Liver	4.E-05	--	1.E-05	5.E-05
			4,4'-DDE	2E-10		4.6E-11	2.E-10	4,4'-DDE	Liver	3.E-05	--	9.E-06	4.E-05
			4,4'-DDT	5E-10		1.5E-10	7.E-10	4,4'-DDT	Liver	1.E-04	--	3.E-05	1.E-04
			ALDRIN	3E-09		9.1E-10	4.E-09	ALDRIN	Liver	2.E-04	--	6.E-05	3.E-04
			ALPHA-BHC	4E-09		1.1E-09	5.E-09	ALPHA-BHC	Liver, kidney	7.E-06	--	2.E-06	9.E-06
			ALPHA-CHLORDANE	5E-10		1.4E-10	6.E-10	ALPHA-CHLORDANE	Liver	3.E-05	--	8.E-06	4.E-05
			AROCLOR-1254	4E-09		3.5E-09	8.E-09	AROCLOR-1254	Immune System	1.E-03	--	1.E-03	3.E-03
			AROCLOR-1260	1E-08		1.2E-08	3.E-08	AROCLOR-1260	Immune System	5.E-03	--	4.E-03	9.E-03
			BETA-BHC	5E-10		1.4E-10	6.E-10	BETA-BHC	Liver, Kidney	3.E-06	--	9.E-07	4.E-06
			DELTA-BHC	--		--	--	DELTA-BHC	Liver, Kidney	2.E-06	--	7.E-07	3.E-06
			DIELDRIN	6E-09		1.8E-09	8.E-09	DIELDRIN	Liver	3.E-04	--	8.E-05	3.E-04
			ENDOSULFAN I	--		--	--	ENDOSULFAN I	Whole body (weight), Kidney, Blood	1.E-06	--	4.E-07	2.E-06
			ENDOSULFAN II	--		--	--	ENDOSULFAN II	Whole body (weight), Kidney, Blood	2.E-06	--	6.E-07	3.E-06
			ENDOSULFAN SULFATE	--		--	--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood	3.E-06	--	7.E-07	3.E-06
			ENDRIN	--		--	--	ENDRIN	Liver, CNS/PNS	4.E-05	--	1.E-05	5.E-05
			ENDRIN ALDEHYDE	--		--	--	ENDRIN ALDEHYDE	Liver, CNS/PNS	7.E-05	--	2.E-05	8.E-05
			ENDRIN KETONE	--		--	--	ENDRIN KETONE	Liver, CNS/PNS	5.E-05	--	2.E-05	7.E-05
			GAMMA-BHC (LINDANE)	4E-10		1.1E-10	5.E-10	GAMMA-BHC (LINDANE)	Liver, Kidney	3.E-06	--	1.E-06	4.E-06
			GAMMA-CHLORDANE	5E-10		1.4E-10	6.E-10	GAMMA-CHLORDANE	Liver	2.E-04	--	7.E-05	3.E-04
			HEPTACHLOR	2E-10		6.0E-11	3.E-10	HEPTACHLOR	Liver	3.E-06	--	7.E-07	3.E-06
			HEPTACHLOR EPOXIDE	7E-10		1.9E-10	9.E-10	HEPTACHLOR EPOXIDE	Liver	1.E-04	--	4.E-05	2.E-04
			METHOXYCHLOR	--		--	--	METHOXYCHLOR	Reproductive System	1.E-05	--	7.E-06	2.E-05
			(Total)	7E-07		6E-07	1E-06	(Total)		0.12		0.007	0.12

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TABLE M~~9.8~~9.6.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY EXPOSURE

FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Air	Indoor Air	**METAL**					**METAL**					
			BARIUM		--		--	BARIUM	Reproductive System		4.E-05		4.E-05
			COBALT		--		--	COBALT	Respiratory System		3.E-03		3.E-03
			COPPER		--		--	COPPER	Respiratory System		4.E-03		4.E-03
			LEAD		--		--	LEAD	--		--		--
			MOLYBDENUM		--		--	MOLYBDENUM	--		--		--
			SELENIUM		--		--	SELENIUM	Respiratory System		9.E-06		9.E-06
			SILVER		--		--	SILVER	Skin		4.E-08		4.E-08
			THALLIUM		--		--	THALLIUM	--		--		--
			TIN		--			TIN	--		--		
			TITANIUM		--		--	TITANIUM	Respiratory/Immune System		7.E-03		7.E-03
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		3.E-04		3.E-04
			ACETONE		--		--	ACETONE	Liver, Kidney		2.E-04		2.E-04
			CARBON DISULFIDE		--		--	CARBON DISULFIDE	CNS/PNS		2.E-01		2.E-01
			TOLUENE		--		--	TOLUENE	CNS/PNS		1.E-01		1.E-01
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		4.E-04		4.E-04
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE		--		--	1,2,4-TRICHLOROBENZENE	Liver		4.E-02		4.E-02
			2-METHYLNAPHTHALENE		--		--	2-METHYLNAPHTHALENE	No observed effect		3.E-02		3.E-02
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		1.E-02		1.E-02
			ANTHRACENE		--		--	ANTHRACENE	No observed effect		5.E-04		5.E-04
			BENZO(A)ANTHRACENE		1.E-12		1.E-12	BENZO(A)ANTHRACENE	No observed effect		3.E-11		3.E-11
			BENZO(A)PYRENE		9.E-12		9.E-12	BENZO(A)PYRENE	Kidney		3.E-10		3.E-10
			BENZO(B)FLUORANTHENE		1.E-12		1.E-12	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		2.E-10		2.E-10
			BENZO(G,H,I)PERYLENE		--		--	BENZO(G,H,I)PERYLENE	Kidney		3.E-10		3.E-10
			BENZO(K)FLUORANTHENE		1.E-12		1.E-12	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood		2.E-10		2.E-10
			BIS(2-ETHYLHEXYL)PHTHALATE		1.E-14		1.E-14	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		2.E-09		2.E-09
			CARBAZOLE		2.E-14		2.E-14	CARBAZOLE	Whole body (weight), Liver, Kidney		1.E-09		1.E-09
			CHRYSENE		9.E-14		9.E-14	CHRYSENE	No observed effect		3.E-11		3.E-11
			DIBENZ(A,H)ANTHRACENE		3.E-12		3.E-12	DIBENZ(A,H)ANTHRACENE	No observed effect		8.E-12		8.E-12
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		2.E-10		2.E-10
			FLUORENE		--		--	FLUORENE	Blood		5.E-03		5.E-03
			INDENO(1,2,3-CD)PYRENE		6.E-13		6.E-13	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood		1.E-10		1.E-10
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		1.E-07		1.E-07
			PENTACHLOROPHENOL		7.E-13		7.E-13	PENTACHLOROPHENOL	Liver, Kidney		7.E-09		7.E-09
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		7.E-04		7.E-04
			PYRENE		--		--	PYRENE	Kidney		1.E-03		1.E-03
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD		8.E-15		8.E-15	4,4'-DDD	Liver		2.E-09		2.E-09
			4,4'-DDE		1.E-14		1.E-14	4,4'-DDE	Liver		2.E-09		2.E-09
			4,4'-DDT		3.E-14		3.E-14	4,4'-DDT	Liver		7.E-09		7.E-09
			ALDRIN		2.E-13		2.E-13	ALDRIN	Liver		1.E-08		1.E-08
			ALPHA-BHC		2.E-13		2.E-13	ALPHA-BHC	Liver, Kidney		4.E-10		4.E-10
			ALPHA-CHLORDANE		3.E-14		3.E-14	ALPHA-CHLORDANE	Liver		5.E-10		5.E-10
			AROCLOR-1254		3.E-13		3.E-13	AROCLOR-1254	Immune System		9.E-08		9.E-08
			AROCLOR-1260		9.E-13		9.E-13	AROCLOR-1260	Immune System		3.E-07		3.E-07
			BETA-BHC		3.E-14		3.E-14	BETA-BHC	Liver, Kidney		2.E-10		2.E-10
			DELTA-BHC		--		--	DELTA-BHC	Liver, Kidney		2.E-10		2.E-10
			DIELDRIN		4.E-13		4.E-13	DIELDRIN	Liver		2.E-08		2.E-08
			ENDOSULFAN I		--		--	ENDOSULFAN I	Whole body (weight), Kidney, Blood		8.E-11		8.E-11
			ENDOSULFAN II		--		--	ENDOSULFAN II	Whole body (weight), Kidney, Blood		1.E-10		1.E-10
			ENDOSULFAN SULFATE		--		--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood		2.E-10		2.E-10
			ENDRIN		--		--	ENDRIN	Liver, CNS/PNS		3.E-09		3.E-09
			ENDRIN ALDEHYDE		--		--	ENDRIN ALDEHYDE	Liver, CNS/PNS		4.E-09		4.E-09
			ENDRIN KETONE		--		--	ENDRIN KETONE	Liver, CNS/PNS		3.E-09		3.E-09
			GAMMA-BHC (LINDANE)		2.E-14		2.E-14	GAMMA-BHC (LINDANE)	Liver, Kidney		2.E-10		2.E-10
			GAMMA-CHLORDANE		3.E-14		3.E-14	GAMMA-CHLORDANE	Liver		4.E-10		4.E-10
			HEPTACHLOR		1.E-14		1.E-14	HEPTACHLOR	Liver		2.E-10		2.E-10
			HEPTACHLOR EPOXIDE		4.E-14		4.E-14	HEPTACHLOR EPOXIDE	Liver		9.E-09		9.E-09
			METHOXYCHLOR		--		--	METHOXYCHLOR	Reproductive System		8.E-10		8.E-10
			(Total)		2E-11		2E-11	(Total)			0.4		0.4

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TABLE M9.6CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Air	Indoor Air	**VOLATILE ORGANIC COMPOUNDS**					**VOLATILE ORGANIC COMPOUNDS**					
			1,2-DICHLOROETHANE		1.E-08		1.E-08	1,2-DICHLOROETHANE	--		3.E-03		3.E-03
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		2.E-04		2.E-04
			4-METHYL-2-PENTANONE		--		--	4-METHYL-2-PENTANONE	Liver, Kidney		4.E-05		4.E-05
			ACETONE		--		--	ACETONE	Liver, Kidney		4.E-04		4.E-04
			CHLOROMETHANE		--		--	CHLOROMETHANE	CNS/PNS		8.E-05		8.E-05
			ETHYLBENZENE		--		--	ETHYLBENZENE	Reproductive System		3.E-05		3.E-05
			TOLUENE		--		--	TOLUENE	CNS/PNS		1.E-04		1.E-04
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		7.E-06		7.E-06
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,3-DICHLOROBENZENE		--		--	1,3-DICHLOROBENZENE	--		1.E-02		1.E-02
			2,4-DICHLOROPHENOL		--		--	2,4-DICHLOROPHENOL	Immune System		--		--
			4-METHYLPHENOL		--		--	4-METHYLPHENOL	CNS/PNS, Respiratory System		--		--
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		--		--
			BENZO(B)FLUORANTHENE		--		--	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		--		--
			BIS(2-ETHYLHEXYL)PHTHALATE		--		--	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		--		--
			CARBAZOLE		--		--	CARBAZOLE	Whole body (weight), Liver, Kidney		--		--
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		--		--
			N-NITROSODIPHENYLAMINE (1)		--		--	N-NITROSODIPHENYLAMINE (1)	--		--		--
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		3.E-02		3.E-02
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		3.E-06		3.E-06
			PHENOL		--		--	PHENOL	Reproductive System		--		--
			PYRENE		--		--	PYRENE	Kidney		4.E-05		4.E-05
			(Total)		1E-08		1E-08	(Total)			0.043		0.043
					Total Risk Across Soil		1.E-06				Total Hazard Index Across Soil		0.5
					Total Risk Across Groundwater		1E-08				Total Hazard Across Groundwater		0.043
					Total Risk Across All Media and All Exposure Routes		1.E-06				Total Hazard Across All Media and All Exposure Routes		0.6

Notes:
Ft. = Feet
-- = Not available
bgs = Below ground surface
CTE = Central tendency exposure
COPC = Chemical of potential concern
CNS/PNS = Central nervous system/peripheral nervous system
GI = Gastrointestinal

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TABLE M.10.5.RME
RISK ASSESSMENT SUMMARY
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact											
			SEMIVOLATILE ORGANIC COMPOUNDS				--						
			BENZO(A)ANTHRACENE	1E-07		8.4E-08	2.E-07						
			BENZO(A)PYRENE	1E-06		7.9E-07	2.E-06						
			BENZO(B)FLUORANTHENE	1E-07		8.4E-08	2.E-07						
			BENZO(K)FLUORANTHENE	1E-07		8.7E-08	2.E-07						
			CHRYSENE	1E-08		8.2E-09	2.E-08						
			DIBENZ(A,H)ANTHRACENE	1E-07		6.9E-08	2.E-07						
			(Total)	2E-06		1E-06	3E-06	(Total)		0.04		0.001	0.04
Soil 0-10 ft. bgs	Air	Indoor Air											
			(Total)		1E-10		1E-10	(Total)			0.6		0.6
Groundwater	Air	Indoor Air											
			(Total)		9E-08		9E-08	(Total)			0.026		0.026
						Total Risk Across Soil	3.E-06					Total Hazard Index Across Soil	0.7
						Total Risk Across Groundwater	9E-08					Total Hazard Across Groundwater	0.026
						Total Risk Across All Media and All Exposure Routes	3.E-06					Total Hazard Across All Media and All Exposure Routes	0.7

Notes:
Ft. = Feet
bgs = Below ground surface
RME = Reasonable maximum exposure

TABLE J-100

TABLE M.10.6.RME
RISK ASSESSMENT SUMMARY
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact	**SEMIVOLATILE ORGANIC COMPOUNDS**										
			BENZO(A)ANTHRACENE	3E-07		1.4E-07	5.E-07						
			BENZO(A)PYRENE	3E-06		1.3E-06	4.E-06						
			BENZO(B)FLUORANTHENE	3E-07		1.4E-07	5.E-07						
			CHRYSENE	3E-08		1.4E-08	5.E-08						
			DIBENZ(A,H)ANTHRACENE	3E-07		1.2E-07	4.E-07						
			(Total)	5E-06		2E-06	7E-06	(Total)		0.3		0.010	0.3
Soil 0-10 ft. bgs	Air	Indoor Air											
			(Total)		8E-11		8E-11	(Total)			1		1
Groundwater	Air	Indoor Air											
			(Total)		5E-08		5E-08	(Total)			0.060		0.060

Total Risk Across Soil	7.E-06
Total Risk Across Groundwater	5E-08
Total Risk Across All Media and All Exposure Routes	7.E-06

Total Hazard Index Across Soil	2
Total Hazard Across Groundwater	0.06
Total Hazard Across All Media and All Exposure Routes	2

Notes:
Ft. = Feet

bgs = Below ground surface
RME = Reasonable maximum exposure

Adult

Total Risk Across Soil	3E-06
Total Risk Across Groundwater	9E-08
Total Risk Across All Media and All Exposure Routes	3E-06

Total Residential Risk	1E-05

TABLE J-101

TABLE M.10.5.CTE
RISK ASSESSMENT SUMMARY
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact											
			SEMIVOLATILE ORGANIC COMPOUNDS				--						
			BENZO(A)ANTHRACENE	2E-08		1.9E-08	4.E-08						
			BENZO(A)PYRENE	2E-07		1.7E-07	3.E-07						
			BENZO(B)FLUORANTHENE	2E-08		1.9E-08	4.E-08						
			BENZO(K)FLUORANTHENE	2E-08		2.0E-08	4.E-08						
			CHRYSENE	2E-09		1.8E-09	3.E-09						
			DIBENZ(A,H)ANTHRACENE	2E-08		1.8E-08	3.E-08						
			INDENO(1,2,3-CD)PYRENE	1E-08		1.2E-08	2.E-08						
			PENTACHLOROPHENOL	4E-09		7.2E-09	1.E-08						
			PHENANTHRENE	--		--	--						
			PYRENE	--		--	--						
			(Total)	3E-07		3E-07	5E-07	(Total)		0.013		0.0009	0.013
Soil 0-10 ft. bgs	Air	Indoor Air											
			(Total)		2E-11		2E-11	(Total)			0.1		0.1
Groundwater	Air	Indoor Air											
			(Total)		1E-08		1E-08	(Total)			0.015		0.015
						Total Risk Across Soil	5.E-07					Total Hazard Index Across Soil	0.1
						Total Risk Across Groundwater	1E-08					Total Hazard Across Groundwater	0.015
						Total Risk Across All Media and All Exposure Routes	5.E-07					Total Hazard Across All Media and All Exposure Routes	0.2

Notes:
Ft. = Feet
bgs = Below ground surface
CTE = Central tendency exposure

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TABLE M.~~10.5~~ 10.6 CTE
RISK ASSESSMENT SUMMARY
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Residential
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact	**SEMIVOLATILE ORGANIC COMPOUNDS**				--						
			BENZO(A)ANTHRACENE	5E-08		4.1E-08	9.E-08						
			BENZO(A)PYRENE	4E-07		3.9E-07	8.E-07						
			BENZO(B)FLUORANTHENE	5E-08		4.1E-08	9.E-08						
			BENZO(K)FLUORANTHENE	5E-08		4.4E-08	1.E-07						
			CHRYSENE	4E-09		3.9E-09	8.E-09						
			DIBENZ(A,H)ANTHRACENE	4E-08		3.9E-08	8.E-08						
			INDENO(1,2,3-CD)PYRENE	3E-08		2.7E-08	6.E-08						
			(Total)	7E-07		6E-07	1E-06	(Total)		0.12		0.007	0.12
Soil 0-10 ft. bgs	Air	Indoor Air											
			(Total)		2E-11		2E-11	(Total)			0.4		0.4
Groundwater	Air	Indoor Air											
			(Total)		1E-08		1E-08	(Total)			0.043		0.043

Total Risk Across Soil	1.E-06	Total Hazard Index Across Soil	0.5
Total Risk Across Groundwater	1E-08	Total Hazard Across Groundwater	0.043
Total Risk Across All Media and All Exposure Routes	1.E-06	Total Hazard Across All Media and All Exposure Routes	0.6

Notes:
Ft = Feet
bgs = Below ground surface
CTE = Central tendency exposure

Adult

Total Risk Across Soil	5E-07
Total Risk Across Groundwater	1E-08
Total Risk Across All Media and All Exposure Routes	5E-07

Total Residential Risk	2E-06

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EPA TABLE M.8.16.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	**METAL**										
	BARIUM	1.09E+02	mg/kg	1.09E+02	mg/kg	M	1.53E-06	mg/kg-day	--	--	--
	COBALT	1.29E+01	mg/kg	1.29E+01	mg/kg	M	1.81E-07	mg/kg-day	--	--	--
	COPPER	7.13E+01	mg/kg	7.13E+01	mg/kg	M	9.96E-07	mg/kg-day	--	--	--
	LEAD	1.47E+02	mg/kg	1.47E+02	mg/kg	M	2.06E-06	mg/kg-day	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	3.81E-01	mg/kg	M	5.33E-09	mg/kg-day	--	--	--
	SELENIUM	5.90E-01	mg/kg	5.90E-01	mg/kg	M	8.25E-09	mg/kg-day	--	--	--
	SILVER	9.22E-01	mg/kg	9.22E-01	mg/kg	M	1.29E-08	mg/kg-day	--	--	--
	THALLIUM	4.51E-01	mg/kg	4.51E-01	mg/kg	M	6.30E-09	mg/kg-day	--	--	--
	TIN	1.78E+01	mg/kg	1.78E+01	mg/kg	M	2.48E-07	mg/kg-day	--	--	--
	TITANIUM	4.77E+03	mg/kg	4.77E+03	mg/kg	M	6.66E-05	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	8.66E-03	mg/kg	8.66E-03	mg/kg	M	1.21E-10	mg/kg-day	--	--	--
	ACETONE	2.34E-02	mg/kg	2.34E-02	mg/kg	M	3.27E-10	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	6.99E-11	mg/kg-day	--	--	--
	TOLUENE	6.37E-03	mg/kg	6.37E-03	mg/kg	M	8.90E-11	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	5.59E-11	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	5.17E-10	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	3.35E-09	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	2.80E-10	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	2.10E-09	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	2.48E-01	mg/kg	M	3.47E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	4.2E-09
	BENZO(A)PYRENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	3.29E-09	mg/kg-day	1.2E+01	(mg/kg-day)-1	3.9E-08
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	2.49E-01	mg/kg	M	3.48E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	4.2E-09
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	2.37E-01	mg/kg	M	3.31E-09	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	2.59E-01	mg/kg	M	3.62E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	4.3E-09
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.44E-01	mg/kg	M	2.02E-09	mg/kg-day	1.4E-02	(mg/kg-day)-1	2.8E-11

TABLE J-103

EPA TABLE M.8.16.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	1.02E-09	mg/kg-day	2.0E-02	(mg/kg-day)-1	2.0E-11
	CHRYSENE	2.43E-01	mg/kg	2.43E-01	mg/kg	M	3.40E-09	mg/kg-day	1.2E-01	(mg/kg-day)-1	4.1E-10
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	8.39E-10	mg/kg-day	4.1E+00	(mg/kg-day)-1	3.4E-09
	FLUORANTHENE	2.23E-01	mg/kg	2.23E-01	mg/kg	M	3.11E-09	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	1.15E-09	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	1.96E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	2.3E-09
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	3.35E-09	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	6.99E-09	mg/kg-day	1.2E-01	(mg/kg-day)-1	8.4E-10
	PHENANTHRENE	2.65E-01	mg/kg	2.65E-01	mg/kg	M	3.70E-09	mg/kg-day	--	--	--
	PYRENE	2.05E-01	mg/kg	2.05E-01	mg/kg	M	2.87E-09	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.30E-03	mg/kg	3.30E-03	mg/kg	M	4.61E-11	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.1E-11
	4,4'-DDE	2.82E-03	mg/kg	2.82E-03	mg/kg	M	3.94E-11	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.3E-11
	4,4'-DDT	1.10E-02	mg/kg	1.10E-02	mg/kg	M	1.53E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.2E-11
	ALDRIN	1.03E-03	mg/kg	1.03E-03	mg/kg	M	1.44E-11	mg/kg-day	1.7E+01	(mg/kg-day)-1	2.4E-10
	ALPHA-BHC	4.35E-03	mg/kg	4.35E-03	mg/kg	M	6.08E-11	mg/kg-day	6.3E+00	(mg/kg-day)-1	3.8E-10
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.74E-03	mg/kg	M	3.83E-11	mg/kg-day	1.2E+00	(mg/kg-day)-1	4.6E-11
	AROCLOR-1254	1.40E-02	mg/kg	1.40E-02	mg/kg	M	1.96E-10	mg/kg-day	2.0E+00	(mg/kg-day)-1	3.9E-10
	AROCLOR-1260	4.89E-02	mg/kg	4.89E-02	mg/kg	M	6.84E-10	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.4E-09
	BETA-BHC	1.61E-03	mg/kg	1.61E-03	mg/kg	M	2.25E-11	mg/kg-day	1.8E+00	(mg/kg-day)-1	4.1E-11
	DELTA-BHC	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.69E-11	mg/kg-day	--	--	--
	DIELDRIN	2.17E-03	mg/kg	2.17E-03	mg/kg	M	3.03E-11	mg/kg-day	1.6E+01	(mg/kg-day)-1	4.9E-10
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.69E-11	mg/kg-day	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	1.97E-03	mg/kg	M	2.75E-11	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.63E-03	mg/kg	M	3.68E-11	mg/kg-day	--	--	--
	ENDRIN	2.05E-03	mg/kg	2.05E-03	mg/kg	M	2.87E-11	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	3.49E-03	mg/kg	M	4.88E-11	mg/kg-day	--	--	--
	ENDRIN KETONE	2.69E-03	mg/kg	2.69E-03	mg/kg	M	3.76E-11	mg/kg-day	--	--	--

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EPA TABLE M.8.16.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.83E-03	mg/kg	M	2.56E-11	mg/kg-day	1.3E+00	(mg/kg-day)-1	3.3E-11
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	3.70E-11	mg/kg-day	1.2E+00	(mg/kg-day)-1	4.4E-11
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	3.21E-12	mg/kg-day	5.7E+00	(mg/kg-day)-1	1.8E-11
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	3.30E-04	mg/kg	M	4.61E-12	mg/kg-day	1.3E+01	(mg/kg-day)-1	6.0E-11
	METHOXYCHLOR	9.97E-03	mg/kg	9.97E-03	mg/kg	M	1.39E-10	mg/kg-day	--	--	--
Dermal	**METAL**										
	BARIUM	1.09E+02	mg/kg	1.09E+02	mg/kg	M	6.97E-07	mg/kg-day	--	--	--
	COBALT	1.29E+01	mg/kg	1.29E+01	mg/kg	M	8.25E-08	mg/kg-day	--	--	--
	COPPER	7.13E+01	mg/kg	7.13E+01	mg/kg	M	4.54E-07	mg/kg-day	--	--	--
	LEAD	1.47E+02	mg/kg	1.47E+02	mg/kg	M	9.38E-07	mg/kg-day	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	3.81E-01	mg/kg	M	2.43E-09	mg/kg-day	--	--	--
	SELENIUM	5.90E-01	mg/kg	5.90E-01	mg/kg	M	3.76E-09	mg/kg-day	--	--	--
	SILVER	9.22E-01	mg/kg	9.22E-01	mg/kg	M	5.88E-09	mg/kg-day	--	--	--
	THALLIUM	4.51E-01	mg/kg	4.51E-01	mg/kg	M	2.87E-09	mg/kg-day	--	--	--
	TIN	1.78E+01	mg/kg	1.78E+01	mg/kg	M	1.13E-07	mg/kg-day	--	--	--
	TITANIUM	4.77E+03	mg/kg	4.77E+03	mg/kg	M	3.04E-05	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	8.66E-03	mg/kg	8.66E-03	mg/kg	M	5.52E-10	mg/kg-day	--	--	--
	ACETONE	2.34E-02	mg/kg	2.34E-02	mg/kg	M	1.49E-09	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	3.19E-10	mg/kg-day	--	--	--
	TOLUENE	6.37E-03	mg/kg	6.37E-03	mg/kg	M	4.06E-10	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	2.55E-10	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	2.36E-09	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	2.29E-08	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	1.91E-09	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.43E-08	mg/kg-day	--	--	--

TABLE J-103

EPA TABLE M.8.16.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	2.48E-01	mg/kg	M	2.37E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	2.8E-08
	BENZO(A)PYRENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	2.25E-08	mg/kg-day	1.2E+01	(mg/kg-day)-1	2.7E-07
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	2.49E-01	mg/kg	M	2.38E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	2.9E-08
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	2.37E-01	mg/kg	M	2.27E-08	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	2.59E-01	mg/kg	M	2.47E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	3.0E-08
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.44E-01	mg/kg	M	9.20E-09	mg/kg-day	1.4E-02	(mg/kg-day)-1	1.3E-10
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	4.65E-09	mg/kg-day	2.0E-02	(mg/kg-day)-1	9.3E-11
	CHRYSENE	2.43E-01	mg/kg	2.43E-01	mg/kg	M	2.33E-08	mg/kg-day	1.2E-01	(mg/kg-day)-1	2.8E-09
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	5.74E-09	mg/kg-day	4.1E+00	(mg/kg-day)-1	2.4E-08
	FLUORANTHENE	2.23E-01	mg/kg	2.23E-01	mg/kg	M	2.13E-08	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	7.84E-09	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	1.34E-08	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.6E-08
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	2.29E-08	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	7.97E-08	mg/kg-day	1.2E-01	(mg/kg-day)-1	9.6E-09
	PHENANTHRENE	2.65E-01	mg/kg	2.65E-01	mg/kg	M	2.53E-08	mg/kg-day	--	--	--
	PYRENE	2.05E-01	mg/kg	2.05E-01	mg/kg	M	1.96E-08	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.30E-03	mg/kg	3.30E-03	mg/kg	M	1.05E-10	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.5E-11
	4,4'-DDE	2.82E-03	mg/kg	2.82E-03	mg/kg	M	8.99E-11	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.1E-11
	4,4'-DDT	1.10E-02	mg/kg	1.10E-02	mg/kg	M	3.49E-10	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.2E-10
	ALDRIN	1.03E-03	mg/kg	1.03E-03	mg/kg	M	3.28E-11	mg/kg-day	1.7E+01	(mg/kg-day)-1	5.6E-10
	ALPHA-BHC	4.35E-03	mg/kg	4.35E-03	mg/kg	M	1.39E-10	mg/kg-day	6.3E+00	(mg/kg-day)-1	8.7E-10
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.74E-03	mg/kg	M	8.73E-11	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.0E-10
	AROCLOR-1254	1.40E-02	mg/kg	1.40E-02	mg/kg	M	1.34E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.7E-09
	AROCLOR-1260	4.89E-02	mg/kg	4.89E-02	mg/kg	M	4.68E-09	mg/kg-day	2.0E+00	(mg/kg-day)-1	9.4E-09
	BETA-BHC	1.61E-03	mg/kg	1.61E-03	mg/kg	M	5.13E-11	mg/kg-day	1.8E+00	(mg/kg-day)-1	9.2E-11
	DELTA-BHC	1.21E-03	mg/kg	1.21E-03	mg/kg	M	3.86E-11	mg/kg-day	--	--	--
	DIELDRIN	2.17E-03	mg/kg	2.17E-03	mg/kg	M	6.92E-11	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.1E-09

TABLE J-103

EPA TABLE M.8.16.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	3.86E-11	mg/kg-day	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	1.97E-03	mg/kg	M	6.28E-11	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.63E-03	mg/kg	M	8.38E-11	mg/kg-day	--	--	--
	ENDRIN	2.05E-03	mg/kg	2.05E-03	mg/kg	M	6.53E-11	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	3.49E-03	mg/kg	M	1.11E-10	mg/kg-day	--	--	--
	ENDRIN KETONE	2.69E-03	mg/kg	2.69E-03	mg/kg	M	8.57E-11	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.83E-03	mg/kg	M	5.83E-11	mg/kg-day	1.3E+00	(mg/kg-day)-1	7.6E-11
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	8.45E-11	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.0E-10
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	7.33E-12	mg/kg-day	5.7E+00	(mg/kg-day)-1	4.2E-11
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	3.30E-04	mg/kg	M	1.05E-11	mg/kg-day	1.3E+01	(mg/kg-day)-1	1.4E-10
	METHOXYCHLOR	9.97E-03	mg/kg	9.97E-03	mg/kg	M	3.18E-10	mg/kg-day	--	--	--
										Total Cancer Risk Across All Direct Contact Exposure Routes/Pathways - Soil	4.9E-07

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
bgs = Below ground surface
Ft. = Feet
mg/kg = Milligrams per kilogram
NV = No value available

TABLE J-104

EPA TABLE M.8.17.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation-Dust	**METAL**										
	BARIUM	1.09E+02	mg/kg	8.31E-08	mg/m^3	R	2.32E-10	mg/kg-day	--	--	--
	COBALT	1.29E+01	mg/kg	9.84E-09	mg/m^3	R	2.75E-11	mg/kg-day	--	--	--
	COPPER	7.13E+01	mg/kg	5.42E-08	mg/m^3	R	1.51E-10	mg/kg-day	--	--	--
	LEAD	1.47E+02	mg/kg	1.12E-07	mg/m^3	R	3.13E-10	mg/kg-day	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	2.90E-10	mg/m^3	R	8.10E-13	mg/kg-day	--	--	--
	SELENIUM	5.90E-01	mg/kg	4.49E-10	mg/m^3	R	1.25E-12	mg/kg-day	--	--	--
	SILVER	9.22E-01	mg/kg	7.01E-10	mg/m^3	R	1.96E-12	mg/kg-day	--	--	--
	THALLIUM	4.51E-01	mg/kg	3.43E-10	mg/m^3	R	9.58E-13	mg/kg-day	--	--	--
	TIN	1.78E+01	mg/kg	1.35E-08	mg/m^3	R	3.77E-11	mg/kg-day	--	--	--
	TITANIUM	4.77E+03	mg/kg	3.62E-06	mg/m^3	R	1.01E-08	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	8.66E-03	mg/kg	6.58E-12	mg/m^3	R	1.84E-14	mg/kg-day	--	--	--
	ACETONE	2.34E-02	mg/kg	1.78E-11	mg/m^3	R	4.97E-14	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	3.80E-12	mg/m^3	R	1.06E-14	mg/kg-day	--	--	--
	TOLUENE	6.37E-03	mg/kg	4.84E-12	mg/m^3	R	1.35E-14	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	8.50E-15	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	7.86E-14	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	5.10E-13	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	1.52E-11	mg/m^3	R	4.25E-14	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	3.19E-13	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	1.89E-10	mg/m^3	R	5.27E-13	mg/kg-day	3.9E-01	(mg/kg-day)-1	2.1E-13

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EPA TABLE M.8.17.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BENZO(A)PYRENE	2.35E-01	mg/kg	1.79E-10	mg/m^3	R	5.00E-13	mg/kg-day	3.9E+00	(mg/kg-day)-1	1.9E-12
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	1.89E-10	mg/m^3	R	5.29E-13	mg/kg-day	3.9E-01	(mg/kg-day)-1	2.1E-13
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	1.80E-10	mg/m^3	R	5.03E-13	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	1.97E-10	mg/m^3	R	5.50E-13	mg/kg-day	3.9E-01	(mg/kg-day)-1	2.1E-13
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.10E-10	mg/m^3	R	3.06E-13	mg/kg-day	8.4E-03	(mg/kg-day)-1	2.6E-15
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	1.55E-13	mg/kg-day	2.0E-02	(mg/kg-day)-1	3.1E-15
	CHRYSENE	2.43E-01	mg/kg	1.85E-10	mg/m^3	R	5.17E-13	mg/kg-day	3.9E-02	(mg/kg-day)-1	2.0E-14
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	1.27E-13	mg/kg-day	4.1E+00	(mg/kg-day)-1	5.2E-13
	FLUORANTHENE	2.23E-01	mg/kg	1.69E-10	mg/m^3	R	4.73E-13	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	1.74E-13	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	2.97E-13	mg/kg-day	3.9E-01	(mg/kg-day)-1	1.2E-13
	NAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	5.10E-13	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	1.06E-12	mg/kg-day	1.2E-01	(mg/kg-day)-1	1.3E-13
	PHENANTHRENE	2.65E-01	mg/kg	2.01E-10	mg/m^3	R	5.63E-13	mg/kg-day	--	--	--
	PYRENE	2.05E-01	mg/kg	1.56E-10	mg/m^3	R	4.36E-13	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.30E-03	mg/kg	2.51E-12	mg/m^3	R	7.01E-15	mg/kg-day	2.4E-01	(mg/kg-day)-1	1.7E-15
	4,4'-DDE	2.82E-03	mg/kg	2.14E-12	mg/m^3	R	5.99E-15	mg/kg-day	3.4E-01	(mg/kg-day)-1	2.0E-15
	4,4'-DDT	1.10E-02	mg/kg	8.32E-12	mg/m^3	R	2.33E-14	mg/kg-day	3.4E-01	(mg/kg-day)-1	7.9E-15
	ALDRIN	1.03E-03	mg/kg	7.83E-13	mg/m^3	R	2.19E-15	mg/kg-day	1.7E+01	(mg/kg-day)-1	3.8E-14
	ALPHA-BHC	4.35E-03	mg/kg	3.31E-12	mg/m^3	R	9.24E-15	mg/kg-day	6.3E+00	(mg/kg-day)-1	5.8E-14
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.08E-12	mg/m^3	R	5.82E-15	mg/kg-day	1.2E+00	(mg/kg-day)-1	7.0E-15
	AROCLOR-1254	1.40E-02	mg/kg	1.06E-11	mg/m^3	R	2.97E-14	mg/kg-day	2.0E+00	(mg/kg-day)-1	5.9E-14

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EPA TABLE M.8.17.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	AROCLOR-1260	4.89E-02	mg/kg	3.72E-11	mg/m^3	R	1.04E-13	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.1E-13
	BETA-BHC	1.61E-03	mg/kg	1.22E-12	mg/m^3	R	3.42E-15	mg/kg-day	1.9E+00	(mg/kg-day)-1	6.3E-15
	DELTA-BHC	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	2.57E-15	mg/kg-day	--	--	--
	DIELDRIN	2.17E-03	mg/kg	1.65E-12	mg/m^3	R	4.61E-15	mg/kg-day	1.6E+01	(mg/kg-day)-1	7.4E-14
	ENDOSULFAN I	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	2.57E-15	mg/kg-day	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	1.50E-12	mg/m^3	R	4.18E-15	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.00E-12	mg/m^3	R	5.59E-15	mg/kg-day	--	--	--
	ENDRIN	2.05E-03	mg/kg	1.56E-12	mg/m^3	R	4.35E-15	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	2.65E-12	mg/m^3	R	7.41E-15	mg/kg-day	--	--	--
	ENDRIN KETONE	2.69E-03	mg/kg	2.04E-12	mg/m^3	R	5.71E-15	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.39E-12	mg/m^3	R	3.89E-15	mg/kg-day	1.3E+00	(mg/kg-day)-1	5.1E-15
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.01E-12	mg/m^3	R	5.63E-15	mg/kg-day	1.2E+00	(mg/kg-day)-1	6.8E-15
	HEPTACHLOR	2.30E-04	mg/kg	1.75E-13	mg/m^3	R	4.89E-16	mg/kg-day	5.7E+00	(mg/kg-day)-1	2.8E-15
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	2.51E-13	mg/m^3	R	7.01E-16	mg/kg-day	1.3E+01	(mg/kg-day)-1	9.1E-15
	METHOXYCHLOR	9.97E-03	mg/kg	7.58E-12	mg/m^3	R	2.12E-14	mg/kg-day	--	--	--
Inhalation-VOCs	**METAL**										
	BARIUM	1.09E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COBALT	1.29E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COPPER	7.13E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	LEAD	1.47E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SELENIUM	5.90E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--

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EPA TABLE M.8.17.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	SILVER	9.22E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	THALLIUM	4.51E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TIN	1.78E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TITANIUM	4.77E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	8.66E-03	mg/kg	1.98E-04	mg/m^3	R	5.53E-07	mg/kg-day	--	--	--
	ACETONE	2.34E-02	mg/kg	4.76E-04	mg/m^3	R	1.33E-06	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.75E-02	mg/m^3	R	1.61E-04	mg/kg-day	--	--	--
	TOLUENE	6.37E-03	mg/kg	2.80E-02	mg/m^3	R	7.83E-05	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	4.56E-06	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	1.26E-04	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.78E-01	mg/m^3	R	4.97E-04	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	1.31E-02	mg/m^3	R	3.65E-05	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	7.67E-06	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BENZO(A)PYRENE	2.35E-01	mg/kg	--	mg/m^3	R	--	--	3.9E+00	(mg/kg-day)-1	--
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	--	mg/m^3	R	--	--	8.4E-03	(mg/kg-day)-1	--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-02	(mg/kg-day)-1	--
	CHRYSENE	2.43E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-02	(mg/kg-day)-1	--

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EPA TABLE M.8.17.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	4.1E+00	(mg/kg-day)-1	--
	FLUORANTHENE	2.23E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	9.49E-06	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	NAPHTHALENE	2.40E-01	mg/kg	*	mg/m^3	R	--	--	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	1.2E-01	(mg/kg-day)-1	--
	PHENANTHRENE	2.65E-01	mg/kg	4.87E-03	mg/m^3	R	1.36E-05	mg/kg-day	--	--	--
	PYRENE	2.05E-01	mg/kg	7.83E-04	mg/m^3	R	2.19E-06	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	3.30E-03	mg/kg	--	mg/m^3	R	--	--	2.4E-01	(mg/kg-day)-1	--
	4,4'-DDE	2.82E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	(mg/kg-day)-1	--
	4,4'-DDT	1.10E-02	mg/kg	--	mg/m^3	R	--	--	3.4E-01	(mg/kg-day)-1	--
	ALDRIN	1.03E-03	mg/kg	--	mg/m^3	R	--	--	1.7E+01	(mg/kg-day)-1	--
	ALPHA-BHC	4.35E-03	mg/kg	--	mg/m^3	R	--	--	6.3E+00	(mg/kg-day)-1	--
	ALPHA-CHLORDANE	2.74E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	(mg/kg-day)-1	--
	AROCLOR-1254	1.40E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	(mg/kg-day)-1	--
	AROCLOR-1260	4.89E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	(mg/kg-day)-1	--
	BETA-BHC	1.61E-03	mg/kg	--	mg/m^3	R	--	--	1.9E+00	(mg/kg-day)-1	--
	DELTA-BHC	1.21E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	DIELDRIN	2.17E-03	mg/kg	--	mg/m^3	R	--	--	1.6E+01	(mg/kg-day)-1	--
	ENDOSULFAN I	1.21E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--

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EPA TABLE M.8.17.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDRIN	2.05E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN KETONE	2.69E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	--	mg/m^3	R	--	--	1.3E+00	(mg/kg-day)-1	--
	GAMMA-CHLORDANE	2.65E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	(mg/kg-day)-1	--
	HEPTACHLOR	2.30E-04	mg/kg	--	mg/m^3	R	--	--	5.7E+00	(mg/kg-day)-1	--
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	--	mg/m^3	R	--	--	1.3E+01	(mg/kg-day)-1	--
	METHOXYCHLOR	9.97E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--

Total Cancer Risk Across All Air Exposure Routes/Pathways - Soil	3.9E-12
Total Cancer Risk Across All Direct Contact Exposure Routes/Pathways - Soil	4.9E-07
Total Cancer Risk Across All Exposure Routes/Pathways - Soil	4.9E-07

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

NV = No value available

VOC = Volatile organic compound

* = Inhalation of VOCs for naphthalane evaluated under groundwater exposures instead of soil due to single detection of naphthalene at 9.5 feet below ground suface, which is below shallow groundwater

TABLE J-105

EPA TABLE M.8.18.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation VOCs	**VOLATILE ORGANIC COMPOUNDS**										
	1,2-DICHLOROETHANE	3.30E-04	mg/L	1.02E-05	mg/m^3	R	2.86E-08	mg/kg-day	9.1E-02	(mg/kg-day)-1	2.6E-09
	2-BUTANONE	1.98E-02	mg/L	2.23E-04	mg/m^3	R	6.22E-07	mg/kg-day	--	--	--
	4-METHYL-2-PENTANONE	8.00E-04	mg/L	1.41E-05	mg/m^3	R	3.94E-08	mg/kg-day	--	--	--
	ACETONE	8.79E-02	mg/L	9.67E-04	mg/m^3	R	2.70E-06	mg/kg-day	--	--	--
	CHLOROMETHANE	7.00E-04	mg/L	1.36E-05	mg/m^3	R	3.80E-08	mg/kg-day	--	--	--
	ETHYLBENZENE	7.00E-04	mg/L	1.62E-05	mg/m^3	R	4.54E-08	mg/kg-day	--	--	--
	TOLUENE	1.00E-03	mg/L	2.55E-05	mg/m^3	R	7.13E-08	mg/kg-day	--	--	--
	XYLENE (TOTAL)	1.54E-03	mg/L	3.35E-05	mg/m^3	R	9.36E-08	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,3-DICHLOROBENZENE	9.00E-04	mg/L	2.10E-05	mg/m^3	R	5.86E-08	mg/kg-day	--	--	--
	2,4-DICHLOROPHENOL	2.00E-03	mg/L	--		R	--	--	--	--	--
	4-METHYLPHENOL	6.00E-03	mg/L	--		R	--	--	--	--	--
	ACENAPHTHENE	2.00E-03	mg/L	--		R	--	--	--	--	--
	BENZO(B)FLUORANTHENE	2.00E-03	mg/L	--		R	--	--	3.9E-01	(mg/kg-day)-1	--
	BIS(2-ETHYLHEXYL)PHTHALATE	7.85E-03	mg/L	--		R	--	--	8.4E-03	(mg/kg-day)-1	--
	CARBAZOLE	2.00E-03	mg/L	--		R	--	--	2.0E-02	(mg/kg-day)-1	--
	FLUORANTHENE	4.00E-03	mg/L	--		R	--	--	--	--	--
	N-NITROSODIPHENYLAMINE (1)	1.32E-02	mg/L	--		R	--	--	9.0E-03	(mg/kg-day)-1	--
	NAPHTHALENE	2.00E-03	mg/L	4.32E-05	mg/m^3	R	1.21E-07	mg/kg-day	--	--	--
	PHENANTHRENE	2.00E-03	mg/L	1.60E-05	mg/m^3	R	4.48E-08	mg/kg-day	--	--	--
	PHENOL	2.00E-03	mg/L	--		R	--	--	--	--	--

TABLE J-105

EPA TABLE M.8.18.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	PYRENE	1.10E-02	mg/L	2.93E-05	mg/m^3	R	8.20E-08	mg/kg-day	--	--	--

Total Cancer Risk Across All Air Exposure Routes/Pathways - Groundwater	2.61E-09
Total Cancer Risk Across All Exposure Routes/Pathways - Soil	4.86E-07
Total Cancer Risk Across All Exposure Routes/Pathways - Soil and Groundwater	**4.89E-07**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/L = Milligrams per liter

mg/m^3 = Milligrams per cubic meter

NV = No value available

TABLE J-106

EPA TABLE M.8.16.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	**METAL**										
	BARIUM	9.67E+01	mg/kg	9.67E+01	mg/kg	M	4.87E-07	mg/kg-day	--	--	--
	COBALT	1.15E+01	mg/kg	1.15E+01	mg/kg	M	5.76E-08	mg/kg-day	--	--	--
	COPPER	5.99E+01	mg/kg	5.99E+01	mg/kg	M	3.02E-07	mg/kg-day	--	--	--
	LEAD	9.96E+01	mg/kg	9.96E+01	mg/kg	M	5.01E-07	mg/kg-day	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.99E-01	mg/kg	M	1.51E-09	mg/kg-day	--	--	--
	SELENIUM	5.18E-01	mg/kg	5.18E-01	mg/kg	M	2.61E-09	mg/kg-day	--	--	--
	SILVER	5.63E-01	mg/kg	5.63E-01	mg/kg	M	2.83E-09	mg/kg-day	--	--	--
	THALLIUM	4.14E-01	mg/kg	4.14E-01	mg/kg	M	2.08E-09	mg/kg-day	--	--	--
	TIN	1.40E+01	mg/kg	1.40E+01	mg/kg	M	7.06E-08	mg/kg-day	--	--	--
	TITANIUM	4.25E+03	mg/kg	4.25E+03	mg/kg	M	2.14E-05	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	7.48E-03	mg/kg	7.48E-03	mg/kg	M	3.76E-11	mg/kg-day	--	--	--
	ACETONE	1.71E-02	mg/kg	1.71E-02	mg/kg	M	8.59E-11	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	2.52E-11	mg/kg-day	--	--	--
	TOLUENE	6.11E-03	mg/kg	6.11E-03	mg/kg	M	3.07E-11	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	2.01E-11	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.86E-10	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	1.18E-09	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	1.01E-10	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	7.55E-10	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	2.17E-01	mg/kg	M	1.09E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.3E-09
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	1.02E-09	mg/kg-day	1.2E+01	(mg/kg-day)-1	1.2E-08
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	2.16E-01	mg/kg	M	1.09E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.3E-09
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	2.08E-01	mg/kg	M	1.05E-09	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	2.32E-01	mg/kg	M	1.17E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.4E-09
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	1.19E-01	mg/kg	M	5.97E-10	mg/kg-day	1.4E-02	(mg/kg-day)-1	8.4E-12
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	3.67E-10	mg/kg-day	2.0E-02	(mg/kg-day)-1	7.3E-12

TABLE J-106

EPA TABLE M.8.16.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	CHRYSENE	2.04E-01	mg/kg	2.04E-01	mg/kg	M	1.03E-09	mg/kg-day	1.2E-01	(mg/kg-day)-1	1.2E-10
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	3.02E-10	mg/kg-day	4.1E+00	(mg/kg-day)-1	1.2E-09
	FLUORANTHENE	1.83E-01	mg/kg	1.83E-01	mg/kg	M	9.20E-10	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	4.13E-10	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	7.05E-10	mg/kg-day	1.2E+00	(mg/kg-day)-1	8.5E-10
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.21E-09	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	2.52E-09	mg/kg-day	1.2E-01	(mg/kg-day)-1	3.0E-10
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	1.15E-09	mg/kg-day	--	--	--
	PYRENE	1.71E-01	mg/kg	1.71E-01	mg/kg	M	8.60E-10	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.86E-03	mg/kg	2.86E-03	mg/kg	M	1.44E-11	mg/kg-day	2.4E-01	(mg/kg-day)-1	3.5E-12
	4,4'-DDE	2.54E-03	mg/kg	2.54E-03	mg/kg	M	1.28E-11	mg/kg-day	3.4E-01	(mg/kg-day)-1	4.3E-12
	4,4'-DDT	8.46E-03	mg/kg	8.46E-03	mg/kg	M	4.26E-11	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.4E-11
	ALDRIN	1.01E-03	mg/kg	1.01E-03	mg/kg	M	5.08E-12	mg/kg-day	1.7E+01	(mg/kg-day)-1	8.6E-11
	ALPHA-BHC	3.33E-03	mg/kg	3.33E-03	mg/kg	M	1.68E-11	mg/kg-day	6.3E+00	(mg/kg-day)-1	1.1E-10
	ALPHA-CHLORDANE	2.26E-03	mg/kg	2.26E-03	mg/kg	M	1.14E-11	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.4E-11
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	5.55E-11	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.1E-10
	AROCLOR-1260	3.79E-02	mg/kg	3.79E-02	mg/kg	M	1.91E-10	mg/kg-day	2.0E+00	(mg/kg-day)-1	3.8E-10
	BETA-BHC	1.44E-03	mg/kg	1.44E-03	mg/kg	M	7.25E-12	mg/kg-day	1.8E+00	(mg/kg-day)-1	1.3E-11
	DELTA-BHC	1.13E-03	mg/kg	1.13E-03	mg/kg	M	5.69E-12	mg/kg-day	--	--	--
	DIELDRIN	2.07E-03	mg/kg	2.07E-03	mg/kg	M	1.04E-11	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.7E-10
	ENDOSULFAN I	1.14E-03	mg/kg	1.14E-03	mg/kg	M	5.74E-12	mg/kg-day	--	--	--
	ENDOSULFAN II	1.92E-03	mg/kg	1.92E-03	mg/kg	M	9.66E-12	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	1.21E-11	mg/kg-day	--	--	--
	ENDRIN	1.98E-03	mg/kg	1.98E-03	mg/kg	M	9.96E-12	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	3.09E-03	mg/kg	M	1.55E-11	mg/kg-day	--	--	--
	ENDRIN KETONE	2.47E-03	mg/kg	2.47E-03	mg/kg	M	1.24E-11	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.61E-03	mg/kg	M	8.10E-12	mg/kg-day	1.3E+00	(mg/kg-day)-1	1.1E-11
	GAMMA-CHLORDANE	2.18E-03	mg/kg	2.18E-03	mg/kg	M	1.10E-11	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.3E-11

TABLE J-106

EPA TABLE M.8.16.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	1.01E-12	mg/kg-day	5.7E+00	(mg/kg-day)-1	5.7E-12
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.80E-04	mg/kg	M	1.41E-12	mg/kg-day	1.3E+01	(mg/kg-day)-1	1.8E-11
	METHOXYCHLOR	9.68E-03	mg/kg	9.68E-03	mg/kg	M	4.87E-11	mg/kg-day	--	--	--
Dermal	**METAL**										
	BARIUM	9.67E+01	mg/kg	9.67E+01	mg/kg	M	1.29E-07	mg/kg-day	--	--	--
	COBALT	1.15E+01	mg/kg	1.15E+01	mg/kg	M	1.52E-08	mg/kg-day	--	--	--
	COPPER	5.99E+01	mg/kg	5.99E+01	mg/kg	M	7.96E-08	mg/kg-day	--	--	--
	LEAD	9.96E+01	mg/kg	9.96E+01	mg/kg	M	1.32E-07	mg/kg-day	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.99E-01	mg/kg	M	3.98E-10	mg/kg-day	--	--	--
	SELENIUM	5.18E-01	mg/kg	5.18E-01	mg/kg	M	6.89E-10	mg/kg-day	--	--	--
	SILVER	5.63E-01	mg/kg	5.63E-01	mg/kg	M	7.48E-10	mg/kg-day	--	--	--
	THALLIUM	4.14E-01	mg/kg	4.14E-01	mg/kg	M	5.50E-10	mg/kg-day	--	--	--
	TIN	1.40E+01	mg/kg	1.40E+01	mg/kg	M	1.86E-08	mg/kg-day	--	--	--
	TITANIUM	4.25E+03	mg/kg	4.25E+03	mg/kg	M	5.65E-06	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	7.48E-03	mg/kg	7.48E-03	mg/kg	M	9.94E-11	mg/kg-day	--	--	--
	ACETONE	1.71E-02	mg/kg	1.71E-02	mg/kg	M	2.27E-10	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	6.64E-11	mg/kg-day	--	--	--
	TOLUENE	6.11E-03	mg/kg	6.11E-03	mg/kg	M	8.12E-11	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	5.31E-11	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	4.92E-10	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	4.69E-09	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	3.99E-10	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	2.99E-09	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	2.17E-01	mg/kg	M	4.32E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	5.2E-09
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	4.03E-09	mg/kg-day	1.2E+01	(mg/kg-day)-1	4.8E-08
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	2.16E-01	mg/kg	M	4.30E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	5.2E-09
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	2.08E-01	mg/kg	M	4.14E-09	mg/kg-day	--	--	--

TABLE J-106

EPA TABLE M.8.16.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	2.32E-01	mg/kg	M	4.63E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	5.6E-09
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	1.19E-01	mg/kg	M	1.58E-09	mg/kg-day	1.4E-02	(mg/kg-day)-1	2.2E-11
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	9.70E-10	mg/kg-day	2.0E-02	(mg/kg-day)-1	1.9E-11
	CHRYSENE	2.04E-01	mg/kg	2.04E-01	mg/kg	M	4.07E-09	mg/kg-day	1.2E-01	(mg/kg-day)-1	4.9E-10
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	1.20E-09	mg/kg-day	4.1E+00	(mg/kg-day)-1	4.9E-09
	FLUORANTHENE	1.83E-01	mg/kg	1.83E-01	mg/kg	M	3.64E-09	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	1.63E-09	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	2.79E-09	mg/kg-day	1.2E+00	(mg/kg-day)-1	3.3E-09
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	4.78E-09	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	1.66E-08	mg/kg-day	1.2E-01	(mg/kg-day)-1	2.0E-09
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	4.55E-09	mg/kg-day	--	--	--
	PYRENE	1.71E-01	mg/kg	1.71E-01	mg/kg	M	3.41E-09	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.86E-03	mg/kg	2.86E-03	mg/kg	M	1.90E-11	mg/kg-day	2.4E-01	(mg/kg-day)-1	4.6E-12
	4,4'-DDE	2.54E-03	mg/kg	2.54E-03	mg/kg	M	1.69E-11	mg/kg-day	3.4E-01	(mg/kg-day)-1	5.7E-12
	4,4'-DDT	8.46E-03	mg/kg	8.46E-03	mg/kg	M	5.62E-11	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.9E-11
	ALDRIN	1.01E-03	mg/kg	1.01E-03	mg/kg	M	6.71E-12	mg/kg-day	1.7E+01	(mg/kg-day)-1	1.1E-10
	ALPHA-BHC	3.33E-03	mg/kg	3.33E-03	mg/kg	M	2.21E-11	mg/kg-day	6.3E+00	(mg/kg-day)-1	1.4E-10
	ALPHA-CHLORDANE	2.26E-03	mg/kg	2.26E-03	mg/kg	M	1.50E-11	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.8E-11
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	2.20E-10	mg/kg-day	2.0E+00	(mg/kg-day)-1	4.4E-10
	AROCLOR-1260	3.79E-02	mg/kg	3.79E-02	mg/kg	M	7.55E-10	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.5E-09
	BETA-BHC	1.44E-03	mg/kg	1.44E-03	mg/kg	M	9.57E-12	mg/kg-day	1.8E+00	(mg/kg-day)-1	1.7E-11
	DELTA-BHC	1.13E-03	mg/kg	1.13E-03	mg/kg	M	7.51E-12	mg/kg-day	--	--	--
	DIELDRIN	2.07E-03	mg/kg	2.07E-03	mg/kg	M	1.37E-11	mg/kg-day	1.6E+01	(mg/kg-day)-1	2.2E-10
	ENDOSULFAN I	1.14E-03	mg/kg	1.14E-03	mg/kg	M	7.57E-12	mg/kg-day	--	--	--
	ENDOSULFAN II	1.92E-03	mg/kg	1.92E-03	mg/kg	M	1.28E-11	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	1.59E-11	mg/kg-day	--	--	--
	ENDRIN	1.98E-03	mg/kg	1.98E-03	mg/kg	M	1.32E-11	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	3.09E-03	mg/kg	M	2.05E-11	mg/kg-day	--	--	--

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EPA TABLE M.8.16.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDRIN KETONE	2.47E-03	mg/kg	2.47E-03	mg/kg	M	1.64E-11	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.61E-03	mg/kg	M	1.07E-11	mg/kg-day	1.3E+00	(mg/kg-day)-1	1.4E-11
	GAMMA-CHLORDANE	2.18E-03	mg/kg	2.18E-03	mg/kg	M	1.45E-11	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.7E-11
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	1.33E-12	mg/kg-day	5.7E+00	(mg/kg-day)-1	7.6E-12
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.80E-04	mg/kg	M	1.86E-12	mg/kg-day	1.3E+01	(mg/kg-day)-1	2.4E-11
	METHOXYCHLOR	9.68E-03	mg/kg	9.68E-03	mg/kg	M	6.43E-11	mg/kg-day	--	--	--
										Total Cancer Risk Across All Direct Contact Exposure Routes/Pathways - Soil	9.7E-08

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

NV = No value available

TABLE J-107

EPA TABLE M.8.17.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation-Dust	**METAL**										
	BARIUM	9.67E+01	mg/kg	7.35E-08	mg/m^3	R	3.85E-11	mg/kg-day	--	--	--
	COBALT	1.15E+01	mg/kg	8.70E-09	mg/m^3	R	4.55E-12	mg/kg-day	--	--	--
	COPPER	5.99E+01	mg/kg	4.55E-08	mg/m^3	R	2.38E-11	mg/kg-day	--	--	--
	LEAD	9.96E+01	mg/kg	7.57E-08	mg/m^3	R	3.96E-11	mg/kg-day	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.28E-10	mg/m^3	R	1.19E-13	mg/kg-day	--	--	--
	SELENIUM	5.18E-01	mg/kg	3.94E-10	mg/m^3	R	2.06E-13	mg/kg-day	--	--	--
	SILVER	5.63E-01	mg/kg	4.28E-10	mg/m^3	R	2.24E-13	mg/kg-day	--	--	--
	THALLIUM	4.14E-01	mg/kg	3.15E-10	mg/m^3	R	1.65E-13	mg/kg-day	--	--	--
	TIN	1.40E+01	mg/kg	1.07E-08	mg/m^3	R	5.58E-12	mg/kg-day	--	--	--
	TITANIUM	4.25E+03	mg/kg	3.23E-06	mg/m^3	R	1.69E-09	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	7.48E-03	mg/kg	5.68E-12	mg/m^3	R	2.97E-15	mg/kg-day	--	--	--
	ACETONE	1.71E-02	mg/kg	1.30E-11	mg/m^3	R	6.79E-15	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	3.80E-12	mg/m^3	R	1.99E-15	mg/kg-day	--	--	--
	TOLUENE	6.11E-03	mg/kg	4.64E-12	mg/m^3	R	2.43E-15	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	1.59E-15	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	1.47E-14	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	1.79E-10	mg/m^3	R	9.36E-14	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	1.52E-11	mg/m^3	R	7.95E-15	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	5.97E-14	mg/kg-day	--	--	--

TABLE J-107

EPA TABLE M.8.17.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	1.65E-10	mg/m^3	R	8.63E-14	mg/kg-day	3.9E-01	(mg/kg-day)-1	3.4E-14
	BENZO(A)PYRENE	2.02E-01	mg/kg	1.53E-10	mg/m^3	R	8.03E-14	mg/kg-day	3.9E+00	(mg/kg-day)-1	3.1E-13
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	1.64E-10	mg/m^3	R	8.58E-14	mg/kg-day	3.9E-01	(mg/kg-day)-1	3.3E-14
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	1.58E-10	mg/m^3	R	8.27E-14	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	1.77E-10	mg/m^3	R	9.24E-14	mg/kg-day	3.9E-01	(mg/kg-day)-1	3.6E-14
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	9.02E-11	mg/m^3	R	4.72E-14	mg/kg-day	8.4E-03	(mg/kg-day)-1	4.0E-16
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	2.90E-14	mg/kg-day	2.0E-02	(mg/kg-day)-1	5.8E-16
	CHRYSENE	2.04E-01	mg/kg	1.55E-10	mg/m^3	R	8.13E-14	mg/kg-day	3.9E-02	(mg/kg-day)-1	3.2E-15
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	2.39E-14	mg/kg-day	4.1E+00	(mg/kg-day)-1	9.8E-14
	FLUORANTHENE	1.83E-01	mg/kg	1.39E-10	mg/m^3	R	7.27E-14	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	3.26E-14	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	5.57E-14	mg/kg-day	3.9E-01	(mg/kg-day)-1	2.2E-14
	NAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	9.54E-14	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	1.99E-13	mg/kg-day	1.2E-01	(mg/kg-day)-1	2.4E-14
	PHENANTHRENE	2.28E-01	mg/kg	1.74E-10	mg/m^3	R	9.09E-14	mg/kg-day	--	--	--
	PYRENE	1.71E-01	mg/kg	1.30E-10	mg/m^3	R	6.80E-14	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.86E-03	mg/kg	2.17E-12	mg/m^3	R	1.14E-15	mg/kg-day	2.4E-01	(mg/kg-day)-1	2.7E-16
	4,4'-DDE	2.54E-03	mg/kg	1.93E-12	mg/m^3	R	1.01E-15	mg/kg-day	3.4E-01	(mg/kg-day)-1	3.4E-16
	4,4'-DDT	8.46E-03	mg/kg	6.43E-12	mg/m^3	R	3.36E-15	mg/kg-day	3.4E-01	(mg/kg-day)-1	1.1E-15
	ALDRIN	1.01E-03	mg/kg	7.67E-13	mg/m^3	R	4.02E-16	mg/kg-day	1.7E+01	(mg/kg-day)-1	6.9E-15
	ALPHA-BHC	3.33E-03	mg/kg	2.53E-12	mg/m^3	R	1.32E-15	mg/kg-day	6.3E+00	(mg/kg-day)-1	8.3E-15

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EPA TABLE M.8.17.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ALPHA-CHLORDANE	2.26E-03	mg/kg	1.72E-12	mg/m^3	R	8.99E-16	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.1E-15
	AROCLOR-1254	1.10E-02	mg/kg	8.37E-12	mg/m^3	R	4.38E-15	mg/kg-day	2.0E+00	(mg/kg-day)-1	8.8E-15
	AROCLOR-1260	3.79E-02	mg/kg	2.88E-11	mg/m^3	R	1.51E-14	mg/kg-day	2.0E+00	(mg/kg-day)-1	3.0E-14
	BETA-BHC	1.44E-03	mg/kg	1.09E-12	mg/m^3	R	5.73E-16	mg/kg-day	1.9E+00	(mg/kg-day)-1	1.1E-15
	DELTA-BHC	1.13E-03	mg/kg	8.59E-13	mg/m^3	R	4.49E-16	mg/kg-day	--	--	--
	DIELDRIN	2.07E-03	mg/kg	1.57E-12	mg/m^3	R	8.23E-16	mg/kg-day	1.6E+01	(mg/kg-day)-1	1.3E-14
	ENDOSULFAN I	1.14E-03	mg/kg	8.66E-13	mg/m^3	R	4.53E-16	mg/kg-day	--	--	--
	ENDOSULFAN II	1.92E-03	mg/kg	1.46E-12	mg/m^3	R	7.64E-16	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	1.82E-12	mg/m^3	R	9.54E-16	mg/kg-day	--	--	--
	ENDRIN	1.98E-03	mg/kg	1.50E-12	mg/m^3	R	7.87E-16	mg/kg-day	--	--	--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	2.35E-12	mg/m^3	R	1.23E-15	mg/kg-day	--	--	--
	ENDRIN KETONE	2.47E-03	mg/kg	1.88E-12	mg/m^3	R	9.82E-16	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.22E-12	mg/m^3	R	6.40E-16	mg/kg-day	1.3E+00	(mg/kg-day)-1	8.3E-16
	GAMMA-CHLORDANE	2.18E-03	mg/kg	1.66E-12	mg/m^3	R	8.67E-16	mg/kg-day	1.2E+00	(mg/kg-day)-1	1.0E-15
	HEPTACHLOR	2.00E-04	mg/kg	1.52E-13	mg/m^3	R	7.95E-17	mg/kg-day	5.7E+00	(mg/kg-day)-1	4.5E-16
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.13E-13	mg/m^3	R	1.11E-16	mg/kg-day	1.3E+01	(mg/kg-day)-1	1.4E-15
	METHOXYCHLOR	9.68E-03	mg/kg	7.36E-12	mg/m^3	R	3.85E-15	mg/kg-day	--	--	--
Inhalation-VOCs	**METAL**										
	BARIUM	9.67E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COBALT	1.15E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	COPPER	5.99E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	LEAD	9.96E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--

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EPA TABLE M.8.17.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	MOLYBDENUM	2.99E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SELENIUM	5.18E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	SILVER	5.63E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	THALLIUM	4.14E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TIN	1.40E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	TITANIUM	4.25E+03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	VOLATILE ORGANIC COMPOUNDS										
	2-BUTANONE	7.48E-03	mg/kg	1.71E-04	mg/m^3	R	8.94E-08	mg/kg-day	--	--	--
	ACETONE	1.71E-02	mg/kg	3.48E-04	mg/m^3	R	1.82E-07	mg/kg-day	--	--	--
	CARBON DISULFIDE	5.00E-03	mg/kg	5.75E-02	mg/m^3	R	3.01E-05	mg/kg-day	--	--	--
	TOLUENE	6.11E-03	mg/kg	2.69E-02	mg/m^3	R	1.41E-05	mg/kg-day	--	--	--
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	8.54E-07	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	2.36E-05	mg/kg-day	--	--	--
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	1.74E-01	mg/m^3	R	9.13E-05	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-02	mg/kg	1.31E-02	mg/m^3	R	6.84E-06	mg/kg-day	--	--	--
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	1.44E-06	mg/kg-day	--	--	--
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BENZO(A)PYRENE	2.02E-01	mg/kg	--	mg/m^3	R	--	--	3.9E+00	(mg/kg-day)-1	--
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	--	mg/m^3	R	--	--	8.4E-03	(mg/kg-day)-1	--

TABLE J-107

EPA TABLE M.8.17.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.0E-02	(mg/kg-day)-1	--
	CHRYSENE	2.04E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-02	(mg/kg-day)-1	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	4.1E+00	(mg/kg-day)-1	--
	FLUORANTHENE	1.83E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	1.78E-06	mg/kg-day	--	--	--
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	3.9E-01	(mg/kg-day)-1	--
	NAPHTHALENE	2.40E-01	mg/kg	*		R	--	--	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	1.2E-01	(mg/kg-day)-1	--
	PHENANTHRENE	2.28E-01	mg/kg	4.20E-03	mg/m^3	R	2.20E-06	mg/kg-day	--	--	--
	PYRENE	1.71E-01	mg/kg	6.52E-04	mg/m^3	R	3.41E-07	mg/kg-day	--	--	--
	PESTICIDE/POLYCHLORINATED BIPHENYLS										
	4,4'-DDD	2.86E-03	mg/kg	--	mg/m^3	R	--	--	2.4E-01	(mg/kg-day)-1	--
	4,4'-DDE	2.54E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	(mg/kg-day)-1	--
	4,4'-DDT	8.46E-03	mg/kg	--	mg/m^3	R	--	--	3.4E-01	(mg/kg-day)-1	--
	ALDRIN	1.01E-03	mg/kg	--	mg/m^3	R	--	--	1.7E+01	(mg/kg-day)-1	--
	ALPHA-BHC	3.33E-03	mg/kg	--	mg/m^3	R	--	--	6.3E+00	(mg/kg-day)-1	--
	ALPHA-CHLORDANE	2.26E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	(mg/kg-day)-1	--
	AROCLOR-1254	1.10E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	(mg/kg-day)-1	--
	AROCLOR-1260	3.79E-02	mg/kg	--	mg/m^3	R	--	--	2.0E+00	(mg/kg-day)-1	--
	BETA-BHC	1.44E-03	mg/kg	--	mg/m^3	R	--	--	1.9E+00	(mg/kg-day)-1	--
	DELTA-BHC	1.13E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	DIELDRIN	2.07E-03	mg/kg	--	mg/m^3	R	--	--	1.6E+01	(mg/kg-day)-1	--

TABLE J-107

EPA TABLE M.8.17.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	ENDOSULFAN I	1.14E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN II	1.92E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN	1.98E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	ENDRIN KETONE	2.47E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	--	mg/m^3	R	--	--	1.3E+00	(mg/kg-day)-1	--
	GAMMA-CHLORDANE	2.18E-03	mg/kg	--	mg/m^3	R	--	--	1.2E+00	(mg/kg-day)-1	--
	HEPTACHLOR	2.00E-04	mg/kg	--	mg/m^3	R	--	--	5.7E+00	(mg/kg-day)-1	--
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	--	mg/m^3	R	--	--	1.3E+01	(mg/kg-day)-1	--
	METHOXYCHLOR	9.68E-03	mg/kg	--	mg/m^3	R	--	--	--	--	--

Total Cancer Risk Across All Air Exposure Routes/Pathways - Soil	6.4E-13
Total Cancer Risk Across All Direct Contact Exposure Routes/Pathways - Soil	9.7E-08
Total Cancer Risk Across All Exposure Routes/Pathways - Soil	9.7E-08

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

NV = No value available

VOC = Volatile organic compound

* = Inhalation of VOCs for naphthalane evaluated under groundwater exposures instead of soil due to single detection of naphthalene at 9.5 feet below ground suface, which is below shallow groundwater

TABLE J-108

EPA TABLE M.8.18.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation VOCs	**VOLATILE ORGANIC COMPOUNDS**										
	1,2-DICHLOROETHANE	2.80E-04	mg/L	8.69E-06	mg/m^3	R	4.55E-09	mg/kg-day	9.1E-02	(mg/kg-day)-1	4.1E-10
	2-BUTANONE	9.42E-03	mg/L	1.06E-04	mg/m^3	R	5.54E-08	mg/kg-day	--	--	--
	4-METHYL-2-PENTANONE	8.00E-04	mg/L	1.41E-05	mg/m^3	R	7.38E-09	mg/kg-day	--	--	--
	ACETONE	6.84E-02	mg/L	7.53E-04	mg/m^3	R	3.94E-07	mg/kg-day	--	--	--
	CHLOROMETHANE	7.00E-04	mg/L	1.36E-05	mg/m^3	R	7.11E-09	mg/kg-day	--	--	--
	ETHYLBENZENE	7.00E-04	mg/L	1.62E-05	mg/m^3	R	8.49E-09	mg/kg-day	--	--	--
	TOLUENE	8.30E-04	mg/L	2.12E-05	mg/m^3	R	1.11E-08	mg/kg-day	--	--	--
	XYLENE (TOTAL)	1.26E-03	mg/L	2.74E-05	mg/m^3	R	1.43E-08	mg/kg-day	--	--	--
	SEMIVOLATILE ORGANIC COMPOUNDS										
	1,3-DICHLOROBENZENE	9.00E-04	mg/L	2.10E-05	mg/m^3	R	1.10E-08	mg/kg-day	--	--	--
	2,4-DICHLOROPHENOL	2.00E-03	mg/L	--		R	--	--	--	--	--
	4-METHYLPHENOL	6.00E-03	mg/L	--		R	--	--	--	--	--
	ACENAPHTHENE	2.00E-03	mg/L	--		R	--	--	--	--	--
	BENZO(B)FLUORANTHENE	2.00E-03	mg/L	--		R	--	--	3.9E-01	(mg/kg-day)-1	--
	BIS(2-ETHYLHEXYL)PHTHALATE	4.92E-03	mg/L	--		R	--	--	8.4E-03	(mg/kg-day)-1	--
	CARBAZOLE	2.00E-03	mg/L	--		R	--	--	2.0E-02	(mg/kg-day)-1	--
	FLUORANTHENE	4.00E-03	mg/L	--		R	--	--	--	--	--
	N-NITROSODIPHENYLAMINE (1)	8.83E-03	mg/L	--		R	--	--	9.0E-03	(mg/kg-day)-1	--
	NAPHTHALENE	2.00E-03	mg/L	4.32E-05	mg/m^3	R	2.26E-08	mg/kg-day	--	--	--
	PHENANTHRENE	2.00E-03	mg/L	1.60E-05	mg/m^3	R	8.38E-09	mg/kg-day	--	--	--
	PHENOL	2.00E-03	mg/L	--		R	--	--	--	--	--

TABLE J-108

EPA TABLE M.8.18.CTE
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	PYRENE	8.39E-03	mg/L	2.24E-05	mg/m^3	R	1.17E-08	mg/kg-day	--	--	--
										Total Cancer Risk Across All Air Exposure Routes/Pathways - Groundwater	4.1E-10
										Total Cancer Risk Across All Exposure Routes/Pathways - Soil	9.7E-08
										Total Cancer Risk Across All Exposure Routes/Pathways - Soil and Groundwater	**9.8E-08**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

bgs = Below ground surface

mg/L = Milligrams per liter

mg/m^3 = Milligrams per cubic meter

NV = No value available

TABLE J-109

EPA TABLE M.7.16.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	**METAL**												
	BARIUM	1.09E+02	mg/kg	1.09E+02	mg/kg	M	1.07E-04	mg/kg-day	7.0E-02	mg/kg-day	--	--	1.5E-03
	COBALT	1.29E+01	mg/kg	1.29E+01	mg/kg	M	1.27E-05	mg/kg-day	6.0E-02	mg/kg-day	--	--	2.1E-04
	COPPER	7.13E+01	mg/kg	7.13E+01	mg/kg	M	6.97E-05	mg/kg-day	3.7E-02	mg/kg-day	--	--	1.9E-03
	LEAD	1.47E+02	mg/kg	1.47E+02	mg/kg	M	1.44E-04	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	3.81E-01	mg/kg	M	3.73E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	7.5E-05
	SELENIUM	5.90E-01	mg/kg	5.90E-01	mg/kg	M	5.78E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.2E-04
	SILVER	9.22E-01	mg/kg	9.22E-01	mg/kg	M	9.02E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.8E-04
	THALLIUM	4.51E-01	mg/kg	4.51E-01	mg/kg	M	4.41E-07	mg/kg-day	7.0E-04	mg/kg-day	--	--	6.3E-04
	TIN	1.78E+01	mg/kg	1.78E+01	mg/kg	M	1.74E-05	mg/kg-day	6.0E-01	mg/kg-day	--	--	2.9E-05
	TITANIUM	4.77E+03	mg/kg	4.77E+03	mg/kg	M	4.66E-03	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.6E-02
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	8.66E-03	mg/kg	8.66E-03	mg/kg	M	8.47E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	4.2E-09
	ACETONE	2.34E-02	mg/kg	2.34E-02	mg/kg	M	2.29E-08	mg/kg-day	1.0E+00	mg/kg-day	--	--	2.3E-08
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	4.89E-09	mg/kg-day	1.0E-01	mg/kg-day	--	--	4.9E-08
	TOLUENE	6.37E-03	mg/kg	6.37E-03	mg/kg	M	6.23E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	3.1E-09
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	3.91E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	2.0E-09
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	3.62E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	3.6E-06
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	2.35E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	7.8E-08
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	1.96E-08	mg/kg-day	6.0E-01	mg/kg-day	--	--	3.3E-08
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.47E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	4.9E-08
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	2.48E-01	mg/kg	M	2.43E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	8.1E-08
	BENZO(A)PYRENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	2.30E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	7.7E-07
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	2.49E-01	mg/kg	M	2.43E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	6.1E-07
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	2.37E-01	mg/kg	M	2.32E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	7.7E-07
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	2.59E-01	mg/kg	M	2.53E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	6.3E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.44E-01	mg/kg	M	1.41E-07	mg/kg-day	2.0E-02	mg/kg-day	--	--	7.1E-06
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	7.14E-08	mg/kg-day	2.5E-02	mg/kg-day	--	--	2.9E-06
	CHRYSENE	2.43E-01	mg/kg	2.43E-01	mg/kg	M	2.38E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	7.9E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	5.87E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.0E-08
	FLUORANTHENE	2.23E-01	mg/kg	2.23E-01	mg/kg	M	2.18E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	5.4E-07
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	8.02E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.0E-07
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	1.37E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.4E-07
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	2.35E-07	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.2E-06

TABLE J-109

EPA TABLE M.7.16.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	4.89E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.6E-05
	PHENANTHRENE	2.65E-01	mg/kg	2.65E-01	mg/kg	M	2.59E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	8.6E-08
	PYRENE	2.05E-01	mg/kg	2.05E-01	mg/kg	M	2.01E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	6.7E-07
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.30E-03	mg/kg	3.30E-03	mg/kg	M	3.23E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	6.5E-06
	4,4'-DDE	2.82E-03	mg/kg	2.82E-03	mg/kg	M	2.76E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	5.5E-06
	4,4'-DDT	1.10E-02	mg/kg	1.10E-02	mg/kg	M	1.07E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.1E-05
	ALDRIN	1.03E-03	mg/kg	1.03E-03	mg/kg	M	1.01E-09	mg/kg-day	3.0E-05	mg/kg-day	--	--	3.4E-05
	ALPHA-BHC	4.35E-03	mg/kg	4.35E-03	mg/kg	M	4.26E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.4E-06
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.74E-03	mg/kg	M	2.68E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	5.4E-06
	AROCLOR-1254	1.40E-02	mg/kg	1.40E-02	mg/kg	M	1.37E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	2.7E-04
	AROCLOR-1260	4.89E-02	mg/kg	4.89E-02	mg/kg	M	4.78E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	9.6E-04
	BETA-BHC	1.61E-03	mg/kg	1.61E-03	mg/kg	M	1.58E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	5.3E-07
	DELTA-BHC	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.18E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	3.9E-07
	DIELDRIN	2.17E-03	mg/kg	2.17E-03	mg/kg	M	2.12E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	4.2E-05
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	1.18E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	2.0E-07
	ENDOSULFAN II	1.97E-03	mg/kg	1.97E-03	mg/kg	M	1.93E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	3.2E-07
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.63E-03	mg/kg	M	2.57E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	4.3E-07
	ENDRIN	2.05E-03	mg/kg	2.05E-03	mg/kg	M	2.01E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	6.7E-06
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	3.49E-03	mg/kg	M	3.41E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.1E-05
	ENDRIN KETONE	2.69E-03	mg/kg	2.69E-03	mg/kg	M	2.63E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	8.8E-06
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.83E-03	mg/kg	M	1.79E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	6.0E-07
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	2.59E-09	mg/kg-day	6.0E-05	mg/kg-day	--	--	4.3E-05
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	2.25E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	4.5E-07
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	3.30E-04	mg/kg	M	3.23E-10	mg/kg-day	1.3E-05	mg/kg-day	--	--	2.5E-05
	METHOXYCHLOR	9.97E-03	mg/kg	9.97E-03	mg/kg	M	9.76E-09	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.0E-06
Dermal	**METAL**												
	BARIUM	1.09E+02	mg/kg	1.09E+02	mg/kg	M	4.88E-05	mg/kg-day	7.0E-02	mg/kg-day	--	--	7.0E-04
	COBALT	1.29E+01	mg/kg	1.29E+01	mg/kg	M	5.78E-06	mg/kg-day	6.0E-02	mg/kg-day	--	--	9.6E-05
	COPPER	7.13E+01	mg/kg	7.13E+01	mg/kg	M	3.18E-05	mg/kg-day	3.7E-02	mg/kg-day	--	--	8.6E-04
	LEAD	1.47E+02	mg/kg	1.47E+02	mg/kg	M	6.57E-05	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	3.81E-01	mg/kg	M	1.70E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.4E-05
	SELENIUM	5.90E-01	mg/kg	5.90E-01	mg/kg	M	2.63E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	5.3E-05
	SILVER	9.22E-01	mg/kg	9.22E-01	mg/kg	M	4.11E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	8.2E-05

TABLE J-109

EPA TABLE M.7.16.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	THALLIUM	4.51E-01	mg/kg	4.51E-01	mg/kg	M	2.01E-07	mg/kg-day	7.0E-04	mg/kg-day	--	--	2.9E-04
	TIN	1.78E+01	mg/kg	1.78E+01	mg/kg	M	7.93E-06	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.3E-05
	TITANIUM	4.77E+03	mg/kg	4.77E+03	mg/kg	M	2.13E-03	mg/kg-day	3.0E-01	mg/kg-day	--	--	7.1E-03
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	8.66E-03	mg/kg	8.66E-03	mg/kg	M	3.86E-08	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.9E-08
	ACETONE	2.34E-02	mg/kg	2.34E-02	mg/kg	M	1.04E-07	mg/kg-day	1.0E+00	mg/kg-day	--	--	1.0E-07
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	2.23E-08	mg/kg-day	1.0E-01	mg/kg-day	--	--	2.2E-07
	TOLUENE	6.37E-03	mg/kg	6.37E-03	mg/kg	M	2.84E-08	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.4E-08
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.78E-08	mg/kg-day	2.0E+00	mg/kg-day	--	--	8.9E-09
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.65E-07	mg/kg-day	1.0E-02	mg/kg-day	--	--	1.7E-05
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.61E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.4E-07
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	1.34E-07	mg/kg-day	6.0E-01	mg/kg-day	--	--	2.2E-07
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	1.00E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.3E-07
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	2.48E-01	mg/kg	M	1.66E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.5E-07
	BENZO(A)PYRENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	1.57E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	5.2E-06
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	2.49E-01	mg/kg	M	1.67E-06	mg/kg-day	4.0E-01	mg/kg-day	--	--	4.2E-06
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	2.37E-01	mg/kg	M	1.59E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	5.3E-06
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	2.59E-01	mg/kg	M	1.73E-06	mg/kg-day	4.0E-01	mg/kg-day	--	--	4.3E-06
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.44E-01	mg/kg	M	6.44E-07	mg/kg-day	2.0E-02	mg/kg-day	--	--	3.2E-05
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	3.26E-07	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.3E-05
	CHRYSENE	2.43E-01	mg/kg	2.43E-01	mg/kg	M	1.63E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.4E-07
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	4.02E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.3E-07
	FLUORANTHENE	2.23E-01	mg/kg	2.23E-01	mg/kg	M	1.49E-06	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.7E-06
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	5.49E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.4E-06
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	9.37E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.3E-06
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	1.61E-06	mg/kg-day	2.0E-01	mg/kg-day	--	--	8.0E-06
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	5.58E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	1.9E-04
	PHENANTHRENE	2.65E-01	mg/kg	2.65E-01	mg/kg	M	1.77E-06	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.9E-07
	PYRENE	2.05E-01	mg/kg	2.05E-01	mg/kg	M	1.37E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	4.6E-06
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.30E-03	mg/kg	3.30E-03	mg/kg	M	7.36E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.5E-05
	4,4'-DDE	2.82E-03	mg/kg	2.82E-03	mg/kg	M	6.29E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.3E-05
	4,4'-DDT	1.10E-02	mg/kg	1.10E-02	mg/kg	M	2.44E-08	mg/kg-day	5.0E-04	mg/kg-day	--	--	4.9E-05

TABLE J-109

EPA TABLE M.7.16.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	ALDRIN	1.03E-03	mg/kg	1.03E-03	mg/kg	M	2.30E-09	mg/kg-day	3.0E-05	mg/kg-day	--	--	7.7E-05
	ALPHA-BHC	4.35E-03	mg/kg	4.35E-03	mg/kg	M	9.70E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	3.2E-06
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.74E-03	mg/kg	M	6.11E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.2E-05
	AROCLOR-1254	1.40E-02	mg/kg	1.40E-02	mg/kg	M	9.37E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.9E-03
	AROCLOR-1260	4.89E-02	mg/kg	4.89E-02	mg/kg	M	3.27E-07	mg/kg-day	5.0E-05	mg/kg-day	--	--	6.5E-03
	BETA-BHC	1.61E-03	mg/kg	1.61E-03	mg/kg	M	3.59E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.2E-06
	DELTA-BHC	1.21E-03	mg/kg	1.21E-03	mg/kg	M	2.70E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	9.0E-07
	DIELDRIN	2.17E-03	mg/kg	2.17E-03	mg/kg	M	4.84E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	9.7E-05
	ENDOSULFAN I	1.21E-03	mg/kg	1.21E-03	mg/kg	M	2.70E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	4.5E-07
	ENDOSULFAN II	1.97E-03	mg/kg	1.97E-03	mg/kg	M	4.39E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	7.3E-07
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.63E-03	mg/kg	M	5.87E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	9.8E-07
	ENDRIN	2.05E-03	mg/kg	2.05E-03	mg/kg	M	4.57E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.5E-05
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	3.49E-03	mg/kg	M	7.79E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.6E-05
	ENDRIN KETONE	2.69E-03	mg/kg	2.69E-03	mg/kg	M	6.00E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.0E-05
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.83E-03	mg/kg	M	4.08E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.4E-06
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.65E-03	mg/kg	M	5.91E-09	mg/kg-day	6.0E-05	mg/kg-day	--	--	9.9E-05
	HEPTACHLOR	2.30E-04	mg/kg	2.30E-04	mg/kg	M	5.13E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.0E-06
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	3.30E-04	mg/kg	M	7.36E-10	mg/kg-day	1.3E-05	mg/kg-day	--	--	5.7E-05
	METHOXYCHLOR	9.97E-03	mg/kg	9.97E-03	mg/kg	M	2.22E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	4.4E-06
												Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	4.0E-02

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
(2) Chronic Values Used
bgs = Below ground surface
Ft. = Feet
mg/kg = Milligrams per kilogram

TABLE J-110

EPA TABLE M.7.17.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation-Dust	**METAL**												
	BARIUM	1.09E+02	mg/kg	8.31E-08	mg/m^3	R	1.63E-08	mg/kg-day	1.0E-03	mg/kg-day	--	--	1.6E-05
	COBALT	1.29E+01	mg/kg	9.84E-09	mg/m^3	R	1.92E-09	mg/kg-day	1.4E-06	mg/kg-day	--	--	1.3E-03
	COPPER	7.13E+01	mg/kg	5.42E-08	mg/m^3	R	1.06E-08	mg/kg-day	5.7E-06	mg/kg-day	--	--	1.9E-03
	LEAD	1.47E+02	mg/kg	1.12E-07	mg/m^3	R	2.19E-08	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	2.90E-10	mg/m^3	R	5.67E-11	mg/kg-day	--	--	--	--	--
	SELENIUM	5.90E-01	mg/kg	4.49E-10	mg/m^3	R	8.78E-11	mg/kg-day	2.3E-05	mg/kg-day	--	--	3.8E-06
	SILVER	9.22E-01	mg/kg	7.01E-10	mg/m^3	R	1.37E-10	mg/kg-day	5.7E-03	mg/kg-day	--	--	2.4E-08
	THALLIUM	4.51E-01	mg/kg	3.43E-10	mg/m^3	R	6.70E-11	mg/kg-day	--	--	--	--	--
	TIN	1.78E+01	mg/kg	1.35E-08	mg/m^3	R	2.64E-09	mg/kg-day	--	--			--
	TITANIUM	4.77E+03	mg/kg	3.62E-06	mg/m^3	R	7.09E-07	mg/kg-day	2.6E-04	mg/kg-day	--	--	2.7E-03
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	8.66E-03	mg/kg	6.58E-12	mg/m^3	R	1.29E-12	mg/kg-day	2.9E-01	mg/kg-day	--	--	4.5E-12
	ACETONE	2.34E-02	mg/kg	1.78E-11	mg/m^3	R	3.48E-12	mg/kg-day	1.0E+00	mg/kg-day	--	--	3.5E-12
	CARBON DISULFIDE	5.00E-03	mg/kg	3.80E-12	mg/m^3	R	7.44E-13	mg/kg-day	2.0E-01	mg/kg-day	--	--	3.7E-12
	TOLUENE	6.37E-03	mg/kg	4.84E-12	mg/m^3	R	9.47E-13	mg/kg-day	1.1E-01	mg/kg-day	--	--	8.3E-12
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	5.95E-13	mg/kg-day	2.0E+00	mg/kg-day	--	--	3.0E-13
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	5.50E-12	mg/kg-day	5.7E-01	mg/kg-day	--	--	9.6E-12
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	3.57E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.2E-11
	ACENAPHTHENE	2.00E-02	mg/kg	1.52E-11	mg/m^3	R	2.97E-12	mg/kg-day	6.0E-01	mg/kg-day	--	--	5.0E-12
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	2.23E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	7.4E-12
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	1.89E-10	mg/m^3	R	3.69E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.2E-11
	BENZO(A)PYRENE	2.35E-01	mg/kg	1.79E-10	mg/m^3	R	3.50E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.2E-10
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	1.89E-10	mg/m^3	R	3.70E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	9.2E-11
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	1.80E-10	mg/m^3	R	3.52E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.2E-10

TABLE J-110

EPA TABLE M.7.17.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	1.97E-10	mg/m^3	R	3.85E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	9.6E-11
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	1.10E-10	mg/m^3	R	2.15E-11	mg/kg-day	2.0E-02	mg/kg-day			1.1E-09
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	1.09E-11	mg/kg-day	2.5E-02	mg/kg-day	--	--	4.3E-10
	CHRYSENE	2.43E-01	mg/kg	1.85E-10	mg/m^3	R	3.62E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.2E-11
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	8.92E-12	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.0E-12
	FLUORANTHENE	2.23E-01	mg/kg	1.69E-10	mg/m^3	R	3.31E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	8.3E-11
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	1.22E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.0E-11
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	2.08E-11	mg/kg-day	4.0E-01	mg/kg-day	--	--	5.2E-11
	NAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	3.57E-11	mg/kg-day	8.6E-04	mg/kg-day	--	--	4.2E-08
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	7.44E-11	mg/kg-day	3.0E-02	mg/kg-day			2.5E-09
	PHENANTHRENE	2.65E-01	mg/kg	2.01E-10	mg/m^3	R	3.94E-11	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.3E-11
	PYRENE	2.05E-01	mg/kg	1.56E-10	mg/m^3	R	3.05E-11	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.0E-10
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.30E-03	mg/kg	2.51E-12	mg/m^3	R	4.91E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	9.8E-10
	4,4'-DDE	2.82E-03	mg/kg	2.14E-12	mg/m^3	R	4.19E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	8.4E-10
	4,4'-DDT	1.10E-02	mg/kg	8.32E-12	mg/m^3	R	1.63E-12	mg/kg-day	5.0E-04	mg/kg-day	--	--	3.3E-09
	ALDRIN	1.03E-03	mg/kg	7.83E-13	mg/m^3	R	1.53E-13	mg/kg-day	3.0E-05	mg/kg-day	--	--	5.1E-09
	ALPHA-BHC	4.35E-03	mg/kg	3.31E-12	mg/m^3	R	6.47E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.2E-10
	ALPHA-CHLORDANE	2.74E-03	mg/kg	2.08E-12	mg/m^3	R	4.07E-13	mg/kg-day	2.0E-03	mg/kg-day	--	--	2.0E-10
	AROCLOR-1254	1.40E-02	mg/kg	1.06E-11	mg/m^3	R	2.08E-12	mg/kg-day	5.0E-05	mg/kg-day	--	--	4.2E-08
	AROCLOR-1260	4.89E-02	mg/kg	3.72E-11	mg/m^3	R	7.27E-12	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.5E-07
	BETA-BHC	1.61E-03	mg/kg	1.22E-12	mg/m^3	R	2.39E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	8.0E-11
	DELTA-BHC	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	1.80E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	6.0E-11
	DIELDRIN	2.17E-03	mg/kg	1.65E-12	mg/m^3	R	3.23E-13	mg/kg-day	5.0E-05	mg/kg-day			6.5E-09
	ENDOSULFAN I	1.21E-03	mg/kg	9.19E-13	mg/m^3	R	1.80E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	3.0E-11
	ENDOSULFAN II	1.97E-03	mg/kg	1.50E-12	mg/m^3	R	2.93E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	4.9E-11

TABLE J-110

EPA TABLE M.7.17.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	2.00E-12	mg/m^3	R	3.91E-13	mg/kg-day	6.0E-03	mg/kg-day	--	--	6.5E-11
	ENDRIN	2.05E-03	mg/kg	1.56E-12	mg/m^3	R	3.05E-13	mg/kg-day	3.0E-04	mg/kg-day			1.0E-09
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	2.65E-12	mg/m^3	R	5.19E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.7E-09
	ENDRIN KETONE	2.69E-03	mg/kg	2.04E-12	mg/m^3	R	4.00E-13	mg/kg-day	3.0E-04	mg/kg-day	--	--	1.3E-09
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	1.39E-12	mg/m^3	R	2.72E-13	mg/kg-day	3.0E-03	mg/kg-day	--	--	9.1E-11
	GAMMA-CHLORDANE	2.65E-03	mg/kg	2.01E-12	mg/m^3	R	3.94E-13	mg/kg-day	2.0E-03	mg/kg-day	--	--	2.0E-10
	HEPTACHLOR	2.30E-04	mg/kg	1.75E-13	mg/m^3	R	3.42E-14	mg/kg-day	5.0E-04	mg/kg-day	--	--	6.8E-11
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	2.51E-13	mg/m^3	R	4.91E-14	mg/kg-day	1.3E-05	mg/kg-day	--	--	3.8E-09
	METHOXYCHLOR	9.97E-03	mg/kg	7.58E-12	mg/m^3	R	1.48E-12	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.0E-10
Inhalation-VOCs	**METAL**												
	BARIUM	1.09E+02	mg/kg	--	mg/m^3	R	--	--	1.0E-03	mg/kg-day	--	--	--
	COBALT	1.29E+01	mg/kg	--	mg/m^3	R	--	--	1.4E-06	mg/kg-day	--	--	--
	COPPER	7.13E+01	mg/kg	--	mg/m^3	R	--	--	5.7E-06	mg/kg-day	--	--	--
	LEAD	1.47E+02	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	MOLYBDENUM	3.81E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	SELENIUM	5.90E-01	mg/kg	--	mg/m^3	R	--	--	2.3E-05	mg/kg-day	--	--	--
	SILVER	9.22E-01	mg/kg	--	mg/m^3	R	--	--	5.7E-03	mg/kg-day	--	--	--
	THALLIUM	4.51E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TIN	1.78E+01	mg/kg	--	mg/m^3	R	--	--	--	--			--
	TITANIUM	4.77E+03	mg/kg	--	mg/m^3	R	--	--	2.6E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	8.66E-03	mg/kg	1.98E-04	mg/m^3	R	3.87E-05	mg/kg-day	2.9E-01	mg/kg-day	--	--	1.4E-04
	ACETONE	2.34E-02	mg/kg	4.76E-04	mg/m^3	R	9.32E-05	mg/kg-day	1.0E+00	mg/kg-day	--	--	9.3E-05
	CARBON DISULFIDE	5.00E-03	mg/kg	5.75E-02	mg/m^3	R	1.13E-02	mg/kg-day	2.0E-01	mg/kg-day	--	--	5.6E-02
	TOLUENE	6.37E-03	mg/kg	2.80E-02	mg/m^3	R	5.48E-03	mg/kg-day	1.1E-01	mg/kg-day	--	--	4.8E-02
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	3.19E-04	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.6E-04

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EPA TABLE M.7.17.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	8.84E-03	mg/kg-day	5.7E-01	mg/kg-day	--	--	1.5E-02
	2-METHYLNAPHTHALENE	2.40E-01	mg/kg	1.78E-01	mg/m^3	R	3.48E-02	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.2E-02
	ACENAPHTHENE	2.00E-02	mg/kg	1.31E-02	mg/m^3	R	2.56E-03	mg/kg-day	6.0E-01	mg/kg-day	--	--	4.3E-03
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	5.37E-04	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.8E-04
	BENZO(A)ANTHRACENE	2.48E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	BENZO(A)PYRENE	2.35E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.49E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	BENZO(G,H,I)PERYLENE	2.37E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.59E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.44E-01	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day			--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.5E-02	mg/kg-day	--	--	--
	CHRYSENE	2.43E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	FLUORANTHENE	2.23E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	6.65E-04	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.7E-03
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	NAPHTHALENE	2.40E-01	mg/kg	*	mg/m^3	R	--	--	8.6E-04	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day		--	--
	PHENANTHRENE	2.65E-01	mg/kg	4.87E-03	mg/m^3	R	9.52E-04	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.2E-04
	PYRENE	2.05E-01	mg/kg	7.83E-04	mg/m^3	R	1.53E-04	mg/kg-day	3.0E-01	mg/kg-day	--	--	5.1E-04
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	3.30E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDE	2.82E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDT	1.10E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	ALDRIN	1.03E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-05	mg/kg-day	--	--	--

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EPA TABLE M.7.17.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	ALPHA-BHC	4.35E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	ALPHA-CHLORDANE	2.74E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-03	mg/kg-day	--	--	--
	AROCLOR-1254	1.40E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	AROCLOR-1260	4.89E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	BETA-BHC	1.61E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	DELTA-BHC	1.21E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	DIELDRIN	2.17E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day			--
	ENDOSULFAN I	1.21E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN II	1.97E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.63E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDRIN	2.05E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day			--
	ENDRIN ALDEHYDE	3.49E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ENDRIN KETONE	2.69E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.83E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	GAMMA-CHLORDANE	2.65E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-03	mg/kg-day	--	--	--
	HEPTACHLOR	2.30E-04	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	HEPTACHLOR EPOXIDE	3.30E-04	mg/kg	--	mg/m^3	R	--	--	1.3E-05	mg/kg-day	--	--	--
	METHOXYCHLOR	9.97E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-03	mg/kg-day	--	--	--

Total Hazard Index Across All Air Exposure Routes/Pathways - Soil	1.4E-01
Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	2.3E-02
Total Hazard Index Across All Exposure Routes/Pathways - Soil	1.7E-01

Notes:
(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.
(2) Chronic Values Used
bgs = Below ground surface
Ft. = Feet
mg/kg = Milligrams per kilogram
mg/m^3 = Milligrams per cubic meter
NV = No value available
VOC = Volatile Organic Compound
* = Inhalation of VOCs for naphthalane evaluated under groundwater exposures instead of soil due to single detection of naphthalene at 9.5 feet below ground suface, which is below shallow groundwater

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EPA TABLE M.7.18.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation VOCs	**VOLATILE ORGANIC COMPOUNDS**												
	1,2-DICHLOROETHANE	3.30E-04	mg/L	1.02E-05	mg/m^3	R	2.00E-06	mg/kg-day	1.4E-03	mg/kg-day	--	--	1.4E-03
	2-BUTANONE	1.98E-02	mg/L	2.23E-04	mg/m^3	R	4.35E-05	mg/kg-day	2.9E-01	mg/kg-day	--	--	1.5E-04
	4-METHYL-2-PENTANONE	8.00E-04	mg/L	1.41E-05	mg/m^3	R	2.76E-06	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.4E-05
	ACETONE	8.79E-02	mg/L	9.67E-04	mg/m^3	R	1.89E-04	mg/kg-day	1.0E+00	mg/kg-day			1.9E-04
	CHLOROMETHANE	7.00E-04	mg/L	1.36E-05	mg/m^3	R	2.66E-06	mg/kg-day	8.6E-02	mg/kg-day	--	--	3.1E-05
	ETHYLBENZENE	7.00E-04	mg/L	1.62E-05	mg/m^3	R	3.17E-06	mg/kg-day	2.9E-01	mg/kg-day	--	--	1.1E-05
	TOLUENE	1.00E-03	mg/L	2.55E-05	mg/m^3	R	4.99E-06	mg/kg-day	1.1E-01	mg/kg-day	--	--	4.4E-05
	XYLENE (TOTAL)	1.54E-03	mg/L	3.35E-05	mg/m^3	R	6.55E-06	mg/kg-day	2.0E+00	mg/kg-day	--	--	3.3E-06
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,3-DICHLOROBENZENE	9.00E-04	mg/L	2.10E-05	mg/m^3	R	4.10E-06	mg/kg-day	9.0E-04	mg/kg-day	--	--	4.6E-03
	2,4-DICHLOROPHENOL	2.00E-03	mg/L	--		R	--	--	3.0E-03	mg/kg-day	--	--	--
	4-METHYLPHENOL	6.00E-03	mg/L	--		R	--	--	5.0E-03	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-03	mg/L	--		R	--	--	6.0E-01	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.00E-03	mg/L	--		R	--	--	4.0E-01	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	7.85E-03	mg/L	--		R	--	--	2.0E-02	mg/kg-day	--	--	--
	CARBAZOLE	2.00E-03	mg/L	--		R	--	--	2.5E-02	mg/kg-day	--	--	--
	FLUORANTHENE	4.00E-03	mg/L	--		R	--	--	4.0E-01	mg/kg-day	--	--	--
	N-NITROSODIPHENYLAMINE (1)	1.32E-02	mg/L	--		R	--	--	--	--	--	--	--
	NAPHTHALENE	2.00E-03	mg/L	4.32E-05	mg/m^3	R	8.45E-06	mg/kg-day	8.6E-04	mg/kg-day	--	--	9.9E-03
	PHENANTHRENE	2.00E-03	mg/L	1.60E-05	mg/m^3	R	3.13E-06	mg/kg-day	3.0E+00	mg/kg-day			1.0E-06
	PHENOL	2.00E-03	mg/L	--		R	--	--	6.0E-01	mg/kg-day	--	--	--

TABLE J-111

EPA TABLE M.7.18.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	PYRENE	1.10E-02	mg/L	2.93E-05	mg/m^3	R	5.74E-06	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.9E-05
												Total Hazard Index Across All Air Exposure Routes/Pathways - Groundwater	1.63E-02
												Total Hazard Index Across All Exposure Routes/Pathways - Soil	1.68E-01
												Total Hazard Index Across All Exposure Routes/Pathways - Soil and Groundwater	**1.84E-01**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) Chronic Values Used

bgs = Below ground surface

Ft. = Feet

mg/L = Milligrams per liter

mg/m^3 = Milligrams per cubic meter

NV = No value available

TABLE J-112

EPA TABLE M.7.16.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	**METAL**												
	BARIUM	9.67E+01	mg/kg	9.67E+01	mg/kg	M	3.41E-05	mg/kg-day	7.0E-02	mg/kg-day	--	--	4.9E-04
	COBALT	1.15E+01	mg/kg	1.15E+01	mg/kg	M	4.03E-06	mg/kg-day	6.0E-02	mg/kg-day	--	--	6.7E-05
	COPPER	5.99E+01	mg/kg	5.99E+01	mg/kg	M	2.11E-05	mg/kg-day	3.7E-02	mg/kg-day	--	--	5.7E-04
	LEAD	9.96E+01	mg/kg	9.96E+01	mg/kg	M	3.51E-05	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.99E-01	mg/kg	M	1.05E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	2.1E-05
	SELENIUM	5.18E-01	mg/kg	5.18E-01	mg/kg	M	1.83E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	3.7E-05
	SILVER	5.63E-01	mg/kg	5.63E-01	mg/kg	M	1.98E-07	mg/kg-day	5.0E-03	mg/kg-day	--	--	4.0E-05
	THALLIUM	4.14E-01	mg/kg	4.14E-01	mg/kg	M	1.46E-07	mg/kg-day	7.0E-04	mg/kg-day	--	--	2.1E-04
	TIN	1.40E+01	mg/kg	1.40E+01	mg/kg	M	4.94E-06	mg/kg-day	6.0E-01	mg/kg-day	--	--	8.2E-06
	TITANIUM	4.25E+03	mg/kg	4.25E+03	mg/kg	M	1.50E-03	mg/kg-day	3.0E-01	mg/kg-day	--	--	5.0E-03
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	7.48E-03	mg/kg	7.48E-03	mg/kg	M	2.63E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.3E-09
	ACETONE	1.71E-02	mg/kg	1.71E-02	mg/kg	M	6.01E-09	mg/kg-day	1.0E+00	mg/kg-day	--	--	6.0E-09
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	1.76E-09	mg/kg-day	1.0E-01	mg/kg-day	--	--	1.8E-08
	TOLUENE	6.11E-03	mg/kg	6.11E-03	mg/kg	M	2.15E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.1E-09
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	1.41E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	7.0E-10
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	1.30E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	1.3E-06
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	8.29E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.8E-08
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	7.05E-09	mg/kg-day	6.0E-01	mg/kg-day	--	--	1.2E-08
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	5.28E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.8E-08
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	2.17E-01	mg/kg	M	7.64E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.5E-08
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	7.12E-08	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.4E-07
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	2.16E-01	mg/kg	M	7.60E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.9E-07
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	2.08E-01	mg/kg	M	7.33E-08	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.4E-07
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	2.32E-01	mg/kg	M	8.19E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.0E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	1.19E-01	mg/kg	M	4.18E-08	mg/kg-day	2.0E-02	mg/kg-day	--	--	2.1E-06
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	2.57E-08	mg/kg-day	2.5E-02	mg/kg-day	--	--	1.0E-06
	CHRYSENE	2.04E-01	mg/kg	2.04E-01	mg/kg	M	7.20E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.4E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	2.11E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	7.0E-09
	FLUORANTHENE	1.83E-01	mg/kg	1.83E-01	mg/kg	M	6.44E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.6E-07
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	2.89E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	7.2E-08
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	4.93E-08	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.2E-07
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	8.45E-08	mg/kg-day	2.0E-01	mg/kg-day	--	--	4.2E-07

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EPA TABLE M.7.16.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	1.76E-07	mg/kg-day	3.0E-02	mg/kg-day	--	--	5.9E-06
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	8.05E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.7E-08
	PYRENE	1.71E-01	mg/kg	1.71E-01	mg/kg	M	6.02E-08	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.0E-07
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.86E-03	mg/kg	2.86E-03	mg/kg	M	1.01E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.0E-06
	4,4'-DDE	2.54E-03	mg/kg	2.54E-03	mg/kg	M	8.95E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.8E-06
	4,4'-DDT	8.46E-03	mg/kg	8.46E-03	mg/kg	M	2.98E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	6.0E-06
	ALDRIN	1.01E-03	mg/kg	1.01E-03	mg/kg	M	3.56E-10	mg/kg-day	3.0E-05	mg/kg-day	--	--	1.2E-05
	ALPHA-BHC	3.33E-03	mg/kg	3.33E-03	mg/kg	M	1.17E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	3.9E-07
	ALPHA-CHLORDANE	2.26E-03	mg/kg	2.26E-03	mg/kg	M	7.96E-10	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.6E-06
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	3.88E-09	mg/kg-day	5.0E-05	mg/kg-day	--	--	7.8E-05
	AROCLOR-1260	3.79E-02	mg/kg	3.79E-02	mg/kg	M	1.33E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	2.7E-04
	BETA-BHC	1.44E-03	mg/kg	1.44E-03	mg/kg	M	5.07E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.7E-07
	DELTA-BHC	1.13E-03	mg/kg	1.13E-03	mg/kg	M	3.98E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.3E-07
	DIELDRIN	2.07E-03	mg/kg	2.07E-03	mg/kg	M	7.29E-10	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.5E-05
	ENDOSULFAN I	1.14E-03	mg/kg	1.14E-03	mg/kg	M	4.02E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	6.7E-08
	ENDOSULFAN II	1.92E-03	mg/kg	1.92E-03	mg/kg	M	6.76E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.1E-07
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	8.45E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.4E-07
	ENDRIN	1.98E-03	mg/kg	1.98E-03	mg/kg	M	6.97E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.3E-06
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	3.09E-03	mg/kg	M	1.09E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.6E-06
	ENDRIN KETONE	2.47E-03	mg/kg	2.47E-03	mg/kg	M	8.70E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.9E-06
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.61E-03	mg/kg	M	5.67E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.9E-07
	GAMMA-CHLORDANE	2.18E-03	mg/kg	2.18E-03	mg/kg	M	7.68E-10	mg/kg-day	6.0E-05	mg/kg-day	--	--	1.3E-05
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	7.05E-11	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.4E-07
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.80E-04	mg/kg	M	9.86E-11	mg/kg-day	1.3E-05	mg/kg-day	--	--	7.6E-06
	METHOXYCHLOR	9.68E-03	mg/kg	9.68E-03	mg/kg	M	3.41E-09	mg/kg-day	5.0E-03	mg/kg-day	--	--	6.8E-07
Dermal	**METAL**												
	BARIUM	9.67E+01	mg/kg	9.67E+01	mg/kg	M	9.00E-06	mg/kg-day	7.0E-02	mg/kg-day	--	--	1.3E-04
	COBALT	1.15E+01	mg/kg	1.15E+01	mg/kg	M	1.07E-06	mg/kg-day	6.0E-02	mg/kg-day	--	--	1.8E-05
	COPPER	5.99E+01	mg/kg	5.99E+01	mg/kg	M	5.57E-06	mg/kg-day	3.7E-02	mg/kg-day	--	--	1.5E-04
	LEAD	9.96E+01	mg/kg	9.96E+01	mg/kg	M	9.26E-06	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.99E-01	mg/kg	M	2.78E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	5.6E-06
	SELENIUM	5.18E-01	mg/kg	5.18E-01	mg/kg	M	4.82E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	9.6E-06

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EPA TABLE M.7.16.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	SILVER	5.63E-01	mg/kg	5.63E-01	mg/kg	M	5.24E-08	mg/kg-day	5.0E-03	mg/kg-day	--	--	1.0E-05
	THALLIUM	4.14E-01	mg/kg	4.14E-01	mg/kg	M	3.85E-08	mg/kg-day	7.0E-04	mg/kg-day	--	--	5.5E-05
	TIN	1.40E+01	mg/kg	1.40E+01	mg/kg	M	1.30E-06	mg/kg-day	6.0E-01	mg/kg-day	--	--	2.2E-06
	TITANIUM	4.25E+03	mg/kg	4.25E+03	mg/kg	M	3.96E-04	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.3E-03
	VOLATILE ORGANIC COMPOUNDS	0.00E+00											
	2-BUTANONE	7.48E-03	mg/kg	7.48E-03	mg/kg	M	6.96E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	3.5E-09
	ACETONE	1.71E-02	mg/kg	1.71E-02	mg/kg	M	1.59E-08	mg/kg-day	1.0E+00	mg/kg-day	--	--	1.6E-08
	CARBON DISULFIDE	5.00E-03	mg/kg	5.00E-03	mg/kg	M	4.65E-09	mg/kg-day	1.0E-01	mg/kg-day	--	--	4.6E-08
	TOLUENE	6.11E-03	mg/kg	6.11E-03	mg/kg	M	5.68E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	2.8E-09
	XYLENE (TOTAL)	4.00E-03	mg/kg	4.00E-03	mg/kg	M	3.72E-09	mg/kg-day	2.0E+00	mg/kg-day	--	--	1.9E-09
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	3.70E-02	mg/kg	M	3.44E-08	mg/kg-day	1.0E-02	mg/kg-day	--	--	3.4E-06
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	2.35E-01	mg/kg	M	3.28E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.1E-07
	ACENAPHTHENE	2.00E-02	mg/kg	2.00E-02	mg/kg	M	2.79E-08	mg/kg-day	6.0E-01	mg/kg-day	--	--	4.6E-08
	ANTHRACENE	1.50E-01	mg/kg	1.50E-01	mg/kg	M	2.09E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	7.0E-08
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	2.17E-01	mg/kg	M	3.03E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.0E-07
	BENZO(A)PYRENE	2.02E-01	mg/kg	2.02E-01	mg/kg	M	2.82E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	9.4E-07
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	2.16E-01	mg/kg	M	3.01E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	7.5E-07
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	2.08E-01	mg/kg	M	2.90E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	9.7E-07
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	2.32E-01	mg/kg	M	3.24E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	8.1E-07
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	1.19E-01	mg/kg	M	1.10E-07	mg/kg-day	2.0E-02	mg/kg-day	--	--	5.5E-06
	CARBAZOLE	7.30E-02	mg/kg	7.30E-02	mg/kg	M	6.79E-08	mg/kg-day	2.5E-02	mg/kg-day	--	--	2.7E-06
	CHRYSENE	2.04E-01	mg/kg	2.04E-01	mg/kg	M	2.85E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	9.5E-08
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	6.00E-02	mg/kg	M	8.37E-08	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.8E-08
	FLUORANTHENE	1.83E-01	mg/kg	1.83E-01	mg/kg	M	2.55E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	6.4E-07
	FLUORENE	8.20E-02	mg/kg	8.20E-02	mg/kg	M	1.14E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	2.9E-07
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.40E-01	mg/kg	M	1.95E-07	mg/kg-day	4.0E-01	mg/kg-day	--	--	4.9E-07
	NAPHTHALENE	2.40E-01	mg/kg	2.40E-01	mg/kg	M	3.35E-07	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.7E-06
	PENTACHLOROPHENOL	5.00E-01	mg/kg	5.00E-01	mg/kg	M	1.16E-06	mg/kg-day	3.0E-02	mg/kg-day	--	--	3.9E-05
	PHENANTHRENE	2.28E-01	mg/kg	2.28E-01	mg/kg	M	3.19E-07	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.1E-07
	PYRENE	1.71E-01	mg/kg	1.71E-01	mg/kg	M	2.38E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	7.9E-07
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.86E-03	mg/kg	2.86E-03	mg/kg	M	1.33E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.7E-06

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EPA TABLE M.7.16.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Soil
Exposure Point:	Direct Soil Contact
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	4,4'-DDE	2.54E-03	mg/kg	2.54E-03	mg/kg	M	1.18E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.4E-06
	4,4'-DDT	8.46E-03	mg/kg	8.46E-03	mg/kg	M	3.93E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	7.9E-06
	ALDRIN	1.01E-03	mg/kg	1.01E-03	mg/kg	M	4.70E-10	mg/kg-day	3.0E-05	mg/kg-day	--	--	1.6E-05
	ALPHA-BHC	3.33E-03	mg/kg	3.33E-03	mg/kg	M	1.55E-09	mg/kg-day	3.0E-03	mg/kg-day	--	--	5.2E-07
	ALPHA-CHLORDANE	2.26E-03	mg/kg	2.26E-03	mg/kg	M	1.05E-09	mg/kg-day	5.0E-04	mg/kg-day	--	--	2.1E-06
	AROCLOR-1254	1.10E-02	mg/kg	1.10E-02	mg/kg	M	1.54E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	3.1E-04
	AROCLOR-1260	3.79E-02	mg/kg	3.79E-02	mg/kg	M	5.28E-08	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.1E-03
	BETA-BHC	1.44E-03	mg/kg	1.44E-03	mg/kg	M	6.70E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.2E-07
	DELTA-BHC	1.13E-03	mg/kg	1.13E-03	mg/kg	M	5.25E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.8E-07
	DIELDRIN	2.07E-03	mg/kg	2.07E-03	mg/kg	M	9.62E-10	mg/kg-day	5.0E-05	mg/kg-day	--	--	1.9E-05
	ENDOSULFAN I	1.14E-03	mg/kg	1.14E-03	mg/kg	M	5.30E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	8.8E-08
	ENDOSULFAN II	1.92E-03	mg/kg	1.92E-03	mg/kg	M	8.93E-10	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.5E-07
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	2.40E-03	mg/kg	M	1.12E-09	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.9E-07
	ENDRIN	1.98E-03	mg/kg	1.98E-03	mg/kg	M	9.21E-10	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.1E-06
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	3.09E-03	mg/kg	M	1.44E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	4.8E-06
	ENDRIN KETONE	2.47E-03	mg/kg	2.47E-03	mg/kg	M	1.15E-09	mg/kg-day	3.0E-04	mg/kg-day	--	--	3.8E-06
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.61E-03	mg/kg	M	7.49E-10	mg/kg-day	3.0E-03	mg/kg-day	--	--	2.5E-07
	GAMMA-CHLORDANE	2.18E-03	mg/kg	2.18E-03	mg/kg	M	1.01E-09	mg/kg-day	6.0E-05	mg/kg-day	--	--	1.7E-05
	HEPTACHLOR	2.00E-04	mg/kg	2.00E-04	mg/kg	M	9.30E-11	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.9E-07
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.80E-04	mg/kg	M	1.30E-10	mg/kg-day	1.3E-05	mg/kg-day	--	--	1.0E-05
	METHOXYCHLOR	9.68E-03	mg/kg	9.68E-03	mg/kg	M	4.50E-09	mg/kg-day	5.0E-03	mg/kg-day	--	--	9.0E-07
												Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	1.0E-02

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) All values are subchronic

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

NV = No value available

TABLE J-113

EPA TABLE M.7.17.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation-Dust	**METAL**												
	BARIUM	9.67E+01	mg/kg	7.35E-08	mg/m^3	R	2.69E-09	mg/kg-day	1.0E-03	mg/kg-day	--	--	2.7E-06
	COBALT	1.15E+01	mg/kg	8.70E-09	mg/m^3	R	3.19E-10	mg/kg-day	1.4E-06	mg/kg-day	--	--	2.2E-04
	COPPER	5.99E+01	mg/kg	4.55E-08	mg/m^3	R	1.67E-09	mg/kg-day	5.7E-06	mg/kg-day	--	--	2.9E-04
	LEAD	9.96E+01	mg/kg	7.57E-08	mg/m^3	R	2.77E-09	mg/kg-day	--	--	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	2.28E-10	mg/m^3	R	8.34E-12	mg/kg-day	--	--	--	--	--
	SELENIUM	5.18E-01	mg/kg	3.94E-10	mg/m^3	R	1.44E-11	mg/kg-day	2.3E-05	mg/kg-day	--	--	6.3E-07
	SILVER	5.63E-01	mg/kg	4.28E-10	mg/m^3	R	1.57E-11	mg/kg-day	5.7E-03	mg/kg-day	--	--	2.7E-09
	THALLIUM	4.14E-01	mg/kg	3.15E-10	mg/m^3	R	1.15E-11	mg/kg-day	--	--	--	--	--
	TIN	1.40E+01	mg/kg	1.07E-08	mg/m^3	R	3.90E-10	mg/kg-day	--	--			--
	TITANIUM	4.25E+03	mg/kg	3.23E-06	mg/m^3	R	1.18E-07	mg/kg-day	2.6E-04	mg/kg-day	--	--	4.6E-04
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	7.48E-03	mg/kg	5.68E-12	mg/m^3	R	2.08E-13	mg/kg-day	2.9E-01	mg/kg-day	--	--	7.3E-13
	ACETONE	1.71E-02	mg/kg	1.30E-11	mg/m^3	R	4.75E-13	mg/kg-day	1.0E+00	mg/kg-day	--	--	4.8E-13
	CARBON DISULFIDE	5.00E-03	mg/kg	3.80E-12	mg/m^3	R	1.39E-13	mg/kg-day	2.0E-01	mg/kg-day	--	--	7.0E-13
	TOLUENE	6.11E-03	mg/kg	4.64E-12	mg/m^3	R	1.70E-13	mg/kg-day	1.1E-01	mg/kg-day	--	--	1.5E-12
	XYLENE (TOTAL)	4.00E-03	mg/kg	3.04E-12	mg/m^3	R	1.11E-13	mg/kg-day	2.0E+00	mg/kg-day	--	--	5.6E-14
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	2.81E-11	mg/m^3	R	1.03E-12	mg/kg-day	5.7E-01	mg/kg-day	--	--	1.8E-12
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	1.79E-10	mg/m^3	R	6.55E-12	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.2E-12
	ACENAPHTHENE	2.00E-02	mg/kg	1.52E-11	mg/m^3	R	5.57E-13	mg/kg-day	6.0E-01	mg/kg-day	--	--	9.3E-13
	ANTHRACENE	1.50E-01	mg/kg	1.14E-10	mg/m^3	R	4.18E-12	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.4E-12
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	1.65E-10	mg/m^3	R	6.04E-12	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.0E-12
	BENZO(A)PYRENE	2.02E-01	mg/kg	1.53E-10	mg/m^3	R	5.62E-12	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.9E-11
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	1.64E-10	mg/m^3	R	6.01E-12	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.5E-11
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	1.58E-10	mg/m^3	R	5.79E-12	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.9E-11
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	1.77E-10	mg/m^3	R	6.47E-12	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.6E-11
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	9.02E-11	mg/m^3	R	3.30E-12	mg/kg-day	2.0E-02	mg/kg-day			1.7E-10

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EPA TABLE M.7.17.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	CARBAZOLE	7.30E-02	mg/kg	5.55E-11	mg/m^3	R	2.03E-12	mg/kg-day	2.5E-02	mg/kg-day	--	--	8.1E-11
	CHRYSENE	2.04E-01	mg/kg	1.55E-10	mg/m^3	R	5.69E-12	mg/kg-day	3.0E+00	mg/kg-day	--	--	1.9E-12
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	4.56E-11	mg/m^3	R	1.67E-12	mg/kg-day	3.0E+00	mg/kg-day	--	--	5.6E-13
	FLUORANTHENE	1.83E-01	mg/kg	1.39E-10	mg/m^3	R	5.09E-12	mg/kg-day	4.0E-01	mg/kg-day	--	--	1.3E-11
	FLUORENE	8.20E-02	mg/kg	6.23E-11	mg/m^3	R	2.28E-12	mg/kg-day	4.0E-01	mg/kg-day	--	--	5.7E-12
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	1.06E-10	mg/m^3	R	3.90E-12	mg/kg-day	4.0E-01	mg/kg-day	--	--	9.7E-12
	NAPHTHALENE	2.40E-01	mg/kg	1.82E-10	mg/m^3	R	6.68E-12	mg/kg-day	8.6E-04	mg/kg-day	--	--	7.8E-09
	PENTACHLOROPHENOL	5.00E-01	mg/kg	3.80E-10	mg/m^3	R	1.39E-11	mg/kg-day	3.0E-02	mg/kg-day			4.6E-10
	PHENANTHRENE	2.28E-01	mg/kg	1.74E-10	mg/m^3	R	6.36E-12	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.1E-12
	PYRENE	1.71E-01	mg/kg	1.30E-10	mg/m^3	R	4.76E-12	mg/kg-day	3.0E-01	mg/kg-day	--	--	1.6E-11
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.86E-03	mg/kg	2.17E-12	mg/m^3	R	7.96E-14	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.6E-10
	4,4'-DDE	2.54E-03	mg/kg	1.93E-12	mg/m^3	R	7.07E-14	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.4E-10
	4,4'-DDT	8.46E-03	mg/kg	6.43E-12	mg/m^3	R	2.36E-13	mg/kg-day	5.0E-04	mg/kg-day	--	--	4.7E-10
	ALDRIN	1.01E-03	mg/kg	7.67E-13	mg/m^3	R	2.81E-14	mg/kg-day	3.0E-05	mg/kg-day	--	--	9.4E-10
	ALPHA-BHC	3.33E-03	mg/kg	2.53E-12	mg/m^3	R	9.27E-14	mg/kg-day	3.0E-03	mg/kg-day	--	--	3.1E-11
	ALPHA-CHLORDANE	2.26E-03	mg/kg	1.72E-12	mg/m^3	R	6.29E-14	mg/kg-day	2.0E-03	mg/kg-day	--	--	3.1E-11
	AROCLOR-1254	1.10E-02	mg/kg	8.37E-12	mg/m^3	R	3.07E-13	mg/kg-day	5.0E-05	mg/kg-day	--	--	6.1E-09
	AROCLOR-1260	3.79E-02	mg/kg	2.88E-11	mg/m^3	R	1.05E-12	mg/kg-day	5.0E-05	mg/kg-day	--	--	2.1E-08
	BETA-BHC	1.44E-03	mg/kg	1.09E-12	mg/m^3	R	4.01E-14	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.3E-11
	DELTA-BHC	1.13E-03	mg/kg	8.59E-13	mg/m^3	R	3.15E-14	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.0E-11
	DIELDRIN	2.07E-03	mg/kg	1.57E-12	mg/m^3	R	5.76E-14	mg/kg-day	5.0E-05	mg/kg-day			1.2E-09
	ENDOSULFAN I	1.14E-03	mg/kg	8.66E-13	mg/m^3	R	3.17E-14	mg/kg-day	6.0E-03	mg/kg-day	--	--	5.3E-12
	ENDOSULFAN II	1.92E-03	mg/kg	1.46E-12	mg/m^3	R	5.34E-14	mg/kg-day	6.0E-03	mg/kg-day	--	--	8.9E-12
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	1.82E-12	mg/m^3	R	6.68E-14	mg/kg-day	6.0E-03	mg/kg-day	--	--	1.1E-11
	ENDRIN	1.98E-03	mg/kg	1.50E-12	mg/m^3	R	5.51E-14	mg/kg-day	3.0E-04	mg/kg-day			1.8E-10
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	2.35E-12	mg/m^3	R	8.60E-14	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.9E-10
	ENDRIN KETONE	2.47E-03	mg/kg	1.88E-12	mg/m^3	R	6.88E-14	mg/kg-day	3.0E-04	mg/kg-day	--	--	2.3E-10

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EPA TABLE M.7.17.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	1.22E-12	mg/m^3	R	4.48E-14	mg/kg-day	3.0E-03	mg/kg-day	--	--	1.5E-11
	GAMMA-CHLORDANE	2.18E-03	mg/kg	1.66E-12	mg/m^3	R	6.07E-14	mg/kg-day	2.0E-03	mg/kg-day	--	--	3.0E-11
	HEPTACHLOR	2.00E-04	mg/kg	1.52E-13	mg/m^3	R	5.57E-15	mg/kg-day	5.0E-04	mg/kg-day	--	--	1.1E-11
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	2.13E-13	mg/m^3	R	7.79E-15	mg/kg-day	1.3E-05	mg/kg-day	--	--	6.0E-10
	METHOXYCHLOR	9.68E-03	mg/kg	7.36E-12	mg/m^3	R	2.69E-13	mg/kg-day	5.0E-03	mg/kg-day	--	--	5.4E-11
Inhalation-VOCs	**METAL**												
	BARIUM	9.67E+01	mg/kg	--	mg/m^3	R	--	--	1.0E-03	mg/kg-day	--	--	--
	COBALT	1.15E+01	mg/kg	--	mg/m^3	R	--	--	1.4E-06	mg/kg-day	--	--	--
	COPPER	5.99E+01	mg/kg	--	mg/m^3	R	--	--	5.7E-06	mg/kg-day	--	--	--
	LEAD	9.96E+01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	MOLYBDENUM	2.99E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	SELENIUM	5.18E-01	mg/kg	--	mg/m^3	R	--	--	2.3E-05	mg/kg-day	--	--	--
	SILVER	5.63E-01	mg/kg	--	mg/m^3	R	--	--	5.7E-03	mg/kg-day	--	--	--
	THALLIUM	4.14E-01	mg/kg	--	mg/m^3	R	--	--	--	--	--	--	--
	TIN	1.40E+01	mg/kg	--	mg/m^3	R	--	--	--	--			--
	TITANIUM	4.25E+03	mg/kg	--	mg/m^3	R	--	--	2.6E-04	mg/kg-day	--	--	--
	VOLATILE ORGANIC COMPOUNDS												
	2-BUTANONE	7.48E-03	mg/kg	1.71E-04	mg/m^3	R	6.26E-06	mg/kg-day	2.9E-01	mg/kg-day	--	--	2.2E-05
	ACETONE	1.71E-02	mg/kg	3.48E-04	mg/m^3	R	1.27E-05	mg/kg-day	1.0E+00	mg/kg-day	--	--	1.3E-05
	CARBON DISULFIDE	5.00E-03	mg/kg	5.75E-02	mg/m^3	R	2.11E-03	mg/kg-day	2.0E-01	mg/kg-day	--	--	1.1E-02
	TOLUENE	6.11E-03	mg/kg	2.69E-02	mg/m^3	R	9.84E-04	mg/kg-day	1.1E-01	mg/kg-day	--	--	8.6E-03
	XYLENE (TOTAL)	4.00E-03	mg/kg	1.63E-03	mg/m^3	R	5.97E-05	mg/kg-day	2.0E+00	mg/kg-day	--	--	3.0E-05
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,2,4-TRICHLOROBENZENE	3.70E-02	mg/kg	4.52E-02	mg/m^3	R	1.65E-03	mg/kg-day	5.7E-01	mg/kg-day	--	--	2.9E-03
	2-METHYLNAPHTHALENE	2.35E-01	mg/kg	1.74E-01	mg/m^3	R	6.39E-03	mg/kg-day	3.0E+00	mg/kg-day	--	--	2.1E-03
	ACENAPHTHENE	2.00E-02	mg/kg	1.31E-02	mg/m^3	R	4.79E-04	mg/kg-day	6.0E-01	mg/kg-day	--	--	8.0E-04
	ANTHRACENE	1.50E-01	mg/kg	2.74E-03	mg/m^3	R	1.00E-04	mg/kg-day	3.0E+00	mg/kg-day	--	--	3.3E-05
	BENZO(A)ANTHRACENE	2.17E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--

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EPA TABLE M.7.17.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	BENZO(A)PYRENE	2.02E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.16E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	BENZO(G,H,I)PERYLENE	2.08E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-01	mg/kg-day	--	--	--
	BENZO(K)FLUORANTHENE	2.32E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	1.19E-01	mg/kg	--	mg/m^3	R	--	--	2.0E-02	mg/kg-day			--
	CARBAZOLE	7.30E-02	mg/kg	--	mg/m^3	R	--	--	2.5E-02	mg/kg-day	--	--	--
	CHRYSENE	2.04E-01	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	DIBENZ(A,H)ANTHRACENE	6.00E-02	mg/kg	--	mg/m^3	R	--	--	3.0E+00	mg/kg-day	--	--	--
	FLUORANTHENE	1.83E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	FLUORENE	8.20E-02	mg/kg	3.40E-03	mg/m^3	R	1.24E-04	mg/kg-day	4.0E-01	mg/kg-day	--	--	3.1E-04
	INDENO(1,2,3-CD)PYRENE	1.40E-01	mg/kg	--	mg/m^3	R	--	--	4.0E-01	mg/kg-day	--	--	--
	NAPHTHALENE	2.40E-01	mg/kg	*	mg/m^3	R	--	--	8.6E-04	mg/kg-day	--	--	--
	PENTACHLOROPHENOL	5.00E-01	mg/kg	--	mg/m^3	R	--	--	3.0E-02	mg/kg-day			--
	PHENANTHRENE	2.28E-01	mg/kg	4.20E-03	mg/m^3	R	1.54E-04	mg/kg-day	3.0E+00	mg/kg-day	--		5.1E-05
	PYRENE	1.71E-01	mg/kg	6.52E-04	mg/m^3	R	2.39E-05	mg/kg-day	3.0E-01	mg/kg-day	--	--	8.0E-05
	PESTICIDE/POLYCHLORINATED BIPHENYLS												
	4,4'-DDD	2.86E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDE	2.54E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	4,4'-DDT	8.46E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	ALDRIN	1.01E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-05	mg/kg-day	--	--	--
	ALPHA-BHC	3.33E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	ALPHA-CHLORDANE	2.26E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-03	mg/kg-day	--	--	--
	AROCLOR-1254	1.10E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	AROCLOR-1260	3.79E-02	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day	--	--	--
	BETA-BHC	1.44E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	DELTA-BHC	1.13E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	DIELDRIN	2.07E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-05	mg/kg-day			--
	ENDOSULFAN I	1.14E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--

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EPA TABLE M.7.17.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Soil 0-10 ft. bgs
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	ENDOSULFAN II	1.92E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDOSULFAN SULFATE	2.40E-03	mg/kg	--	mg/m^3	R	--	--	6.0E-03	mg/kg-day	--	--	--
	ENDRIN	1.98E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day			--
	ENDRIN ALDEHYDE	3.09E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	ENDRIN KETONE	2.47E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-04	mg/kg-day	--	--	--
	GAMMA-BHC (LINDANE)	1.61E-03	mg/kg	--	mg/m^3	R	--	--	3.0E-03	mg/kg-day	--	--	--
	GAMMA-CHLORDANE	2.18E-03	mg/kg	--	mg/m^3	R	--	--	2.0E-03	mg/kg-day	--	--	--
	HEPTACHLOR	2.00E-04	mg/kg	--	mg/m^3	R	--	--	5.0E-04	mg/kg-day	--	--	--
	HEPTACHLOR EPOXIDE	2.80E-04	mg/kg	--	mg/m^3	R	--	--	1.3E-05	mg/kg-day	--	--	--
	METHOXYCHLOR	9.68E-03	mg/kg	--	mg/m^3	R	--	--	5.0E-03	mg/kg-day	--	--	--

Total Hazard Index Across All Air Exposure Routes/Pathways - Soil	2.6E-02
Total Hazard Index Across All Direct Contact Exposure Routes/Pathways - Soil	2.3E-02
Total Hazard Index Across All Exposure Routes/Pathways - Soil	5.0E-02

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) All values are subchronic

bgs = Below ground surface

Ft. = Feet

mg/kg = Milligrams per kilogram

mg/m^3 = Milligrams per cubic meter

NV = No value available

VOC = Volatile Organic Compound

* = Inhalation of VOCs for naphthalane evaluated under groundwater exposures instead of soil due to single detection of naphthalene at 9.5 feet below ground suface, which is below shallow groundwater

TABLE J-114

EPA TABLE 7.18.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation VOCs	**VOLATILE ORGANIC COMPOUNDS**												
	1,2-DICHLOROETHANE	2.80E-04	mg/L	8.69E-06	mg/m^3	R	3.18E-07	mg/kg-day	1.4E-03	mg/kg-day	--	--	2.3E-04
	2-BUTANONE	9.42E-03	mg/L	1.06E-04	mg/m^3	R	3.88E-06	mg/kg-day	2.9E-01	mg/kg-day	--	--	1.4E-05
	4-METHYL-2-PENTANONE	8.00E-04	mg/L	1.41E-05	mg/m^3	R	5.17E-07	mg/kg-day	2.0E-01	mg/kg-day	--	--	2.6E-06
	ACETONE	6.84E-02	mg/L	7.53E-04	mg/m^3	R	2.76E-05	mg/kg-day	1.0E+00	mg/kg-day			2.8E-05
	CHLOROMETHANE	7.00E-04	mg/L	1.36E-05	mg/m^3	R	4.98E-07	mg/kg-day	8.6E-02	mg/kg-day	--	--	5.8E-06
	ETHYLBENZENE	7.00E-04	mg/L	1.62E-05	mg/m^3	R	5.94E-07	mg/kg-day	2.9E-01	mg/kg-day	--	--	2.1E-06
	TOLUENE	8.30E-04	mg/L	2.12E-05	mg/m^3	R	7.76E-07	mg/kg-day	1.1E-01	mg/kg-day	--	--	6.8E-06
	XYLENE (TOTAL)	1.26E-03	mg/L	2.74E-05	mg/m^3	R	1.00E-06	mg/kg-day	2.0E+00	mg/kg-day	--	--	5.0E-07
	SEMIVOLATILE ORGANIC COMPOUNDS												
	1,3-DICHLOROBENZENE	9.00E-04	mg/L	2.10E-05	mg/m^3	R	7.68E-07	mg/kg-day	9.0E-04	mg/kg-day	--	--	8.5E-04
	2,4-DICHLOROPHENOL	2.00E-03	mg/L	--		R	--	--	3.0E-03	mg/kg-day	--	--	--
	4-METHYLPHENOL	6.00E-03	mg/L	--		R	--	--	5.0E-03	mg/kg-day	--	--	--
	ACENAPHTHENE	2.00E-03	mg/L	--		R	--	--	6.0E-01	mg/kg-day	--	--	--
	BENZO(B)FLUORANTHENE	2.00E-03	mg/L	--		R	--	--	4.0E-01	mg/kg-day	--	--	--
	BIS(2-ETHYLHEXYL)PHTHALATE	4.92E-03	mg/L	--		R	--	--	2.0E-02	mg/kg-day	--	--	--
	CARBAZOLE	2.00E-03	mg/L	--		R	--	--	2.5E-02	mg/kg-day	--	--	--
	FLUORANTHENE	4.00E-03	mg/L	--		R	--	--	4.0E-01	mg/kg-day	--	--	--
	N-NITROSODIPHENYLAMINE (1)	8.83E-03	mg/L	--		R	--	--	--	--	--	--	--
	NAPHTHALENE	2.00E-03	mg/L	4.32E-05	mg/m^3	R	1.58E-06	mg/kg-day	8.6E-04	mg/kg-day	--	--	1.8E-03
	PHENANTHRENE	2.00E-03	mg/L	1.60E-05	mg/m^3	R	5.86E-07	mg/kg-day	3.0E+00	mg/kg-day			2.0E-07
	PHENOL	2.00E-03	mg/L	--		R	--	--	6.0E-01	mg/kg-day	--	--	--

TABLE J-114

EPA TABLE 7.18.CTE
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Air
Exposure Point:	Indoor Air
Receptor Population:	Construction Worker
Receptor Age:	Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
	PYRENE	8.39E-03	mg/L	2.24E-05	mg/m^3	R	8.20E-07	mg/kg-day	3.0E-01	mg/kg-day	--	--	2.7E-06
												Total Hazard Index Across All Air Exposure Routes/Pathways - Groundwater	3.0E-03
												Total Hazard Index Across All Exposure Routes/Pathways - Soil	5.0E-02
												Total Hazard Index Across All Exposure Routes/Pathways - Soil and Groundwater	**5.3E-02**

Notes:

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

(2) All values are subchronic

bgs = Below ground surface

Ft. = Feet

mg/L = Milligrams per liter

mg/m^3 = Milligrams per cubic meter

NV = No value available

TABLE J-115

TABLE M.9.7.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact	**METAL**					**METAL**					
			BARIUM	--		--	--	BARIUM	No adverse effect	2.E-03	--	7.E-04	2.E-03
			COBALT	--		--	--	COBALT	--	2.E-04	--	1.E-04	3.E-04
			COPPER	--		--	--	COPPER	GI System	2.E-03	--	9.E-04	3.E-03
			LEAD	--		--	--	LEAD	--	--	--	--	--
			MOLYBDENUM	--		--	--	MOLYBDENUM	Kidney	7.E-05	--	3.E-05	1.E-04
			SELENIUM	--		--	--	SELENIUM	CNS/PNS, Liver, Skin, Blood	1.E-04	--	5.E-05	2.E-04
			SILVER	--		--	--	SILVER	Skin	2.E-04	--	8.E-05	3.E-04
			THALLIUM	--		--	--	THALLIUM	No adverse effect	6.E-04	--	3.E-04	9.E-04
			TIN			--		TIN	Liver, Kidney			1.E-05	
			TITANIUM	--		--	--	TITANIUM	Blood	2.E-02	--	7.E-03	2.E-02
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			2-BUTANONE	--		--	--	2-BUTANONE	Reproductive System	4.E-09	--	2.E-08	2.E-08
			ACETONE	--		--	--	ACETONE	Liver, Kidney	2.E-08	--	1.E-07	1.E-07
			CARBON DISULFIDE	--		--	--	CARBON DISULFIDE	Reproductive System	5.E-08	--	2.E-07	3.E-07
			TOLUENE	--		--	--	TOLUENE	Liver, Kidney	3.E-09	--	1.E-08	2.E-08
			XYLENE (TOTAL)	--		--	--	XYLENE (TOTAL)	Whole body (weight), CNS/PNS	2.E-09	--	9.E-09	1.E-08
			SEMIVOLATILE ORGANIC COMPOUNDS				--	**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE	--		--	--	1,2,4-TRICHLOROBENZENE	Adrenal	4.E-06	--	2.E-05	2.E-05
			2-METHYLNAPHTHALENE	--		--	--	2-METHYLNAPHTHALENE	No observed effect	8.E-08	--	5.E-07	6.E-07
			ACENAPHTHENE	--		--	--	ACENAPHTHENE	Liver	3.E-08	--	2.E-07	3.E-07
			ANTHRACENE	--		--	--	ANTHRACENE	No observed effect	5.E-08	--	3.E-07	4.E-07
			BENZO(A)ANTHRACENE	4E-09		2.8E-08	3.E-08	BENZO(A)ANTHRACENE	No observed effect	8.E-08	--	6.E-07	6.E-07
			BENZO(A)PYRENE	4E-08		2.7E-07	3.E-07	BENZO(A)PYRENE	Kidney	8.E-07	--	5.E-06	6.E-06
			BENZO(B)FLUORANTHENE	4E-09		2.9E-08	3.E-08	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood	6.E-07	--	4.E-06	5.E-06
			BENZO(G,H,I)PERYLENE	--		--	--	BENZO(G,H,I)PERYLENE	Kidney	8.E-07	--	5.E-06	6.E-06
			BENZO(K)FLUORANTHENE	4E-09		3.0E-08	3.E-08	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood	6.E-07	--	4.E-06	5.E-06
			BIS(2-ETHYLHEXYL)PHTHALATE	3E-11		1.3E-10	2.E-10	BIS(2-ETHYLHEXYL)PHTHALATE	Liver	7.E-06	--	3.E-05	4.E-05
			CARBAZOLE	2E-11		9.3E-11	1.E-10	CARBAZOLE	Whole body (weight), Liver, Kidney	3.E-06	--	1.E-05	2.E-05
			CHRYSENE	4E-10		2.8E-09	3.E-09	CHRYSENE	No observed effect	8.E-08	--	5.E-07	6.E-07
			DIBENZ(A,H)ANTHRACENE	3E-09		2.4E-08	3.E-08	DIBENZ(A,H)ANTHRACENE	No observed effect	2.E-08	--	1.E-07	2.E-07
			FLUORANTHENE	--		--	--	FLUORANTHENE	Liver, Kidney, Blood	5.E-07	--	4.E-06	4.E-06
			FLUORENE	--		--	--	FLUORENE	Blood	2.E-07	--	1.E-06	2.E-06
			INDENO(1,2,3-CD)PYRENE	2E-09		1.6E-08	2.E-08	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood	3.E-07	--	2.E-06	3.E-06
			NAPHTHALENE	--		--	--	NAPHTHALENE	Body weight	1.E-06	--	8.E-06	9.E-06
			PENTACHLOROPHENOL	8E-10		9.6E-09	1.E-08	PENTACHLOROPHENOL	Liver, Kidney	2.E-05	--	2.E-04	2.E-04
			PHENANTHRENE	--		--	--	PHENANTHRENE	No observed effect	9.E-08	--	6.E-07	7.E-07
			PYRENE	--		--	--	PYRENE	Kidney	7.E-07	--	5.E-06	5.E-06
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD	1E-11		2.5E-11	4.E-11	4,4'-DDD	Liver	6.E-06	--	1.E-05	2.E-05
			4,4'-DDE	1E-11		3.1E-11	4.E-11	4,4'-DDE	Liver	6.E-06	--	1.E-05	2.E-05
			4,4'-DDT	5E-11		1.2E-10	2.E-10	4,4'-DDT	Liver	2.E-05	--	5.E-05	7.E-05
			ALDRIN	2E-10		5.6E-10	8.E-10	ALDRIN	Liver	3.E-05	--	8.E-05	1.E-04
			ALPHA-BHC	4E-10		8.7E-10	1.E-09	ALPHA-BHC	Liver, kidney	1.E-06	--	3.E-06	5.E-06
			ALPHA-CHLORDANE	5E-11		1.0E-10	2.E-10	ALPHA-CHLORDANE	Liver	5.E-06	--	1.E-05	2.E-05
			AROCLOR-1254	4E-10		2.7E-09	3.E-09	AROCLOR-1254	Immune System	3.E-04	--	2.E-03	2.E-03
			AROCLOR-1260	1E-09		9.4E-09	1.E-08	AROCLOR-1260	Immune System	1.E-03	--	7.E-03	8.E-03
			BETA-BHC	4E-11		9.2E-11	1.E-10	BETA-BHC	Liver, Kidney	5.E-07	--	1.E-06	2.E-06
			DELTA-BHC	--		--	--	DELTA-BHC	Liver, Kidney	4.E-07	--	9.E-07	1.E-06
			DIELDRIN	5E-10		1.1E-09	2.E-09	DIELDRIN	Liver	4.E-05	--	1.E-04	1.E-04
			ENDOSULFAN I	--		--	--	ENDOSULFAN I	Whole body (weight), Kidney, Blood	2.E-07	--	4.E-07	6.E-07
			ENDOSULFAN II	--		--	--	ENDOSULFAN II	Whole body (weight), Kidney, Blood	3.E-07	--	7.E-07	1.E-06
			ENDOSULFAN SULFATE	--		--	--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood	4.E-07	--	1.E-06	1.E-06
			ENDRIN	--		--	--	ENDRIN	Liver, CNS/PNS	7.E-06	--	2.E-05	2.E-05
			ENDRIN ALDEHYDE	--		--	--	ENDRIN ALDEHYDE	Liver, CNS/PNS	1.E-05	--	3.E-05	4.E-05
			ENDRIN KETONE	--		--	--	ENDRIN KETONE	Liver, CNS/PNS	9.E-06	--	2.E-05	3.E-05
			GAMMA-BHC (LINDANE)	3E-11		7.6E-11	1.E-10	GAMMA-BHC (LINDANE)	Liver, Kidney	6.E-07	--	1.E-06	2.E-06
			GAMMA-CHLORDANE	4E-11		1.0E-10	1.E-10	GAMMA-CHLORDANE	Liver	4.E-05	--	1.E-04	1.E-04
			HEPTACHLOR	2E-11		4.2E-11	6.E-11	HEPTACHLOR	Liver	5.E-07	--	1.E-06	1.E-06
			HEPTACHLOR EPOXIDE	6E-11		1.4E-10	2.E-10	HEPTACHLOR EPOXIDE	Liver	2.E-05	--	6.E-05	8.E-05

TABLE J-115

TABLE M.9.7.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact (continued)	METHOXYCHLOR	--		--	--	METHOXYCHLOR	Reproductive System	2.E-06	--	8.E-06	1.E-05
			(Total)	6E-08		4E-07	5E-07	(Total)		0.020		0.0093	0.03
Soil 0-10 ft. bgs	Air	Indoor Air	**METAL**					**METAL**					
			BARIUM		--		--	BARIUM	Reproductive System		2.E-05		2.E-05
			COBALT		--		--	COBALT	Respiratory System		1.E-03		1.E-03
			COPPER		--		--	COPPER	Respiratory System		2.E-03		2.E-03
			LEAD		--		--	LEAD	--		--		--
			MOLYBDENUM		--		--	MOLYBDENUM	--		--		--
			SELENIUM		--		--	SELENIUM	Respiratory System		4.E-06		4.E-06
			SILVER		--		--	SILVER	Skin		2.E-08		2.E-08
			THALLIUM		--		--	THALLIUM	--		--		--
			TIN		--			TIN	--		--		
			TITANIUM		--		--	TITANIUM	Respiratory/Immune System		3.E-03		3.E-03
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		1.E-04		1.E-04
			ACETONE		--		--	ACETONE	Liver, Kidney		9.E-05		9.E-05
			CARBON DISULFIDE		--		--	CARBON DISULFIDE	CNS/PNS		6.E-02		6.E-02
			TOLUENE		--		--	TOLUENE	CNS/PNS		5.E-02		5.E-02
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		2.E-04		2.E-04
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE		--		--	1,2,4-TRICHLOROBENZENE	Liver		2.E-02		2.E-02
			2-METHYLNAPHTHALENE		--		--	2-METHYLNAPHTHALENE	No observed effect		1.E-02		1.E-02
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		4.E-03		4.E-03
			ANTHRACENE		--		--	ANTHRACENE	No observed effect		2.E-04		2.E-04
			BENZO(A)ANTHRACENE		3.E-14		3.E-14	BENZO(A)ANTHRACENE	No observed effect		1.E-11		1.E-11
			BENZO(A)PYRENE		3.E-13		3.E-13	BENZO(A)PYRENE	Kidney		1.E-10		1.E-10
			BENZO(B)FLUORANTHENE		3.E-14		3.E-14	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		9.E-11		9.E-11
			BENZO(G,H,I)PERYLENE		--		--	BENZO(G,H,I)PERYLENE	Kidney		1.E-10		1.E-10
			BENZO(K)FLUORANTHENE		4.E-14		4.E-14	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood		1.E-10		1.E-10
			BIS(2-ETHYLHEXYL)PHTHALATE		4.E-16		4.E-16	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		1.E-09		1.E-09
			CARBAZOLE		6.E-16		6.E-16	CARBAZOLE	Whole body (weight), Liver, Kidney		4.E-10		4.E-10
			CHRYSENE		3.E-15		3.E-15	CHRYSENE	No observed effect		1.E-11		1.E-11
			DIBENZ(A,H)ANTHRACENE		1.E-13		1.E-13	DIBENZ(A,H)ANTHRACENE	No observed effect		3.E-12		3.E-12
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		8.E-11		8.E-11
			FLUORENE		--		--	FLUORENE	Blood		2.E-03		2.E-03
			INDENO(1,2,3-CD)PYRENE		2.E-14		2.E-14	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood		5.E-11		5.E-11
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		4.E-08		4.E-08
			PENTACHLOROPHENOL		2.E-14		2.E-14	PENTACHLOROPHENOL	Liver, Kidney		2.E-09		2.E-09
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		3.E-04		3.E-04
			PYRENE		--		--	PYRENE	Kidney		5.E-04		5.E-04
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD		3.E-16		3.E-16	4,4'-DDD	Liver		1.E-09		1.E-09
			4,4'-DDE		3.E-16		3.E-16	4,4'-DDE	Liver		8.E-10		8.E-10
			4,4'-DDT		1.E-15		1.E-15	4,4'-DDT	Liver		3.E-09		3.E-09
			ALDRIN		7.E-15		7.E-15	ALDRIN	Liver		5.E-09		5.E-09
			ALPHA-BHC		8.E-15		8.E-15	ALPHA-BHC	Liver, Kidney		2.E-10		2.E-10
			ALPHA-CHLORDANE		1.E-15		1.E-15	ALPHA-CHLORDANE	Liver		2.E-10		2.E-10
			AROCLOR-1254		9.E-15		9.E-15	AROCLOR-1254	Immune System		4.E-08		4.E-08
			AROCLOR-1260		3.E-14		3.E-14	AROCLOR-1260	Immune System		1.E-07		1.E-07
			BETA-BHC		1.E-15		1.E-15	BETA-BHC	Liver, Kidney		8.E-11		8.E-11
			DELTA-BHC		--		--	DELTA-BHC	Liver, Kidney		6.E-11		6.E-11
			DIELDRIN		1.E-14		1.E-14	DIELDRIN	Liver		6.E-09		6.E-09
			ENDOSULFAN I		--		--	ENDOSULFAN I	Whole body (weight), Kidney, Blood		3.E-11		3.E-11
			ENDOSULFAN II		--		--	ENDOSULFAN II	Whole body (weight), Kidney, Blood		5.E-11		5.E-11
			ENDOSULFAN SULFATE		--		--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood		7.E-11		7.E-11
			ENDRIN		--		--	ENDRIN	Liver, CNS/PNS		1.E-09		1.E-09
			ENDRIN ALDEHYDE		--		--	ENDRIN ALDEHYDE	Liver, CNS/PNS		2.E-09		2.E-09
			ENDRIN KETONE		--		--	ENDRIN KETONE	Liver, CNS/PNS		1.E-09		1.E-09
			GAMMA-BHC (LINDANE)		8.E-16		8.E-16	GAMMA-BHC (LINDANE)	Liver, Kidney		9.E-11		9.E-11
			GAMMA-CHLORDANE		1.E-15		1.E-15	GAMMA-CHLORDANE	Liver		2.E-10		2.E-10
			HEPTACHLOR		5.E-16		5.E-16	HEPTACHLOR	Liver		7.E-11		7.E-11

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TABLE M.9.7.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Air	Indoor Air (continued)	HEPTACHLOR EPOXIDE		1.E-15		1.E-15	HEPTACHLOR EPOXIDE	Liver		4.E-09		4.E-09
			METHOXYCHLOR		--		--	METHOXYCHLOR	Reproductive System		3.E-10		3.E-10
			(Total)		6E-13		6E-13	(Total)			0.1		0.1
Groundwater	Air	Indoor Air	**VOLATILE ORGANIC COMPOUNDS**					**VOLATILE ORGANIC COMPOUNDS**					
			1,2-DICHLOROETHANE		3.E-09		3.E-09	1,2-DICHLOROETHANE	--		1.E-03		1.E-03
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		2.E-04		2.E-04
			4-METHYL-2-PENTANONE		--		--	4-METHYL-2-PENTANONE	Liver, Kidney		1.E-05		1.E-05
			ACETONE		--		--	ACETONE	Liver, Kidney		2.E-04		2.E-04
			CHLOROMETHANE		--		--	CHLOROMETHANE	CNS/PNS		3.E-05		3.E-05
			ETHYLBENZENE		--		--	ETHYLBENZENE	Reproductive System		1.E-05		1.E-05
			TOLUENE		--		--	TOLUENE	CNS/PNS		4.E-05		4.E-05
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		3.E-06		3.E-06
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,3-DICHLOROBENZENE		--		--	1,3-DICHLOROBENZENE	--		5.E-03		5.E-03
			2,4-DICHLOROPHENOL		--		--	2,4-DICHLOROPHENOL	Immune System		--		--
			4-METHYLPHENOL		--		--	4-METHYLPHENOL	CNS/PNS, Respiratory System		--		--
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		--		--
			BENZO(B)FLUORANTHENE		--		--	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		--		--
			BIS(2-ETHYLHEXYL)PHTHALATE		--		--	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		--		--
			CARBAZOLE		--		--	CARBAZOLE	Whole body (weight), Liver, Kidney		--		--
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		--		--
			N-NITROSODIPHENYLAMINE (1)		--		--	N-NITROSODIPHENYLAMINE (1)	--		--		--
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		1.E-02		1.E-02
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		1.E-06		1.E-06
			PHENOL		--		--	PHENOL	Reproductive System		--		--
			PYRENE		--		--	PYRENE	Kidney		2.E-05		2.E-05
			(Total)		3E-09		3E-09	(Total)			0.016		0.016

Total Risk Across Soil	5.E-07	Total Hazard Index Across Soil	0.2
Total Risk Across Groundwater	3E-09	Total Hazard Across Groundwater	0.016
Total Risk Across All Media and All Exposure Routes	5.E-07	Total Hazard Across All Media and All Exposure Routes	0.2

Notes:
Ft. = Feet
-- = Not available
bgs = Below ground surface
RME = Reasonable maximum exposure
COPC = Chemical of potential concern
CNS/PNS = Central nervous system/peripheral nervous system
GI = Gastrointestinal

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TABLE M.9.7.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact	**METAL**					**METAL**					
			BARIUM	--		--	--	BARIUM	No adverse effect	5.E-04	--	1.E-04	6.E-04
			COBALT	--		--	--	COBALT	--	7.E-05	--	2.E-05	8.E-05
			COPPER	--		--	--	COPPER	GI System	6.E-04	--	2.E-04	7.E-04
			LEAD	--		--	--	LEAD	--	--	--	--	--
			MOLYBDENUM	--		--	--	MOLYBDENUM	Kidney	2.E-05	--	6.E-06	3.E-05
			SELENIUM	--		--	--	SELENIUM	CNS/PNS, Liver, Skin, Blood	4.E-05	--	1.E-05	5.E-05
			SILVER	--		--	--	SILVER	Skin	4.E-05	--	1.E-05	5.E-05
			THALLIUM	--		--	--	THALLIUM	No adverse effect	2.E-04	--	6.E-05	3.E-04
			TIN			--		TIN	Liver, Kidney			2.E-06	
			TITANIUM	--		--	--	TITANIUM	Blood	5.E-03	--	1.E-03	6.E-03
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			2-BUTANONE	--		--	--	2-BUTANONE	Reproductive System	1.E-09	--	3.E-09	5.E-09
			ACETONE	--		--	--	ACETONE	Liver, Kidney	6.E-09	--	2.E-08	2.E-08
			CARBON DISULFIDE	--		--	--	CARBON DISULFIDE	Reproductive System	2.E-08	--	5.E-08	6.E-08
			TOLUENE	--		--	--	TOLUENE	Liver, Kidney	1.E-09	--	3.E-09	4.E-09
			XYLENE (TOTAL)	--		--	--	XYLENE (TOTAL)	Whole body (weight), CNS/PNS	7.E-10	--	2.E-09	3.E-09
			SEMIVOLATILE ORGANIC COMPOUNDS				--	**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE	--		--	--	1,2,4-TRICHLOROBENZENE	Adrenal	1.E-06	--	3.E-06	5.E-06
			2-METHYLNAPHTHALENE	--		--	--	2-METHYLNAPHTHALENE	No observed effect	3.E-08	--	1.E-07	1.E-07
			ACENAPHTHENE	--		--	--	ACENAPHTHENE	Liver	1.E-08	--	5.E-08	6.E-08
			ANTHRACENE	--		--	--	ANTHRACENE	No observed effect	2.E-08	--	7.E-08	9.E-08
			BENZO(A)ANTHRACENE	1E-09		5.2E-09	6.E-09	BENZO(A)ANTHRACENE	No observed effect	3.E-08	--	1.E-07	1.E-07
			BENZO(A)PYRENE	1E-08		4.8E-08	6.E-08	BENZO(A)PYRENE	Kidney	2.E-07	--	9.E-07	1.E-06
			BENZO(B)FLUORANTHENE	1E-09		5.2E-09	6.E-09	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood	2.E-07	--	8.E-07	9.E-07
			BENZO(G,H,I)PERYLENE	--		--	--	BENZO(G,H,I)PERYLENE	Kidney	2.E-07	--	1.E-06	1.E-06
			BENZO(K)FLUORANTHENE	1E-09		5.6E-09	7.E-09	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood	2.E-07	--	8.E-07	1.E-06
			BIS(2-ETHYLHEXYL)PHTHALATE	8E-12		2.2E-11	3.E-11	BIS(2-ETHYLHEXYL)PHTHALATE	Liver	2.E-06	--	6.E-06	8.E-06
			CARBAZOLE	7E-12		1.9E-11	3.E-11	CARBAZOLE	Whole body (weight), Liver, Kidney	1.E-06	--	3.E-06	4.E-06
			CHRYSENE	1E-10		4.9E-10	6.E-10	CHRYSENE	No observed effect	2.E-08	--	1.E-07	1.E-07
			DIBENZ(A,H)ANTHRACENE	1E-09		4.9E-09	6.E-09	DIBENZ(A,H)ANTHRACENE	No observed effect	7.E-09	--	3.E-08	3.E-08
			FLUORANTHENE	--		--	--	FLUORANTHENE	Liver, Kidney, Blood	2.E-07	--	6.E-07	8.E-07
			FLUORENE	--		--	--	FLUORENE	Blood	7.E-08	--	3.E-07	4.E-07
			INDENO(1,2,3-CD)PYRENE	8E-10		3.3E-09	4.E-09	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood	1.E-07	--	5.E-07	6.E-07
			NAPHTHALENE	--		--	--	NAPHTHALENE	Body weight	4.E-07	--	2.E-06	2.E-06
			PENTACHLOROPHENOL	3E-10		2.0E-09	2.E-09	PENTACHLOROPHENOL	Liver, Kidney	6.E-06	--	4.E-05	4.E-05
			PHENANTHRENE	--		--	--	PHENANTHRENE	No observed effect	3.E-08	--	1.E-07	1.E-07
			PYRENE	--		--	--	PYRENE	Kidney	2.E-07	--	8.E-07	1.E-06
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD	3E-12		4.6E-12	8.E-12	4,4'-DDD	Liver	2.E-06	--	3.E-06	5.E-06
			4,4'-DDE	4E-12		5.7E-12	1.E-11	4,4'-DDE	Liver	2.E-06	--	2.E-06	4.E-06
			4,4'-DDT	1E-11		1.9E-11	3.E-11	4,4'-DDT	Liver	6.E-06	--	8.E-06	1.E-05
			ALDRIN	9E-11		1.1E-10	2.E-10	ALDRIN	Liver	1.E-05	--	2.E-05	3.E-05
			ALPHA-BHC	1E-10		1.4E-10	2.E-10	ALPHA-BHC	Liver, kidney	4.E-07	--	5.E-07	9.E-07
			ALPHA-CHLORDANE	1E-11		1.8E-11	3.E-11	ALPHA-CHLORDANE	Liver	2.E-06	--	2.E-06	4.E-06
			AROCLOR-1254	1E-10		4.4E-10	6.E-10	AROCLOR-1254	Immune System	8.E-05	--	3.E-04	4.E-04
			AROCLOR-1260	4E-10		1.5E-09	2.E-09	AROCLOR-1260	Immune System	3.E-04	--	1.E-03	1.E-03
			BETA-BHC	1E-11		1.7E-11	3.E-11	BETA-BHC	Liver, Kidney	2.E-07	--	2.E-07	4.E-07
			DELTA-BHC	--		--	--	DELTA-BHC	Liver, Kidney	1.E-07	--	2.E-07	3.E-07
			DIELDRIN	2E-10		2.2E-10	4.E-10	DIELDRIN	Liver	1.E-05	--	2.E-05	3.E-05
			ENDOSULFAN I	--		--	--	ENDOSULFAN I	Whole body (weight), Kidney, Blood	7.E-08	--	9.E-08	2.E-07
			ENDOSULFAN II	--		--	--	ENDOSULFAN II	Whole body (weight), Kidney, Blood	1.E-07	--	1.E-07	3.E-07
			ENDOSULFAN SULFATE	--		--	--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood	1.E-07	--	2.E-07	3.E-07
			ENDRIN	--		--	--	ENDRIN	Liver, CNS/PNS	2.E-06	--	3.E-06	5.E-06
			ENDRIN ALDEHYDE	--		--	--	ENDRIN ALDEHYDE	Liver, CNS/PNS	4.E-06	--	5.E-06	8.E-06
			ENDRIN KETONE	--		--	--	ENDRIN KETONE	Liver, CNS/PNS	3.E-06	--	4.E-06	7.E-06
			GAMMA-BHC (LINDANE)	1E-11		1.4E-11	2.E-11	GAMMA-BHC (LINDANE)	Liver, Kidney	2.E-07	--	2.E-07	4.E-07
			GAMMA-CHLORDANE	1E-11		1.7E-11	3.E-11	GAMMA-CHLORDANE	Liver	1.E-05	--	2.E-05	3.E-05
			HEPTACHLOR	6E-12		7.6E-12	1.E-11	HEPTACHLOR	Liver	1.E-07	--	2.E-07	3.E-07
			HEPTACHLOR EPOXIDE	2E-11		2.4E-11	4.E-11	HEPTACHLOR EPOXIDE	Liver	8.E-06	--	1.E-05	2.E-05

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TABLE M.9.7.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact (continued)	METHOXYCHLOR	--		--	--	METHOXYCHLOR	Reproductive System	7.E-07	--	2.E-06	2.E-06
			(Total)	2E-08		7E-08	9E-08	(Total)		0.006		0.0017	0.008
Soil 0-10 ft. bgs	Air	Indoor Air	**METAL**					**METAL**					
			BARIUM		--		--	BARIUM	Reproductive System		3.E-06		3.E-06
			COBALT		--		--	COBALT	Respiratory System		2.E-04		2.E-04
			COPPER		--		--	COPPER	Respiratory System		3.E-04		3.E-04
			LEAD		--		--	LEAD	--		--		--
			MOLYBDENUM		--		--	MOLYBDENUM	--		--		--
			SELENIUM		--		--	SELENIUM	Respiratory System		6.E-07		6.E-07
			SILVER		--		--	SILVER	Skin		3.E-09		3.E-09
			THALLIUM		--		--	THALLIUM	--		--		--
			TIN		--			TIN	--		--		
			TITANIUM		--		--	TITANIUM	Respiratory/Immune System		5.E-04		5.E-04
			VOLATILE ORGANIC COMPOUNDS					**VOLATILE ORGANIC COMPOUNDS**					
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		2.E-05		2.E-05
			ACETONE		--		--	ACETONE	Liver, Kidney		1.E-05		1.E-05
			CARBON DISULFIDE		--		--	CARBON DISULFIDE	CNS/PNS		1.E-02		1.E-02
			TOLUENE		--		--	TOLUENE	CNS/PNS		9.E-03		9.E-03
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		3.E-05		3.E-05
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,2,4-TRICHLOROBENZENE		--		--	1,2,4-TRICHLOROBENZENE	Liver		3.E-03		3.E-03
			2-METHYLNAPHTHALENE		--		--	2-METHYLNAPHTHALENE	No observed effect		2.E-03		2.E-03
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		8.E-04		8.E-04
			ANTHRACENE		--		--	ANTHRACENE	No observed effect		3.E-05		3.E-05
			BENZO(A)ANTHRACENE		3.E-14		3.E-14	BENZO(A)ANTHRACENE	No observed effect		2.E-12		2.E-12
			BENZO(A)PYRENE		3.E-13		3.E-13	BENZO(A)PYRENE	Kidney		2.E-11		2.E-11
			BENZO(B)FLUORANTHENE		3.E-14		3.E-14	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		2.E-11		2.E-11
			BENZO(G,H,I)PERYLENE		--		--	BENZO(G,H,I)PERYLENE	Kidney		2.E-11		2.E-11
			BENZO(K)FLUORANTHENE		4.E-14		4.E-14	BENZO(K)FLUORANTHENE	Liver, Kidney, Blood		2.E-11		2.E-11
			BIS(2-ETHYLHEXYL)PHTHALATE		4.E-16		4.E-16	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		2.E-10		2.E-10
			CARBAZOLE		6.E-16		6.E-16	CARBAZOLE	Whole body (weight), Liver, Kidney		8.E-11		8.E-11
			CHRYSENE		3.E-15		3.E-15	CHRYSENE	No observed effect		2.E-12		2.E-12
			DIBENZ(A,H)ANTHRACENE		1.E-13		1.E-13	DIBENZ(A,H)ANTHRACENE	No observed effect		6.E-13		6.E-13
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		1.E-11		1.E-11
			FLUORENE		--		--	FLUORENE	Blood		3.E-04		3.E-04
			INDENO(1,2,3-CD)PYRENE		2.E-14		2.E-14	INDENO(1,2,3-CD)PYRENE	Liver, Kidney, Blood		1.E-11		1.E-11
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		8.E-09		8.E-09
			PENTACHLOROPHENOL		2.E-14		2.E-14	PENTACHLOROPHENOL	Liver, Kidney		5.E-10		5.E-10
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		5.E-05		5.E-05
			PYRENE		--		--	PYRENE	Kidney		8.E-05		8.E-05
			PESTICIDE/POLYCHLORINATED BIPHENYLS					**PESTICIDE/POLYCHLORINATED BIPHENYLS**					
			4,4'-DDD		3.E-16		3.E-16	4,4'-DDD	Liver		2.E-10		2.E-10
			4,4'-DDE		3.E-16		3.E-16	4,4'-DDE	Liver		1.E-10		1.E-10
			4,4'-DDT		1.E-15		1.E-15	4,4'-DDT	Liver		5.E-10		5.E-10
			ALDRIN		7.E-15		7.E-15	ALDRIN	Liver		9.E-10		9.E-10
			ALPHA-BHC		8.E-15		8.E-15	ALPHA-BHC	Liver, Kidney		3.E-11		3.E-11
			ALPHA-CHLORDANE		1.E-15		1.E-15	ALPHA-CHLORDANE	Liver		3.E-11		3.E-11
			AROCLOR-1254		9.E-15		9.E-15	AROCLOR-1254	Immune System		6.E-09		6.E-09
			AROCLOR-1260		3.E-14		3.E-14	AROCLOR-1260	Immune System		2.E-08		2.E-08
			BETA-BHC		1.E-15		1.E-15	BETA-BHC	Liver, Kidney		1.E-11		1.E-11
			DELTA-BHC		--		--	DELTA-BHC	Liver, Kidney		1.E-11		1.E-11
			DIELDRIN		1.E-14		1.E-14	DIELDRIN	Liver		1.E-09		1.E-09
			ENDOSULFAN I		--		--	ENDOSULFAN I	Whole body (weight), Kidney, Blood		5.E-12		5.E-12
			ENDOSULFAN II		--		--	ENDOSULFAN II	Whole body (weight), Kidney, Blood		9.E-12		9.E-12
			ENDOSULFAN SULFATE		--		--	ENDOSULFAN SULFATE	Whole body (weight), Kidney, Blood		1.E-11		1.E-11
			ENDRIN		--		--	ENDRIN	Liver, CNS/PNS		2.E-10		2.E-10
			ENDRIN ALDEHYDE		--		--	ENDRIN ALDEHYDE	Liver, CNS/PNS		3.E-10		3.E-10
			ENDRIN KETONE		--		--	ENDRIN KETONE	Liver, CNS/PNS		2.E-10		2.E-10
			GAMMA-BHC (LINDANE)		8.E-16		8.E-16	GAMMA-BHC (LINDANE)	Liver, Kidney		1.E-11		1.E-11
			GAMMA-CHLORDANE		1.E-15		1.E-15	GAMMA-CHLORDANE	Liver		3.E-11		3.E-11
			HEPTACHLOR		5.E-16		5.E-16	HEPTACHLOR	Liver		1.E-11		1.E-11
			HEPTACHLOR EPOXIDE		1.E-15		1.E-15	HEPTACHLOR EPOXIDE	Liver		6.E-10		6.E-10
			METHOXYCHLOR		--		--	METHOXYCHLOR	Reproductive System		5.E-11		5.E-11
			(Total)		6E-13		6E-13	(Total)			0.03		0.03

TABLE J-116

TABLE M.9.7.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Air	Indoor Air	**VOLATILE ORGANIC COMPOUNDS**					**VOLATILE ORGANIC COMPOUNDS**					
			1,2-DICHLOROETHANE		4.E-10		4.E-10	1,2-DICHLOROETHANE	--		2.E-04		2.E-04
			2-BUTANONE		--		--	2-BUTANONE	Reproductive System		1.E-05		1.E-05
			4-METHYL-2-PENTANONE		--		--	4-METHYL-2-PENTANONE	Liver, Kidney		3.E-06		3.E-06
			ACETONE		--		--	ACETONE	Liver, Kidney		3.E-05		3.E-05
			CHLOROMETHANE		--		--	CHLOROMETHANE	CNS/PNS		6.E-06		6.E-06
			ETHYLBENZENE		--		--	ETHYLBENZENE	Reproductive System		2.E-06		2.E-06
			TOLUENE		--		--	TOLUENE	CNS/PNS		7.E-06		7.E-06
			XYLENE (TOTAL)		--		--	XYLENE (TOTAL)	--		5.E-07		5.E-07
			SEMIVOLATILE ORGANIC COMPOUNDS					**SEMIVOLATILE ORGANIC COMPOUNDS**					
			1,3-DICHLOROBENZENE		--		--	1,3-DICHLOROBENZENE	--		9.E-04		9.E-04
			2,4-DICHLOROPHENOL		--		--	2,4-DICHLOROPHENOL	Immune System		--		--
			4-METHYLPHENOL		--		--	4-METHYLPHENOL	CNS/PNS, Respiratory System		--		--
			ACENAPHTHENE		--		--	ACENAPHTHENE	Liver		--		--
			BENZO(B)FLUORANTHENE		--		--	BENZO(B)FLUORANTHENE	Liver, Kidney, Blood		--		--
			BIS(2-ETHYLHEXYL)PHTHALATE		--		--	BIS(2-ETHYLHEXYL)PHTHALATE	Liver		--		--
			CARBAZOLE		--		--	CARBAZOLE	Whole body (weight), Liver, Kidney		--		--
			FLUORANTHENE		--		--	FLUORANTHENE	Liver, Kidney, Blood		--		--
			N-NITROSODIPHENYLAMINE (1)		--		--	N-NITROSODIPHENYLAMINE (1)	--		--		--
			NAPHTHALENE		--		--	NAPHTHALENE	Respiratory System		2.E-03		2.E-03
			PHENANTHRENE		--		--	PHENANTHRENE	No observed effect		2.E-07		2.E-07
			PHENOL		--		--	PHENOL	Reproductive System		--		--
			PYRENE		--		--	PYRENE	Kidney		3.E-06		3.E-06
			(Total)		4E-10		4E-10	(Total)			0.003		0.003
						Total Risk Across Soil	9.E-08					Total Hazard Index Across Soil	0.03
						Total Risk Across Groundwater	4E-10					Total Hazard Across Groundwater	0.003
						Total Risk Across All Media and All Exposure Routes	9.E-08					Total Hazard Across All Media and All Exposure Routes	0.04

Notes:
Ft. = Feet
-- = Not available
bgs = Below ground surface
CTE = Central tendency exposure
COPC = Chemical of potential concern
CNS/PNS = Central nervous system/peripheral nervous system
GI = Gastrointestinal

TABLE J-117

TABLE M.10.7.RME
RISK ASSESSMENT SUMMARY
REASONABLE MAXIMUM EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact											
			(Total)	6E-08		4E-07	5E-07	(Total)		0.020		0.009	0.03
Soil 0-10 ft. bgs	Air	Indoor Air											
			(Total)		6E-13		6E-13	(Total)			0.1		0.1
Groundwater	Air	Indoor Air											
			(Total)		3E-09		3E-09	(Total)			0.016		0.016
						Total Risk Across Soil	5.E-07					Total Hazard Index Across Soil	0.2
						Total Risk Across Groundwater	3E-09					Total Hazard Across Groundwater	0.016
						Total Risk Across All Media and All Exposure Routes	5.E-07					Total Hazard Across All Media and All Exposure Routes	0.2

Notes:
Ft. = Feet
bgs = Below ground surface
RME = Reasonable maximum exposure

TABLE J-118

TABLE M.10.7.CTE
RISK ASSESSMENT SUMMARY
CENTRAL TENDENCY EXPOSURE
FORMER NORTH BUILDING WAYS AREA, MARE ISLAND, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil 0-10 ft. bgs	Soil	Direct Soil Contact											
			(Total)	2E-08		7E-08	9E-08	(Total)		0.0064		0.0017	0.0081
Soil 0-10 ft. bgs	Air	Indoor Air											
			(Total)		6E-13		6E-13	(Total)			0.026		0.026
Groundwater	Air	Indoor Air											
			(Total)		4E-10		4E-10	(Total)			0.003		0.003
						Total Risk Across Soil	9.E-08					Total Hazard Index Across Soil	0.035
						Total Risk Across Groundwater	4E-10					Total Hazard Across Groundwater	0.003
						Total Risk Across All Media and All Exposure Routes	9.E-08					Total Hazard Across All Media and All Exposure Routes	0.038

Notes:

Ft. = Feet

bgs = Below ground surface

CTE = Central tendency exposure

TABLE J-119 SUMMARY OF UNCERTAINTIES MARE ISLAND, CALIFORNIA		
Item	**Effect on Human Health Risk Assessment**	**Potential Magnitude of Effect on Risk**
Evaluation of hypothetical residential receptor population exposures	May represent overestimate of potential exposures; future re-use limited to light industry/commercial without residential	High Overestimate
Inclusion of all chemicals detected in soil and groundwater regardless of frequency of detection	May overestimate risks for those chemicals detected sporadically	Low Overestimate
Available groundwater data was limited to grab groundwater samples from boreholes	May overestimate groundwater concentrations due to high soil content of water samples	Low Overestimate
No metal analyses of groundwater samples	No known source of metals at Site and no suspected elevated metals in groundwater	Low Underestimate
Selection of PAHs as COPCs	Risk estimates include the PAH component that the Navy believes to be related to ambient risks present in all urban locations and not due to Navy-specific activities	Moderate Overestimate
Use of PAH risks as surrogate for total petroleum hydrocarbons risks	Lack of correlation observed between PAHs and total petroleum hydrocarbons in soil results	Moderate Overestimate

TABLE J-119 SUMMARY OF UNCERTAINTIES MARE ISLAND, CALIFORNIA		
Item	**Effect on Human Health Risk Assessment**	**Potential Magnitude of Effect on Risk**
Use of 0 to 3 feet below ground surface for surface soil instead of 0 to 2 feet	None known	None known
Use of commercial/industrial receptor as upper bound estimate for recreational visitor	Will overestimate potential exposures for an unlikely potential receptor	Moderate Overestimate
Assumption of unchanged configuration exposures for commercial/industrial receptors with limited buildings present	Potential exposures not likely under unchanged configuration	Moderate Overestimate
Incidental ingestion of soil and dermal contact with soil under a modified site configuration may not be complete exposure pathways based upon buildings to be constructed and paving and general landscaping to be installed	Consideration of exposure pathways that should not be complete under future land use	Moderate Overestimate
Use of single representative concentration for chemicals for entire investigation area (single exposure point)	Overestimate of potential exposures for chemicals sporadically detected	Low Overestimate

TABLE J-119 SUMMARY OF UNCERTAINTIES MARE ISLAND, CALIFORNIA		
Item	**Effect on Human Health Risk Assessment**	**Potential Magnitude of Effect on Risk**
Use of inhalation subchronic RfD for inhalation chronic RfD for silver, which was originally extrapolated from oral subchronic RfD	May overestimate hazard quotient for silver and overestimate hazard indices for all receptors	Low Overestimate
For selenium, use of oral subchronic RfD extrapolated to inhalation subchronic RfD but not extrapolated for chronic RfD	May underestimate selenium hazard index under RME scenario (silver is only included as a COPC under the RME scenario)	Low Underestimate
Derivation of volatilization factors for 2-methylnaphthalene (COPC in soil) were developed based upon physical information available for naphthalene	May underestimate or overestimate potential air concentrations of 2-methylnaphthalene based upon volatilization.	Unknown
Xylenes evaluated as mixture with meta-isomer physical properties assumed to be representative	May not accurately estimate potential exposures to xylenes	Unknown
Use of ASTM default soil bulk density and estimated site-specific soil moisture percentage (22 percent) to estimate air concentration for volatiles	Lower soil moisture percentage would yield lower potential inhalation exposures to volatiles	Low Overestimate

TABLE J-119 SUMMARY OF UNCERTAINTIES MARE ISLAND, CALIFORNIA		
Item	**Effect on Human Health Risk Assessment**	**Potential Magnitude of Effect on Risk**
Use of soil model with vadose zone height set at 3 feet below ground surface	None known due to lack of known source of VOCs	None

Notes:

ASTM	Amercian Society for Testing and Materials
COPC	Chemical of Potential Concer
HHRA	Human Health Risk Assessment
PAH	Polynuclear Aromatic Hydrocarbons
RfD	Reference Dose
RME	Reasonable Maximum Exposure
VOC	Volatile Organic Compound

TABLE J-120

SUMMARY OF HUMAN HEALTH RISK ASSESSMENT RESULTS – SITE RISK
FORMER NORTH BUILDING WAYS AREA
MARE ISLAND, CALIFORNIA

Site Configuration and Receptor	Site Risk - Multi-Chemical and Multi-Pathway Risk Assessment Result for Reasonable Maximum Exposure	Comment
Unchanged Site Configuration (0 to 3 feet bgs for soil and groundwater)		
Commercial/Industrial Worker	Risk: 4×10^{-6} HI: 0.4 Soil Lead: < 750 mg/kg	Primary cancer risk drivers include benzo(a)pyrene in soil and other assorted other PAHs in soil at concentrations consistent with the Navy's proposed ambient levels.
Residential	Risk: 1×10^{-5} (Adult and Child) HI: 1 (Child) Soil Lead: < 210 mg/kg	Primary cancer risk drivers include benzo(a)pyrene in soil, and other assorted other PAHs in soil at concentrations consistent with the Navy's proposed ambient levels.
Modified Site Configuration (0 to 10 feet bgs for soil and groundwater)		
Commercial/Industrial Worker	Risk: 3×10^{-6} HI: 0.5 Soil Lead: < 750 mg/kg	Primary cancer risk drivers include benzo(a)pyrene in soil and other assorted other PAHs in soil at concentrations consistent with the Navy's proposed ambient levels.
Residential	Risk: 1×10^{-5} (Adult and Child) HI: < 1 (Segregated by target organ) Lead: < 210 mg/kg	Primary cancer risk drivers include benzo(a)pyrene in soil and other PAHs in soil at concentrations consistent with the Navy's proposed ambient levels.
Construction Worker	Risk: 5×10^{-7} HI: 0.2 Lead: < 750 mg/kg	Primary cancer risk drivers include benzo(a)pyrene in soil and other assorted other PAHs in soil at concentrations consistent with the Navy's proposed ambient levels.

Notes:

<	Less than
bgs	Below ground surface
HI	Hazard index (total multi-chemical and multi-pathway)
mg/kg	Milligrams per kilogram
Navy	U.S. Department of the Navy
PAH	Polynuclear aromatic hydrocarbon
Risk	Cancer risk (total multi-chemical and multi-pathway excess)

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
49	Assumptions and uncertainties	Section 2.5.1	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix J, Sections 6.0 through 6.4. Tetra Tech EM Inc. September 22, 2008.

risk estimates and HIs for soil and groundwater COPCs, and Tables J-75 and J-76 present the cancer risk estimate and HI summary. Tables J-77 and J-78 summarize the cancer risk estimates and HIs, and identify primary contributors to cancer risks and HIs for the commercial/industrial worker scenario.

For the residential scenario, Tables J-79 through J-94 present the calculation of cancer risk estimates and HIs for soil and groundwater COPCs. Tables J-95 through J-98 present the cancer risk estimate and HI receptor summary. Tables J-99 through J-102 summarize the residential cancer risk estimates and HIs, and identify primary contributors to cancer risks and HIs.

For the construction worker scenario, Tables J-103 through J-114 present the calculation of cancer risk estimates and HIs for soil and groundwater COPCs. Tables J-115 and J-116 present the construction worker cancer risk estimate and HI receptor summary. Table J-117 and J-118 summarize the construction worker cancer risk estimates and HIs, and identify primary contributors to cancer risk estimates and HIs.

Figures J-4 and J-5 graphically present the incremental, ambient, and total RME cancer risk estimates and HIs for the modified site configuration. The analysis of possible exposure via homegrown produce is presented in Attachment J4, and is not incorporated in this discussion.

6.0 UNCERTAINTY EVALUATION

Some uncertainties are inherent in the estimates of potential cancer risk and noncancer health hazard presented in this document. The uncertainties fall into two categories, including uncertainties associated with the general risk assessment methodologies and uncertainties uniquely associated with this HHRA. The following subsections present information related to these uncertainties. Table J-119 summarizes selected site-specific uncertainties associated with this HHRA, including an evaluation of the effect of each uncertainty and the expected magnitude of the effect on the estimates of risk.

The net overall effect of these uncertainties is expected to be that this HHRA was developed based upon a series of assumptions, almost all conservative, that are expected to yield an overestimate of risks. Even considering a few uncertainties contributing to a small underestimate of risk, the compounding conservatism in the HHRA process is expected to negate the assumptions that may lead to underestimating risks.

6.1 DATA EVALUATION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

To identify COPCs for the HHRA, the adequacy of site characterization data was reviewed, and a structured selection process was employed. The uncertainties associated with these two components of COPC selection are discussed in the following sections.

6.1.1 Site Characterization Data

The risk assessment is based on analytical data presented in the RI. The total number of samples collected during these investigations was quite large; however, not all samples were analyzed for the full suite of chemicals. In accordance with the approved field sampling and analysis plan for phase II of the RI (PRC 1993), if records of area history did not suggest that chemicals of a particular class were likely to have been used or released at a site, the number of samples that were analyzed for that class of compounds was limited. Specifically, when no potential contaminant sources justified additional analyses, 15 percent of the samples collected for phase II of the RI were analyzed by an off-site laboratory for a full suite of constituents (typically, metals, VOCs, SVOCs, PCBs, and TPH); all other samples were analyzed by the on-site laboratory for a more limited suite of the chemicals most likely to be present (metals, PCBs, and TPH). One exception to this approach was upheld for PAHs. Although PAHs were thought to be present in association with TPH, which is widely distributed at Mare Island, analyses for PAHs were generally performed on 15 percent of the samples.

During previous field investigations, the only groundwater samples collected at the site were grab groundwater samples. Grab groundwater samples are expected to contain soil mixed with the water and data from analysis of these samples may not reflect actual groundwater conditions. Therefore, chemical concentrations in grab groundwater samples will likely be overestimated.

6.1.2 Selection Process for Chemicals of Potential Concern

The primary uncertainty associated with the COPC selection process is the possibility that a chemical may be inappropriately identified as a COPC for evaluation in the risk assessment (that is, a detected chemical may be inappropriately excluded or included as a COPC). For the HHRA, the only chemicals that were excluded from designation as COPCs were metals detected at concentrations below ambient limits and essential nutrients detected at concentrations typical of U.S. background levels. For this reason, it is unlikely that any chemicals were inappropriately excluded from the risk assessment. A more

likely error in this risk assessment is the possibility that chemicals were inappropriately included as COPCs. This is particularly the case for organic compounds.

Consistent with EPA and DTSC guidance (EPA 1989; DTSC 1992), ambient limits were not estimated for organic compounds detected in soil at Mare Island. In general, this approach is not likely to result in inappropriate COPC selection because most organic contaminants are not widespread in the environment. PAHs are an important exception at Mare Island. Although PAHs may be present at certain sites because of the nature of former activities, these compounds were found to be very widely distributed across Mare Island.

Investigations at Mare Island have characterized ambient levels of PAHs in soil that are apparently unrelated to chemical use or generation at the installation (TtEMI and LFR 1998). Other studies have also shown that there are ambient concentrations of these compounds in urban and rural soil (Agency for Toxic Substances and Disease Registry 1995). PAHs are typically detected in soil samples from rural and urban areas at concentrations that may exceed a cancer risk of 1×10^{-6}. Natural sources of PAHs include emissions from volcanoes and forest fires. The primary manmade sources are wood burning in homes, automobile and truck emissions, and other combustion sources. PAHs appear to be representative of ambient conditions based on their distribution relative to TPH and concentrations at which they were detected (concentrations generally below Navy-proposed ambient PAH levels). The spatial distribution of PAHs is discussed in detail in Section 3.3.1.1 of the RI report and sample locations and concentrations of PAHs are shown on Figures 3-6 and 3-7 of the RI report.

6.2 EXPOSURE ASSESSMENT

Uncertainties were identified in association with four areas of the exposure assessment process: (1) the selection of exposure scenarios, (2) the selection of exposure pathways, (3) the estimation of EPCs, and (4) the selection of exposure variables used to estimate chemical intake. Uncertainties in each of these areas are discussed in Section 6.2.1 through 6.2.4.

6.2.1 Exposure Scenarios

Exposure scenarios were developed based on observed and assumed land use and activity that may occur there. To the degree that actual land-use and activity patterns are not represented by those assumptions, uncertainties are introduced. For example, future land use is assumed to be commercial/industrial for all areas; however, not all areas are proposed for future commercial/industrial use (City of Vallejo 1994). Thus, exposure estimates developed under the future land-use scenario may not ultimately be applicable.

6.2.2 Selection of Exposure Pathways

The exposure pathways quantified in this risk assessment were identified on the basis of the area conceptual model, relevant site characterization data, and contaminant fate and transport considerations. To the extent that these factors may not accurately predict the migration of contaminants within and from the area, uncertainty is introduced into the exposure assessment.

6.2.3 Estimation of Exposure Point Concentrations

In general, the uncertainties associated with site characterization and the estimation of a representative EPC increase with smaller data sets. The estimation of EPCs is affected by several factors including (1) sampling strategy, (2) treatment of nondetectable concentrations and high detection limits, (3) assumptions regarding contaminant degradation over time, and (4) accuracy of modeled estimates of chemical concentrations in air.

The sample collection strategy was designed as a purposive investigation, whereby some of the samples were collected in areas of suspected or known contamination. The primary objective of this sampling effort was to define the nature and extent of contamination. The EPCs based on these nonrandom soil samples are likely to overestimate the concentrations at the exposure point as well as the actual doses. The site had few potential chemical sources, so the number of samples analyzed for particular classes of compounds (VOCs, SVOCs, and pesticides) was relatively small.

Current and future COPC concentrations and by association, the EPCs, are assumed to remain the same as those that were measured during site characterization activities. This assumption ignores the effects of various fate and transport mechanisms that will alter the composition and distribution of chemicals present in the various media. In general, the assumption of steady-state conditions results in overestimated COPC concentrations and exposure doses because contaminant concentrations generally tend to decrease over time as a result of fate and transport processes. This generally provides a conservative analysis, but it is possible for more toxic breakdown products to be formed, which would result in underestimation of risk.

In the absence of direct measurements, mathematical models were applied to estimate contaminant concentrations in air. While models cannot predict true EPCs at different times and locations or in different media, they provide a conservative estimate of the EPC under certain assumed conditions. To model concentrations of volatile compounds in air, a VF was applied to data for concentrations of the

same compounds in soil. The model did not account for attenuation of emissions by the paved surfaces or building foundations that may be present under future land use at the site.

6.2.4 Selection of Exposure Variables

The exposure variables used to estimate chemical intake are standard upperbound estimates. In reality, however, there may be considerable variation in the activity patterns and physiological response of individuals. Therefore, it is possible that the exposure variables used in this evaluation do not represent actual exposure conditions.

6.3 TOXICITY ASSESSMENT

The primary uncertainties associated with the toxicity assessment are related to derivation of toxicity values for COPCs. Standard RfDs and SFs developed by DTSC and EPA were used to estimate potential cancer and noncancer health effects from exposure to COPCs at the site. These values are derived by applying conservative (health-protective) assumptions and are intended to protect the most sensitive potentially exposed individuals.

To derive the toxicity values, EPA makes several assumptions that tend to overestimate the actual hazard or risk to human health. Because data from human studies are generally unavailable, the RfDs are typically derived from animal studies. Uncertainty factors and modifying factors are then applied to the data from animal studies to ensure that the RfDs are adequately protective of human health. For many compounds, this approach is anticipated to result in an overestimated potential for noncancer adverse health effects.

Derivation of SFs used to estimate cancer risk is also typically based on data from animal studies. These data are taken from studies in which high doses of a test chemical were administered to laboratory animals, and the reported response is extrapolated to the much lower doses to which humans are likely to be subjected. Very little experimental data are available on the nature of the dose-response relationship at low doses (for example, a threshold may exist or the dose-response curve may pass through the origin). Because of this uncertainty, EPA has selected a conservative model to estimate the low-dose relationship, and EPA uses an upperbound estimate (typically a 95 percent UCL of the slope predicted by the extrapolation model) as the SF. With this SF, an upperbound estimate of potential cancer risks is obtained.

A second uncertainty associated with toxicity values is the unavailability of RfDs or SFs for all COPCs at a site. The cancer risks and noncancer health hazards can be assessed only for those COPCs for which the relevant toxicity values are available. For organic COPCs for which a SF or an RfD was available for only one route of exposure, route-to-route extrapolations were made. These extrapolations will introduce some uncertainty into the risk and hazard estimates. Further, the use of oral toxicity values to assess the dermal pathway introduces additional uncertainty into the results; risks may be overestimated or underestimated using this approach. Risks may be underestimated for exposure to metals for which a RfD is unavailable for one or more exposure routes. Using this extrapolation approach, however, a SF was available to assess the oral, dermal, and inhalation risks for most of the carcinogenic COPCs. Similarly, an RfD was available to assess the noncancer health hazards for most COPCs.

In addition to the uncertainties associated with derivation and availability of toxicity values, the toxicity assessment is affected by chemical-specific factors for chromium and TPH, as described in Sections 6.3.1 and 6.3.2.

6.3.1 Chromium Speciation

Selection of the appropriate toxicity value for chromium depends on the chemical species of chromium that is encountered; hexavalent chromium is a potent carcinogen (by the inhalation route only), whereas trivalent chromium is not. Chromium occurs in nature primarily in the trivalent form, which is its most stable oxidation state. Hexavalent chromium is easily transformed to trivalent chromium in reducing environments such as those found in acidic soil or soil that contains iron or dissolved sulfides. Hexavalent chromium was not detected in the 15 samples for which it was an analyte, but those locations included the only two locations where total chromium concentrations exceeded the ambient limit. Accordingly, the uncertainty about the oxidation state of the chromium detected in site soils is low.

6.3.2 Surrogates for Total Petroleum Hydrocarbons

As discussed in Section 2.2.3, BTEX and PAHs were used as surrogates for the assessment of potential risk and hazards associated with TPH. The assessment of TPH was thus dependent upon the adequacy of the BTEX and PAH analytical data. Most samples were analyzed for BTEX, and the analytical results are expected to give an adequate representation of the health risks associated with potential exposure to TPH-gr. Greater uncertainty is associated with use of the PAH data because the number of analyses was limited. The magnitude of the uncertainties in the TPH assessment was assumed to be a function of the spatial distribution of TPH-dr and TPH-mr contamination, relative to the distribution of the samples analyzed for PAHs. A preliminary evaluation of the PAH and TPH data has suggested that the

compounds of these two types may not be well correlated at Mare Island (in other words, the TPH may not have contained PAHs).

6.4 RISK CHARACTERIZATION

Standard EPA methodologies were used for the risk characterization step. Using these methods, the risks from exposure to multiple carcinogens were added to estimate the total cancer risk associated with exposures at a site. The underlying assumption with this approach is that the risks from carcinogens with different target organs are additive. This assumption contributes to the uncertainty in the risk assessment and may result in underestimated or overestimated risks, depending on whether there are synergistic or antagonistic interactions between the site COPCs. Information on such interactions, however, is generally not available. Therefore, possible interactions were not evaluated in this HHRA.

Finally, the risk assessment process as a whole is composed of a series of four steps, each with inherent uncertainties, so results of the risk characterization step represent a compilation of all uncertainties linked to that process.

7.0 SUMMARY AND DISCUSSION OF HUMAN HEALTH RISK ASSESSMENT RESULTS

The objective of the site HHRA was to provide a basis for risk management decisions about cancer risks and risk of adverse noncancer health effects associated with potential human exposures to contaminants in soil and groundwater at the site. A summary of the HHRA approach and methodology and HHRA results is presented in the following sections.

7.1 HUMAN HEALTH RISK ASSESSMENT APPROACH AND METHODOLOGY

The HHRA incorporated an assumption that no further remedial actions would be conducted. The COPCs evaluated in the HHRA included metals, VOCs, SVOCs including PAHs, and organochlorine pesticides and PCBs. Potential exposed populations were limited to those potentially present under future land use and included commercial/industrial workers and construction workers. Although very unlikely, future land use could deviate from that proposed in the Mare Island reuse plan (City of Vallejo 1994) by allowing unrestricted use, and residences would be constructed at the site. Consequently, residents are considered a hypothetical, but unlikely, exposed population.

Sources of chemicals for exposure include soil and groundwater at the site. The exposure pathways considered as complete are incidental ingestion of soil, direct dermal contact with soil, inhalation of airborne particulates as dust, inhalation of VOCs released directly from soil, and inhalation of VOCs from

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
50	Residential screening levels	Section 2.5.1	Tier 2 Risk Assessment Approach for Water Board Sites in the Eastern Early Transfer Parcel, Lennar Mare Island, Vallejo, California. Pages 1 and 2. CH2M Hill. April 9 2009.

Tier 2 Risk Assessment Approach for Water Board Sites in the Eastern Early Transfer Parcel, Lennar Mare Island, Vallejo, California

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DATE: April 9, 2009

PROJECT NUMBER: 264204.18.D2.02

Introduction and Background

This technical memorandum presents the approach and assumptions used to develop the Tier 2 screening levels for constituents detected in soil and groundwater in Lennar Mare Island, LLC's, Eastern Early Transfer Parcel (EETP) in Vallejo, California. Following is a brief history of the evolution of this technical memorandum:

- CH2M HILL and the California Regional Water Quality Control Board, San Francisco Bay Region (Water Board), have discussed Tier 2 screening levels for the EETP on an ongoing basis since 2001. CH2M HILL initially proposed Tier 2 screening levels for petroleum-contaminated sites at Lennar Mare Island in 2001 (CH2M HILL 2001). In April 2007, CH2M HILL prepared and issued the technical memorandum entitled *Tier 2 Risk Assessment Approach for Underground Storage Tanks and Fuel-oil Pipeline Sites, Lennar Mare Island, Vallejo, California* (CH2M HILL 2007). That technical memorandum presented the approach to developing and using Tier 2 screening levels for the EETP and was the culmination of the discussions between 2001 and 2007.

- In May 2008, the Water Board issued the revised *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* (Water Board 2008a), which presented updated Tier 1 environmental screening levels (ESLs). In response to the Water Board's revised ESLs, CH2M HILL updated the Tier 2 screening levels for the EETP in a letter entitled "Tier 2 Screening Levels for the Eastern Early Transfer Parcel, Mare Island, Vallejo, California," which was submitted to the Water Board on September 2, 2008 (CH2M HILL 2008). The updated Tier 2 screening levels for the EETP were discussed in detail in a meeting between CH2M HILL and the Water Board on September 22, 2008.

- On October 6, 2008, CH2M HILL and the Water Board discussed the path forward for the Tier 2 screening levels for the EETP. In that meeting, the Water Board requested that the April 11, 2007, technical memorandum (CH2M HILL 2007) be updated with the information in the September 2, 2008, letter and that additional, pertinent information be provided in a new, revised technical memorandum (Water Board 2008b).

This revised technical memorandum fulfills the request by the Water Board in October 2008. The purposes of this technical memorandum are as follows:

- Describe the methodologies and approaches used to develop Tier 2 screening levels for the EETP.
- Present the Tier 2 screening levels that CH2M HILL has developed to date for the EETP.
- Document the approach that will be followed for using Tier 1 ESLs and Tier 2 screening levels for sites in the EETP.
- Support technical discussions and decisionmaking associated with future remedial action work plans and requests for closure for sites in the EETP.

Table 1 summarizes the changes that were made to the Water Board's May 2008 Tier 1 ESLs to develop the Tier 2 screening levels for the EETP (tables and figures are located at the end of this technical memorandum). Tier 2 screening levels for the EETP are presented in Tables 2 through 8.

Summary of Environmental and Human Health Concerns Considered in Tier 1 Environmental Screening Levels

The Water Board's May 2008 revision of *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* (Water Board 2008a) presented a tiered approach to conducting risk assessments. The Water Board's tiered approach includes using Tier 1 ESLs as conservative criteria and guidance for developing Tier 2 screening levels.

Following is a summary of the environmental and human health concerns considered by the Water Board in developing Tier 1 ESLs for constituents in soil and groundwater at sites with nonpotable groundwater (Water Board 2008a):

- Soil
  - Odor (used as a ceiling value for gross contamination concerns)
  - Urban area ecotoxicity criteria
  - Human health risk from direct exposure
  - Groundwater protection from soil leaching
- Groundwater
  - Odor (used as a ceiling value for gross contamination concerns)
  - Human health risk from vapor intrusion into buildings (volatile organic compounds only)
  - Ecological risk to aquatic life from groundwater discharge to surface water bodies

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
51	Onshore ERA	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix L, Section 9.0. Tetra Tech EM Inc. September 22, 2008.

9.0 INVESTIGATION AREA A2

A screening-level ERA has been conducted for sites located in IA A2 using the methods described in Section 4.0 and following ERA guidance for Superfund (EPA 1997, 1999b). Although the draft onshore ERA document recommended performing a baseline risk assessment, additional meetings with the Navy, DTSC, EPA, USFWS, CDFG, and RWQCB on February 18, May 1, July 6, and September 1, 1999, led to a decision not to collect ecological samples at IA A2 (TtEMI 1999f). The decision not to conduct a baseline ERA was based on additional statistical methods, data analysis, and interpretation performed to address ecological concerns in IA A2. Results and discussion of these analyses are included in the following sections.

This section presents the results of the screening-level ERA. Problem formulation, including the site location and background, environmental setting, CSM, and exposure pathway evaluation, is discussed in Section 9.1. Section 9.2 evaluates potential exposure and effects. Risks to birds and mammals are discussed in Section 9.3. The uncertainty analysis and confounding effects are discussed in Section 9.4. Section 9.5 presents the summary of ecological risk in IA A2 and recommendations for risk management.

9.1 SCREENING-LEVEL PROBLEM FORMULATION (STEP 1)

The following sections describe the problem formulation for IA A2, including the site location and background, environmental setting, CSM, and potential exposure pathways. Problem formulation corresponds to Step 1 of the screening-level risk assessment process, as described in EPA guidance (1997, 1999b) and Section 1.4.

9.1.1 Site Location and Background

IA A2 contains one Group II/III site (the FNBW Area) and two offshore sites (Fleet Reserve Piers and the FNBW offshore area) and covers 67 acres in the northwestern portion of Mare Island (see Figure 9-1).

The Fleet Reserve Piers is an offshore site that was evaluated in the final Mare Island offshore ERA (TtEMI 2000e); however, risk management meetings held with the regulatory agencies in May, October, and November 2001 identified further concerns that needed to be addressed, including revision of the risk characterization for invertebrates and need for evaluation of risk to fishes and vertebrates in the offshore areas. As a result of these meetings, a preliminary revised final was submitted on February 2002 (TtEMI 2002a). Additional meetings were held on February 27 and April 24, 2002 (TtEMI 2002b, 2002c), and the revised final ERA is scheduled for submission in June 2002. Samples collected from

nearshore mudflats located in the Fleet Reserve Piers were considered in the onshore ERA in order to fully evaluate the ecosystem in this area. The mudflats are adjacent to a wetland present at the northern boundary of FNBW and are therefore evaluated as part of the FNBW onshore ERA.

The following section summarizes the location and background for the FNBW in IA A2. The site-specific RI provides a complete discussion of the site description, background, and analytical results (TtEMI 1999g).

Former North Building Ways Area

The FNBW Area is northwest of Causeway Street, between Railroad Avenue and Mare Island Strait (see Figure 9-1). The FNBW Area is 32 acres and contains Buildings 589, 593, 601, and 643 and former Buildings 491, 575, 581, 583, 587, 595, 597, and 723. The FNBW Area consists of an upland habitat, an intertidal marsh and mudflats, and an offshore area. The mudflats near shore, which are exposed during low tide, are adjacent to a wetland, which is about 100 yards wide. Remnant wood pilings, previously used as the foundation of the ways, are still present in the wetland habitat at the site, and it is not known whether the area was dredged after the structures were removed. Buildings in the area were used for a variety of purposes, but the collective former use of the area was for ship construction, and the area was known as the "Building Ways." During World War II, thousands of personnel were employed in the construction of fleet submarines, barges, and small surface craft; use of the Building Ways for ship construction was phased out after World War II (TtEMI 1998f). Most of the site currently is not in use, with the exception of the occasional storage of construction debris on the southern portion of the site. The future reuse for the uplands area site is designated as light industry.

9.1.2 Environmental Setting

TtEMI conducted a site visit in May 1998 as an initial step in this screening assessment in accordance with EPA guidance (1997, 1999b), as outlined in Section 4.0; checklists are included in Appendix H. IA A2 contains a mixture of habitats, including an upland area, an intertidal marsh and mudflats, and an offshore area. The highly disturbed upland habitat was likely a parking lot or paved area used in past industrial activities. Some areas are not paved but have carried heavy traffic; as a result, soil is highly compacted, is littered with debris, and supports only ruderal vegetation. Limited populations of small mammals are present, including the house mouse (*Mus musculus*) and jackrabbits. Although small mammals may use the disturbed upland habitat, foraging of predator species is likely to be limited. The reuse for IA A2 is as light industry; therefore, it is unlikely to provide viable upland habitat in the future (City of Vallejo 1994).

Other areas in IA A2 include a tidal wetland habitat consisting of a brackish marsh and mudflats associated with Mare Island Strait. The tidal wetland habitat consists of a low-lying, relatively flat area between the uplands and Mare Island Strait that is influenced by tidal action. This habitat also is called a coastal brackish marsh, because it represents a relatively narrow band where fresh water from the Napa River mixes with tidal saltwater from Carquinez Strait. This habitat, which is generally between 150 and 400 feet wide, is dominated with vegetation, including *Scirpus* sedge and pickleweed. As a result, this viable habitat contains various species of invertebrates (including snails, mussels, and insects), birds, small mammals, amphibians, reptiles, and, at high tide, fish. The northern area of IA A2 appears to be less disturbed than the area of the FNBW footprint, as shown on Figure 9-1. The reuse for the IA A2 wetland habitat is as open space.

9.1.3 Conceptual Site Model

The CSM for IA A2 is presented on Figure 9-2. The site primarily consists of an upland area, including existing and former buildings and structures, and the tidal wetland along Mare Island Strait. The entire site, including existing buildings, is not in use, with the exception of the occasional storage of materials on the southern portion of the site. Primary utilities at the site are storm water pipelines. As discussed in Section 9.1.1, the Navy used IA A2 for the assembly of destroyers during World War II. Potential chemicals at the site based on past activities include metals, oils, and PCBs. Metals and oils may have been released during welding, grinding, bolting, and greasing parts during ship assembly. In addition, oils may have been used as a base layer for paving at the site or as spray for mosquito control. PCBs may have leaked from former electrical transformers at the site.

Resident and colonizing plants and animals are exposed to chemicals in the area because soil and sediment at IA A2 are exposed. As a result, soil and sediment form a complete exposure pathway. Contamination, if present, was expected to be found at the surface because suspected chemicals are relatively immobile. Food-chain modeling was completed for the site to explore the ecological risk posed by this pathway, as described in Section 9.2.2.

Although future use of the site will be light industry, the upland habitat's proximity to the wetlands makes surface water and groundwater potential transport pathways. The upland portion of the site is relatively flat, with a general slope toward Mare Island Strait; a slightly elevated area (a few feet higher) separates the upland area from the wetland. The tidal wetland slopes gently toward Mare Island Strait. Habitat and receptors are present in the wetland; as a result, surface water or groundwater could be complete exposure pathways, if contamination reaches the wetland through these transport pathways. The groundwater

pathway was addressed in the RI for IA A2 (TtEMI 1999g). The potential surface water runoff pathway consists of chemicals in exposed surface soil being eroded and carried as particulate matter in surface water runoff from the upland area to the tidal wetland or Mare Island Strait. No data for surface water have been collected. However, surface water was considered an insignificant pathway because no evidence exists, such as channelization or erosion features (ruts, gullies, or streams), that surface water flows into the wetlands. The ground surface is relatively flat (slope ranges from 0.001 to 0.004 foot per foot toward the tidal wetland) and, in some areas, surface water generated during rain storms either accumulates in ponds or directly infiltrates into the subsurface sandy soil because the surface is somewhat mounded immediately adjacent to the tidal wetland. Other areas that are paved or have clay-rich surface soil tend to promote ponding. Surface water in these areas typically either evaporates or slowly infiltrates into the subsurface. Therefore, it does not appear that chemicals from the site are being transferred to the adjacent wetland by the surface water pathway.

The wind transport pathway consists of chemicals in exposed surface soil being entrained as dust in the air and being transported by wind. The direction of transport primarily would be that of the prevailing winds from the uplands to the tidal wetland or Mare Island Strait. Transport of chemicals along this pathway is considered to be inactive because of the surface cover at the site. Most of the upland portion of the site is either covered with asphalt pavement (of varying condition) or well-established grassy vegetation. Although some areas of the western part of the upland area are not as well vegetated because of occasional vehicular traffic, surface soil in these areas is largely bound together with dried clay, limiting the generation of dust. The tidal wetland area is heavily vegetated, and sediments are usually damp, precluding the generation of dust. Because this migration pathway is considered inactive, it is not discussed further in this evaluation.

9.1.4 Exposure Pathway Evaluation

Exposure to COPECs in food and incidentally ingested soil are likely to be the major routes of exposure. Exposure of representative vertebrate receptors to COPECs in IA A2 was evaluated using the following:

- Food-chain modeling to estimate potential ingested doses to representative receptors
- Comparison of site-specific doses with TRVs
- Qualitative evaluation of chemicals that have not been assigned TRVs

Food-chain models assess exposure of higher-level receptors to COPECs in ingested media. Food-chain modeling was completed for the salt marsh harvest mouse in the wetlands and the gray fox and Northern

Harrier in the uplands at IA A2. Salt marsh harvest mice were used to evaluate risk to small mammals in the wetlands along the eastern edge of IA A2. Gray foxes and Northern Harriers were used to evaluate risk to predatory mammals and birds that feed in the uplands in IA A2. Soil and sediment chemistry data were collected in IA A2; however, chemical concentrations were not directly measured in field-collected tissues. For this reason, the concentration of each COPEC in prey was estimated using an empirical BAF that was derived from tissues collected in other areas of Mare Island (IAs H, I, and J). HQs were calculated for all COECs for which the Navy has derived TRVs (EFA WEST 1997) using food-chain modeling. Other COECs were evaluated using food-chain modeling to estimate doses, and doses were evaluated qualitatively. Section 4.5.4 describes the approach to food-chain modeling. The assumptions and parameters used in the food-chain model for individual receptors are presented in Appendix G.

9.1.5 Assessment and Measurement Endpoints

Specific assessment endpoints include protection of populations of vertebrates, including mammals and birds. For special status species, protection of individuals was considered to be the assessment endpoint. These endpoints were assessed through food-chain modeling using sediment chemistry and estimated tissue data. Food-chain modeling and receptors selected for analysis were detailed in Section 4.1.2.

9.2 ASSESSMENT OF EXPOSURE AND EFFECTS (STEP 2)

The following sections describe characterization of exposure and ecological effects at IA A2. The assessment of exposure and effects corresponds to Step 2 of the screening-level risk assessment process, as described in EPA guidance (1997, 1999b) and Section 1.4.

9.2.1 Characterization of Exposure

The FNBW Area has been characterized as part of the Group II/III investigations. Analytical soil data gathered in 1998 and 1999 during Rounds 1 and 2 of the field investigation are presented here for this screening-level assessment (TtEMI 1999g). The area offshore of the FNBW Area and the Fleet Reserve Piers was also investigated as part of the final offshore ERA (TtEMI 2000e). Groundwater was not analyzed for this screening-level ERA; however, grab groundwater samples were collected, and the results are discussed in the RI for IA A2 (TtEMI 1999g). Spatial distribution maps are shown on Figures 9-3 through 9-14.

9.2.1.1 Identification of Chemicals of Potential Ecological Concern

COPECs were identified by comparing concentrations of chemicals in samples collected from the field with ambient values and toxicity benchmarks (see Section 4.3). Soil collected at depths of 0.0 to 0.5 foot bgs from 78 locations was screened using the COPEC process to evaluate the upland habitat of IA A2 that lies in the footprint of FNBW. Concentrations of chemicals in upland soils were compared with the Mare Island 95th percentile ambient fill values (PRC 1995e; TtEMI 1999b), and the results of the comparison are presented in Table 9-1. Sediment samples collected at depths of 1.0 to 1.5 feet bgs from 28 locations were screened using the ER-Ls to evaluate the mudflats in IA A2 (Long and others 1995). The results of comparisons of sediment concentrations from IA A2 with ER-Ls and ER-Ms are presented in Table 9-2.

Chemicals detected at concentrations that exceeded established ambient values for soil samples included beryllium, chromium, copper, lead, mercury, nickel, vanadium, and zinc. Additional COPECs were identified because no established ambient values were available, including barium, cobalt, molybdenum, selenium, silver, thallium, all pesticides (including total DDTs and total chlordanes), all SVOCs (including total PAHs), Aroclor-1254, Aroclor-1260, TPH-dr, TPH-mr, and TPH-gr. No clear source for contamination has been identified in IA A2.

Chemicals detected at concentrations that exceeded ER-L values in sediment samples included antimony, arsenic, cadmium, chromium, copper, lead, mercury, nickel, zinc, total DDTs, total chlordanes, and total PCBs. Additional COPECs were identified because no ER-L values were available for these chemicals, including aluminum; barium; beryllium; cobalt; manganese; molybdenum; selenium; thallium; vanadium; 1-methylnaphthalene; 1,-methylphenanthrene; 2,3,5-trimethylnaphthalene; 2,6-dimethylnaphthalene; benzo(b) fluoranthene; benzo(e)pyrene; benzo(g,h,i)perylene; benzo(k) fluoranthene; biphenyl; indeno(1,2,3-cd)pyrene; perylene; 2,4'-DDD; alpha-chlordane; endrin ketone; gamma-chlordane; methoxychlor; all PCB congeners; total PCBs; TPH-diesel; TPH-motor oil; and TPH-gr.

9.2.1.2 Nature and Extent

The summary COPEC tables show that only lead and zinc were detected at concentrations that exceeded ambient fill values for Mare Island in more than 10 percent of the soil samples. COPECs that exceeded ER-L values in more than 10 percent of the intertidal sediment samples included antimony, arsenic, chromium, copper, nickel, and total PCBs. The frequency of detection for PCBs and DDTs was low. Ambient concentrations of PAHs at Mare Island result from smelting and coal burned in the area. The random distribution of PAHs throughout the site indicates that they are present at background levels. Residual PAHs detected at the site contain little or no volatile constituents, as presented in the RI report

for IA A2 (TtEMI 1999g). This lack of volatile chemicals is expected because the leaks and spills would have occurred at the site over 40 years ago; therefore, most of the volatile chemicals have likely degraded or dispersed over time. A full discussion of PAH levels is included in the PAH technical memorandum (TtEMI 1998g).

The distribution of TPH fractions in samples of soil and sediment indicates that TPH is primarily confined to surface and subsurface soil in the uplands. Concentrations of TPH in samples of wetland sediments were generally low or not detected. The highest overall concentrations of TPH in soil samples were for the fraction that corresponds to motor-oil-range organic chemicals. The nature and extent of the high TPH concentrations detected in soil samples and their potential migration to the intertidal wetlands is discussed in Section 9.2.1.3.

Chemical concentrations measured in samples of soil and sediment from onshore (uplands and tidal wetlands) and offshore (intertidal mudflats and open water) areas have been compared graphically and statistically as part of the onshore ERA to assess whether chemicals concentrations in soil and sediment samples differ between onshore and offshore areas. Graphical and statistical comparisons were made for metals, total PAHs, and total TPH in soil and sediment samples from eight location groups. Side-by-side boxplots were prepared to facilitate rapid visual comparison of the distribution of sample concentrations among location groups. Chemical concentrations in soil and sediment samples from the eight location groups also were statistically compared using the Kruskal-Wallis test to characterize variability among location groups.

Boxplots, which are a qualitative presentation of data distribution, for IA A2 are shown on Figures 9-15 through 9-37. Outlier concentrations were present in these boxplots for aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, zinc, total PAHs, and TPH. Outliers were most frequently observed in data for samples from the uplands surface soils (0 to 0.5 foot bgs) and wetland subsurface sediments (1.0 to 1.5 feet bgs). The median concentration was above the ER-Ls for chromium, copper, lead, mercury, and zinc. The median concentration was above the ER-M for nickel, although this high level is expected to be associated with the high background levels of nickel at Mare Island.

Boxplots showed similar distributions of metals and PAHs for the onshore soils and offshore sediments. A qualitative spatial analysis of the concentrations that exceed screening values did not show a clear pattern in either the sediment or soil samples. No pattern was noted in the spatial patterns of outlier values. Therefore, concentrations of metals and PAHs in sediment in the wetlands are comparable and

consistent with offshore concentrations. Higher concentrations of TPH were detected in upland soils compared with tidal wetland and offshore sediment samples. Implications for potential TPH migration from the uplands to the wetlands are discussed in Section 9.2.1.3.

9.2.1.3 Fate and Transport

Samples were collected in IA A2 to evaluate whether chemicals were migrating from the uplands to the adjacent wetlands. Although samples were analyzed for a suite of chemicals, meetings with the Navy, DTSC, EPA, USFWS, CDFG, and RWQCB concluded that only TPH was of major concern regarding chemical transport and migration (TtEMI 1999f). Potential risk posed by the migration of TPH detected in upland soil samples to the intertidal wetlands at IA A2 was also assessed. Of the three TPH fractions, only TPH-mr was present at detectable concentrations in samples of surface sediments (0.0 to 0.5 foot bgs). The median concentration reported for TPH-mr in surface sediments was 250 mg/kg; the median was 510 mg/kg. All three TPH fractions were found at detectable concentrations in sediment samples collected from the 1.0- to 1.5-foot-bgs depth interval. The median concentration reported for TPH-mr from this depth interval was 41.2 mg/kg, and only two samples contained concentrations that exceeded 500 mg/kg. These concentrations are relatively low, and the available toxicological literature suggests that they would not be toxic to birds or mammals through ingestion, provided that the effects of TPH-mr on these receptors would be comparable to the observed effects of crude oil (Eisler and others 1977; Hartung 1995; Peakall and others 1983). All three fractions of TPH were reported at detectable concentrations in soil samples collected from the 0- to 0.5-foot-bgs depth interval. Only TPH-mr was reported at concentrations that may pose risk to ecological receptors. Eight of the 86 samples contained concentrations of TPH-mr above 1,000 mg/kg. The median concentration was 380 mg/kg; the maximum concentration was 6,600 mg/kg. Groundwater samples were also collected as part of the RI report for IA A2, and TPH was detected at very low levels (TtEMI 1999g). Because the upland area at IA A2 will be regraded and paved for light industrial use and concentrations of TPH in groundwater samples are very low, the likelihood that any TPH in soil would migrate to the wetland is low. In addition, TPH in soil is immobile and, therefore, does not pose a risk to ecological receptors in the wetlands area.

Surface water was considered an insignificant pathway for TPH for two reasons. First, no evidence exists, such as channelization and erosion that surface water flows into the wetland. Second, TPH-mr is not mobile, and no existing surface water pathway exists.

9.2.2 Characterization of Ecological Effects

Food-chain models were used to evaluate potential risk to the salt marsh harvest mouse, the gray fox, and the Northern Harrier in IA A2. Section 4.5.4 describes the overall approach to food-chain modeling, and the assumptions and parameters used in the food-chain model for individual receptors are presented in Appendix G. Section 9.1.4 describes the assumptions specific to IA A2. Dose calculations and HQs for the salt marsh harvest mouse in IA A2 are presented in Table 9-3. Dose calculations and HQs for the gray fox in IA A2 are presented in Table 9-4. Dose calculations and HQs for the Northern Harrier in IA A2 are presented in Table 9-5. COPECs that have not been assigned TRVs are evaluated qualitatively in Section 9.2.2.4.

9.2.2.1 Salt Marsh Harvest Mouse

HQs were calculated for the following inorganic COPECs present in sediments at IA A2: arsenic, cadmium, cobalt, copper, lead, manganese, mercury, nickel, selenium, thallium, and zinc. HQs were calculated for the following organic COPECs in IA A2 sediments: DDT, methoxychlor, and total PCBs. The results of the dose and HQ calculations for the salt marsh harvest mouse are shown in Table 9-3. HQs calculated using the low TRV for cobalt, mercury, selenium, thallium, DDT, methoxychlor, and total PCBs for the maximum doses were less than 1.0 for the salt marsh harvest mouse, indicating little or no risk. All HQs that exceed 1.0 for modeled COPECs are summarized in the following table.

COPEC	HQ (Maximum Dose[a]/High TRV)	HQ (Average Dose[b]/High TRV)	HQ (Maximum Dose[a]/Low TRV)	HQ (Average Dose[b]/Low TRV)
Salt Marsh Harvest Mouse				
Arsenic	0.24	0.09	3.38	1.18
Cadmium	0.24	0.02	11.27	1.09
Copper	0.02	0.01	5.19	1.52
Lead	0.04	0.01	4,907.63	1,108.17
Manganese	0.42	0.14	4.86	1.56
Nickel	0.09	0.05	21.41	12.65
Zinc	0.15	0.02	7.14	1.08

Notes:

a The maximum dose was calculated using an average ingestion rate, average body weight, a SUF of 1.0, site maximum sediment concentrations, and tissue concentrations estimated using Mare Island-specific BAFs.

b The average dose was calculated using an average ingestion rate, average body weight, a SUF of 1.0, site 95UCL sediment concentrations, and tissue concentrations estimated using Mare Island-specific BAFs.

95UCL 95th percentile upper confidence limit on the arithmetic mean
BAF Bioaccumulation factor
COPEC Chemical of potential ecological concern
HQ Hazard quotient
SUF Site use factor
TRV Toxicity reference value

HQs calculated using the high TRV for all COPECs for the salt marsh harvest mouse were below 1.0, indicating no significant or immediate risk. HQs calculated using the low TRV for arsenic, cadmium, copper, lead, manganese, nickel, and zinc for both the maximum and average dose exceed 1.0 and therefore indicate potential risk.

9.2.2.2 Gray Fox

HQs were calculated for the following inorganic COPECs present in soils at IA A2: cobalt, copper, lead, mercury, nickel, selenium, thallium, and zinc. HQs were calculated for the following organic COPECs in IA A2 soils: benzo(a)pyrene (HMW PAH), naphthalene (LMW PAH), DDT, heptachlor, gamma BHC, and methoxychlor. The results of the dose and HQ calculations for the gray fox are shown in Table 9-4. HQs calculated using the low TRV for cobalt, mercury, thallium, and all of the organic chemicals for the maximum doses were less than 1.0 for the gray fox, indicating little or no risk. All HQs that exceed 1.0 for modeled COPECs are summarized in the following table.

COPEC	HQ (Maximum Dose[a]/High TRV)	HQ (Average Dose[b]/High TRV)	HQ (Maximum Dose[a]/Low TRV)	HQ (Average Dose[b]/Low TRV)
Gray Fox				
Copper	0.01	< 0.01	2.80	0.36
Lead	0.04	< 0.01	5,944.92	717.26
Nickel	0.01	< 0.01	1.92	0.43
Selenium	0.15	0.05	3.27	0.95
Zinc	0.24	0.03	11.67	1.27

Notes:

a The maximum dose was calculated using an average ingestion rate, average body weight, average SUF, site maximum soil concentrations, and tissue concentrations estimated using Mare Island-specific BAFs.

b The average dose was calculated using an average ingestion rate, average body weight, average SUF, site 95UCL soil concentrations, and tissue concentrations estimated using Mare Island-specific BAFs.

95UCL 95th percentile upper confidence limit on the arithmetic mean
BAF Bioaccumulation factor
COPEC Chemical of potential ecological concern
HQ Hazard quotient
SUF Site use factor
TRV Toxicity reference value

HQs calculated using the high TRV for all COPECs for the gray fox were below 1.0, indicating no significant or immediate risk. HQs calculated using the low TRV for copper, lead, nickel, selenium, and zinc for the maximum dose exceed 1.0 and therefore indicate potential risk.

9.2.2.3 Northern Harrier

HQs were calculated for the following inorganic COPECs present in soils at IA A2: copper, lead, mercury, nickel, selenium, and zinc. HQs were calculated for the following organic COPECs in IA A2

soils: DDE, DDT, and total DDTs. The results of the dose and HQ calculations for the Northern Harrier are shown in Table 9-5. HQs calculated using the low TRV for mercury, nickel, and all of the organic chemicals for the maximum doses were less than 1.0 for the Northern Harrier, indicating little or no risk. All HQs that exceed 1.0 for modeled COPECs are summarized in the following table.

COPEC	HQ (Maximum Dose[b]/High TRV)	HQ (Average Dose[a]/High TRV)	HQ (Maximum Dose[b]/Low TRV)	HQ (Average Dose[b]/Low TRV)
Northern Harrier				
Copper	0.17	0.02	4.23	0.55
Lead	1.54	0.19	613.30	74.00
Selenium	0.32	0.11	1.29	0.43
Zinc	1.01	0.11	10.14	1.10

Notes:

a The maximum dose was calculated using an average ingestion rate, average body weight, a SUF of 1.0, site maximum soil concentrations, and tissue concentrations estimated using Mare Island-specific BAFs.

b The average dose was calculated using an average ingestion rate, average body weight, a SUF of 1.0, site 95UCL soil concentrations, and tissue concentrations estimated using Mare Island-specific BAFs.

95UCL 95th percentile upper confidence limit on the arithmetic mean
BAF Bioaccumulation factor
COPEC Chemical of potential ecological concern
HQ Hazard quotient
SUF Site use factor
TRV Toxicity reference value

HQs calculated using the high TRV for the maximum doses were below 1.0 for copper and selenium, indicating that concentrations of these two metals do not present an immediate or significant risk to the Northern Harrier in IA A2. HQs calculated using the high TRV for the maximum doses were slightly greater than 1.0 for lead and zinc, indicating significant or immediate risk. HQs calculated using the low TRV for both the maximum doses were greater than 1.0 for copper and selenium, indicating potential risk.

9.2.2.4 Qualitative Evaluation of Chemicals of Potential Ecological Concern without Toxicity Reference Values in IA A2

HQs could not be calculated if there was no TRV for a given COPEC. When TRVs were unavailable, a dose was calculated for each chemical detected in at least 10 percent of the samples analyzed. The dose was then compared with the doses in the reported literature associated with effect or no-effect levels for any endpoints that were tested. A more detailed description of this qualitative approach is presented in Section 4.5.4.7. Uncertainty associated with this approach is also discussed in Section 14.0.

Qualitative Evaluation of Risk to Mammals

Sufficient data are available to qualitatively evaluate the effects of modeled doses of aluminum, barium, beryllium, chromium, dieldrin, molybdenum, tin, vanadium, and chlordanes to the salt marsh harvest mouse and the gray fox, as presented in Appendix G. Table 9-6 presents a summary of the modeled doses, the measured effects of metal toxicity studies conducted using mammalian species, and the associated, allometrically converted doses. A dose was calculated for dieldrin, but little qualitative dose information is available; therefore, dieldrin is discussed in the paragraphs below.

Comparing doses from the literature with doses modeled for the salt marsh harvest mouse and gray fox reveals no indication that the concentrations of antimony, barium, beryllium, chromium, tin, and vanadium in the onshore habitats are likely to pose a risk to mammalian receptors. Modeled doses of aluminum are higher than some doses used in the literature, indicating potential risk to the salt marsh harvest mouse. Although allometrically adjusted doses could not be calculated for aluminum because of the lack of information on the body weight of test species, qualitative comparisons can be made between the rodent test species and the salt marsh harvest mouse. Laboratory studies use soluble forms of aluminum that do not necessarily represent the same bioavailability of aluminum in soils and sediments, so the dose obtained using food-chain modeling is expected to be very conservative. Most of the aluminum at Mare Island is not expected to be soluble or readily extractable through ingestion. Doses obtained using food-chain modeling for molybdenum to the salt marsh harvest mouse are also slightly higher than the allometrically converted, no-effects doses obtained based on the literature, but are much lower than the low effects level. However, the doses obtained using food-chain modeling are calculated using overly conservative assumptions. When considering the likely bioavailability of these metals in soils and sediments at Mare Island, the risk posed to the salt marsh harvest mouse will be minimized, with doses likely similar to the no-effects level based on the literature.

Dieldrin administered to mice had varying effects on reproduction and survival. Doses of 5 and 6.25 mg/kg-day caused high mortality, while doses of 2.5 mg/kg-day and higher caused severe behavioral abnormalities, resulting in offspring mortality as a result of abandonment and direct mortality because of behavioral abnormalities in the dam (Virgo and Bellward 1975). For comparison, the dose calculated for dieldrin for the salt marsh harvest mouse in IA A2 was 0.000004 mg/kg-day (see Table 9-3).

Qualitative Evaluation of Risk to Birds

Sufficient data are available to qualitatively evaluate the effects of modeled doses of chromium, molybdenum, and HMW PAHs to the Northern Harrier, as presented in Appendix G. Doses were

calculated for aluminum, antimony, beryllium, cobalt, vanadium, and LMW PAHs, but no qualitative dose information is available. Table 9-7 presents a summary of the modeled doses, the measured effects of metal toxicity studies conducted using avian species, and the associated, allometrically converted doses.

Comparing doses from the literature with doses modeled for the Northern Harrier reveals no indication that concentrations of chromium, molybdenum, and HMW PAHs in onshore habitats are likely to pose a risk to avian receptors. Few data describe the toxicity of antimony (Environment Canada 2000) to birds, and no data could be found regarding the toxicity of beryllium, cobalt, or vanadium to birds. For aluminum, birds are most likely to be exposed to this metal through their diets, and aluminum may be necessary to maintain calcium and phosphorus metabolism (NAS 1980). In general, diets with less than 1,000 mg/kg of aluminum are not considered to be harmful, although some effects, such as reduced food consumption and eggshell breaking strength, appear in diets containing 1,500 mg/kg of aluminum or more (Hussein and others 1988).

Information on the effects of PAH exposure on wildlife is limited, particularly for birds. PAHs such as 7,12-dimethyl-benz(a)anthracene and chrysene are highly embryotoxic. Several investigations have suggested that (1) the presence of PAHs in petroleum significantly enhances the overall embryotoxicity in avian species and (2) the relatively small percent of the aromatic hydrocarbons contributed by PAHs in petroleum may confer much of the adverse biological effects reported after eggs have been exposed to microliter quantities of constituent PAHs, frequently characterized in crude oils (Albers 1983, Hoffman and Gay 1981, both as cited in Eisler 1987b).

Chemicals of Potential Ecological Concern Without Modeled Doses

Organic soil or sediment COECs without sufficient data to calculate a dose include individual chlordanes (alpha-chlordane, gamma-chlordane, and heptachlor epoxide), which were identified as COPECs because no toxicity benchmarks exist for these chemicals. However, total chlordanes were evaluated qualitatively to represent the group, and methoxychlor and heptachlor were modeled and compared to TRVs to further represent the pesticides. Individual PAHs (including 1-methylnaphthalene; 2,3,5-trimethylnaphthalene; 2,6-dimethylnaphthalene; anthracene; benzo[a]anthracene; benzo[a]pyrene; benzo[b]fluoranthene; benzo[e]pyrene; benzo[g,h,i]perylene; benzo[k]fluoranthene; chrysene; dibenz[a,h]anthracene; fluoranthene; fluorene; indeno[1,2,3-cd]pyrene; phenanthrene; pyrene; and perylene) were identified as COPECs. These chemicals are grouped and summed as two COPECs, “high molecular weight PAHs” and “low molecular weight PAHs”, which are modeled and compared to TRVs. Similarly, Aroclor-1254

and Aroclor-1260 were identified as COPECs because no toxicity benchmarks exist, but the group "total PCBs" did not exceed the benchmark and therefore is not a COPEC.

In addition, 1-methylphenanthrene; 1,2,4-trichlorobenzene; aldrin; alpha-BHC; Aroclor-1254; Aroclor-1260; biphenyl; carbazole; delta-BHC; dieldrin; diesel range; endosulfan I; endosulfan II; endosulfan sulfate; endrin; endrin aldehyde; endrin ketone; gasoline range; pentachlorophenol; and total SVOCs were not modeled because no information is available to evaluate effects of their doses. Motor oil was also a COPEC without available chemical data to calculate a dose; potential risk from TPH to mammalian receptors has been discussed in Sections 9.2.1.2 and 9.2.1.3. Numerical criteria for oil and grease, TPH-mr, TPH-dr, gasoline, and diesel fuel range from 1,000 to 20,000 mg/kg for oil and grease (Williams and others 1991, as cited in Irwin and others 1998). As a whole, the organic COPECs are represented by chemicals and congener totals that are evaluated in Section 9.2.2, either qualitatively or using food-chain modeling.

9.3 SUMMARY OF RISK CHARACTERIZATION (STEP 2)

The risk characterization summaries for the salt marsh harvest mouse, gray fox, and Northern Harrier are presented in the following sections.

9.3.1 Risk to the Salt Marsh Harvest Mouse

HQs presented in Section 9.2.2 assume that chemicals in both sediment and tissue are 100 percent bioavailable. Additional HQs were calculated that take into account the limited bioavailability of chemicals at the site. These additional HQs were calculated for both maximum and average doses and then were compared with HQs calculated based on ambient sediment conditions, as shown in Tables 9-8 and 9-9, and summarized in the following table.

COPEC	HQ (Maximum Dose[a]/High TRV)	HQ (Average Dose[b]/High TRV)	HQ (Ambient Dose[c]/High TRV)	HQ (Maximum Dose[a]/Low TRV)	HQ (Average Dose[b]/Low TRV)	HQ (Ambient Dose[c]/Low TRV)
Salt Marsh Harvest Mouse						
Arsenic	0.24	0.09	0.07	3.36	1.17	1.01
Cadmium	0.24	0.02	0.01	10.57	1.03	0.50
Copper	0.02	0.01	< 0.01	4.47	1.31	0.94
Lead	< 0.01	< 0.01	< 0.01	120	27.1	12.3
Manganese	0.42	0.14	NA	4.86	1.56	NA

(Continued)

COPEC	HQ (Maximum Dose[a]/High TRV)	HQ (Average Dose[b]/High TRV)	HQ (Ambient Dose[c]/High TRV)	HQ (Maximum Dose[a]/Low TRV)	HQ (Average Dose[b]/Low TRV)	HQ (Ambient Dose[c]/Low TRV)
Salt Marsh Harvest Mouse						
Nickel	< 0.01	< 0.01	< 0.01	0.61	0.36	0.42
Zinc	0.12	0.02	0.01	6.00	0.91	0.51

Notes: Sediment concentrations adjusted for the bioavailability of arsenic, cadmium, copper, lead, manganese, nickel, and zinc. Tissue concentrations are adjusted for the bioavailability of lead and nickel.

a The maximum dose was calculated using an average ingestion rate, average body weight, a SUF of 1.0, site maximum sediment concentrations, and tissue concentrations estimated using Mare Island-specific BAFs.

b The average dose was calculated using an average ingestion rate, average body weight, a SUF of 1.0, site 95UCL sediment concentrations, and tissue concentrations estimated using Mare Island-specific BAFs.

c The ambient dose was calculated using an average ingestion rate, average body weight, a SUF of 1.0, RWQCB San Francisco estuary ambient concentrations (100 percent fines) for sediment (California Regional Water Quality Control Board 1998), and tissue concentrations estimated using Mare Island-specific BAFs.

95UCL 95th percentile upper confidence limit on the arithmetic mean
BAF Bioaccumulation factor
COPEC Chemical of potential ecological concern
HQ Hazard quotient
SUF Site use factor
TRV Toxicity reference value

None of the HQs for the salt marsh harvest mouse calculated using the high TRV exceed 1.0, indicating that estimated doses were all below effects levels represented by the high TRV. Therefore, no significant or immediate risk exists to the salt marsh harvest mouse. In contrast, HQs calculated using the low TRV for maximum doses reveal that arsenic, cadmium, copper, lead, manganese, and zinc may present a potential risk to salt marsh harvest mice that feed in this area, particularly individual mice that feed in areas with the highest concentrations. However, ambient HQs calculated using the low TRV were greater than 1.0 for arsenic and lead, implying that background concentrations of these chemicals at Mare Island are elevated.

Figures 9-38 through 9-43 show the range of estimated daily doses calculated with a constant prey concentration for arsenic, cadmium, copper, lead, manganese, and zinc, respectively, for the salt marsh harvest mouse. The prey concentration was calculated using the 95UCL for sediment and the average BAF. For arsenic and cadmium, most estimated daily doses fall between the doses associated with the low TRV (0.39 and 0.06 mg/kg-day, respectively) and ambient dose (0.44 and 0.06 mg/kg-day, respectively), as shown in the frequency histogram. Although some arsenic daily doses exceed the ambient dose, all daily doses are at least an order of magnitude lower than the dose associated with the high TRV (5.39 mg/kg-day). For cadmium, about 5 of 33 estimated doses exceed ambient; the dose resulting when the exposure is from prey ingestions only (that is, the contribution from soil is set to zero) is equivalent to both the low TRV and ambient doses. The distribution of point doses for copper, lead, and zinc follow a similar pattern: several doses fall below the ambient and prey-only doses, although the

densest 50 percent of the doses fall above these benchmarks, indicating the potential for effects from these chemicals. For each of these three chemicals, the maximum daily dose is one or two orders of magnitude lower than the dose associated with the high TRV and the daily doses are within the same order of magnitude as the ambient dose. No ambient dose could be calculated for manganese.

It is likely that these metals will be present in a form that is less bioavailable than was used to calculate TRVs, thereby potentially decreasing the risk posed by these metals. When nickel concentrations were adjusted for bioavailability in sediment, the resulting HQs for the maximum and average doses did not exceed 1.0, indicating little or no risk. For example, the low TRV for lead was derived from a study (Krasovskii and others 1979) in which a very soluble form of lead (lead acetate) was fed to rats in drinking water. This implies several overly conservative assumptions, including that lead acetate is the form received by receptors at Mare Island and that site-specific sediment and chemical conditions at Mare Island that affect the bioavailability of the form of lead in sediments are the same as in the controlled laboratory conditions used to generate the low TRV. Based on the history of site use at Mare Island, it is unlikely that the lead in sediments at IA A2 is not in a soluble organic form. It is likely to be a much less soluble form, bound within metal fragments and strongly adsorbed to organic matter in sediment. Therefore, it is likely that the TRV for lead overestimates risk. Similar arguments can be made for arsenic (sodium arsenite in drinking water), cadmium (soluble cadmium chloride in drinking water), copper (administered as soluble cupric sulfate in drinking water), manganese (as manganese oxide), nickel (as nickel chloride), selenium (as selenite and selenate), and zinc (as zinc carbonate) (Schroeder and others 1968; Webster 1988; Pocino and others 1991; Gray and Laskey 1980; Smith and others 1993; Harr and others 1996; Aughey and others 1977). In addition, the low TRV for lead for mammalian receptors was not based on a no-effects level dose, but rather on the lowest-known-effects-level dose. This dose was then increased by 10 percent to account for uncertainty. A similar uncertainty factor was applied to copper, manganese, nickel, and zinc.

In addition, assumptions in the food-chain model are conservative and therefore may overestimate risk. An SUF of 1.0 was assumed for the salt marsh harvest mouse, for example, suggesting that they inhabit the area 100 percent of the time, but this is not always the case. The home range for the salt marsh harvest mouse varies from 0.40 to 0.64 acre (Golley and others 1975). This home range is considerably less than the area of the IA A2 wetlands (18.1 acres). However, the portion of the wetlands dominated by pickleweed forms only a small part of the wetlands.

9.3.2 Risk to the Gray Fox

HQs presented in Section 9.2.2 assume that chemicals in both soil and tissue are 100 percent bioavailable. Additional HQs were calculated that take into account the limited bioavailability of chemicals at the site. These additional HQs were calculated for average doses and then were compared with HQs calculated based on ambient soil conditions, as shown in Tables 9-10 and 9-11, and summarized in the following table.

COPEC	HQ (Maximum Dose[a]/High TRV)	HQ (Average Dose[b]/High TRV)	HQ (Ambient Dose[c]/High TRV)	HQ (Maximum Dose[a]/Low TRV)	HQ (Average Dose[b]/Low TRV)	HQ (Ambient Dose[c]/Low TRV)
Gray Fox						
Lead	< 0.01	< 0.01	< 0.01	130	15.7	7.92
Nickel	0.27	NC[d]	< 0.01	63.41	NC[d]	0.10
Selenium	0.15	0.05	NA	3.27	1.09	NA
Zinc	0.24	0.03	0.03	11.33	1.23	1.32

Notes: Soil concentrations are adjusted for the bioavailability of lead, nickel, and zinc. Tissue concentrations are adjusted for the bioavailability of lead and nickel.

a The maximum dose was calculated using an average ingestion rate, average body weight, a SUF of 1.0, site maximum soil concentrations, and tissue concentrations estimated using Mare Island-specific BAFs.

b The average dose was calculated using an average ingestion rate, average body weight, a SUF of 1.0, site 95UCL soil concentrations, and tissue concentrations estimated using Mare Island-specific BAFs.

c The ambient dose was calculated using an average ingestion rate, average body weight, a SUF of 1.0, Mare Island 95th percentile ambient fill concentrations (PRC Environmental Management Inc. 1995e; Tetra Tech EM Inc. 1999b) for soil concentrations, and tissue concentrations estimated using Mare Island-specific BAFs.

d Not calculated (NC) because the HQ presented in Section 9.2.2 did not exceed 1.0.

95UCL 95th percentile upper confidence limit on the arithmetic mean
BAF Bioaccumulation factor
COPEC Chemical of potential ecological concern
HQ Hazard quotient
SUF Site use factor
TRV Toxicity reference value

None of the HQs for the gray fox calculated using the high TRV exceed 1.0, indicating that estimated doses were all below effects levels represented by the high TRV. Therefore, no significant or immediate risk exists to the gray fox. In contrast, HQs calculated using the low TRV for maximum concentrations exceed 1.0 for lead, nickel, selenium, and zinc, indicating that these chemicals may present a potential risk to gray fox that forage in this area, particularly an individual fox that forages in areas with the highest concentrations. However, ambient HQs calculated using the low TRV were greater than 1.0 for lead and zinc, implying that background concentrations of these chemicals at Mare Island are elevated. As previously discussed in Section 9.3.1, it is likely that the TRV for lead overestimates risk. The low TRV for lead was not based on a no-effects level dose, but rather on the lowest-known-effects-level dose. This

dose was then increased by 10 percent to account for uncertainty. A similar uncertainty factor was applied to nickel and zinc.

Figures 9-44 through 9-46 show the range of estimated daily doses calculated with a constant prey concentration for lead, selenium, and zinc, respectively, for the gray fox. The prey concentration was calculated using the 95UCL for soil and the average BAF. For lead and zinc, most estimated daily doses fall between the doses associated with ambient and the prey-only dose, as shown in the frequency histograms for these chemicals; this is consistent with the finding that ambient HQs were greater than 1.0 for these two chemicals. For selenium, the distribution of point doses shows two distinct groupings of doses; however, most doses are similar to the low TRV and prey-only doses and an order of magnitude lower than the dose associated with the high TRV. No ambient dose could be calculated for selenium.

Assumptions in the food-chain model are conservative and therefore may overestimate risk. An SUF of 1.0 was assumed for the gray fox, for example. However, the home range for the gray fox varies from 32 to 1,900 acres (Trapp and Hallberg 1975, as cited in Zeiner and others 1990a), and averages 320 acres in studies conducted near Davis, California (Fuller 1978, as cited in Zeiner and others 1990a). These home ranges exceed the area of IA A2. In addition, the upland habitat at IA A2 is highly disturbed, provides marginal habitat for the gray fox, and is probably only occasionally used for foraging.

9.3.3 Risk to the Northern Harrier

HQs presented in Section 9.2.2 assume that chemicals in both soil and tissue are 100 percent bioavailable. Additional HQs were calculated that take into account the limited bioavailability of chemicals at the site. These additional HQs were calculated for both maximum and average doses and then were compared with HQs calculated based on ambient soil conditions, as shown in Tables 9-12 and 9-13, and summarized in the following table.

COPEC	HQ (Maximum Dose[a]/High TRV)	HQ (Average Dose[b]/High TRV)	HQ (Ambient Dose[c]/High TRV)	HQ (Maximum Dose[a]/Low TRV)	HQ (Average Dose[b]/Low TRV)	HQ (Ambient Dose[c]/Low TRV)
Northern Harrier						
Copper	0.16	NC[d]	0.03	4.05	NC[d]	0.71
Lead	1.47	0.04	0.02	587.10	14.44	7.30

(Continued)

COPEC	HQ (Maximum Dose[a]/High TRV)	HQ (Average Dose[b]/High TRV)	HQ (Ambient Dose[c]/High TRV)	HQ (Maximum Dose[a]/Low TRV)	HQ (Average Dose[b]/Low TRV)	HQ (Ambient Dose[c]/Low TRV)
Northern Harrier						
Selenium	0.32	NC[d]	NA	1.29	NC[d]	NA
Zinc	1.01	0.03	0.03	10.06	0.27	0.29

Notes: Soil concentrations are adjusted for the bioavailability of lead, nickel, and zinc. Tissue concentrations are adjusted for the bioavailability of lead and nickel.

a The maximum dose was calculated using an average ingestion rate, average body weight, a SUF of 1.0, site maximum soil concentrations, and tissue concentrations estimated using Mare Island-specific BAFs.

b The average dose was calculated using an average ingestion rate, average body weight, a SUF of 1.0, site 95UCL soil concentrations, and tissue concentrations estimated using Mare Island-specific BAFs.

c The ambient dose was calculated using an average ingestion rate, average body weight, a SUF of 1.0, Mare Island 95th percentile ambient fill concentrations (PRC Environmental Management Inc. 1995e; Tetra Tech EM Inc. 1999b) for soil concentrations, and tissue concentrations estimated using Mare Island-specific BAFs.

d Not calculated (NC) because the HQ presented in Section 9.2.2 did not exceed 1.0.

95UCL 95th percentile upper confidence limit on the arithmetic mean

BAF Bioaccumulation factor

COPEC Chemical of potential ecological concern

HQ Hazard quotient

NA Not available

SUF Site use factor

TRV Toxicity reference value

None of the HQs for the Northern Harrier calculated using the high TRV exceed 1.0, with the exception of zinc, indicating that estimated doses were all below effects levels represented by the high TRV. Therefore, no significant or immediate risk exists to the Northern Harrier to copper, lead, or selenium, but probable risk may exist to Northern Harrier feeding in areas with maximum concentrations. In addition, it is unlikely that the Northern Harrier will forage exclusively in the areas with maximum chemical concentrations. HQs calculated using the low TRV for maximum concentrations exceed 1.0 for copper, lead, selenium, and zinc, also indicating potential risk to Northern Harriers that forage in areas with maximum concentrations. Ambient HQs calculated using the low TRV was greater than 1.0 for lead, implying that background concentrations of lead at Mare Island are elevated. Figure 9-47, shows the range of estimated daily doses calculated with a constant prey concentration for lead for the Northern Harrier. The prey concentration was calculated using the 95UCL for soil and the average BAF. The densest 50 percent of the daily doses fall below the dose resulting from incidental ingestion of soil containing the ambient concentration of lead.

The bioavailability of copper, lead, and selenium in tissue was not taken into account because no literature-based ratios could be calculated to adjust for the availability of these metals. However, it is

likely that these metals will be present in a form that is less bioavailable than the form used to calculate the TRVs, thereby potentially decreasing the risk posed by these metals. Levels of lead exceeded ambient concentrations in sediment calculated using the low TRV. As discussed in Section 9.3.1, the TRV for lead likely overestimates risk because a 10 percent uncertainty factor (similar to the factor applied to mammalian TRVs using different studies) was used to determine the TRV for avian receptors. A similar uncertainty factor was applied to copper and zinc.

Assumptions in the food-chain model are conservative and therefore may overestimate risk. An SUF of 1.0 was assumed for the Northern Harrier, for example, suggesting that they inhabit the area 100 percent of the time. However, the Northern Harrier's daily foraging area ranges from 30 to 640 acres, and the Harrier will fly from 1 to 5.5 miles from the communal roost to foraging areas (Craighead and Craighead 1956, as cited in Zeiner and others 1990b). Thus, the foraging range of the Northern Harrier exceeds the area of IA A2. In addition, the upland habitat at IA A2 is highly disturbed, provides marginal habitat for the Northern Harrier, and is probably only occasionally used for foraging.

9.4 UNCERTAINTY ANALYSIS

Uncertainty plays an important role in risk-based decision-making and is therefore incorporated explicitly into the risk characterization. Identifying known sources of uncertainty using conservative default assumptions allows potential error to be more explicit in the risk management process (Suter 1993). Section 14.0 provides a complete discussion of the uncertainty analysis and potential confounding factors.

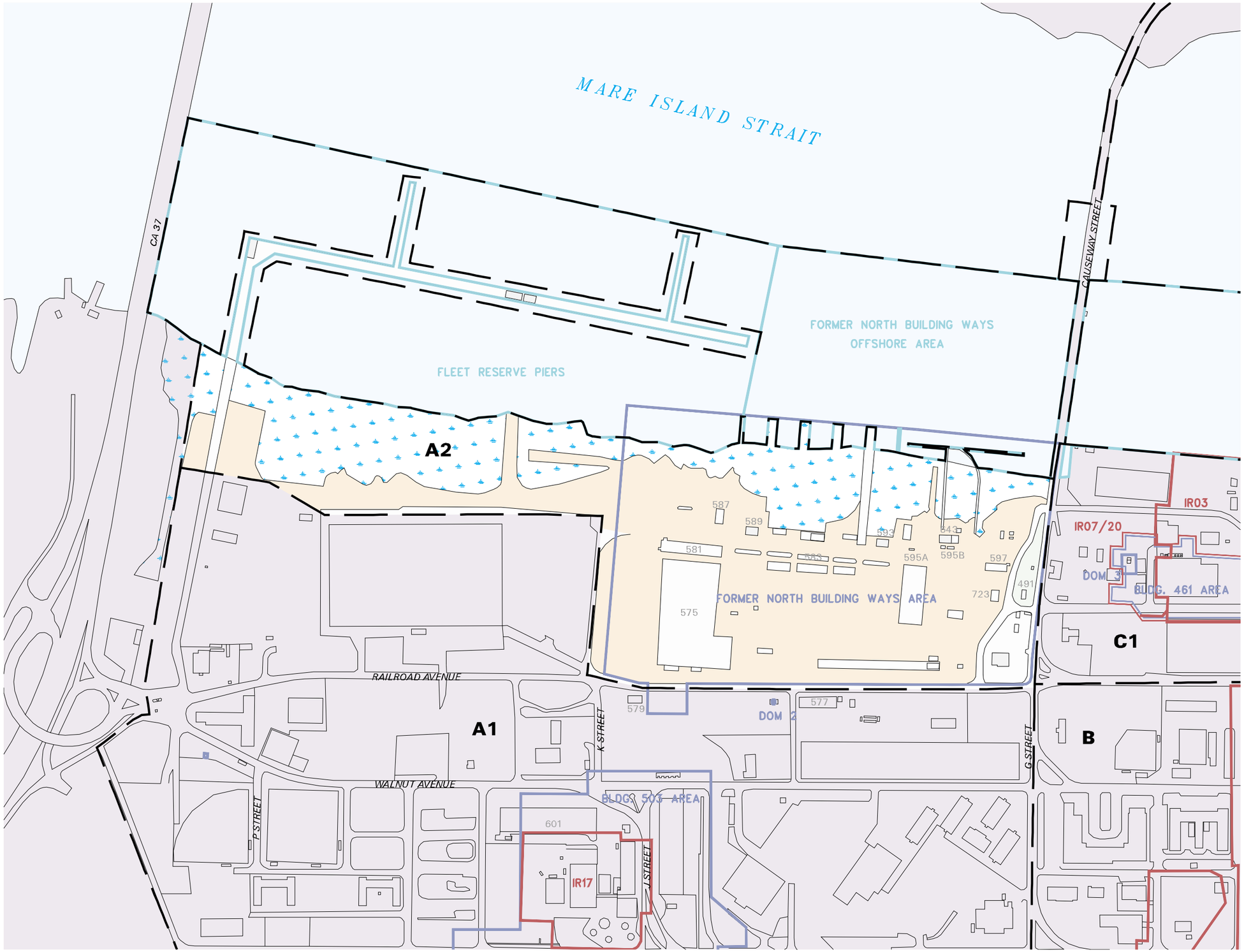
Some uncertainty is site-specific. Soil and sediment chemistry data were collected in IA A2; however, chemical concentrations were not directly measured in field-collected tissues. For this reason, the concentration of each COPEC in prey tissues was estimated using an empirical BAF that was derived from tissues collected in other areas of Mare Island (IAs H, I, and J). Collection of site-specific tissue samples would help to reduce the degree of uncertainty in exposure and in the biological fate of COECs.

The draft onshore ERA recommended sampling in the tidal wetland habitat in IA A2 to address data gaps. Meetings held in 1999 between the Navy and the regulatory agencies concluded that no additional sampling was necessary based on the results of further data analysis that were presented at the meetings (TtEMI 1999f).

9.5 CONCLUSIONS OF RISK ASSESSMENT AND RISK MANAGEMENT RECOMMENDATIONS

The results of the IA A2 screening-level ERA concluded that marginal upland and viable wetland habitats exist. In addition, soil and sediment present complete exposure pathways for ecological receptors in IA A2. Groundwater and surface water are potential transport pathways; however, they are addressed in the RI report for IA A2 (TtEMI 1999g). Although the draft onshore ERA recommended a baseline risk assessment, based on the results of additional data evaluations, the Navy and regulatory agencies agreed no ecological sampling was necessary to address potential ecological risk (TtEMI 1999f). Ecological risks appear low and exposure pathways in the upland habitat area will likely remain muted by the continued use of the site for light industry. Food-chain models indicate that the salt marsh harvest mouse, gray fox, and Northern Harrier are not at an immediate or significant risk from any COPEC modeled in IA A2; in addition, assumptions used in the food-chain model are conservative and may overestimate actual field exposures. The range of point doses calculated for all detected soil and sediment concentrations do not indicate an unacceptable risk to the receptors evaluated, because most chemical doses are similar to that associated with the low TRV or with ambient. Ecological receptors in the wetland at the FNBW Area are not at risk from concentrations of TPH in upland soils, intertidal sediments, or offshore sediments. The results of the screening-level ERA for IA A2 indicate the site does not pose unacceptable risk to ecological receptors. Based on the screening-level ERA for IA A2, no action is recommended for risk management to address ecological risk.

FIGURES



LEGEND

- GROUP II/III SITE BOUNDARY
- GROUP I OR IR SITE BOUNDARY
- OFFSHORE SITE BOUNDARY
- INVESTIGATION AREA BOUNDARY
- LANDSCAPED AREA
- UNPAVED AREA
- BUILDING/STRUCTURE
- ROAD OR OTHER PAVED AREA
- WETLAND

200 0 200 400

SCALE: 1" = 400'

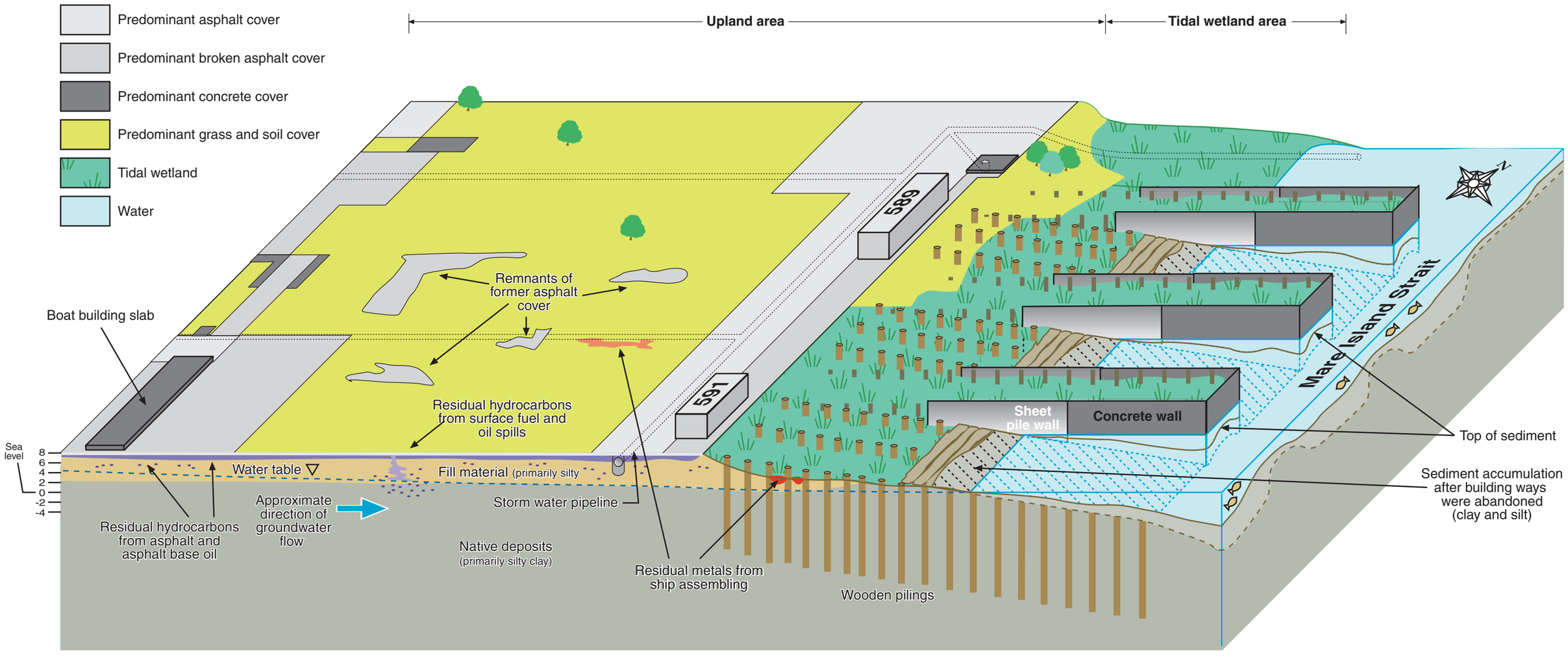
ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

FIGURE 9-1

INVESTIGATION AREA A2
SITES AND SURFACE COVER

DS.0263.14700

01/17/01 K:/MARE1SL/ONSHORE/SS_A2.MAP SITESURF.AML ROGALLP



Approximate Scale

Vertical 200 Feet

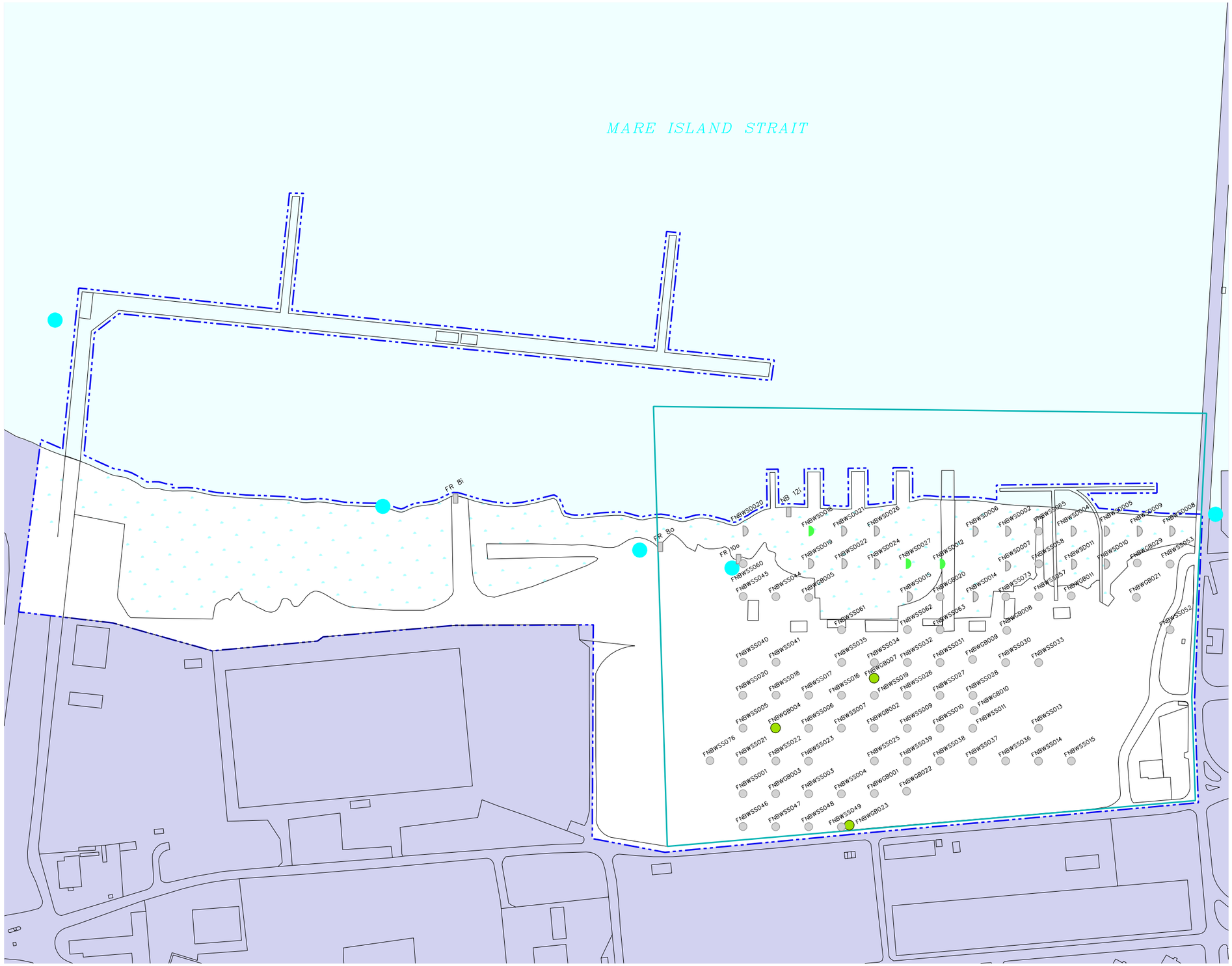
Horizontal 100 Feet

5x Vertical Exaggeration

ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

FIGURE 9-2
INVESTIGATION AREA A2
FORMER NORTH BUILDING WAYS
CONCEPTUAL SITE MODEL

DS.0263.17557



LEGEND

- ANTIMONY CONCENTRATION IS GREATER THAN OR EQUAL TO 10 X THE AMBIENT FILL CONCENTRATION (8.5 mg/kg)
- ANTIMONY CONCENTRATION IS GREATER THAN OR EQUAL TO 5 X AND LESS THAN 10 X THE AMBIENT FILL CONCENTRATION (8.5 mg/kg)
- ANTIMONY CONCENTRATION IS GREATER THAN OR EQUAL TO 1 X AND LESS THAN 5 X THE AMBIENT FILL CONCENTRATION (8.5 mg/kg)
- ANTIMONY CONCENTRATION IS LESS THAN THE AMBIENT FILL CONCENTRATION (8.5 mg/kg) OR BELOW THE DETECTION LIMIT
- ANTIMONY CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-M (25 mg/kg)
- ANTIMONY CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-L (2.0 mg/kg) AND LESS THAN THE ER-M (25 mg/kg)
- ANTIMONY CONCENTRATION IS LESS THAN THE ER-L (2.0 mg/kg)
- DEPTH RANGE 1 TO 1.5 FEET BELOW GROUND SURFACE
- DEPTH RANGE 0 TO 0.5 FEET BELOW GROUND SURFACE
- GROUP II/III SITE BOUNDARY
- INVESTIGATION AREA BOUNDARY
- WETLAND
- STORM WATER OUTFALL

NOTE:

NO WETLAND COVER VALUE IS AVAILABLE FOR ANTIMONY.

150 0 150 300

SCALE IN FEET

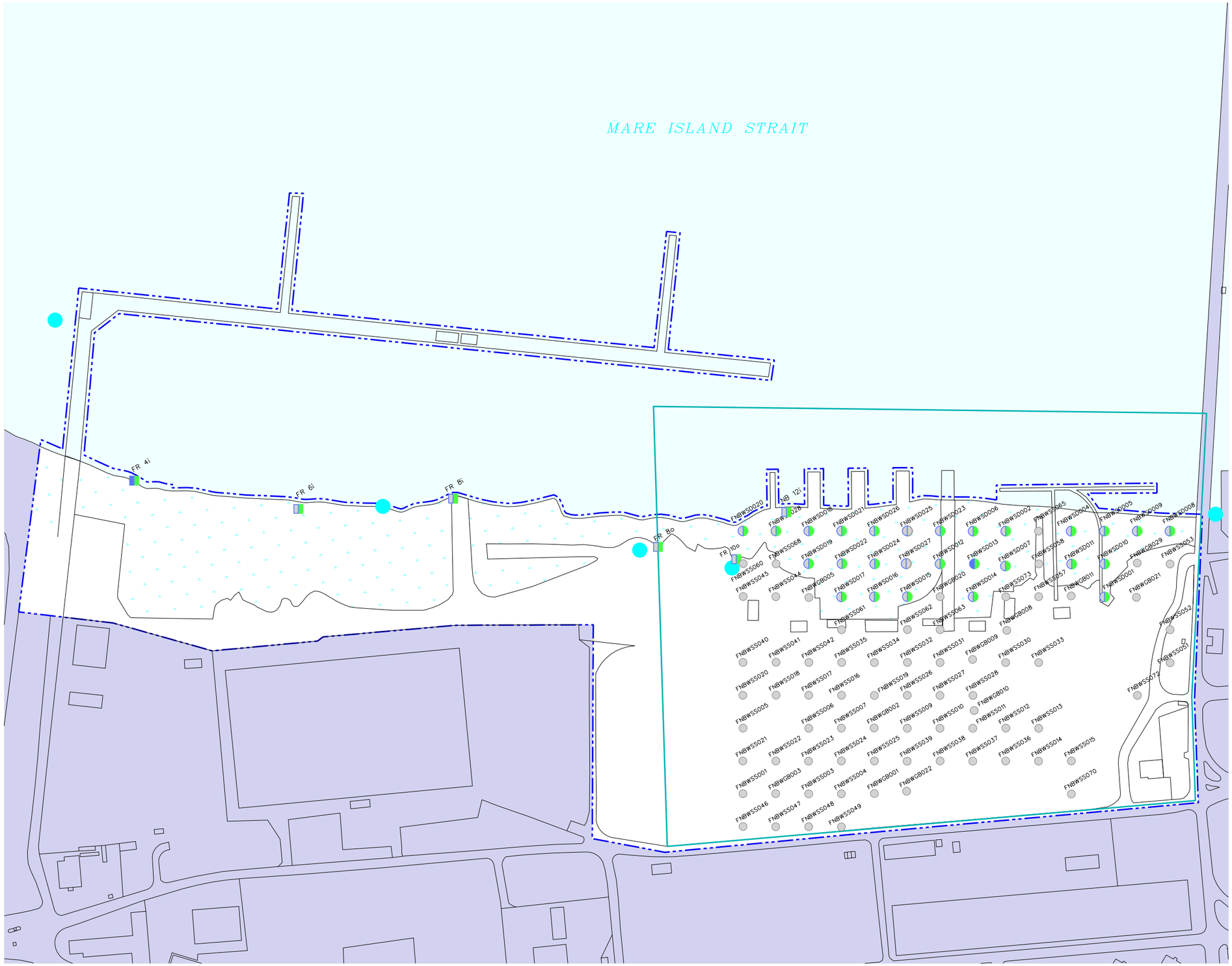
ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

FIGURE 9-3

INVESTIGATION AREA A2
ANTIMONY CONCENTRATIONS
IN SOIL AND SEDIMENT

Levels: 1 and 41
01/26/2001
j:\mi2\dgn\cto197\figs_chem.dgn

DS.0263.14700



LEGEND

- ARSENIC CONCENTRATION IS GREATER THAN OR EQUAL TO 10 X THE AMBIENT FILL CONCENTRATION (36 mg/kg)
- ARSENIC CONCENTRATION IS GREATER THAN OR EQUAL TO 5 X AND LESS THAN 10 X THE AMBIENT FILL CONCENTRATION (36 mg/kg)
- ARSENIC CONCENTRATION IS GREATER THAN OR EQUAL TO 1 X AND LESS THAN 5 X THE AMBIENT FILL CONCENTRATION (36 mg/kg)
- ARSENIC CONCENTRATION IS LESS THAN THE AMBIENT FILL CONCENTRATION (36 mg/kg) OR BELOW THE DETECTION LIMIT
- ARSENIC CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-M (70 mg/kg)
- ARSENIC CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-L (8.2 mg/kg) AND LESS THAN THE ER-M (70 mg/kg)
- ARSENIC CONCENTRATION IS LESS THAN THE ER-L (8.2 mg/kg)
- ARSENIC CONCENTRATION IS GREATER THAN OR EQUAL TO THE WETLAND COVER VALUE (33 mg/kg)
- ARSENIC CONCENTRATION IS LESS THAN THE WETLAND COVER VALUE (33 mg/kg)
- DEPTH RANGE 1 TO 1.5 FEET BELOW GROUND SURFACE
- DEPTH RANGE 0 TO 0.5 FEET BELOW GROUND SURFACE
- GROUP II/III SITE BOUNDARY
- INVESTIGATION AREA BOUNDARY
- WETLAND
- STORM WATER OUTFALL

150 0 150 300
SCALE IN FEET

ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

FIGURE 9-4

INVESTIGATION AREA A2
ARSENIC CONCENTRATIONS
IN SOIL AND SEDIMENT

Levels: 1 and 42
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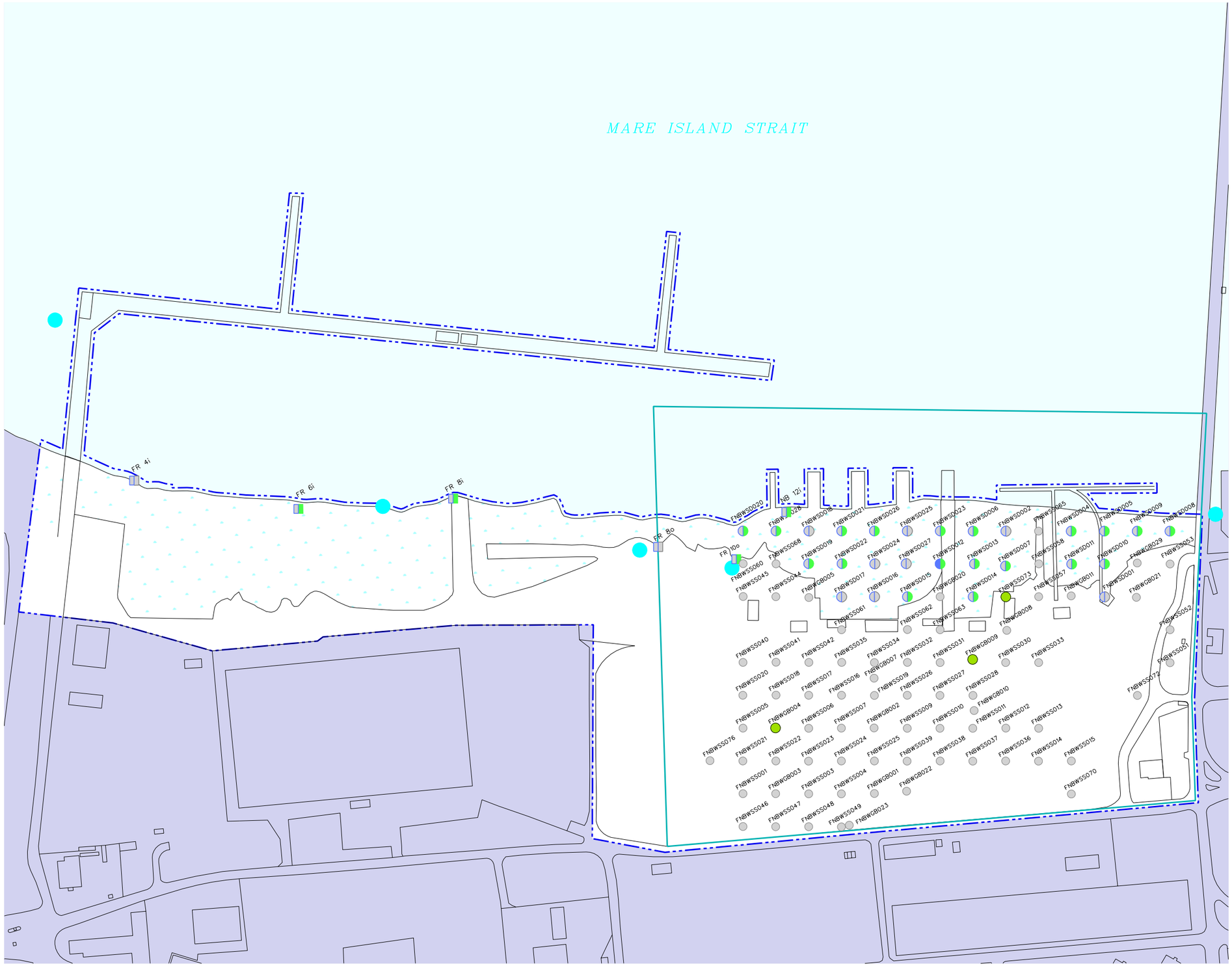

LEGEND

- CHROMIUM CONCENTRATION IS GREATER THAN OR EQUAL TO 10 X THE AMBIENT FILL CONCENTRATION (140 mg/kg)
- CHROMIUM CONCENTRATION IS GREATER THAN OR EQUAL TO 5 X AND LESS THAN 10 X THE AMBIENT FILL CONCENTRATION (140 mg/kg)
- CHROMIUM CONCENTRATION IS GREATER THAN OR EQUAL TO 1 X AND LESS THAN 5 X THE AMBIENT FILL CONCENTRATION (140 mg/kg)
- CHROMIUM CONCENTRATION IS LESS THAN THE AMBIENT FILL CONCENTRATION (140 mg/kg) OR BELOW THE DETECTION LIMIT
- CHROMIUM CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-M (370 mg/kg)
- CHROMIUM CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-L (81 mg/kg) AND LESS THAN THE ER-M (370 mg/kg)
- CHROMIUM CONCENTRATION IS LESS THAN THE ER-L (81 mg/kg)
- CHROMIUM CONCENTRATION IS GREATER THAN OR EQUAL TO THE WETLAND COVER VALUE (220 mg/kg)
- CHROMIUM CONCENTRATION IS LESS THAN THE WETLAND COVER VALUE (220 mg/kg)
- DEPTH RANGE 1 TO 1.5 FEET BELOW GROUND SURFACE
- DEPTH RANGE 0 TO 0.5 FEET BELOW GROUND SURFACE
- GROUP II/III SITE BOUNDARY
- INVESTIGATION AREA BOUNDARY
- WETLAND
- STORM WATER OUTFALL

150 0 150 300
SCALE IN FEET

ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

FIGURE 9-5

INVESTIGATION AREA A2
CHROMIUM CONCENTRATIONS
IN SOIL AND SEDIMENT

Levels: 1 and 43
01/26/2001
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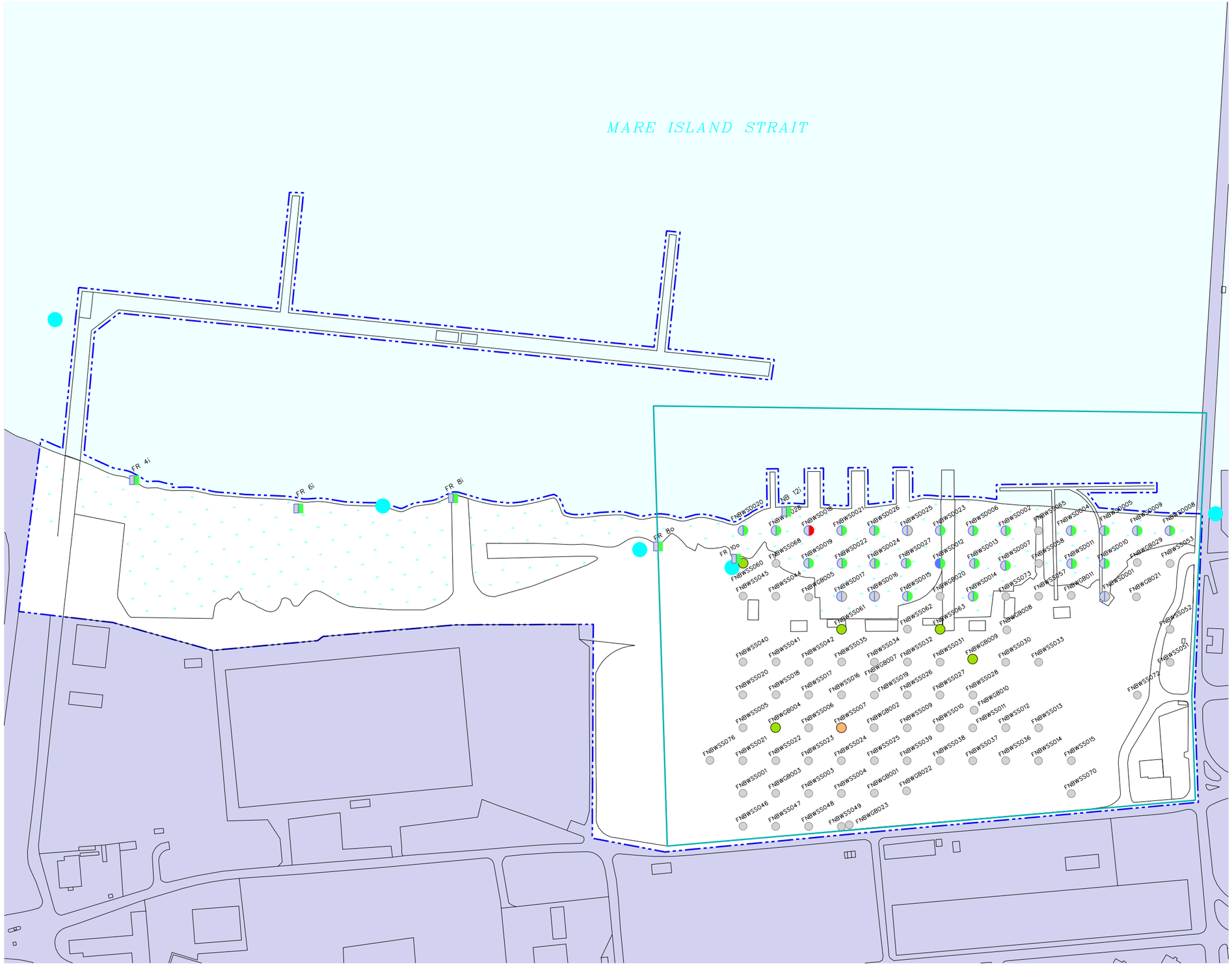

LEGEND

- COPPER CONCENTRATION IS GREATER THAN OR EQUAL TO 10 X THE AMBIENT FILL CONCENTRATION (120 mg/kg)
- COPPER CONCENTRATION IS GREATER THAN OR EQUAL TO 5 X AND LESS THAN 10 X THE AMBIENT FILL CONCENTRATION (120 mg/kg)
- COPPER CONCENTRATION IS GREATER THAN OR EQUAL TO 1 X AND LESS THAN 5 X THE AMBIENT FILL CONCENTRATION (120 mg/kg)
- COPPER CONCENTRATION IS LESS THAN THE AMBIENT FILL CONCENTRATION (120 mg/kg) OR BELOW DETECTION LIMIT
- COPPER CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-M (270 mg/kg)
- COPPER CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-L (34 mg/kg) AND LESS THAN THE ER-M (270 mg/kg)
- COPPER CONCENTRATION IS LESS THAN THE ER-L (34 mg/kg)
- COPPER CONCENTRATION IS GREATER THAN OR EQUAL TO THE WETLAND COVER VALUE (90 mg/kg)
- COPPER CONCENTRATION IS LESS THAN THE WETLAND COVER VALUE (90 mg/kg)
- DEPTH RANGE 1 TO 1.5 FEET BELOW GROUND SURFACE
- DEPTH RANGE 0 TO 0.5 FEET BELOW GROUND SURFACE
- GROUP II/III SITE BOUNDARY
- INVESTIGATION AREA BOUNDARY
- WETLAND
- STORM WATER OUTFALL

150 0 150 300
SCALE IN FEET

ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

FIGURE 9-6

INVESTIGATION AREA A2
COPPER CONCENTRATIONS
IN SOIL AND SEDIMENT

Levels: 1 and 44
01/26/2001
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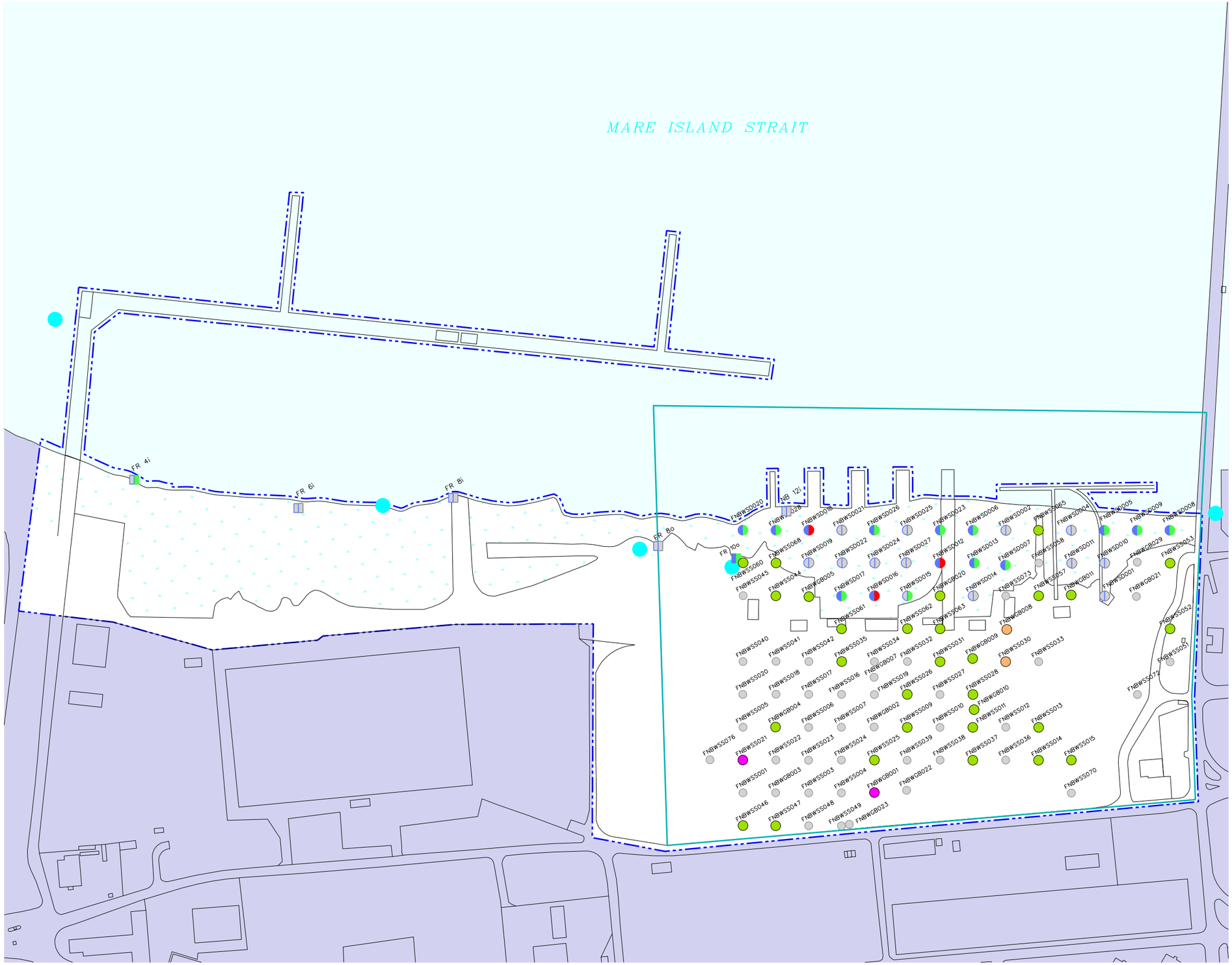

LEGEND

- LEAD CONCENTRATION IS GREATER THAN OR EQUAL TO 10 X THE AMBIENT FILL CONCENTRATION (59 mg/kg)
- LEAD CONCENTRATION IS GREATER THAN OR EQUAL TO 5 X AND LESS THAN 10 X THE AMBIENT FILL CONCENTRATION (59 mg/kg)
- LEAD CONCENTRATION IS GREATER THAN OR EQUAL TO 1 X AND LESS THAN 5 X THE AMBIENT FILL CONCENTRATION (59 mg/kg)
- LEAD CONCENTRATION IS LESS THAN THE AMBIENT FILL CONCENTRATION (59 mg/kg) OR BELOW THE DETECTION LIMIT
- LEAD CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-M (218 mg/kg)
- LEAD CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-L (46.7 mg/kg) AND LESS THAN THE ER-M (218 mg/kg)
- LEAD CONCENTRATION IS LESS THAN THE ER-L (46.7 mg/kg)
- LEAD CONCENTRATION IS GREATER THAN OR EQUAL TO THE WETLAND COVER VALUE (50 mg/kg)
- LEAD CONCENTRATION IS LESS THAN THE WETLAND COVER VALUE (50 mg/kg)
- DEPTH RANGE 1 TO 1.5 FEET BELOW GROUND SURFACE
- DEPTH RANGE 0 TO 0.5 FEET BELOW GROUND SURFACE
- GROUP II/III SITE BOUNDARY
- INVESTIGATION AREA BOUNDARY
- WETLAND
- STORM WATER OUTFALL

150 0 150 300
SCALE IN FEET

ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

FIGURE 9-7

INVESTIGATION AREA A2
LEAD CONCENTRATIONS
IN SOIL AND SEDIMENT

Levels: 1 and 45
01/26/2001
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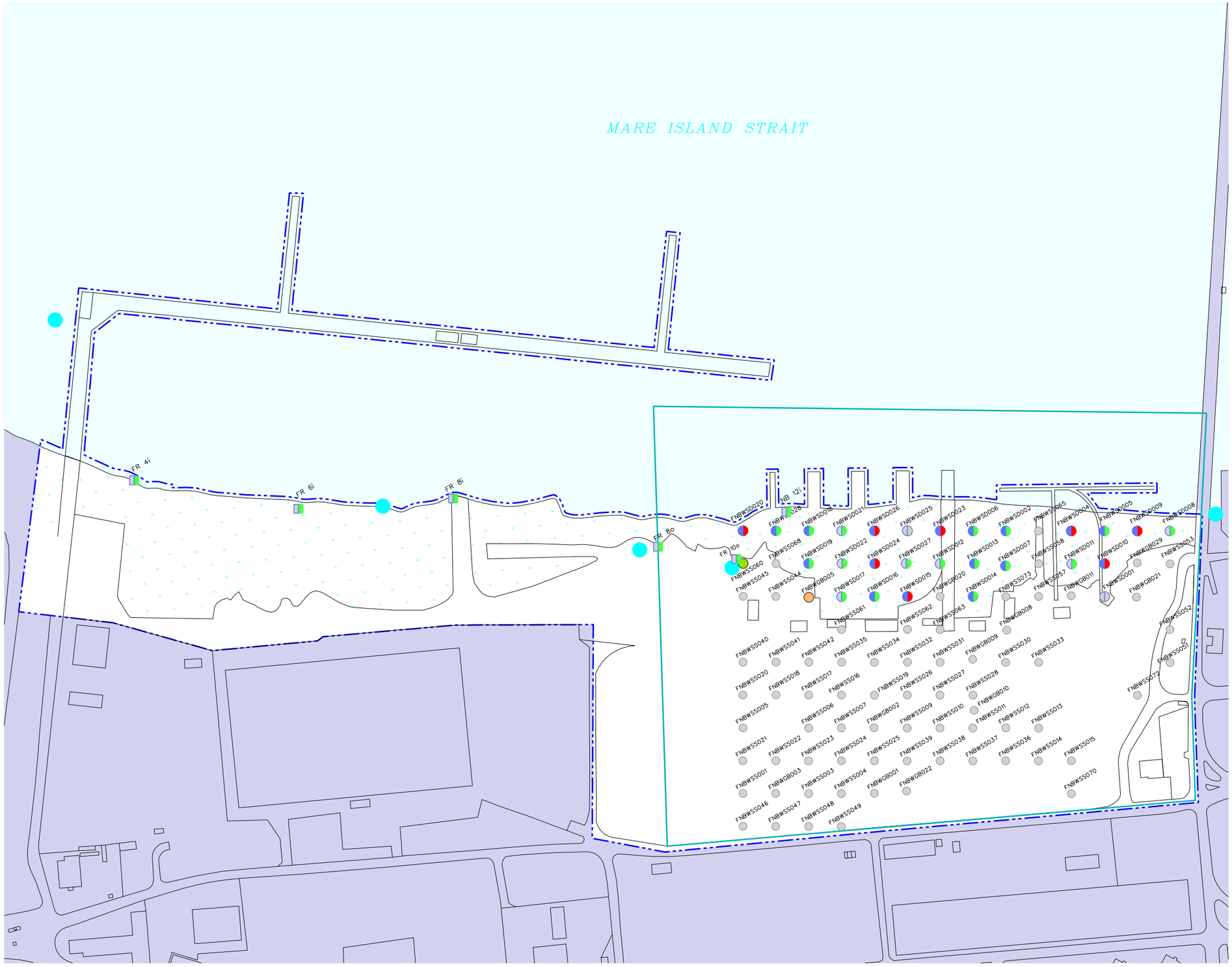

LEGEND

- MERCURY CONCENTRATION IS GREATER THAN OR EQUAL TO 10 X THE AMBIENT FILL CONCENTRATION (2.0 mg/kg)
- MERCURY CONCENTRATION IS GREATER THAN OR EQUAL TO 5 X AND LESS THAN 10 X THE AMBIENT FILL CONCENTRATION (2.0 mg/kg)
- MERCURY CONCENTRATION IS GREATER THAN OR EQUAL TO 1 X AND LESS THAN 5 X THE AMBIENT FILL CONCENTRATION (2.0 mg/kg)
- MERCURY CONCENTRATION IS LESS THAN THE AMBIENT FILL CONCENTRATION (2.0 mg/kg) OR BELOW THE DETECTION LIMIT
- MERCURY CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-M (0.71 mg/kg)
- MERCURY CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-L (0.15 mg/kg) AND LESS THAN THE ER-M (0.71 mg/kg)
- MERCURY CONCENTRATION IS LESS THAN THE ER-L (0.15 mg/kg)
- MERCURY CONCENTRATION IS GREATER THAN OR EQUAL TO THE WETLAND COVER VALUE (0.35 mg/kg)
- MERCURY CONCENTRATION IS LESS THAN THE WETLAND COVER VALUE (0.35 mg/kg)
- DEPTH RANGE 1 TO 1.5 FEET BELOW GROUND SURFACE
- DEPTH RANGE 0 TO 0.5 FEET BELOW GROUND SURFACE
- GROUP II/III SITE BOUNDARY
- INVESTIGATION AREA BOUNDARY
- WETLAND
- STORM WATER OUTFALL

N

150 0 150 300
SCALE IN FEET

ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

FIGURE 9-8

INVESTIGATION AREA A2
MERCURY CONCENTRATIONS
IN SOIL AND SEDIMENT

Levels: 1 and 46
01/26/2001
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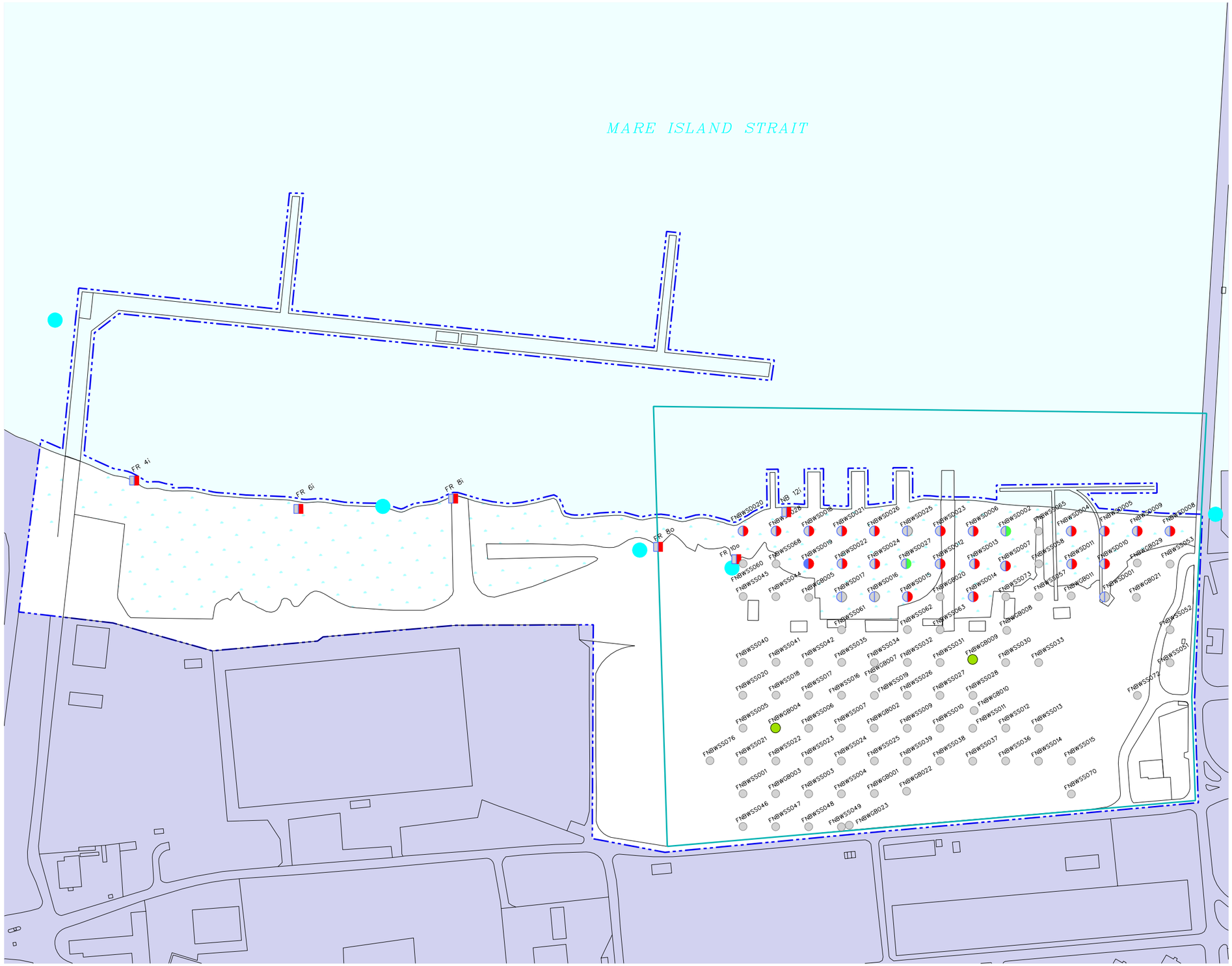

LEGEND

- NICKEL CONCENTRATION IS GREATER THAN OR EQUAL TO 10 X THE AMBIENT FILL CONCENTRATION (130 mg/kg)
- NICKEL CONCENTRATION IS GREATER THAN OR EQUAL TO 5 X AND LESS THAN 10 X THE AMBIENT FILL CONCENTRATION (130 mg/kg)
- NICKEL CONCENTRATION IS GREATER THAN OR EQUAL TO 1 X AND LESS THAN 5 X THE AMBIENT FILL CONCENTRATION (130 mg/kg)
- NICKEL CONCENTRATION IS LESS THAN THE AMBIENT FILL CONCENTRATION (130 mg/kg) OR BELOW THE DETECTION LIMIT
- NICKEL CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-M (51.6 mg/kg)
- NICKEL CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-L (20.9 mg/kg) AND LESS THAN THE ER-M (51.6 mg/kg)
- NICKEL CONCENTRATION IS LESS THAN THE ER-L (20.9 mg/kg)
- NICKEL CONCENTRATION IS GREATER THAN OR EQUAL TO THE WETLAND COVER VALUE (140 mg/kg)
- NICKEL CONCENTRATION IS LESS THAN THE WETLAND COVER VALUE (140 mg/kg)
- DEPTH RANGE 1 TO 1.5 FEET BELOW GROUND SURFACE
- DEPTH RANGE 0 TO 0.5 FEET BELOW GROUND SURFACE
- GROUP II/III SITE BOUNDARY
- INVESTIGATION AREA BOUNDARY
- WETLAND
- STORM WATER OUTFALL

150 0 150 300
SCALE IN FEET

ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

FIGURE 9-9

INVESTIGATION AREA A2
NICKEL CONCENTRATIONS
IN SOIL AND SEDIMENT

Levels: 1 and 47
01/26/2001
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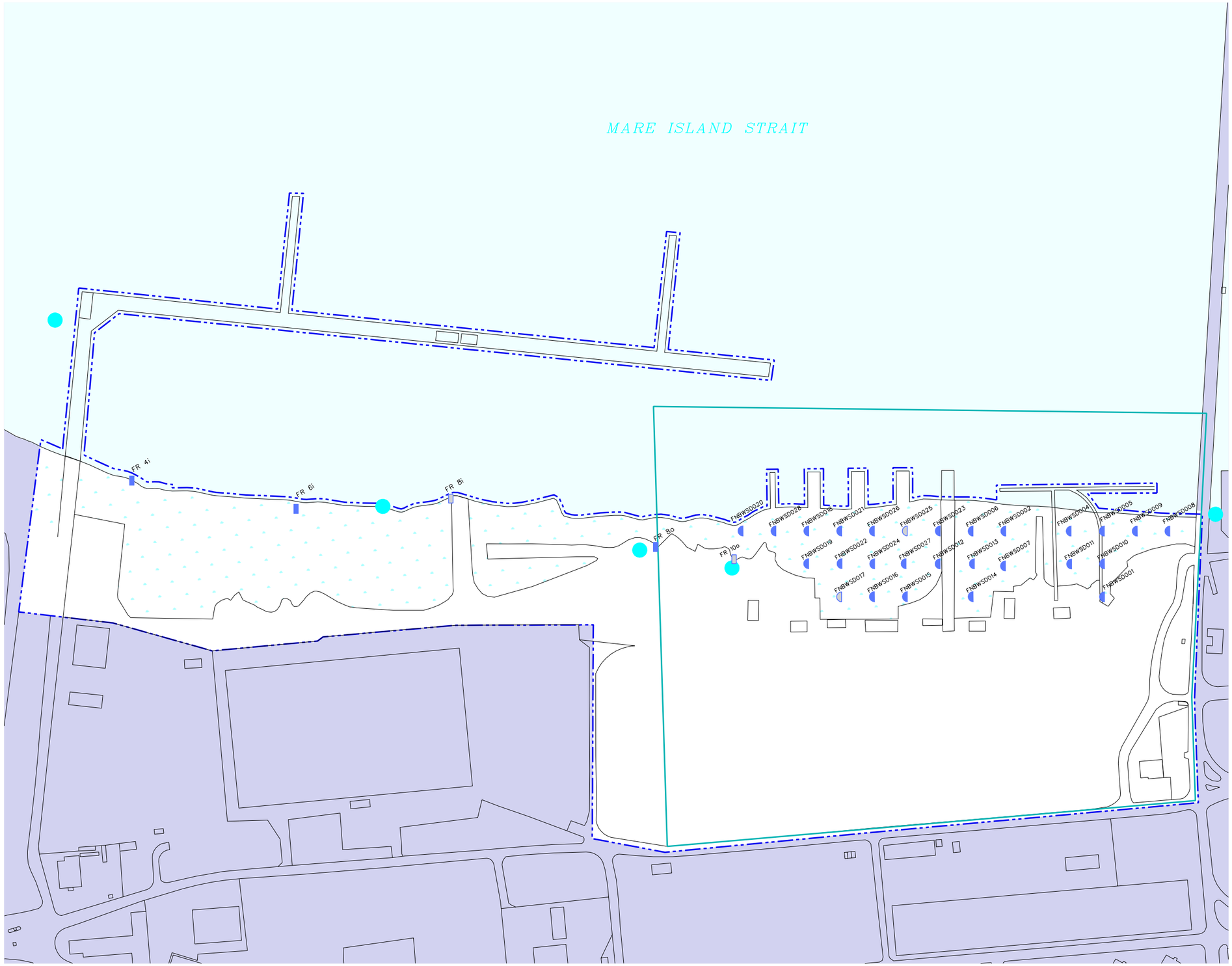

LEGEND

SELENIUM CONCENTRATION IS GREATER THAN OR EQUAL TO THE WETLAND COVER VALUE (0.7 mg/kg)

SELENIUM CONCENTRATION IS LESS THAN THE WETLAND COVER VALUE (0.7 mg/kg)

DEPTH RANGE 1 TO 1.5 FEET BELOW GROUND SURFACE

DEPTH RANGE 0 TO 0.5 FEET BELOW GROUND SURFACE

GROUP II/III SITE BOUNDARY

INVESTIGATION AREA BOUNDARY

WETLAND

STORM WATER OUTFALL

NOTE:

NO MARE ISLAND AMBIENT FILL VALUE, ER-L, OR ER-M IS AVAILABLE FOR SELENIUM.

150 0 150 300

SCALE IN FEET

ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

FIGURE 9-10

INVESTIGATION AREA A2
SELENIUM CONCENTRATIONS
IN SEDIMENT

Levels: 1 and 48
01/26/2001
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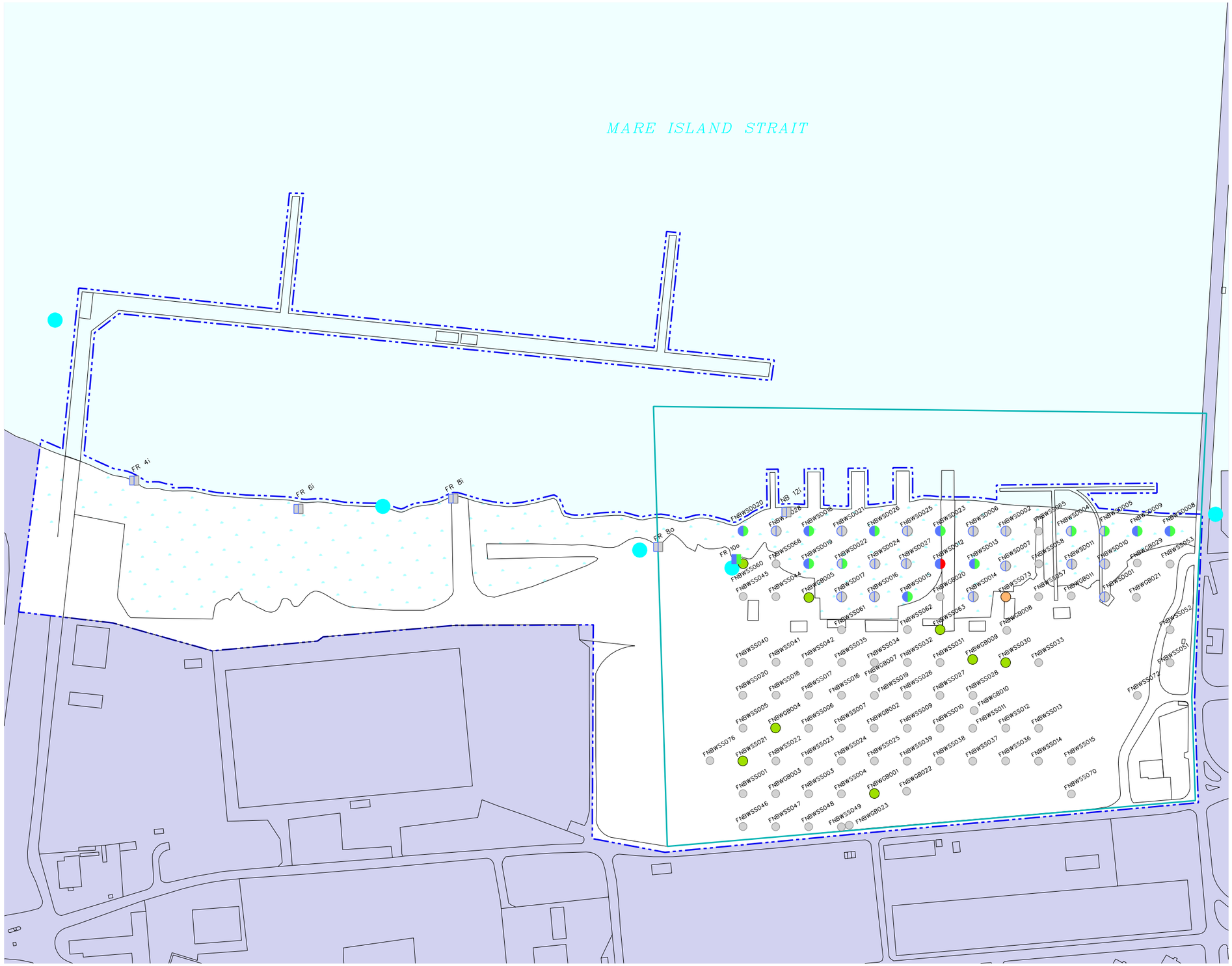

LEGEND

- ZINC CONCENTRATION IS GREATER THAN OR EQUAL TO 10 X THE AMBIENT FILL CONCENTRATION (230 mg/kg)
- ZINC CONCENTRATION IS GREATER THAN OR EQUAL TO 5 X AND LESS THAN 10 X THE AMBIENT FILL CONCENTRATION (230 mg/kg)
- ZINC CONCENTRATION IS GREATER THAN OR EQUAL TO 1 X AND LESS THAN 5 X THE AMBIENT FILL CONCENTRATION (230 mg/kg)
- ZINC CONCENTRATION IS LESS THAN THE AMBIENT FILL CONCENTRATION (230 mg/kg) OR BELOW THE DETECTION LIMIT
- ZINC CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-M (410 mg/kg)
- ZINC CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-L (150 mg/kg) AND LESS THAN THE ER-M (410 mg/kg)
- ZINC CONCENTRATION IS LESS THAN THE ER-L (150 mg/kg)
- ZINC CONCENTRATION IS GREATER THAN OR EQUAL TO THE WETLAND COVER VALUE (160 mg/kg)
- ZINC CONCENTRATION IS LESS THAN THE WETLAND COVER VALUE (160 mg/kg)
- DEPTH RANGE 1 TO 1.5 FEET BELOW GROUND SURFACE
- DEPTH RANGE 0 TO 0.5 FEET BELOW GROUND SURFACE
- GROUP II/III SITE BOUNDARY
- INVESTIGATION AREA BOUNDARY
- WETLAND
- STORM WATER OUTFALL

150 0 150 300
SCALE IN FEET

ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

FIGURE 9-11

INVESTIGATION AREA A2
ZINC CONCENTRATIONS
IN SOIL AND SEDIMENT

Levels: 1 and 49
01/26/2001
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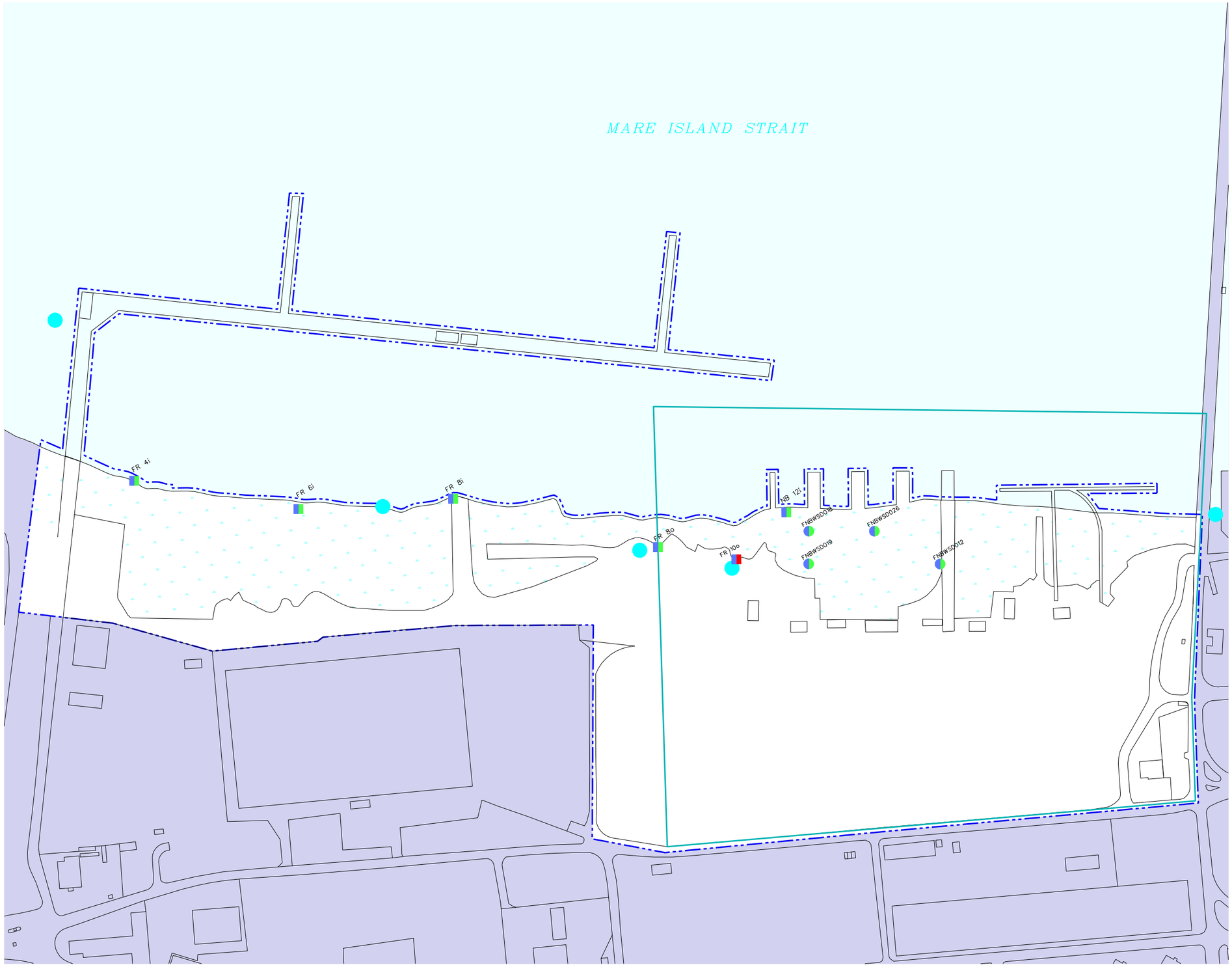

LEGEND

- TOTAL DDTs CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-M (0.0461 mg/kg)
- TOTAL DDTs CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-L (0.00158 mg/kg) AND LESS THAN THE ER-M (0.0461 mg/kg)
- TOTAL DDTs CONCENTRATION IS LESS THAN THE ER-L (0.00158 mg/kg)
- TOTAL DDTs CONCENTRATION IS GREATER THAN OR EQUAL TO THE WETLAND COVER VALUE (0.003 mg/kg)
- TOTAL DDTs CONCENTRATION IS LESS THAN THE WETLAND COVER VALUE (0.003 mg/kg)
- DEPTH RANGE 1 TO 1.5 FEET BELOW GROUND SURFACE
- DEPTH RANGE 0 TO 0.5 FEET BELOW GROUND SURFACE

- GROUP II/III SITE BOUNDARY
- INVESTIGATION AREA BOUNDARY
- WETLAND
- STORM WATER OUTFALL

NOTE:

NO MARE ISLAND AMBIENT FILL VALUE IS AVAILABLE FOR TOTAL DDTs.

150 0 150 300
SCALE IN FEET

ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

FIGURE 9-12

INVESTIGATION AREA A2
TOTAL DDTs CONCENTRATIONS
IN SEDIMENT

Levels: 1 and 50
01/26/2001
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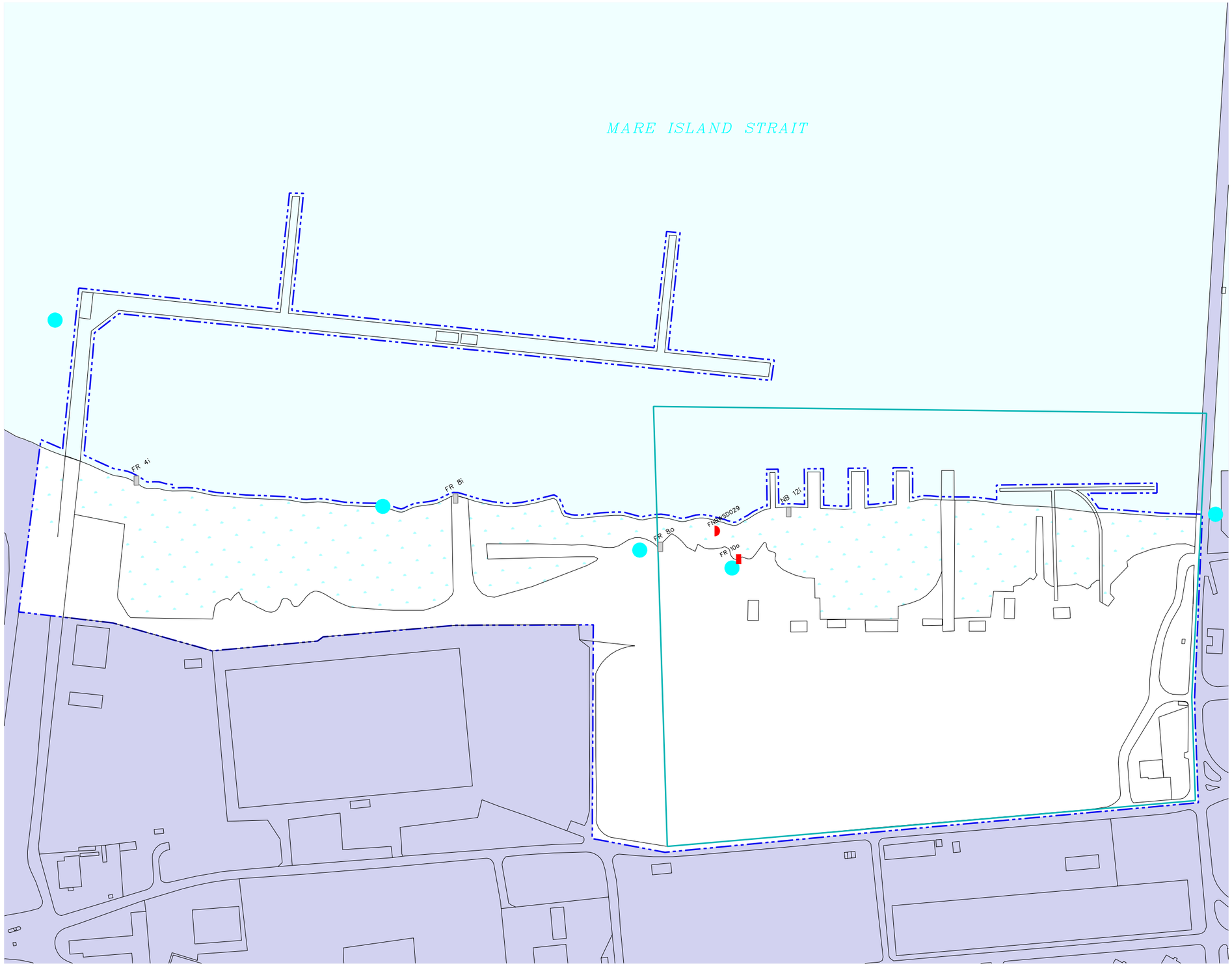

LEGEND

- TOTAL PCBs CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-M (0.18 mg/kg)
- TOTAL PCBs CONCENTRATION IS GREATER THAN OR EQUAL TO THE ER-L (0.0227 mg/kg) AND LESS THAN THE ER-M (0.18 mg/kg)
- TOTAL PCBs CONCENTRATION IS LESS THAN THE ER-L (0.0227 mg/kg)
- DEPTH RANGE 1 TO 1.5 FEET BELOW GROUND SURFACE
- DEPTH RANGE 0 TO 0.5 FEET BELOW GROUND SURFACE
- GROUP II/III SITE BOUNDARY
- INVESTIGATION AREA BOUNDARY
- WETLAND
- STORM WATER OUTFALL

NOTE:

NO MARE ISLAND AMBIENT FILL VALUE OR WETLAND COVER VALUE IS AVAILABLE FOR TOTAL PCBs.

150 0 150 300

SCALE IN FEET

ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

FIGURE 9-13

INVESTIGATION AREA A2
TOTAL PCBs CONCENTRATIONS
IN SEDIMENT

Levels: 1 and 51
01/26/2001
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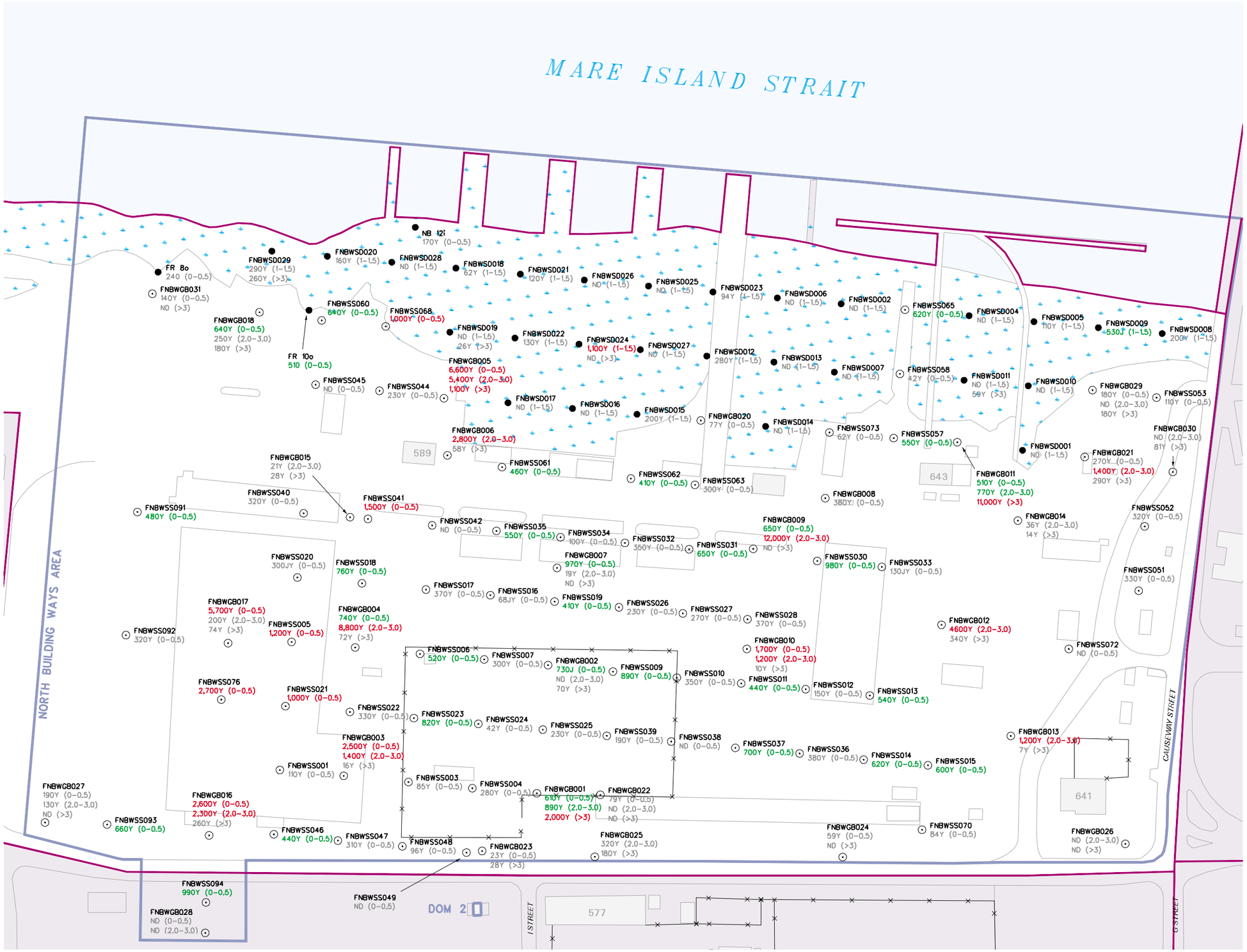

LEGEND

●	SEDIMENT MATRIX SAMPLE LOCATION
⊙	SOIL MATRIX SAMPLE LOCATION
1,100 (>3)	TPH-mr CONCENTRATION IS GREATER THAN OR EQUAL TO 1000 MG/KG (DEPTH IN FEET)
500 (>3)	TPH-mr CONCENTRATION IS GREATER THAN OR EQUAL TO 400 MG/KG AND LESS THAN 1000 MG/KG (DEPTH IN FEET)
100 (>3)	TPH-mr CONCENTRATION IS LESS THAN 400 MG/KG (DEPTH IN FEET)
ND	TPH-mr NOT DETECTED
J	ESTIMATED VALUE
Y	OTHER FUEL RANGE PRESENT
	GROUP II/III SITE BOUNDARY
	INVESTIGATION AREA BOUNDARY
	BUILDING OR STRUCTURE
	WETLAND
	FENCE

75 0 75 150

SCALE IN FEET

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ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

FIGURE 9-14

INVESTIGATION AREA A2
TPH-MOTOR OIL CONCENTRATIONS
IN SOIL AND SEDIMENT

K:/MAREISL/ONSHORE/A2TPH.MAP rogollp

01/25/01

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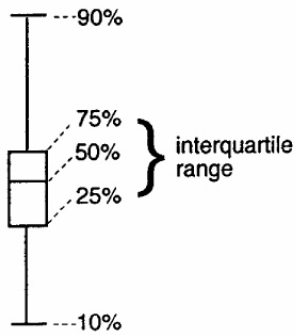
FIGURE 9-15

KEY TO BOX PLOTS AND SAMPLING LOCATIONS

BOX PLOTS



Indicates a change in the y-axis (concentration) scale

The 95th percentile for Mare Island artificial fill soils

Effects range-low (ER-L) concentration for sediments

Effects range-medium (ER-M) concentration for sediments

SAMPLING LOCATIONS (X-AXIS)

AXIS LABEL	SEDIMENT LOCATIONS[a]	DEPTH (FT BGS)
NBW(D)_0-0.5	North Building Ways (Deep Water)	0 to 0.5
NBW(S)_0-0.5	North Building Ways (Shallow Water)	0 to 0.5
FR(D)_0-5	Fleet Reserve Piers (Deep Water)	0 to 5
FR(S)_0-5	Fleet Reserve Piers (Shallow Water)	0 to 5
WET_0-0.5	Tidal Wetland	0 to 0.5
WET_1-1.5	Tidal Wetland	1 to 1.5
	SOIL LOCATIONS[b]	
UPL_0-0.5	Upland	0 to 0.5
UPL_2-3	Upland	2 to 3

[a] sediment sample locations are shown on Figures K-1 and K-2

[b] soil sample locations are shown on Plate 2-3 of Volume I

FIGURE 9-16

COMPARISON OF ALUMINUM CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

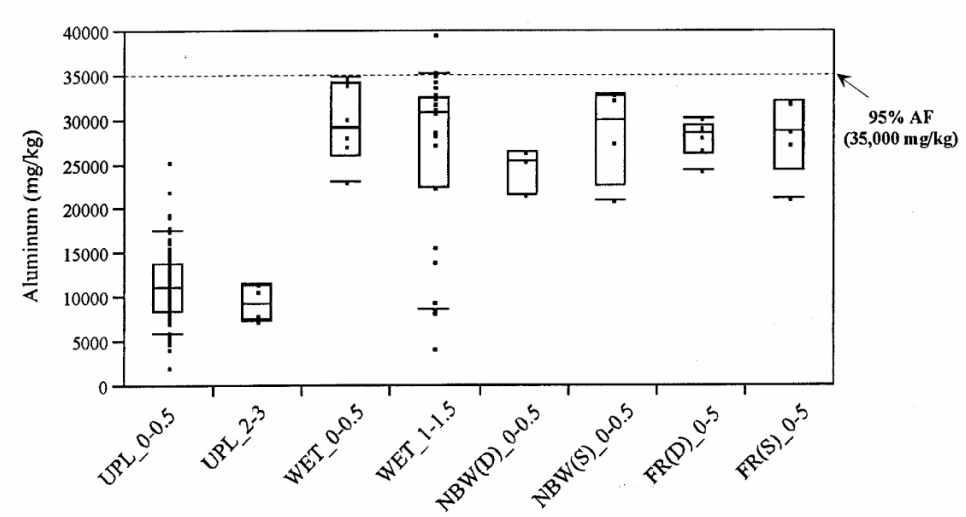


FIGURE 9-17

COMPARISON OF ANTIMONY CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

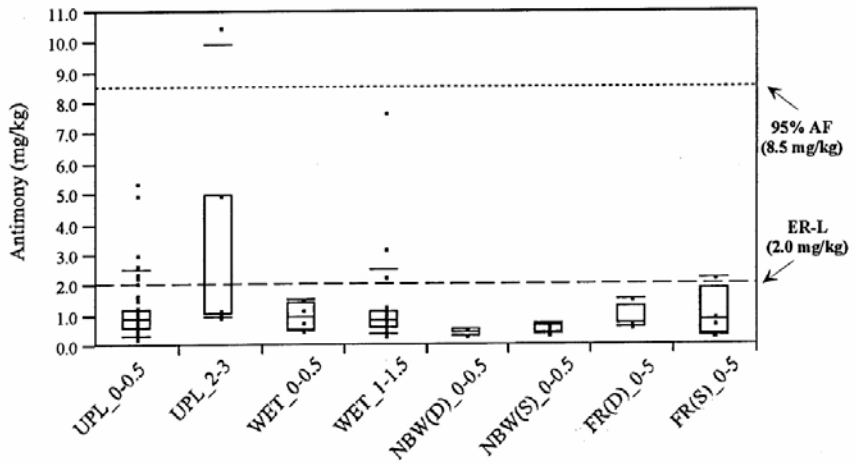


FIGURE 9-18

COMPARISON OF ARSENIC CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

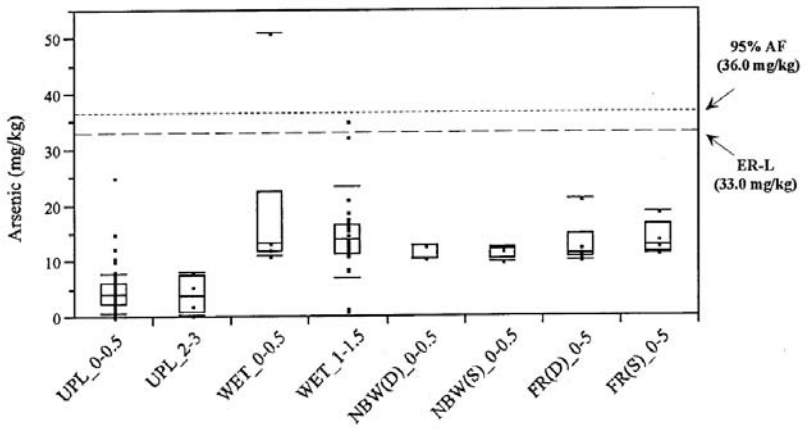


FIGURE 9-19

COMPARISON OF BARIUM CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

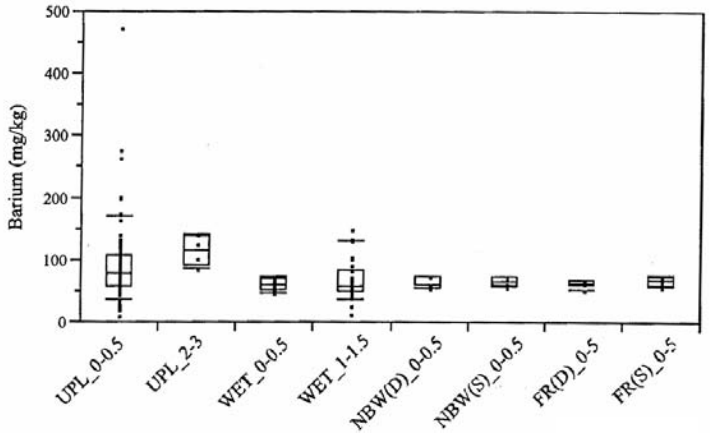


FIGURE 9-20

COMPARISON OF BERYLLIUM CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

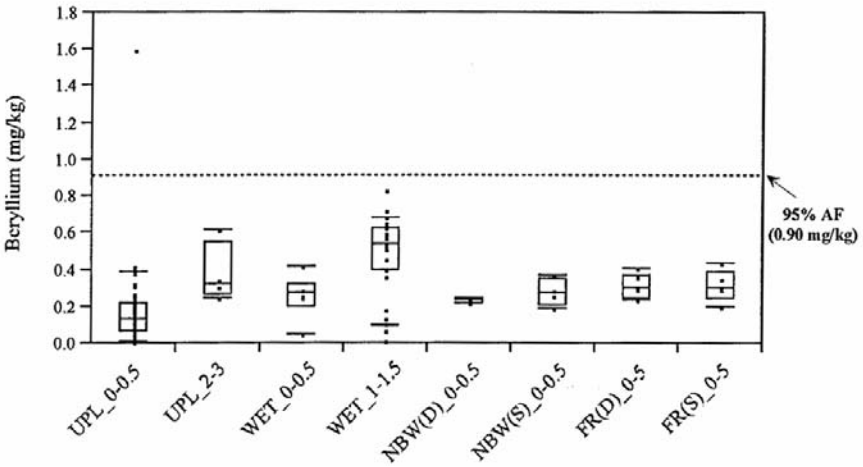


FIGURE 9-21

COMPARISON OF CADMIUM CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

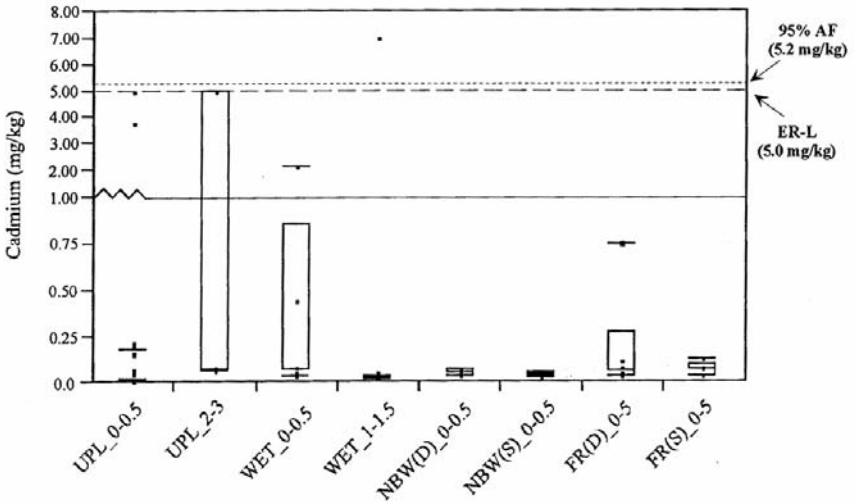


FIGURE 9-22

COMPARISON OF CHROMIUM CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

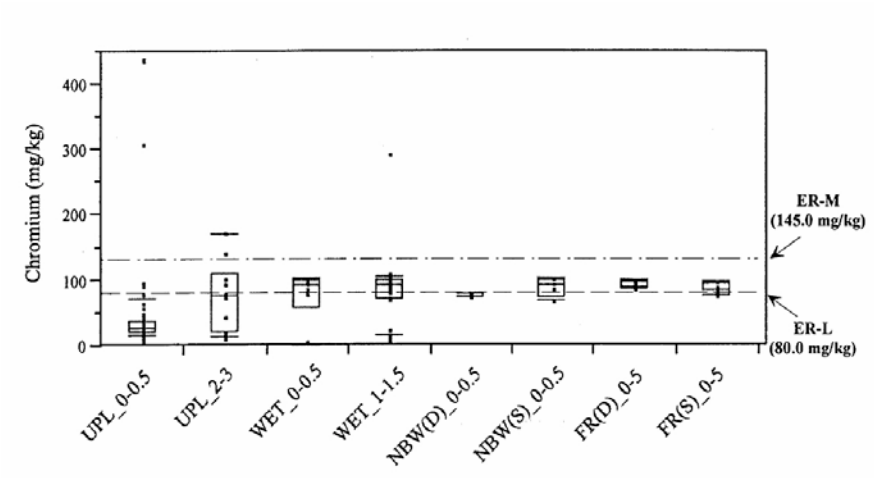


FIGURE 9-23

COMPARISON OF COBALT CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

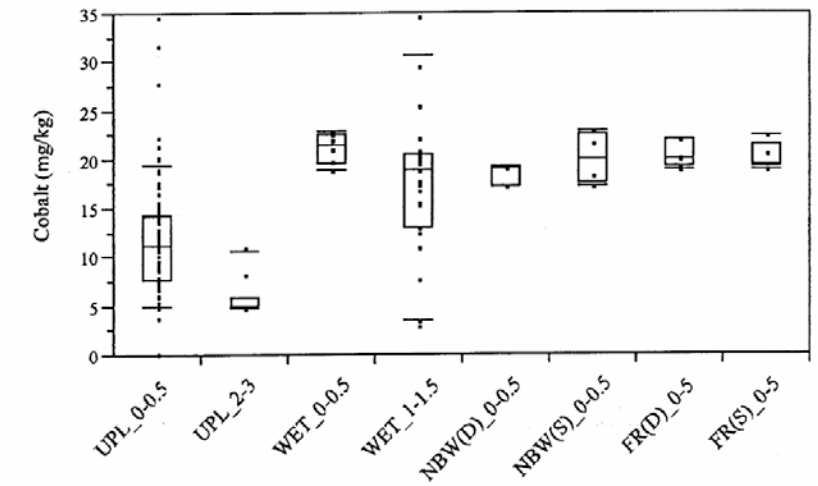


FIGURE 9-24

COMPARISON OF COPPER CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

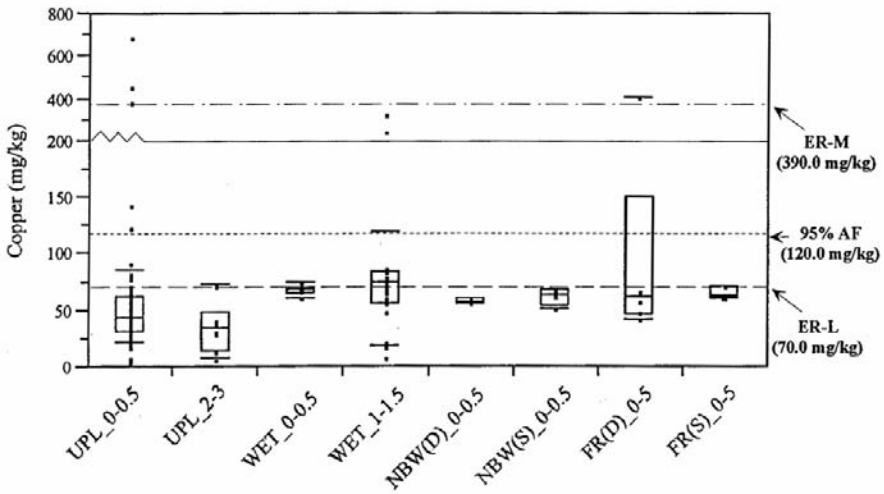


FIGURE 9-25

COMPARISON OF LEAD CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

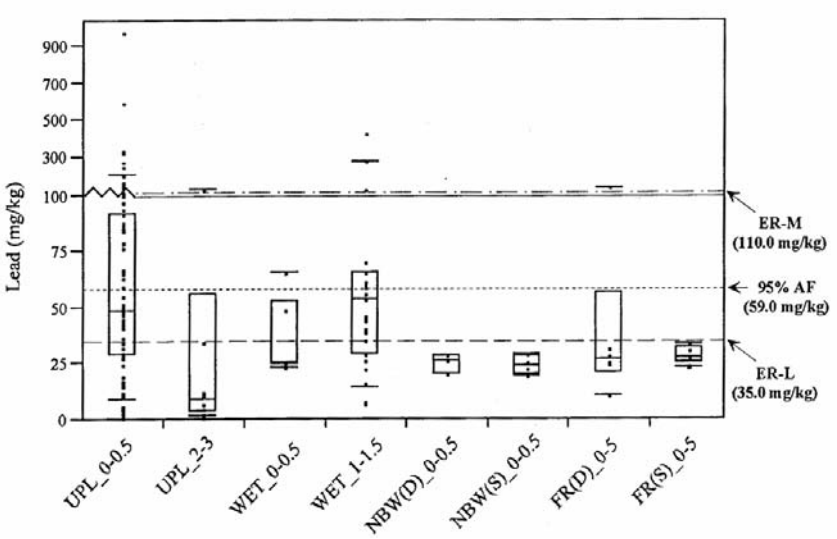


FIGURE 9-26

COMPARISON OF MANGANESE CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

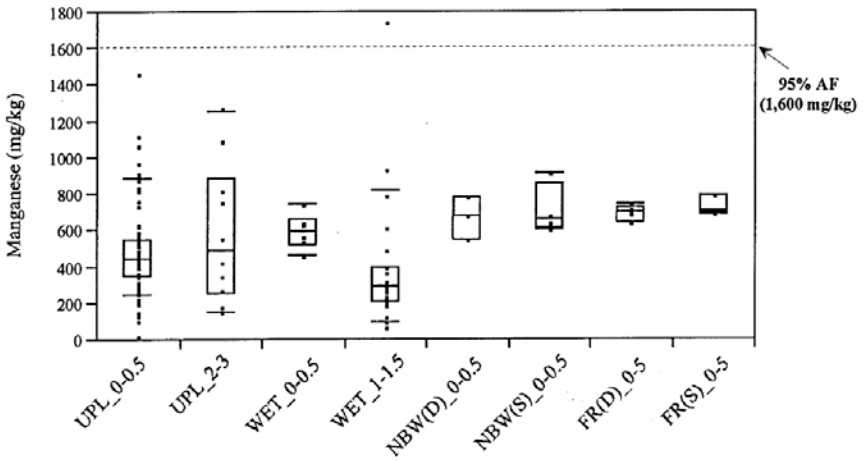


FIGURE 9-27

COMPARISON OF MERCURY CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

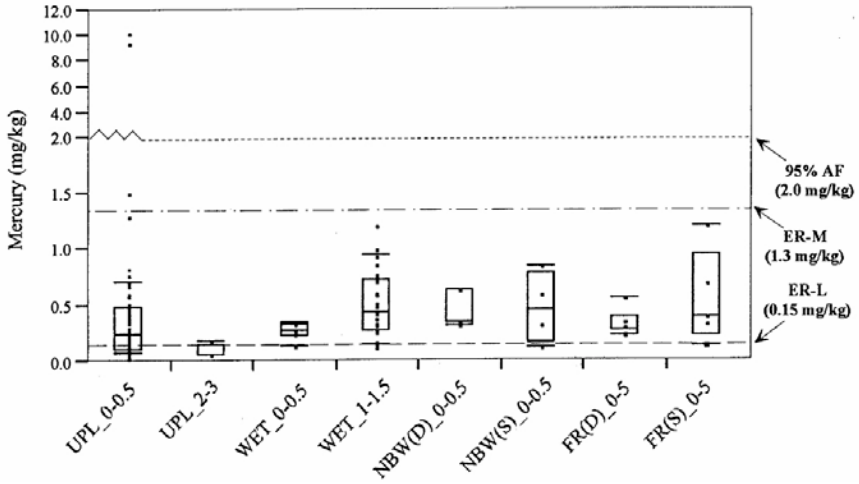


FIGURE 9-28

COMPARISON OF MOLYBDENUM CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

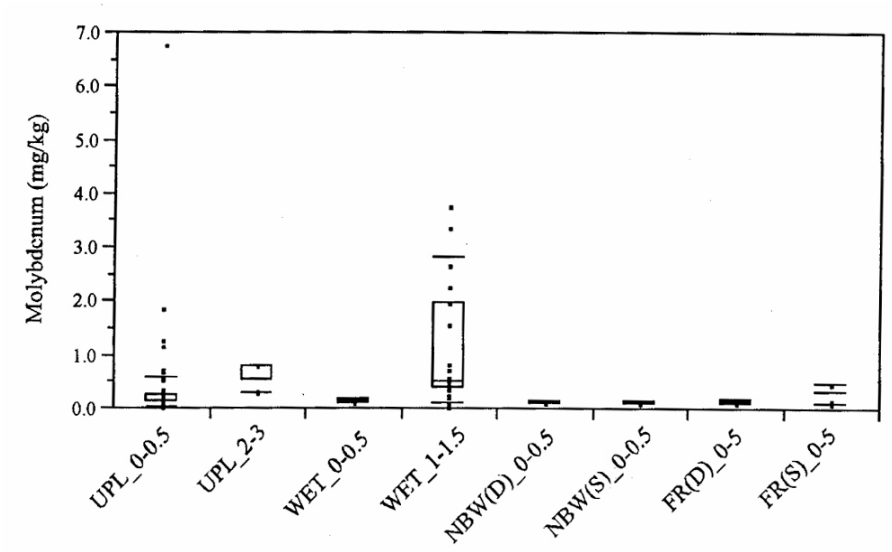


FIGURE 9-29

COMPARISON OF NICKEL CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

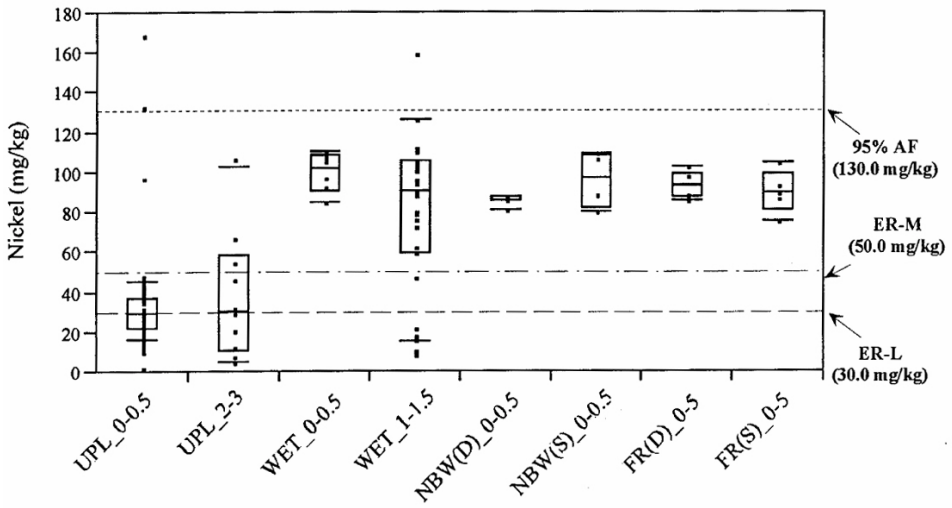


FIGURE 9-30

COMPARISON OF SELENIUM CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

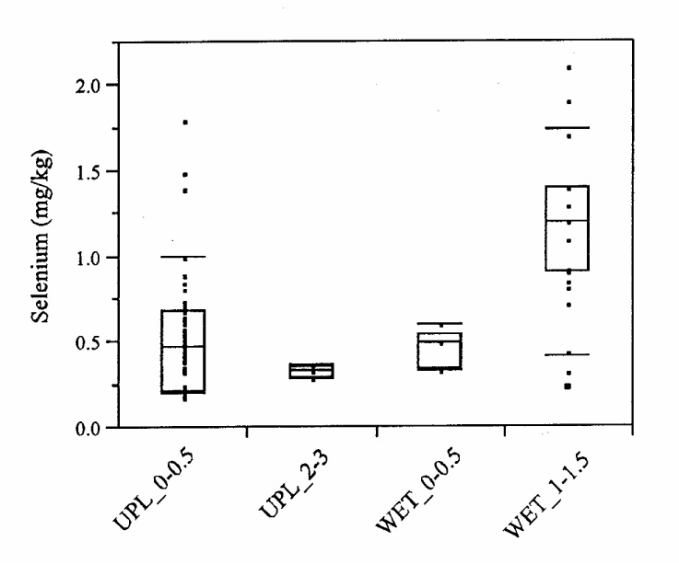


FIGURE 9-31

COMPARISON OF SILVER CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

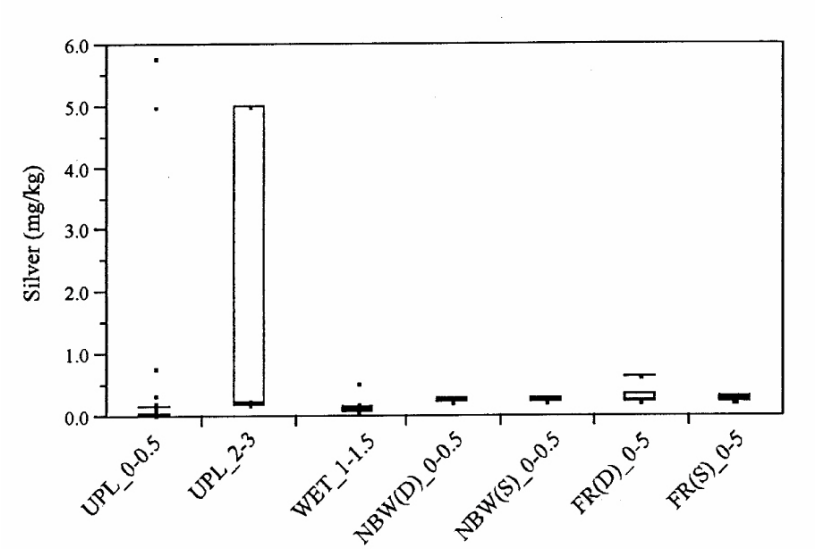


FIGURE 9-32

COMPARISON OF THALLIUM CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

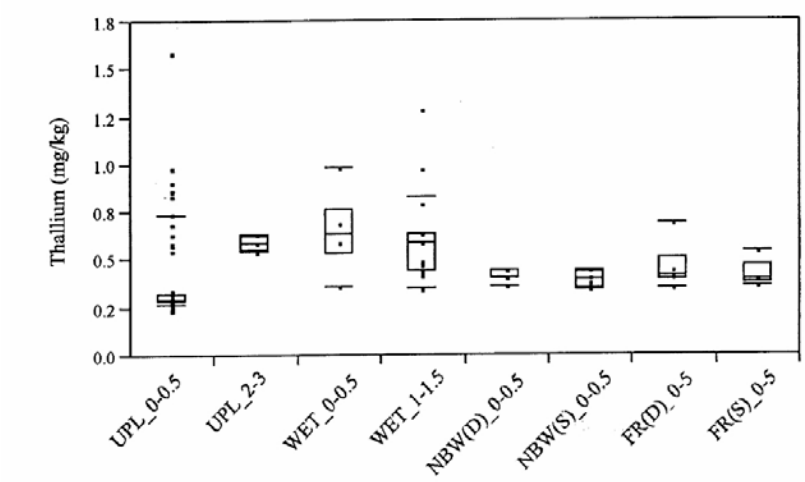


FIGURE 9-33

COMPARISON OF TIN CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

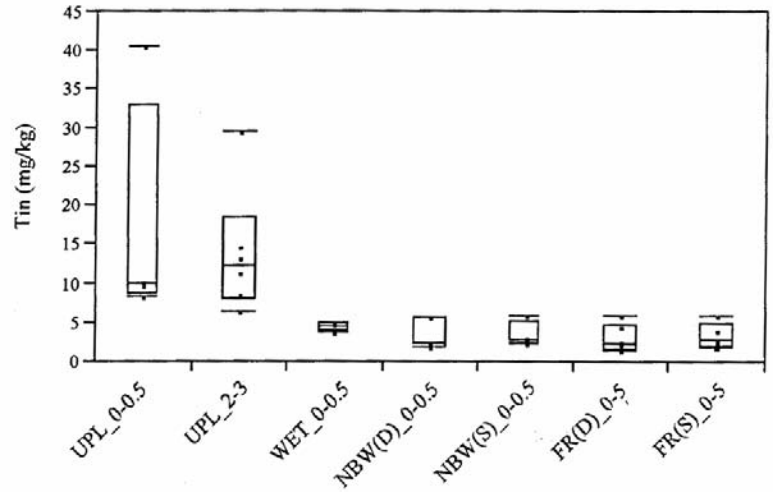


FIGURE 9-34

COMPARISON OF VANADIUM CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

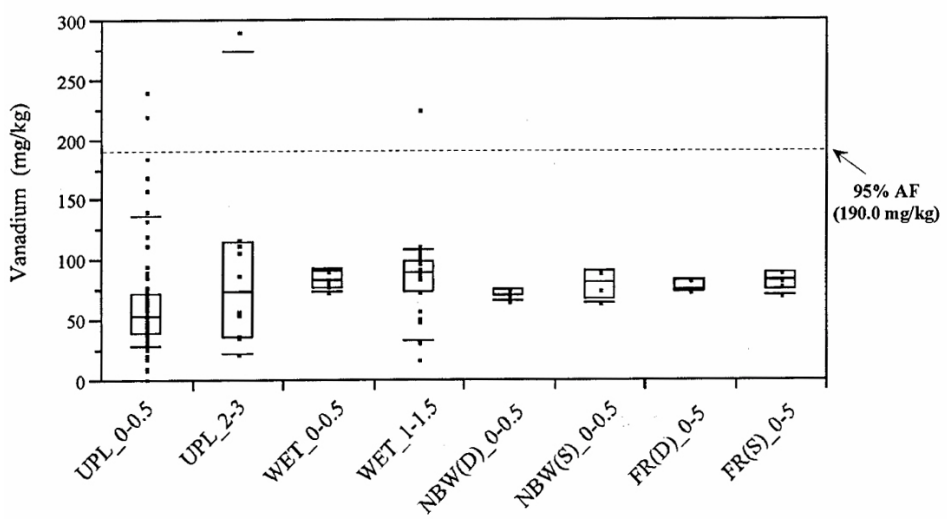


FIGURE 9-35

COMPARISON OF ZINC CONCENTRATIONS BETWEEN SOIL AND SEDIMENT LOCATIONS

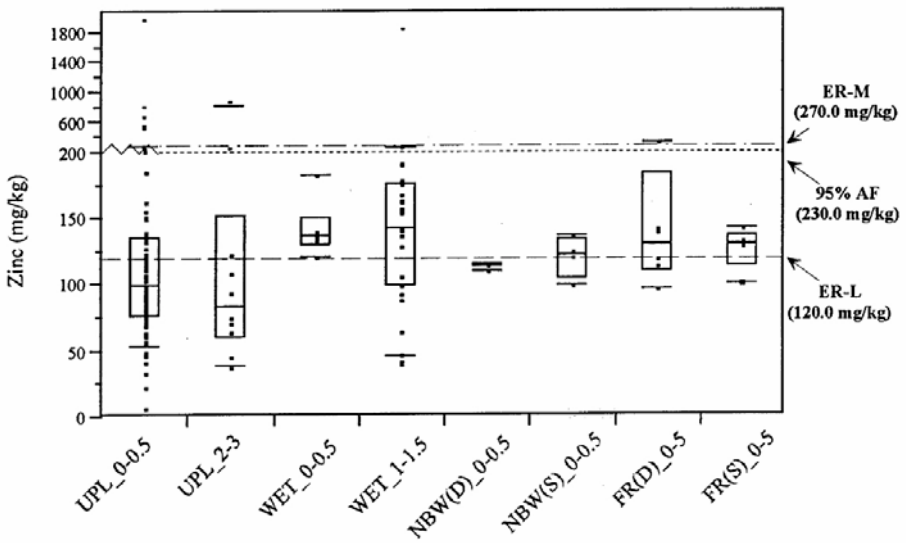


FIGURE 9-36

COMPARISON OF SOIL AND SEDIMENT
TOTAL POLYNUCLEAR AROMATIC HYDROCARBON CONCENTRATIONS

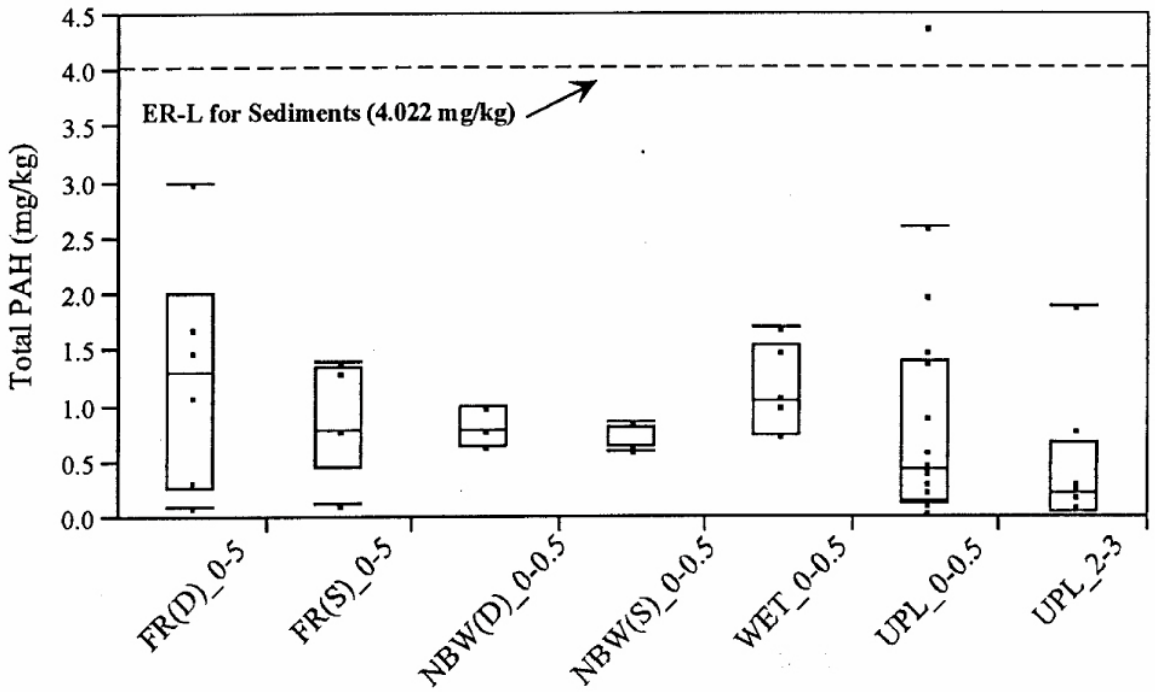
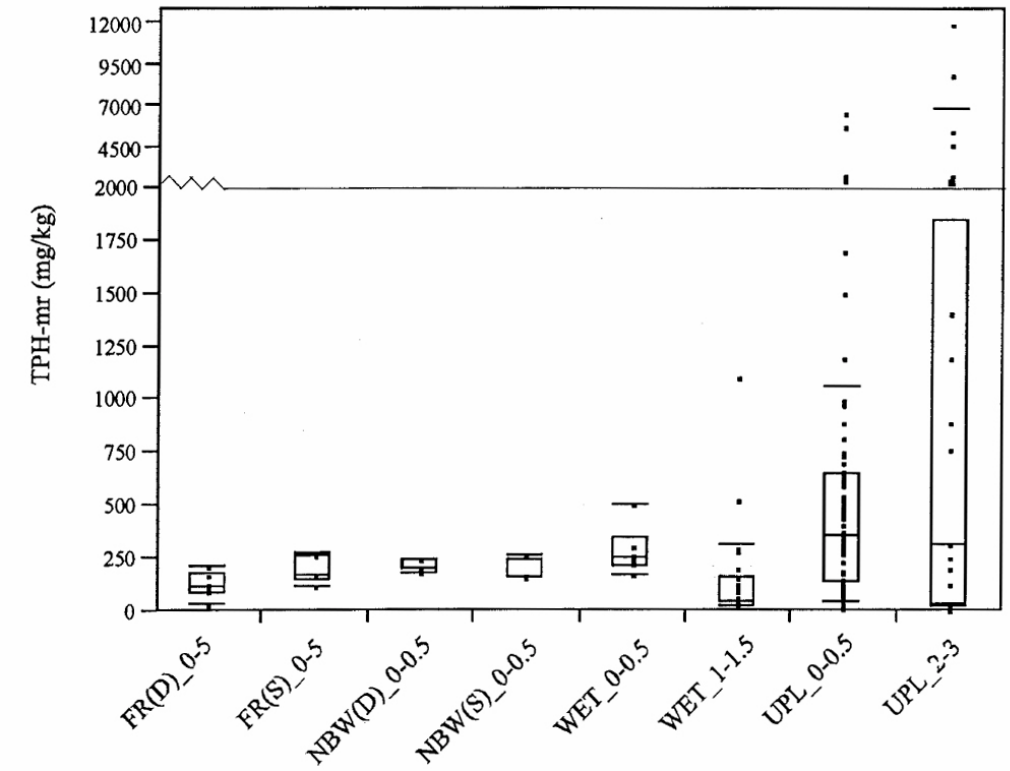


FIGURE 9-37

COMPARISON OF SOIL AND SEDIMENT TOTAL PETROELUM HYDROCARBONS CONCENTRATIONS



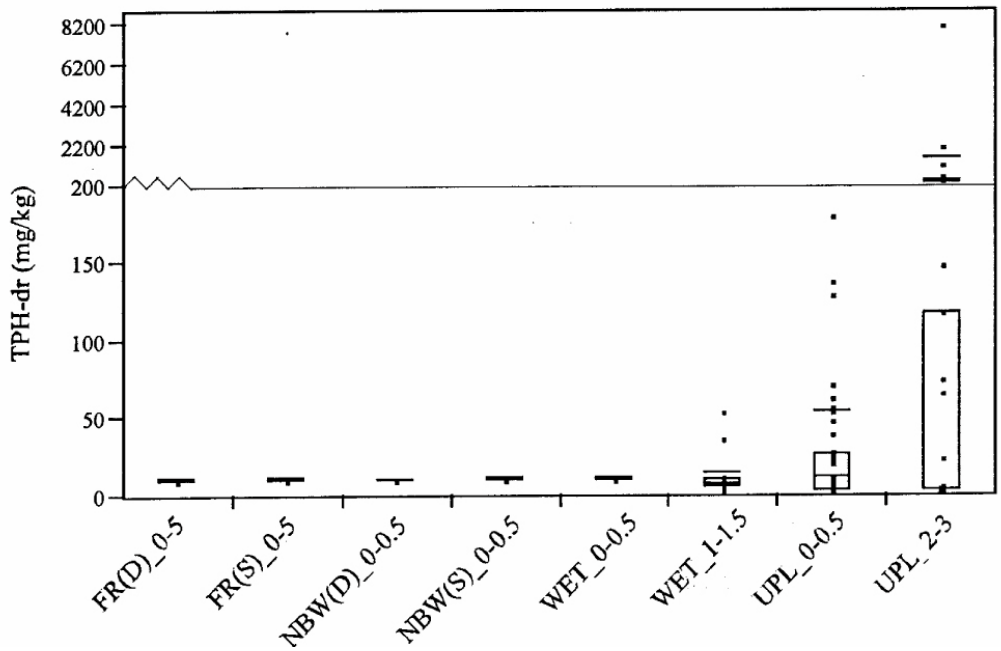


FIGURE 9-37 (Continued)

COMPARISON OF SOIL AND SEDIMENT TOTAL PETROELUM HYDROCARBONS CONCENTRATIONS

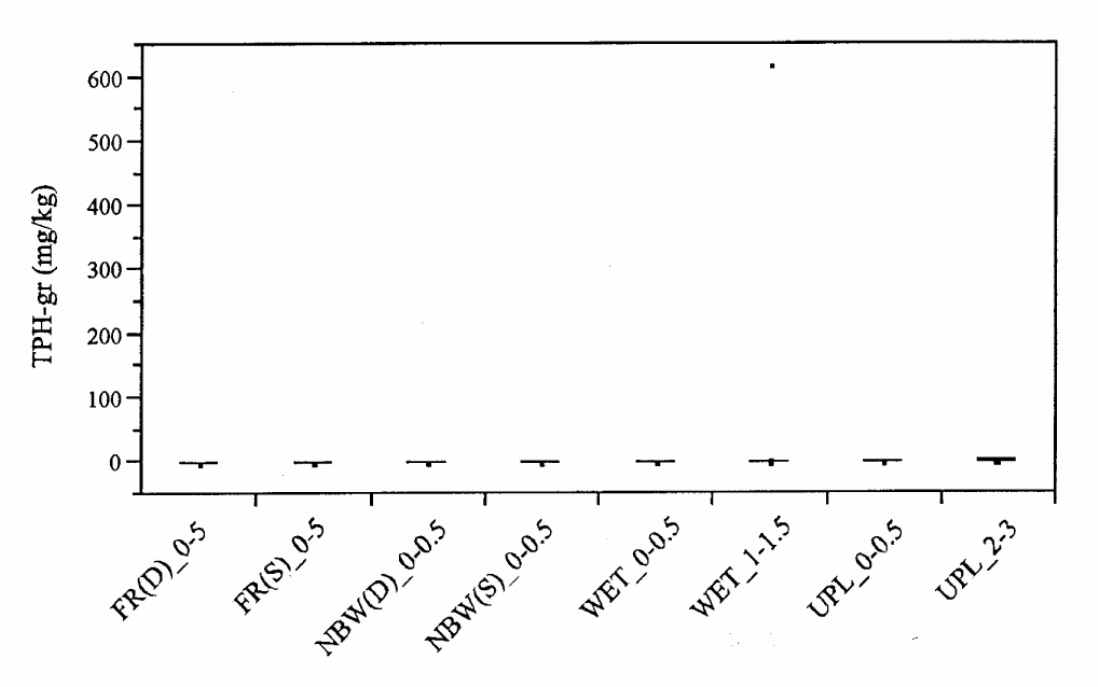
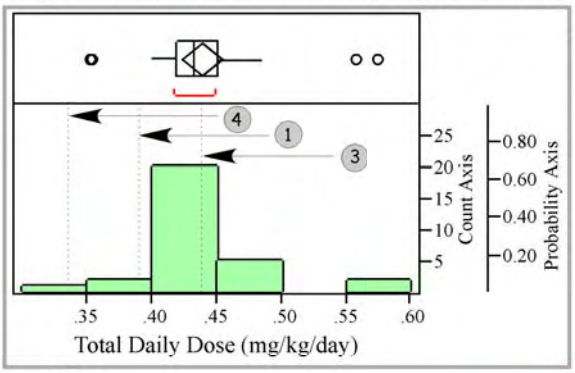


FIGURE 9-38

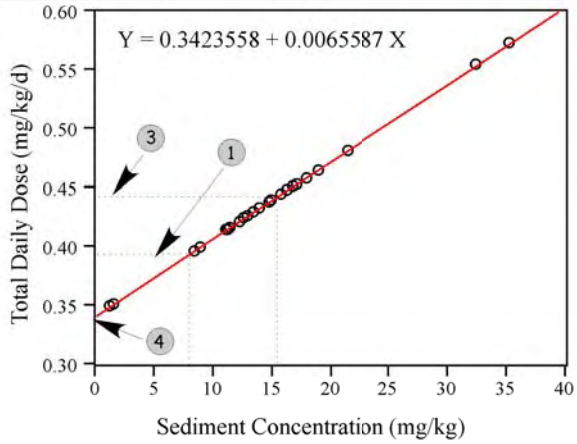
DISTRIBUTION OF POINT DOSES FOR THE SALT MARSH HARVEST MOUSE FOR ARSENIC

INVESTIGATION AREA A2

Receptor= Saltmarsh Harvest Mouse // COEC= Arsenic **IA A2**



Quantiles			Moments	
100.0%	maximum	0.57322	Mean	0.4357734
99.5%		0.57322	Std Dev	0.044759
97.5%		0.57322	Std Err Mean	0.0081718
90.0%		0.48042	upper 95% Mean	0.4524867
75.0%	quartile	0.44893	lower 95% Mean	0.4190601
50.0%	median	0.42991	N	30
25.0%	quartile	0.41631	Sum Wgts	30
10.0%		0.39771	Sum	13.073202
2.5%		0.34957	Variance	0.0020034
0.5%		0.34957	Skewness	1.2367332
0.0%	minimum	0.34957	Kurtosis	3.7391359
			CV	10.271163



1. Dose That Would Result in an $HQ_{(Dose/Low\ TRV)}$ of 1.0
3. Dose Resulting From Incidental Ingestion of Sediment Containing the Ambient Concentration of Arsenic
4. Dose Calculated When the Sediment Concentration of Arsenic is Zero and the Only Exposure is From Prey Ingestion.

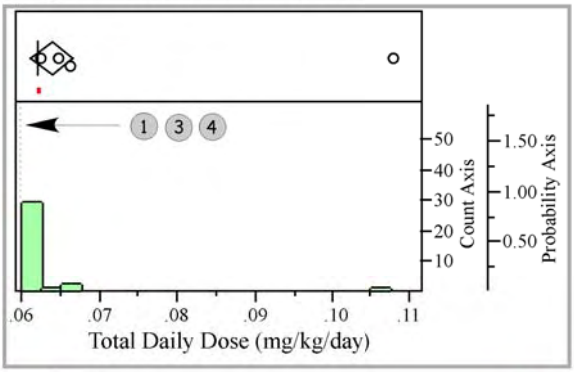
1	Low TRV	0.39
2	High TRV	5.39
3	Ambient	0.44
4	Prey Only	0.34

FIGURE 9-39

DISTRIBUTION OF POINT DOSES FOR THE SALT MARSH HARVEST MOUSE FOR CADMIUM

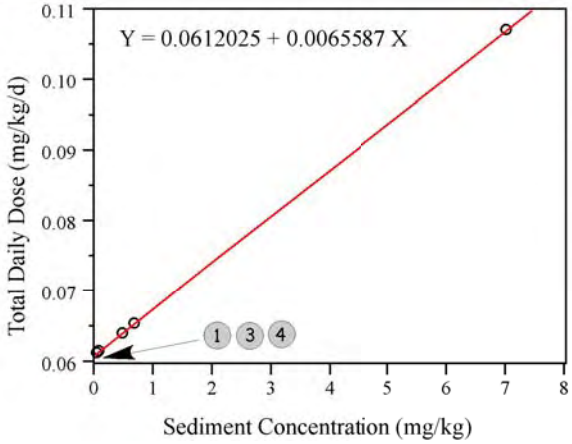
INVESTIGATION AREA A2

Receptor= Saltmarsh Harvest Mouse // COEC= Cadmium **IA A2**



Quantiles		
100.0%	maximum	0.10711
99.5%		0.10711
97.5%		0.10711
90.0%		0.06498
75.0%	quartile	0.06149
50.0%	median	0.06147
25.0%	quartile	0.06141
10.0%		0.06136
2.5%		0.06135
0.5%		0.06135
0.0%	minimum	0.06135

Moments	
Mean	0.0631691
Std Dev	0.0079637
Std Err Mean	0.0013863
upper 95% Mean	0.0659929
lower 95% Mean	0.0603452
N	33
Sum Wgts	33
Sum	2.0845789
Variance	0.0000634
Skewness	5.5816064
Kurtosis	31.654598
CV	12.606994



1. Dose That Would Result in an $HQ_{(Dose/Low\ TRV)}$ of 1.0
3. Dose Resulting From Incidental Ingestion of Sediment Containing the Ambient Concentration of Cadmium
4. Dose Calculated When the Sediment Concentration of Cadmium is Zero and the Only Exposure is From Prey Ingestion.

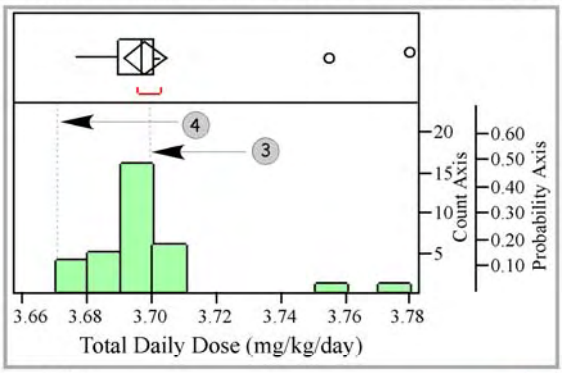
1	Low TRV	0.06
2	High TRV	2.81
3	Ambient	0.06
4	Prey Only	0.06

FIGURE 9-40

DISTRIBUTION OF POINT DOSES FOR THE SALT MARSH HARVEST MOUSE FOR COPPER

INVESTIGATION AREA A2

Receptor= Saltmarsh Harvest Mouse // COEC= Copper **IA A2**

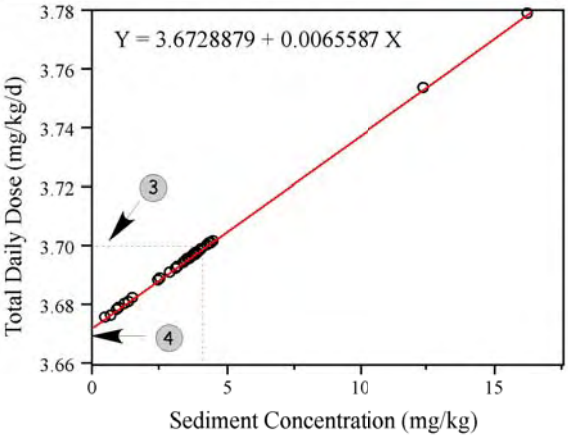


Quantiles

100.0%	maximum	3.7791
99.5%		3.7791
97.5%		3.7791
90.0%		3.7018
75.0%	quartile	3.6999
50.0%	median	3.6962
25.0%	quartile	3.6890
10.0%		3.6790
2.5%		3.6759
0.5%		3.6759
0.0%	minimum	3.6759

Moments

Mean	3.6972524
Std Dev	0.0197955
Std Err Mean	0.003446
upper 95% Mean	3.7042716
lower 95% Mean	3.6902332
N	33
Sum Wgts	33
Sum	122.00933
Variance	0.0003919
Skewness	2.9475813
Kurtosis	10.45931
CV	0.5354109



3 Dose Resulting From Incidental Ingestion of Sediment Containing the Ambient Concentration of Copper

4 Dose Calculated When the Sediment Concentration of Copper is Zero and the Only Exposure is From Prey Ingestion.

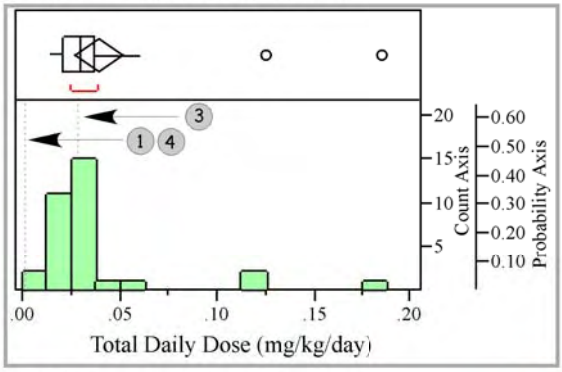
1	Low TRV	2.83
2	High TRV	662.27
3	Ambient	3.7
4	Prey Only	3.67

FIGURE 9-41

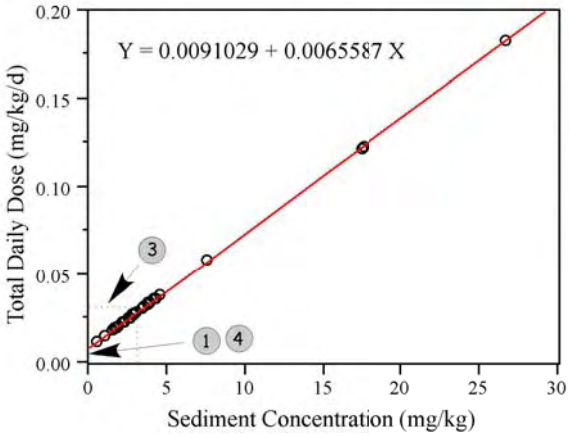
DISTRIBUTION OF POINT DOSES FOR THE SALT MARSH HARVEST MOUSE FOR LEAD

INVESTIGATION AREA A2

Receptor= Saltmarsh Harvest Mouse // COEC= Lead **IA A2**



Quantiles			Moments	
100.0%	maximum	0.18347	Mean	0.0374933
99.5%		0.18347	Std Dev	0.0363816
97.5%		0.18347	Std Err Mean	0.0063332
90.0%		0.09711	upper 95% Mean	0.0503937
75.0%	quartile	0.03549	lower 95% Mean	0.024593
50.0%	median	0.02807	N	33
25.0%	quartile	0.01933	Sum Wgts	33
10.0%		0.01392	Sum	1.2372805
2.5%		0.01220	Variance	0.0013236
0.5%		0.01220	Skewness	2.9426121
0.0%	minimum	0.01220	Kurtosis	8.8435054
			CV	97.03471



1 Dose That Would Result in an $HQ_{(Dose/Low\ TRV)}$ of 1.0

3 Dose Resulting From Incidental Ingestion of Sediment Containing the Ambient Concentration of Lead

4 Dose Calculated When the Sediment Concentration of Lead is Zero and the Only Exposure is From Prey Ingestion.

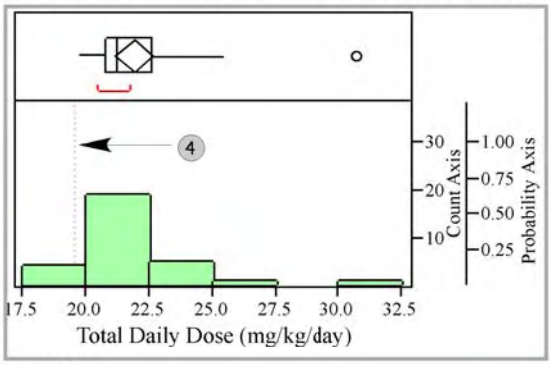
1	Low TRV	0.002
2	High TRV	248.16
3	Ambient	0.03
4	Prey Only	0.009

FIGURE 9-42

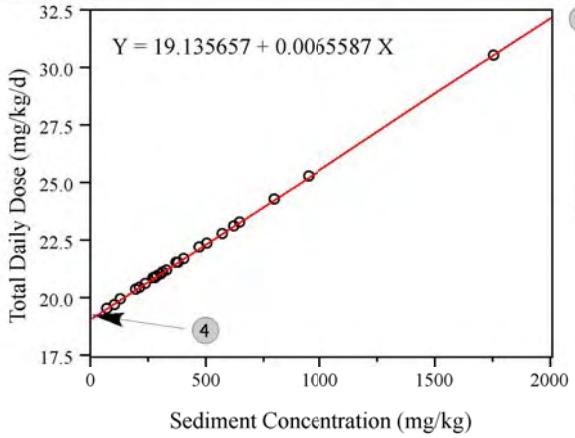
DISTRIBUTION OF POINT DOSES FOR THE SALT MARSH HARVEST MOUSE FOR MANGANESE

INVESTIGATION AREA A2

Receptor= Saltmarsh Harvest Mouse // COEC= Manganese **IA A2**



Quantiles			Moments	
100.0%	maximum	30.613	Mean	21.811362
99.5%		30.613	Std Dev	2.1409989
97.5%		30.613	Std Err Mean	0.3908911
90.0%		24.250	upper 95% Mean	22.610824
75.0%	quartile	22.513	lower 95% Mean	21.011899
50.0%	median	21.146	N	30
25.0%	quartile	20.646	Sum Wgts	30
10.0%		19.807	Sum	654.34085
2.5%		19.591	Variance	4.5838765
0.5%		19.591	Skewness	2.6518894
0.0%	minimum	19.591	Kurtosis	9.3682675
			CV	9.8159802



4 Dose Calculated When the Sediment Concentration of Manganese is Zero and the Only Exposure is From Prey Ingestion.

1	Low TRV	14.66
2	High TRV	168.68
3	Ambient	N/A
4	Prey Only	19.14

FIGURE 9-43

DISTRIBUTION OF POINT DOSES FOR THE SALT MARSH HARVEST MOUSE FOR ZINC

INVESTIGATION AREA A2

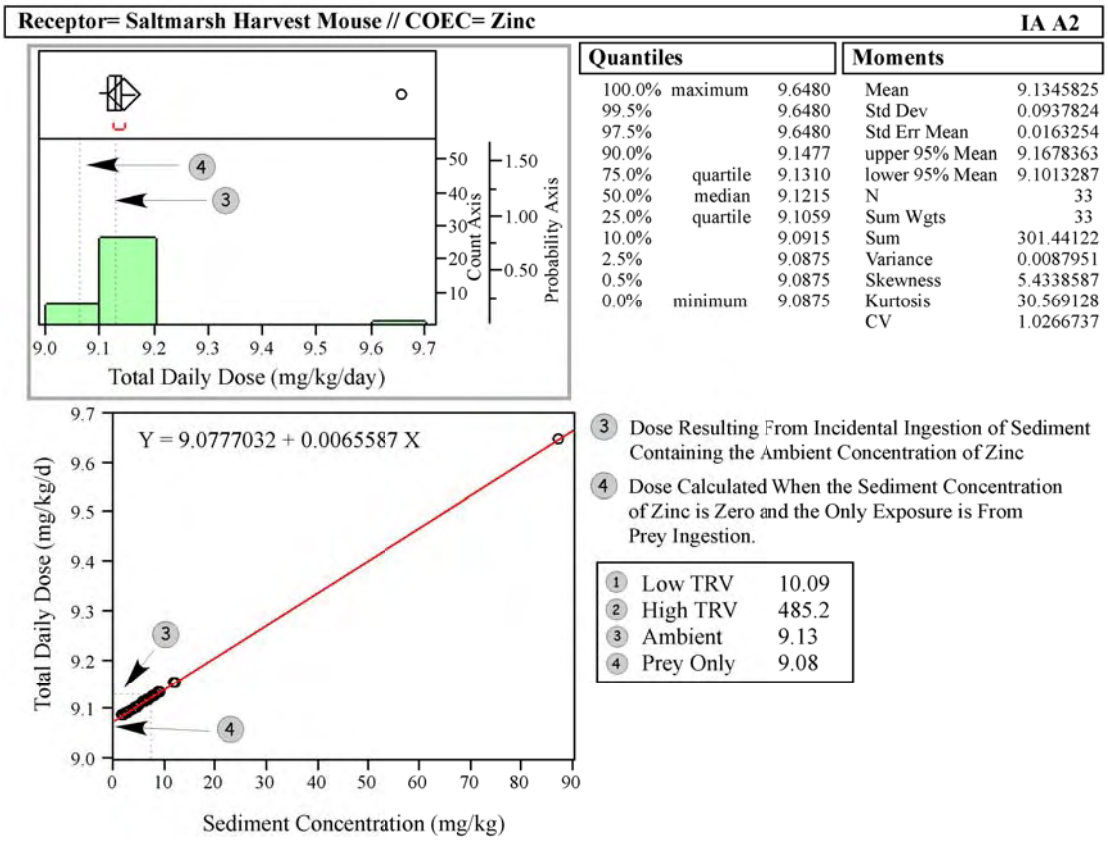
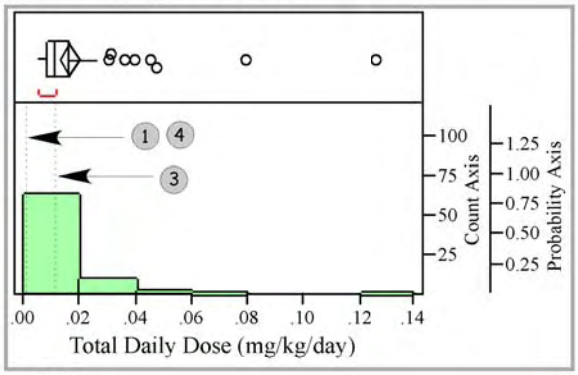


FIGURE 9-44

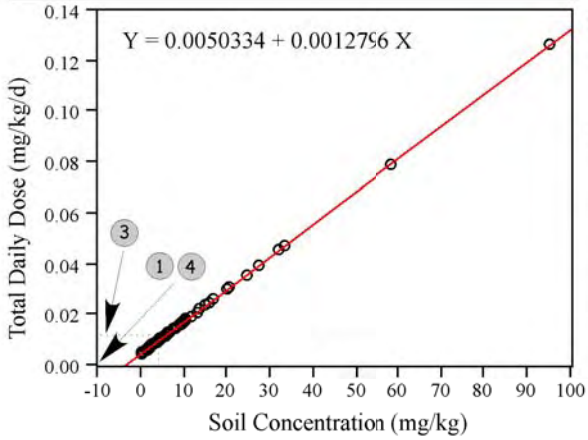
DISTRIBUTION OF POINT DOSES FOR THE GRAY FOX FOR LEAD

INVESTIGATION AREA A2

Receptor= Gray Fox // COEC= Lead **IA A2**



Quantiles			Moments	
100.0%	maximum	0.12642	Mean	0.0163508
99.5%		0.12642	Std Dev	0.0172471
97.5%		0.08292	Std Err Mean	0.0019784
90.0%		0.03068	upper 95% Mean	0.0202919
75.0%	quartile	0.01650	lower 95% Mean	0.0124097
50.0%	median	0.01119	N	76
25.0%	quartile	0.00865	Sum Wgts	76
10.0%		0.00623	Sum	1.2426605
2.5%		0.00517	Variance	0.0002975
0.5%		0.00505	Skewness	4.3860951
0.0%	minimum	0.00505	Kurtosis	23.804393
			CV	105.48182



1. Dose That Would Result in an $HQ_{(Dose/Low\ TRV)}$ of 1.0
3. Dose Resulting From Incidental Ingestion of Soil Containing the Ambient Concentration of Lead
4. Dose Calculated When the Soil Concentration of Lead is Zero and the Only Exposure is From Prey Ingestion.

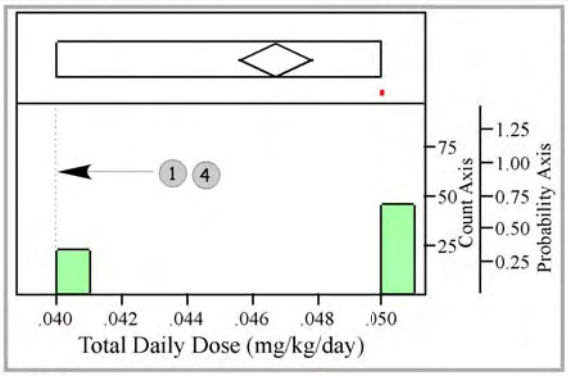
1	Low TRV	0.0013
2	High TRV	174.72
3	Ambient	0.012
4	Prey Only	0.005

FIGURE 9-45

DISTRIBUTION OF POINT DOSES FOR THE GRAY FOX FOR SELENIUM

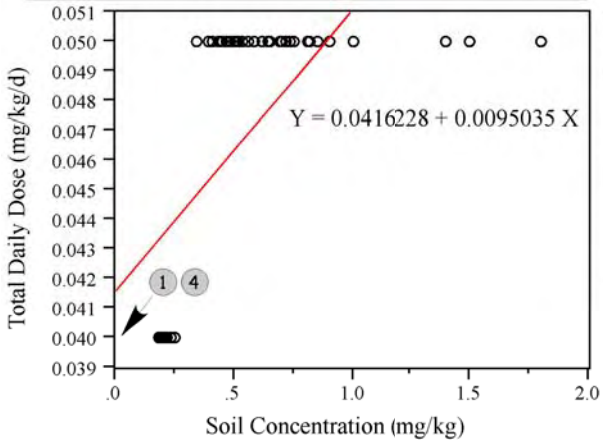
INVESTIGATION AREA A2

Receptor= Gray Fox // COEC= Selenium **IA A2**



Quantiles		
100.0%	maximum	0.05000
99.5%		0.05000
97.5%		0.05000
90.0%		0.05000
75.0%	quartile	0.05000
50.0%	median	0.05000
25.0%	quartile	0.04000
10.0%		0.04000
2.5%		0.04000
0.5%		0.04000
0.0%	minimum	0.04000

Moments	
Mean	0.0467164
Std Dev	0.0047316
Std Err Mean	0.0005781
upper 95% Mean	0.0478705
lower 95% Mean	0.0455623
N	67
Sum Wgts	67
Sum	3.13
Variance	0.0000224
Skewness	-0.747836
Kurtosis	-1.486026
CV	10.12835



1 Dose That Would Result in an $HQ_{(Dose/Low\ TRV)}$ of 1.0

4 Dose Calculated When the Soil Concentration of Selenium is Zero and the Only Exposure is From Prey Ingestion.

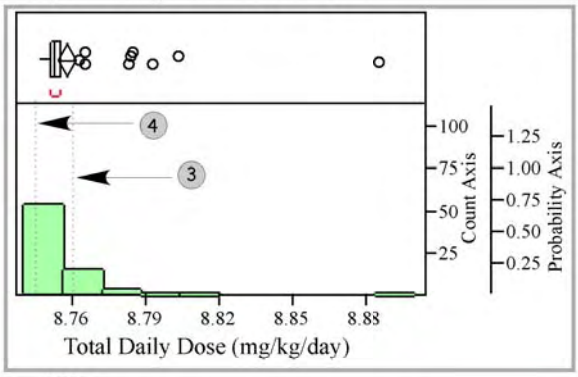
1	Low TRV	0.04
2	High TRV	0.89
3	Ambient	N/A
4	Prey Only	0.04

FIGURE 9-46

DISTRIBUTION OF POINT DOSES FOR THE GRAY FOX FOR ZINC

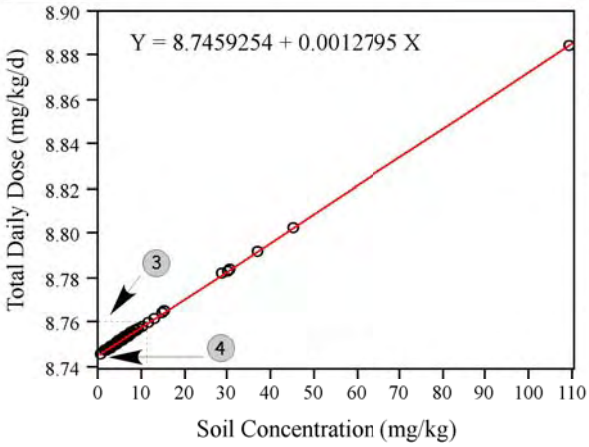
INVESTIGATION AREA A2

Receptor= Gray Fox // COEC= Zinc **IA A2**



Quantiles		
100.0%	maximum	8.8853
99.5%		8.8853
97.5%		8.8115
90.0%		8.7649
75.0%	quartile	8.7556
50.0%	median	8.7530
25.0%	quartile	8.7514
10.0%		8.7498
2.5%		8.7475
0.5%		8.7465
0.0%	minimum	8.7465

Moments	
Mean	8.7575371
Std Dev	0.0179078
Std Err Mean	0.0020678
upper 95% Mean	8.7616573
lower 95% Mean	8.7534169
N	75
Sum Wgts	75
Sum	656.81528
Variance	0.0003207
Skewness	5.4798383
Kurtosis	35.874677
CV	0.2044844



3 Dose Resulting From Incidental Ingestion of Soil Containing the Ambient Concentration of Zinc

4 Dose Calculated When the Soil Concentration of Zinc is Zero and the Only Exposure is From Prey Ingestion.

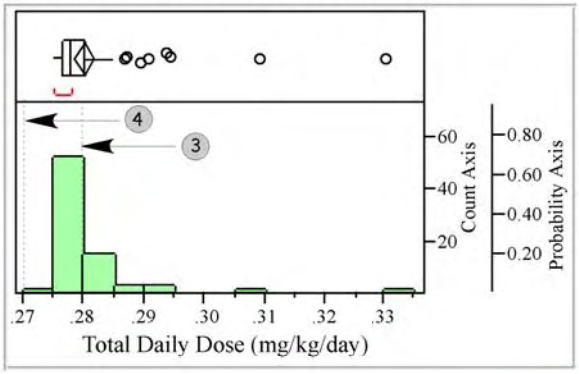
1	Low TRV	7.1
2	High TRV	341.62
3	Ambient	8.76
4	Prey Only	8.75

FIGURE 9-47

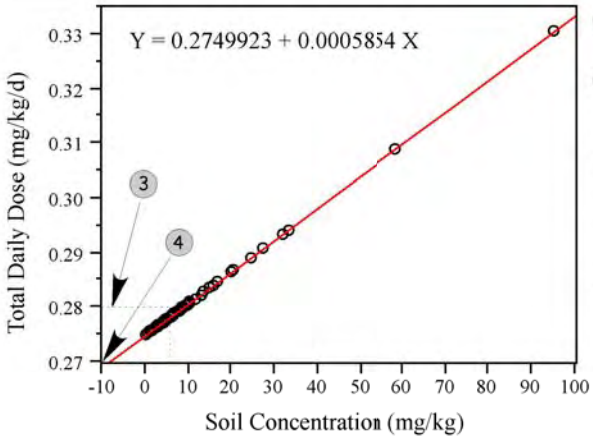
DISTRIBUTION OF POINT DOSES FOR THE NORTHERN HARRIER FOR LEAD

INVESTIGATION AREA A2

Receptor= Northern Harrier // COEC= Lead **IA A2**



Quantiles			Moments	
100.0%	maximum	0.33052	Mean	0.2801696
99.5%		0.33052	Std Dev	0.0078904
97.5%		0.31062	Std Err Mean	0.0009051
90.0%		0.28672	upper 95% Mean	0.2819726
75.0%	quartile	0.28024	lower 95% Mean	0.2783666
50.0%	median	0.27781	N	76
25.0%	quartile	0.27664	Sum Wgts	76
10.0%		0.27554	Sum	21.292888
2.5%		0.27506	Variance	0.0000623
0.5%		0.27500	Skewness	4.3860951
0.0%	minimum	0.27500	Kurtosis	23.804394
			CV	2.8162812



3 Dose Resulting From Incidental Ingestion of Soil Containing the Ambient Concentration of Lead

4 Dose Calculated When the Soil Concentration of Lead is Zero and the Only Exposure is From Prey Ingestion.

1	Low TRV	0.02
2	High TRV	7.77
3	Ambient	0.28
4	Prey Only	0.27

TABLES

TABLE 9-1

STATISTICAL SUMMARY OF SOIL ANALYSES -- FORMER NORTH BUILDING WAYS
0 TO 2 FEET BELOW GROUND SURFACE
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

Analyte	Number of Detections/Analyses	Maximum Detected Concentration (mg/kg)	Average Detected Concentration (mg/kg)	Median Detected Concentration (mg/kg)	Number of Samples with Concentrations Greater than the 95th Ambient	Mare Island 95th Percentile Ambient Fill Values (mg/kg)	COPEC
Metals							
Aluminum	71/71	25,400	11,500	11,200	0	35,000	No
Antimony	62/68	5.4	1.1	0.93	0	8.5	No
Arsenic	62/71	25.1	5.3	4.6	0	36	No
Barium	71/71	474	95.5	79.4	NA	NA	Yes
Beryllium	53/71	1.6	0.22	0.19	1	0.9	Yes
Cadmium	6/75	3.8	0.77	0.19	0	5.2	No
Chromium	75/75	440	46.9	28.5	3	140	Yes
Chromium VI	0/13	ND	ND	ND	NA	NA	No
Cobalt	70/75	34.8	12.5	11.6	NA	NA	Yes
Copper	74/75	684	69.8	44.7	6	120	Yes
Lead	74/75	968	92.2	49.2	33	59	Yes
Manganese	75/75	1,470	491	445	0	1,600	No
Mercury	59/71	10.2	0.69	0.35	2	2	Yes
Molybdenum	16/71	6.8	0.92	0.32	NA	NA	Yes
Nickel	75/75	169	33	29.3	2	130	Yes
Selenium	44/67	1.8	0.7	0.62	NA	NA	Yes
Silver	4/75	5.8	1.8	0.59	NA	NA	Yes
Thallium	11/71	1.6	0.84	0.76	NA	NA	Yes
Tin	4/4	40.6	17.3	10.1	NA	NA	Yes
Titanium	4/4	6,470	4,800	4,650	NA	NA	Yes
Vanadium	75/75	241	66.1	55	2	190	Yes
Zinc	75/75	1,980	165	101	9	230	Yes
Semivolatile Organic Compounds							
1,2,4-Trichlorobenzene	1/27	0.04	0.04	0.04	NA	NA	Yes
2-Methylnaphthalene	1/27	0.2	0.2	0.2	NA	NA	Yes
Anthracene	4/27	0.2	0.05	0.02	NA	NA	Yes
Benzo(a)anthracene	10/27	0.3	0.1	0.08	NA	NA	Yes
Benzo(a)pyrene	12/21	0.3	0.1	0.1	NA	NA	Yes
Benzo(b)fluoranthene	10/21	0.6	0.2	0.2	NA	NA	Yes
Benzo(g,h,i)perylene	6/21	0.2	0.07	0.06	NA	NA	Yes
Benzo(k)fluoranthene	6/21	0.6	0.2	0.1	NA	NA	Yes
Carbazole	2/27	0.07	0.05	0.05	NA	NA	Yes

TABLE 9-1 (Continued)

STATISTICAL SUMMARY OF SOIL ANALYSES -- FORMER NORTH BUILDING WAYS
0 TO 2 FEET BELOW GROUND SURFACE
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

Analyte	Number of Detections/Analyses	Maximum Detected Concentration (mg/kg)	Average Detected Concentration (mg/kg)	Median Detected Concentration (mg/kg)	Number of Samples with Concentrations Greater than the 95th Ambient	Mare Island 95th Percentile Ambient Fill Values (mg/kg)	COPEC
Semivolatile Organic Compounds (Continued)							
Chrysene	19/27	0.8	0.2	0.09	NA	NA	Yes
Dibenz(a,h)anthracene	3/21	0.06	0.04	0.04	NA	NA	Yes
Fluoranthene	16/27	1	0.2	0.05	1	0.5	Yes
Fluorene	1/27	0.08	0.08	0.08	NA	NA	Yes
Indeno(1,2,3-cd)pyrene	5/21	0.1	0.06	0.07	NA	NA	Yes
Pentachlorophenol	1/26	0.5	0.5	0.5	NA	NA	Yes
Phenanthrene	9/27	0.5	0.1	0.06	NA	NA	Yes
Pyrene	19/27	0.6	0.1	0.07	NA	NA	Yes
Total PAHs	20/27	4	0.9	0.4	NA	NA	Yes
Pesticides							
4,4'-DDD	19/72	0.2	0.02	0.004	NA	NA	Yes
4,4'-DDE	11/72	0.04	0.009	0.006	NA	NA	Yes
4,4'-DDT	54/73	0.2	0.02	0.007	NA	NA	Yes
Aldrin	1/72	0.002	0.002	0.002	NA	NA	Yes
alpha-BHC	24/72	0.04	0.01	0.01	NA	NA	Yes
alpha-Chlordane	35/72	0.03	0.005	0.002	NA	NA	Yes
beta-BHC	13/72	0.01	0.005	0.003	NA	NA	Yes
delta-BHC	11/72	0.008	0.002	0.002	NA	NA	Yes
Dieldrin	7/72	0.006	0.004	0.004	NA	NA	Yes
Endosulfan I	10/72	0.005	0.002	0.002	NA	NA	Yes
Endosulfan II	1/73	0.004	0.004	0.004	NA	NA	Yes
Endosulfan sulfate	13/73	0.02	0.006	0.003	NA	NA	Yes
Endrin	6/72	0.004	0.003	0.002	NA	NA	Yes
Endrin aldehyde	29/72	0.02	0.005	0.004	NA	NA	Yes
Endrin ketone	18/72	0.01	0.005	0.004	NA	NA	Yes
gamma-BHC (lindane)	19/72	0.01	0.004	0.003	NA	NA	Yes
gamma-Chlordane	29/72	0.03	0.006	0.002	NA	NA	Yes
Heptachlor	4/72	0.005	0.002	0.001	NA	NA	Yes
Heptachlor epoxide	12/72	0.004	0.001	0.0009	NA	NA	Yes
Methoxychlor	3/73	0.02	0.01	0.02	NA	NA	Yes
Total Chlordanes	35/72	0.07	0.01	0.005	NA	NA	Yes
Total DDTs	55/73	0.5	0.02	0.007	NA	NA	Yes

TABLE 9-1 (Continued)

STATISTICAL SUMMARY OF SOIL ANALYSES -- FORMER NORTH BUILDING WAYS
0 TO 2 FEET BELOW GROUND SURFACE
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

Analyte	Number of Detections/Analyses	Maximum Detected Concentration (mg/kg)	Average Detected Concentration (mg/kg)	Median Detected Concentration (mg/kg)	Number of Samples with Concentrations Greater than the 95th Ambient	Mare Island 95th Percentile Ambient Fill Values (mg/kg)	COPEC
Polychlorinated Biphenyls							
Aroclor-1254	1/75	0.2	0.2	0.2	NA	NA	Yes
Aroclor-1260	36/75	0.2	0.06	0.04	NA	NA	Yes
Petroleum Indicators							
Diesel-range	9/86	180	72	59	NA	NA	Yes
Gasoline-range	1/76	0.8	0.8	0.8	NA	NA	Yes
Motor-oil-range	80/86	6,600	670	380	NA	NA	Yes

Notes: Inorganic results less than 10 are reported to two significant figures, and results greater than 10 are reported to three significant figures.
R and "Z" qualified data (rejected results and nonfuel total petroleum hydrocarbonsresults, respectively) were excluded from the statistical summary.
Organic results less than 10 are reported to one significant figure, and results greater than 10 are reported to two significant figures.

Ambient Estimated ambient metal concentrations in Mare Island fill soils (PRC Environmental Management Inc. 1995e; Tetra Tech EM Inc. 1999b).
BHC Hexachlorocyclohexane
COPEC Chemical of potential ecological concern
DDD Dichlorodiphenyldichloroethane
DDE Dichlorodiphenyldichloroethene
DDT Dichlorodiphenyltrichloroethane
mg/kg Milligrams per kilogram
NA No ambient limit has been established
ND Not detected
PAH Polynuclear aromatic hydrocarbon

TABLE 9-2

STATISTICAL SUMMARY OF SEDIMENT ANALYSES -- FORMER NORTH BUILDING WAYS
0 TO 2 FEET BELOW GROUND SURFACE
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

Analyte	Number of Detections/ Analyses	Maximum Detected Concentration (mg/kg)	Median Detection Concentration (mg/kg)	Number of Samples with Concentrations Greater than ER-L (mg/kg)	Number of Samples with Concentrations Greater than ER-M (mg/kg)	ER-L (mg/kg)	ER-M (mg/kg)	COPEC (yes/no)
Metals								
Aluminum	33/33	39,600 J	30,300	NL	NM	NL	NM	Yes
Antimony	21/24	7.7 J	1	3	0	2	25	Yes
Arsenic	33/33	51.1	13.3	31	0	8.2	70	Yes
Barium	33/33	151 J	58.8	NL	NM	NL	NM	Yes
Beryllium	26/33	0.83	0.56	NL	NM	NL	NM	Yes
Cadmium	3/33	7	2.1	2	0	1.2	9.6	Yes
Chromium	32/33	294 J	93.5	23	0	81	370	Yes
Chromium VI	0/3	ND	ND	0	0	NL	NM	No
Cobalt	33/33	34.8 J	19.7	NL	NM	NL	NM	Yes
Copper	33/33	324 J	71.1	29	1	34	270	Yes
Lead	33/33	422 J	46.8	17	3	46.7	218	Yes
Manganese	33/33	1,750 J	325	NL	NM	NL	NM	Yes
Mercury	31/32	1.2 J	0.42	29	7	0.15	0.71	Yes
Molybdenum	13/33	3.8	2	NL	NM	NL	NM	Yes
Nickel	33/33	160 J	94.4	29	27	20.9	51.6	Yes
Selenium	24/32	2.1	1.2	NL	NM	NL	NM	Yes
Silver	0/28	ND	ND	0	0	1	3.7	No
Thallium	3/33	1.3 J	1	NL	NM	NL	NM	Yes
Tin	6/6	5.0 J	4.5	NL	NM	NL	NM	Yes
Vanadium	33/33	226	88.8	NL	NM	NL	NM	Yes
Zinc	33/33	1,850 J	142	14	1	150	410	Yes
Semivolatile Organic Compounds								
1-Methylnaphthalene	5/6	0.02 J	0.01	NL	NM	NL	NM	Yes
1-Methylphenanthrene	3/6	0.01 J	0.01	NL	NM	NL	NM	Yes
2,3,5-Trimethylnaphthalene	2/6	0.005 J	0.005	NL	NM	NL	NM	Yes
2,6-Dimethylnaphthalene	3/6	0.007 J	0.006	NL	NM	NL	NM	Yes
2-Methylnaphthalene	5/11	0.03	0.02	0	0	0.07	0.67	No
Acenaphthene	3/11	0.006 J	0.004	0	0	0.016	0.5	No
Acenaphthylene	3/11	0.003 J	0.003	0	0	0.044	0.64	No
Anthracene	6/11	0.02	0.01	0	0	0.0853	1.1	No
Benzo(a)anthracene	6/11	0.08	0.05	0	0	0.261	1.6	No
Benzo(a)pyrene	6/11	0.1	0.08	0	0	0.43	1.6	No
Benzo(b)fluoranthene	5/11	0.3 J	0.1	NL	NM	NL	NM	Yes
Benzo(e)pyrene	6/6	0.1	0.07	NL	NM	NL	NM	Yes
Benzo(g,h,i)perylene	6/11	0.1	0.09	NL	NM	NL	NM	Yes

TABLE 9-2 (Continued)

STATISTICAL SUMMARY OF SEDIMENT ANALYSES -- FORMER NORTH BUILDING WAYS
0 TO 2 FEET BELOW GROUND SURFACE
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

Analyte	Number of Detections/ Analyses	Maximum Detected Concentration (mg/kg)	Median Detection Concentration (mg/kg)	Number of Samples with Concentrations Greater than ER-L (mg/kg)	Number of Samples with Concentrations Greater than ER-M (mg/kg)	ER-L (mg/kg)	ER-M (mg/kg)	COPEC (yes/no)
Semivolatile Organic Compounds (Continued)								
Benzo(k)fluoranthene	3/11	0.07	0.06	NL	NM	NL	NM	Yes
Biphenyl	3/6	0.006 J	0.004	NL	NM	NL	NM	Yes
Chrysene	6/11	0.1	0.07	0	0	0.384	2.8	No
Dibenz(a,h)anthracene	5/11	0.04	0.02	0	0	0.0634	0.26	No
Fluoranthene	6/11	0.2	0.1	0	0	0.6	5.1	No
Fluorene	4/11	0.02 J	0.008	0	0	0.019	0.54	No
Indeno(1,2,3-cd)pyrene	6/11	0.1	0.07	NL	NM	NL	NM	Yes
Naphthalene	6/11	0.06 J	0.02	0	0	0.16	2.1	No
Perylene	6/6	0.1	0.07	NL	NM	NL	NM	Yes
Phenanthrene	6/11	0.06	0.05	0	0	0.24	1.5	No
Pyrene	7/11	0.2	0.1	0	0	0.665	2.6	No
Total PAHs	7/11	2	1	0	0	4.022	44.792	No
Pesticides								
2,4'-DDD	6/7	0.01	0.0006	NL	NM	NL	NM	Yes
4,4'-DDD	8/34	0.02	0.002	3	1	0.002	0.02	Yes
4,4'-DDE	6/34	0.008	0.003	4	0	0.0022	0.027	Yes
4,4'-DDT	7/34	0.02	0.0007	3	1	0.001	0.007	Yes
alpha-chlordane	2/34	0.002	0.001	NL	NM	NL	NM	Yes
Dieldrin	1/34	0.0006	0.0006	1	0	0.00002	0.008	Yes
Endrin Ketone	1/34	0.002	0.002	NL	NM	NL	NM	Yes
gamma-chlordane	2/34	0.002	0.001	NL	NM	NL	NM	Yes
Methoxychlor	1/34	0.001	0.001	NL	NM	NL	NM	Yes
Total chlordanes	2/34	0.004	0.002	2	0	0.0005	0.006	Yes
Total DDTs	10/34	0.06	0.005	10	1	0.00158	0.0461	Yes
Polychorinated Biphenyls								
Aroclor-1260	7/27	0.08	0.03	NL	NM	NL	NM	Yes
PCB-101	3/7	0.005	0.005	NL	NM	NL	NM	Yes
PCB-114	1/7	0.002	0.002	NL	NM	NL	NM	Yes
PCB-118	1/7	0.0003	0.0003	NL	NM	NL	NM	Yes
PCB-128	1/7	0.0004	0.0004	NL	NM	NL	NM	Yes
PCB-138	6/7	0.04	0.0008	NL	NM	NL	NM	Yes
PCB-153	4/7	0.05	0.009	NL	NM	NL	NM	Yes
PCB-157	1/7	0.1	0.1	NL	NM	NL	NM	Yes

TABLE 9-2 (Continued)

STATISTICAL SUMMARY OF SEDIMENT ANALYSES -- FORMER NORTH BUILDING WAYS
0 TO 2 FEET BELOW GROUND SURFACE
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

Analyte	Number of Detections/ Analyses	Maximum Detected Concentration (mg/kg)	Median Detection Concentration (mg/kg)	Number of Samples with Concentrations Greater than ER-L (mg/kg)	Number of Samples with Concentrations Greater than ER-M (mg/kg)	ER-L (mg/kg)	ER-M (mg/kg)	COPEC (yes/no)
Polychorinated Biphenyls (Continued)								
PCB-170	2/7	0.05 J	0.03	NL	NM	NL	NM	Yes
PCB-180	4/7	0.1	0.01	NL	NM	NL	NM	Yes
PCB-187	3/7	0.04	0.01	NL	NM	NL	NM	Yes
PCB-195	2/7	0.007 J	0.006	NL	NM	NL	NM	Yes
PCB-206	2/7	0.002	0.001	NL	NM	NL	NM	Yes
PCB-209	1/7	0.001	0.001	NL	NM	NL	NM	Yes
PCB-66	1/7	0.0002	0.0002	NL	NM	NL	NM	Yes
Total PCBs	6/34	0.6	0.006	2	2	0.0227	0.18	Yes
Petroleum Indicators								
Diesel-range	1/34	39 J	39	NL	NM	NL	NM	Yes
Gasoline-range	2/33	620 Y	310	NL	NM	NL	NM	Yes
Motor-oil-range	18/34	1,100 Y	210	NL	NM	NL	NM	Yes

Notes: Inorganic results less than 10 are reported to two significant figures, and results greater than 10 are reported to three significant figures.
Organic results less than 10 are reported to one significant figure, and results greater than 10 are reported to two significant figures.
R and "Z" qualified data (rejected results and nonfuel total petroleum hydrocarbon results, respectively) were excluded from the statistical summary.

COPEC	Chemical of potential ecological concern
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethene
DDT	Dichlorodiphenyltrichloroethane
ER-L	Effects-range low (Long and others 1995)
ER-M	Effects-range median (Long and others 1995)
J	Estimated
mg/kg	Milligrams per kilogram
ND	Nondetected
NL	No ER-L has been established.
NM	No ER-M has been established.
PAH	Polynuclear aromatic hydrocarbon
PCB	Polychlorinated biphenyl
SVOC	Semivolatile organic compound
Y	Chromatogram indicates the presence of petroleum fuel

TABLE 9-3

SALT MARSH HARVEST MOUSE (AVERAGE BODY WEIGHT) HAZARD QUOTIENTS FOR THE WETLAND HABITAT
INVESTIGATION AREA A2
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

COPEC		Prey Ingestion Rate[1] (kg/day)	Prey Concentration (mg/kg)[2,3]	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration (mg/kg)[6]	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Aluminum														
Areawide 95UCL	Dose/High TRV	0.003	46.54	0.14	0.0001	28,545.00	2.10	1	0.01	199.94	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	46.54	0.14	0.0001	28,545.00	2.10	1	0.01	199.94	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.003	64.57	0.20	0.0001	39,600.00	2.91	1	0.01	277.37	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	64.57	0.20	0.0001	39,600.00	2.91	1	0.01	277.37	NA	NA	NA	No TRV[13]
Antimony														
Areawide 95UCL	Dose/High TRV	0.003	7.70	0.02	0.0001	1.80	0.0001	1	0.01	2.12	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	3.10	0.01	0.0001	1.80	0.0001	1	0.01	0.86	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.003	13.25	0.04	0.0001	7.70	0.001	1	0.01	3.67	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	13.25	0.04	0.0001	7.70	0.001	1	0.01	3.67	NA	NA	NA	No TRV[13]
Arsenic														
Areawide 95UCL	Dose/High TRV	0.003	1.25	0.004	0.0001	17.80	0.001	1	0.01	0.46	4.70	0.11	5.39	0.09
	Dose/Low TRV	0.003	1.25	0.004	0.0001	17.80	0.001	1	0.01	0.46	0.32	0.33	0.39	1.18
Areawide Maximum	Dose/High TRV	0.003	3.60	0.01	0.0001	51.10	0.004	1	0.01	1.32	4.70	0.11	5.39	0.24
	Dose/Low TRV	0.003	3.60	0.01	0.0001	51.10	0.004	1	0.01	1.32	0.32	0.33	0.39	3.38
Barium														
Areawide 95UCL	Dose/High TRV	0.003	17.15	0.05	0.0001	76.12	0.01	1	0.01	5.19	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	17.15	0.05	0.0001	76.12	0.01	1	0.01	5.19	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.003	34.02	0.10	0.0001	151.00	0.01	1	0.01	10.29	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	34.02	0.10	0.0001	151.00	0.01	1	0.01	10.29	NA	NA	NA	No TRV[13]
Beryllium														
Areawide 95UCL	Dose/High TRV	0.003	NB	0	0.0001	0.49	0.00004	1	0.01	0.003	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	NB	0	0.0001	0.49	0.00004	1	0.01	0.003	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.003	NB	0	0.0001	0.83	0.0001	1	0.01	0.01	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	NB	0	0.0001	0.83	0.0001	1	0.01	0.01	NA	NA	NA	No TRV[13]
Cadmium														
Areawide 95UCL	Dose/High TRV	0.003	0.22	0.001	0.0001	0.68	0.00005	1	0.01	0.07	2.64	0.03	2.81	0.02
	Dose/Low TRV	0.003	0.22	0.001	0.0001	0.68	0.00005	1	0.01	0.07	0.06	0.03	0.06	1.09
Areawide Maximum	Dose/High TRV	0.003	2.31	0.01	0.0001	7.00	0.001	1	0.01	0.68	2.64	0.03	2.81	0.24
	Dose/Low TRV	0.003	2.31	0.01	0.0001	7.00	0.001	1	0.01	0.68	0.06	0.03	0.06	11.27
Chromium														
Areawide 95UCL	Dose/High TRV	0.003	NB	0	0.0001	98.37	0.01	1	0.01	0.65	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	NB	0	0.0001	98.37	0.01	1	0.01	0.65	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.003	NB	0	0.0001	294.00	0.02	1	0.01	1.93	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	NB	0	0.0001	294.00	0.02	1	0.01	1.93	NA	NA	NA	No TRV[13]
Cobalt														
Areawide 95UCL	Dose/High TRV	0.003	NB	0	0.0001	20.61	0.002	1	0.01	0.14	20.00	0.20	23.78	0.01
	Dose/Low TRV	0.003	NB	0	0.0001	20.61	0.002	1	0.01	0.14	1.20	0.28	1.45	0.09
Areawide Maximum	Dose/High TRV	0.003	NB	0	0.0001	34.80	0.003	1	0.01	0.23	20.00	0.20	23.78	0.01
	Dose/Low TRV	0.003	NB	0	0.0001	34.80	0.003	1	0.01	0.23	1.20	0.28	1.45	0.16

TABLE 9-3 (Continued)

SALT MARSH HARVEST MOUSE (AVERAGE BODY WEIGHT) HAZARD QUOTIENTS FOR THE WETLAND HABITAT
INVESTIGATION AREA A2
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

COPEC		Prey Ingestion Rate[1] (kg/day)	Prey Concentration (mg/kg)[2,3]	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration (mg/kg)[6]	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Copper														
Areawide 95UCL	Dose/High TRV	0.003	13.44	0.04	0.0001	94.75	0.01	1	0.01	4.29	631.58	0.02	662.27	0.01
	Dose/Low TRV	0.003	13.44	0.04	0.0001	94.75	0.01	1	0.01	4.29	2.67	0.03	2.83	1.52
Areawide Maximum	Dose/High TRV	0.003	45.96	0.14	0.0001	324.00	0.02	1	0.01	14.68	631.58	0.02	662.27	0.02
	Dose/Low TRV	0.003	45.96	0.14	0.0001	324.00	0.02	1	0.01	14.68	2.67	0.03	2.83	5.19
Lead														
Areawide 95UCL	Dose/High TRV	0.003	4.97	0.02	0.0001	95.29	0.01	1	0.01	1.98	240.64	0.02	248.16	0.01
	Dose/Low TRV	0.003	4.97	0.02	0.0001	95.29	0.01	1	0.01	1.98	0.002	0.21	0.002	1,108.17
Areawide Maximum	Dose/High TRV	0.003	22.02	0.07	0.0001	422.00	0.03	1	0.01	8.78	240.64	0.02	248.16	0.04
	Dose/Low TRV	0.003	22.02	0.07	0.0001	422.00	0.03	1	0.01	8.78	0.002	0.21	0.002	4,907.63
Manganese														
Areawide 95UCL	Dose/High TRV	0.003	70.02	0.21	0.0001	560.18	0.04	1	0.01	22.81	159.09	0.03	168.68	0.14
	Dose/Low TRV	0.003	70.02	0.21	0.0001	560.18	0.04	1	0.01	22.81	13.70	0.03	14.66	1.56
Areawide Maximum	Dose/High TRV	0.003	218.75	0.67	0.0001	1,750.00	0.13	1	0.01	71.26	159.09	0.03	168.68	0.42
	Dose/Low TRV	0.003	218.75	0.67	0.0001	1,750.00	0.13	1	0.01	71.26	13.70	0.03	14.66	4.86
Mercury														
Areawide 95UCL	Dose/High TRV	0.003	0.35	0.001	0.0001	0.59	0.00004	1	0.01	0.10	4.00	0.43	4.98	0.02
	Dose/Low TRV	0.003	0.35	0.001	0.0001	0.59	0.00004	1	0.01	0.10	0.25	0.19	0.30	0.33
Areawide Maximum	Dose/High TRV	0.003	0.71	0.002	0.0001	1.20	0.0001	1	0.01	0.20	4.00	0.43	4.98	0.04
	Dose/Low TRV	0.003	0.71	0.002	0.0001	1.20	0.0001	1	0.01	0.20	0.25	0.19	0.30	0.67
Molybdenum														
Areawide 95UCL	Dose/High TRV	0.003	6.25	0.02	0.0001	1.51	0.0001	1	0.01	1.72	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	6.25	0.02	0.0001	1.51	0.0001	1	0.01	1.72	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.003	15.72	0.05	0.0001	3.80	0.0003	1	0.01	4.32	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	15.72	0.05	0.0001	3.80	0.0003	1	0.01	4.32	NA	NA	NA	No TRV[13]
Nickel														
Areawide 95UCL	Dose/High TRV	0.003	5.14	0.02	0.0001	94.54	0.01	1	0.01	2.02	31.6	0.25	38.06	0.05
	Dose/Low TRV	0.003	5.14	0.02	0.0001	94.54	0.01	1	0.01	2.02	0.13	0.25	0.16	12.65
Areawide Maximum	Dose/High TRV	0.003	8.70	0.03	0.0001	160.00	0.01	1	0.01	3.43	31.6	0.25	38.06	0.09
	Dose/Low TRV	0.003	8.70	0.03	0.0001	160.00	0.01	1	0.01	3.43	0.13	0.25	0.16	21.41
Selenium														
Areawide 95UCL	Dose/High TRV	0.003	NB	0	0.0001	1.19	0.0001	1	0.01	0.01	1.21	0.02	1.27	0.01
	Dose/Low TRV	0.003	NB	0	0.0001	1.19	0.0001	1	0.01	0.01	0.05	0.19	0.06	0.13
Areawide Maximum	Dose/High TRV	0.003	NB	0	0.0001	2.10	0.0002	1	0.01	0.01	1.21	0.02	1.27	0.01
	Dose/Low TRV	0.003	NB	0	0.0001	2.10	0.0002	1	0.01	0.01	0.05	0.19	0.06	0.23
Thallium														
Areawide 95UCL	Dose/High TRV	0.003	NB	0	0.0001	0.66	0.00005	1	0.01	0.004	1.43	0.07	1.59	0.003
	Dose/Low TRV	0.003	NB	0	0.0001	0.66	0.00005	1	0.01	0.004	0.48	0.07	0.53	0.01
Areawide Maximum	Dose/High TRV	0.003	NB	0	0.0001	1.30	0.0001	1	0.01	0.01	1.43	0.07	1.59	0.005
	Dose/Low TRV	0.003	NB	0	0.0001	1.30	0.0001	1	0.01	0.01	0.48	0.07	0.53	0.02

TABLE 9-3 (Continued)

SALT MARSH HARVEST MOUSE (AVERAGE BODY WEIGHT) HAZARD QUOTIENTS FOR THE WETLAND HABITAT
INVESTIGATION AREA A2
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

COPEC		Prey Ingestion Rate[1] (kg/day)	Prey Concentration (mg/kg)[2,3]	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration (mg/kg)[6]	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Tin														
Areawide 95UCL	Dose/High TRV	0.003	NB	0	0.0001	2.24	0.0002	1	0.01	0.01	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	NB	0	0.0001	2.24	0.0002	1	0.01	0.01	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.003	NB	0	0.0001	5.00	0.0004	1	0.01	0.03	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	NB	0	0.0001	5.00	0.0004	1	0.01	0.03	NA	NA	NA	No TRV[13]
Vanadium														
Areawide 95UCL	Dose/High TRV	0.003	NB	0	0.0001	95.84	0.01	1	0.01	0.63	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	NB	0	0.0001	95.84	0.01	1	0.01	0.63	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.003	NB	0	0.0001	226.00	0.02	1	0.01	1.48	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	NB	0	0.0001	226.00	0.02	1	0.01	1.48	NA	NA	NA	No TRV[13]
Zinc														
Areawide 95UCL	Dose/High TRV	0.003	33.22	0.10	0.0001	280.37	0.02	1	0.01	10.92	411.43	0.18	485.20	0.02
	Dose/Low TRV	0.003	33.22	0.10	0.0001	280.37	0.02	1	0.01	10.92	9.60	0.03	10.09	1.08
Areawide Maximum	Dose/High TRV	0.003	219.18	0.67	0.0001	1,850.00	0.14	1	0.01	72.03	411.43	0.18	485.20	0.15
	Dose/Low TRV	0.003	219.18	0.67	0.0001	1,850.00	0.14	1	0.01	72.03	9.60	0.03	10.09	7.14
DDTs														
Areawide 95UCL	Dose/High TRV	0.003	NB	0	0.0001	0.004	0.0000003	1	0.01	0.00003	16.00	0.32	19.56	0.000001
	Dose/Low TRV	0.003	NB	0	0.0001	0.004	0.0000003	1	0.01	0.00003	0.18	0.32	0.98	0.00003
Areawide Maximum	Dose/High TRV	0.003	NB	0	0.0001	0.02	0.000001	1	0.01	0.0001	16.00	0.32	19.56	0.00001
	Dose/Low TRV	0.003	NB	0	0.0001	0.02	0.000001	1	0.01	0.0001	0.18	0.32	0.98	0.0001
Dieldrin														
Areawide 95UCL	Dose/High TRV	0.003	NB	0	0.0001	0.001	0.00000004	1	0.01	0.000004	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	NB	0	0.0001	0.001	0.00000004	1	0.01	0.000004	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.003	NB	0	0.0001	0.001	0.00000004	1	0.01	0.000004	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	NB	0	0.0001	0.001	0.00000004	1	0.01	0.000004	NA	NA	NA	No TRV[13]
Methoxyclor														
Areawide 95UCL	Dose/High TRV	0.003	NB	0	0.0001	0.001	0.0000001	1	0.01	0.00001	50.00	0.33	61.28	0.0000001
	Dose/Low TRV	0.003	NB	0	0.0001	0.001	0.0000001	1	0.01	0.00001	2.50	0.33	3.06	0.000002
Areawide Maximum	Dose/High TRV	0.003	NB	0	0.0001	0.001	0.0000001	1	0.01	0.00001	50.00	0.33	61.28	0.0000001
	Dose/Low TRV	0.003	NB	0	0.0001	0.001	0.0000001	1	0.01	0.00001	2.50	0.33	3.06	0.000002
Total Chlordanes														
Areawide 95UCL	Dose/High TRV	0.003	NB	0	0.0001	0.004	0.0000003	1	0.01	0.00003	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	NB	0	0.0001	0.004	0.0000003	1	0.01	0.00003	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.003	NB	0	0.0001	0.004	0.0000003	1	0.01	0.00003	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.003	NB	0	0.0001	0.004	0.0000003	1	0.01	0.00003	NA	NA	NA	No TRV[13]
Total PCBs														
Areawide 95UCL	Dose/High TRV	0.003	NB	0	0.0001	0.28	0.00002	1	0.01	0.002	1.28	0.02	1.34	0.001
	Dose/Low TRV	0.003	NB	0	0.0001	0.28	0.00002	1	0.01	0.002	0.36	0.02	0.37	0.005
Areawide Maximum	Dose/High TRV	0.003	NB	0	0.0001	0.60	0.00004	1	0.01	0.004	1.28	0.02	1.34	0.003
	Dose/Low TRV	0.003	NB	0	0.0001	0.60	0.00004	1	0.01	0.004	0.36	0.02	0.37	0.01

TABLE 9-3 (Continued)

SALT MARSH HARVEST MOUSE (AVERAGE BODY WEIGHT) HAZARD QUOTIENTS FOR THE WETLAND HABITAT INVESTIGATION AREA A2
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95 percent upper confidence limit on the arithmetic mean
BAF	Bioaccumulation factor
COPEC	Chemical of potential ecological concern
DDT	Dichlorodiphenyltrichloroethane
kg/day	Kilograms per day
mg/day	Milligrams per day
EFA WEST	Naval Facilities Engineering Command, Engineering Field West
HQ	Hazard quotient
NB	No BAF was available.
mg/kg	Milligrams per kilogram
mg/kg/day	Milligrams per kilogram per day
NA	Not available
PCB	Polychlorinated biphenyl
SUF	Site use factor
TRV	Toxicity reference value
USACE	U.S. Army Corps of Engineers

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for rodents and the averaged food requirement conversion for herbivores.
2 The 95UCL or habitat area maximum (see note 6) for all site-collected sediment samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 0 mg/kg because no BAF was available.
3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 81.6 percent in USACE (1995).
4 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration.
5 Rate for the meadow vole in Beyer and others (1994); 2.4 percent of prey ingestion rate.
6 For average doses, lesser of 95UCL or detected maximum of all site-collected sediment samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected sediment samples was used.
7 Sediment daily dose was calculated by multiplying the sediment ingestion rate by 95UCL or habitat area maximum (see note 6) sediment concentration.
8 Average adult weight from a San Pablo Bay (Gallinas) population measured by Fisler (1965).
9 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + sediment daily dose)*SUF)/receptor species body weight.
10 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.
11 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-0.94)}$.
12 The HQ was calculated using total daily dose/allometrically adjusted TRV.
13 Sufficient data are not available to derive a TRV. This chemical was evaluated qualitatively.

TABLE 9-4

GRAY FOX DOSE CALCULATIONS AND HAZARD QUOTIENTS FOR THE UPLAND HABITAT
INVESTIGATION AREA A2
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

COPEC		Prey Ingestion Rate[1] (kg/day)	Prey Concentration (mg/kg)[2,3]	Prey Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration (mg/kg)[6]	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Barium														
Areawide 95UCL	Dose/High TRV	0.18	6.57	1.16	0.005	108.89	0.54	1	3.88	0.44	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.18	6.57	1.16	0.005	108.89	0.54	1	3.88	0.44	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.18	28.59	5.07	0.005	474.00	2.35	1	3.88	1.91	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.18	28.59	5.07	0.005	474.00	2.35	1	3.88	1.91	NA	NA	NA	No TRV[13]
Beryllium														
Areawide 95UCL	Dose/High TRV	0.18	NB	0	0.005	0.21	0.001	1	3.88	0.0003	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.18	NB	0	0.005	0.21	0.001	1	3.88	0.0003	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.18	NB	0	0.005	1.60	0.01	1	3.88	0.002	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.18	NB	0	0.005	1.60	0.01	1	3.88	0.002	NA	NA	NA	No TRV[13]
Chromium														
Areawide 95UCL	Dose/High TRV	0.18	1.85	0.33	0.005	60.91	0.30	1	3.88	0.16	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.18	1.85	0.33	0.005	60.91	0.30	1	3.88	0.16	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.18	13.34	2.36	0.005	440.00	2.18	1	3.88	1.17	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.18	13.34	2.36	0.005	440.00	2.18	1	3.88	1.17	NA	NA	NA	No TRV[13]
Cobalt														
Areawide 95UCL	Dose/High TRV	0.18	NB	0	0.005	13.07	0.06	1	3.88	0.02	20.00	0.20	16.74	0.001
	Dose/Low TRV	0.18	NB	0	0.005	13.07	0.06	1	3.88	0.02	1.20	0.28	1.02	0.02
Areawide Maximum	Dose/High TRV	0.18	NB	0	0.005	34.80	0.17	1	3.88	0.04	20.00	0.20	16.74	0.003
	Dose/Low TRV	0.18	NB	0	0.005	34.80	0.17	1	3.88	0.04	1.20	0.28	1.02	0.04
Copper														
Areawide 95UCL	Dose/High TRV	0.18	13.34	2.36	0.005	88.44	0.44	1	3.88	0.72	631.58	0.02	466.29	0.002
	Dose/Low TRV	0.18	13.34	2.36	0.005	88.44	0.44	1	3.88	0.72	2.67	0.03	1.99	0.36
Areawide Maximum	Dose/High TRV	0.18	103.13	18.29	0.005	684.00	3.40	1	3.88	5.59	631.58	0.02	466.29	0.01
	Dose/Low TRV	0.18	103.13	18.29	0.005	684.00	3.40	1	3.88	5.59	2.67	0.03	1.99	2.80
Lead														
Areawide 95UCL	Dose/High TRV	0.18	16.44	2.92	0.005	116.79	0.58	1	3.88	0.90	240.64	0.02	174.72	0.005
	Dose/Low TRV	0.18	16.44	2.92	0.005	116.79	0.58	1	3.88	0.90	0.002	0.20	0.001	717.26
Areawide Maximum	Dose/High TRV	0.18	136.28	24.16	0.005	968.00	4.81	1	3.88	7.47	240.64	0.02	174.72	0.04
	Dose/Low TRV	0.18	136.28	24.16	0.005	968.00	4.81	1	3.88	7.47	0.002	0.20	0.001	5,944.92
Mercury														
Areawide 95UCL	Dose/High TRV	0.18	NB	0	0.005	10.20	0.05	1	3.88	0.01	0.27	0.80	0.25	0.05
	Dose/Low TRV	0.18	NB	0	0.005	10.20	0.05	1	3.88	0.01	0.03	0.80	0.025	0.53
Areawide Maximum	Dose/High TRV	0.18	NB	0	0.005	10.20	0.05	1	3.88	0.01	0.27	0.80	0.25	0.05
	Dose/Low TRV	0.18	NB	0	0.005	10.20	0.05	1	3.88	0.01	0.03	0.80	0.025	0.53
Molybdenum														
Areawide 95UCL	Dose/High TRV	0.18	NB	0	0.005	0.50	0.002	1	3.88	0.001	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.18	NB	0	0.005	0.50	0.002	1	3.88	0.001	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.18	NB	0	0.005	6.80	0.03	1	3.88	0.01	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.18	NB	0	0.005	6.80	0.03	1	3.88	0.01	NA	NA	NA	No TRV[13]
Nickel														
Areawide 95UCL	Dose/High TRV	0.18	NB	0	0.005	37.42	0.19	1	3.88	0.05	31.60	0.25	26.80	0.002
	Dose/Low TRV	0.18	NB	0	0.005	37.42	0.19	1	3.88	0.05	0.13	0.25	0.11	0.43
Areawide Maximum	Dose/High TRV	0.18	NB	0	0.005	169.00	0.84	1	3.88	0.22	31.60	0.25	26.80	0.01
	Dose/Low TRV	0.18	NB	0	0.005	169.00	0.84	1	3.88	0.22	0.13	0.25	0.11	1.92

TABLE 9-4 (Continued)

GRAY FOX DOSE CALCULATIONS AND HAZARD QUOTIENTS FOR THE UPLAND HABITAT
INVESTIGATION AREA A2
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

COPEC		Prey Ingestion Rate[1] (kg/day)	Prey Concentration (mg/kg)[2,3]	Prey Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration (mg/kg)[6]	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Selenium														
Areawide 95UCL	Dose/High TRV	0.18	0.98	0.17	0.005	0.60	0.003	1	3.88	0.05	1.21	0.02	0.89	0.05
	Dose/Low TRV	0.18	0.98	0.17	0.005	0.60	0.003	1	3.88	0.05	0.05	1.87	0.05	0.95
Areawide Maximum	Dose/High TRV	0.18	2.93	0.52	0.005	1.80	0.01	1	3.88	0.14	1.21	0.02	0.89	0.15
	Dose/Low TRV	0.18	2.93	0.52	0.005	1.80	0.01	1	3.88	0.14	0.05	0.19	0.04	3.27
Silver														
Areawide 95UCL	Dose/High TRV	0.18	NB	0	0.005	0.48	0.002	1	3.88	0.001	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.18	NB	0	0.005	0.48	0.002	1	3.88	0.001	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.18	NB	0	0.005	5.80	0.03	1	3.88	0.01	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.18	NB	0	0.005	5.80	0.03	1	3.88	0.01	NA	NA	NA	No TRV[13]
Thallium														
Areawide 95UCL	Dose/High TRV	0.18	NB	0	0.005	0.44	0.002	1	3.88	0.001	1.43	0.07	1.12	0.001
	Dose/Low TRV	0.18	NB	0	0.005	0.44	0.002	1	3.88	0.001	0.48	0.07	0.38	0.001
Areawide Maximum	Dose/High TRV	0.18	NB	0	0.005	1.60	0.01	1	3.88	0.002	1.43	0.07	1.12	0.002
	Dose/Low TRV	0.18	NB	0	0.005	1.60	0.01	1	3.88	0.002	0.48	0.07	0.38	0.005
Tin														
Areawide 95UCL	Dose/High TRV	0.18	NB	0	0.005	28.35	0.14	1	3.88	0.04	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.18	NB	0	0.005	28.35	0.14	1	3.88	0.04	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.18	NB	0	0.005	40.60	0.20	1	3.88	0.05	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.18	NB	0	0.005	40.60	0.20	1	3.88	0.05	NA	NA	NA	No TRV[13]
Vanadium														
Areawide 95UCL	Dose/High TRV	0.18	NB	0	0.005	74.51	0.37	1	3.88	0.10	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.18	NB	0	0.005	74.51	0.37	1	3.88	0.10	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.18	NB	0	0.005	241.00	1.20	1	3.88	0.31	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.18	NB	0	0.005	241.00	1.20	1	3.88	0.31	NA	NA	NA	No TRV[13]
Zinc														
Areawide 95UCL	Dose/High TRV	0.18	191.38	33.93	0.005	215.53	1.07	1	3.88	9.02	411.43	0.18	341.62	0.03
	Dose/Low TRV	0.18	191.38	33.93	0.005	215.53	1.07	1	3.88	9.02	9.60	0.03	7.10	1.27
Areawide Maximum	Dose/High TRV	0.18	1758.18	311.74	0.005	1,980.00	9.83	1	3.88	82.88	411.43	0.18	341.62	0.24
	Dose/Low TRV	0.18	1758.18	311.74	0.005	1,980.00	9.83	1	3.88	82.88	9.60	0.03	7.10	11.67
LMW PAH														
Areawide 95UCL	Dose/High TRV	0.18	NB	0	0.005	0.10	0.0005	1	3.88	0.0001	150.00	0.27	127.83	0.000001
	Dose/Low TRV	0.18	NB	0	0.005	0.10	0.0005	1	3.88	0.0001	50.00	0.28	42.68	0.000003
Areawide Maximum	Dose/High TRV	0.18	NB	0	0.005	0.64	0.003	1	3.88	0.001	150.00	0.27	127.84	0.000006
	Dose/Low TRV	0.18	NB	0	0.005	0.64	0.003	1	3.88	0.001	50.00	0.28	42.67	0.00002
HMW PAH														
Areawide 95UCL	Dose/High TRV	0.18	NB	0	0.005	0.85	0.004	1	3.88	0.001	32.79	0.03	24.52	0.00004
	Dose/Low TRV	0.18	NB	0	0.005	0.85	0.004	1	3.88	0.001	1.31	0.03	0.98	0.001
Areawide Maximum	Dose/High TRV	0.18	NB	0	0.005	3.79	0.02	1	3.88	0.005	32.79	0.03	24.52	0.0002
	Dose/Low TRV	0.18	NB	0	0.005	3.79	0.02	1	3.88	0.005	1.31	0.03	0.98	0.005
DDTs														
Areawide 95UCL	Dose/High TRV	0.18	0.01	0.002	0.005	0.02	0.0001	1	3.88	0.001	16.00	0.32	13.78	0.00005
	Dose/Low TRV	0.18	0.01	0.002	0.005	0.02	0.0001	1	3.88	0.001	0.80	0.32	0.69	0.001
Areawide Maximum	Dose/High TRV	0.18	0.16	0.03	0.005	0.21	0.001	1	3.88	0.008	16.00	0.32	13.78	0.001
	Dose/Low TRV	0.18	0.16	0.03	0.005	0.21	0.001	1	3.88	0.008	0.80	0.32	0.69	0.011

TABLE 9-4 (Continued)

GRAY FOX DOSE CALCULATIONS AND HAZARD QUOTIENTS FOR THE UPLAND HABITAT
INVESTIGATION AREA A2
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

COPEC		Prey Ingestion Rate[1] (kg/day)	Prey Concentration (mg/kg)[2,3]	Prey Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration (mg/kg)[6]	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
gamma-BHC														
Areawide 95UCL	Dose/High TRV	0.18	NB	0	0.005	0.002	0.00001	1	3.88	0.000003	3.75	0.02	2.76	0.000001
	Dose/Low TRV	0.18	NB	0	0.005	0.002	0.00001	1	3.88	0.000003	0.05	0.10	0.04	0.0001
Areawide Maximum	Dose/High TRV	0.18	NB	0	0.005	0.01	0.0001	1	3.88	0.00002	3.75	0.02	2.76	0.00001
	Dose/Low TRV	0.18	NB	0	0.005	0.01	0.0001	1	3.88	0.00002	0.05	0.18	0.04	0.0004
Heptachlor														
Areawide 95UCL	Dose/High TRV	0.18	NB	0	0.005	0.0004	0.000002	1	3.88	0.000001	6.80	0.20	5.70	0.0000001
	Dose/Low TRV	0.18	NB	0	0.005	0.0004	0.000002	1	3.88	0.000001	0.13	0.10	0.10	0.000005
Areawide Maximum	Dose/High TRV	0.18	NB	0	0.005	0.005	0.00002	1	3.88	0.00001	6.80	0.20	5.70	0.000001
	Dose/Low TRV	0.18	NB	0	0.005	0.005	0.00002	1	3.88	0.00001	0.13	0.10	0.10	0.0001
Methoxychlor														
Areawide 95UCL	Dose/High TRV	0.18	NB	0	0.005	0.01	0.00005	1	3.88	0.00001	50.00	0.33	43.14	0.0000003
	Dose/Low TRV	0.18	NB	0	0.005	0.01	0.00005	1	3.88	0.00001	2.50	0.33	2.16	0.00001
Areawide Maximum	Dose/High TRV	0.18	NB	0	0.005	0.02	0.0001	1	3.88	0.00002	50.00	0.33	43.14	0.000001
	Dose/Low TRV	0.18	NB	0	0.005	0.02	0.0001	1	3.88	0.00002	2.50	0.33	2.16	0.00001
Total Chlordanes														
Areawide 95UCL	Dose/High TRV	0.18	NB	0	0.005	0.02	0.0001	1	3.88	0.00002	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.18	NB	0	0.005	0.02	0.0001	1	3.88	0.00002	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.18	NB	0	0.005	0.07	0.0003	1	3.88	0.0001	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.18	NB	0	0.005	0.07	0.0003	1	3.88	0.0001	NA	NA	NA	No TRV[13]

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95 percent upper confidence limit on the arithmetic mean	kg/day	Kilograms per day
BAF	Bioaccumulation factor	LMW	Low molecular weight
BHC	Hexachlorocyclohexane	mg/day	Milligrams per day
COPEC	Chemical of potential ecological concern	mg/kg	Milligrams per kilogram
DDT	Dichlorodiphenyltrichloroethane	mg/kg/day	Milligrams per kilogram per day
EFA WEST	Naval Facilities Engineering Command, Engineering Field Activity West	NA	Not applicable
EPA	U.S. Environmental Protection Agency	NB	No BAF was available.
HMW	High molecular weight	PAH	Polynuclear aromatic hydrocarbon
HQ	Hazard quotient	SUF	Site use factor
kg	Kilogram	TRV	Toxicity reference value

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for eutherian mammals and the averaged food requirement conversion for omnivores.
2 The 95UCL or habitat area maximum (see note 6) for all site-collected soil samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 0 mg/ because no BAF was available.
3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).
4 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration.
5 Rate for the red fox in Beyer and others (1994); 2.8 percent of prey ingestion rate.
6 For average doses, lesser of 95UCL or detected maximum of all site-collected soil samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected soil samples was used.
7 Soil daily dose was calculated by multiplying the soil ingestion rate by 95UCL or habitat area maximum (see note 6) soil concentration.
8 Average adult weight from Silva and Downing (1995).
9 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + soil daily dose)*SUF)/receptor species body weight.
10 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.
11 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-0.94)}$.
12 The HQ was calculated using total daily dose/allometrically adjusted TRV.
13 Sufficient data are not available to derive a TRV. This chemical was evaluated qualitatively.

TABLE 9-5

NORTHERN HARRIER HAZARD QUOTIENTS FOR THE UPLAND HABITAT
INVESTIGATION AREA A2
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

COPEC		Prey Ingestion Rate[1] (kg/day)	Prey Concentration (mg/kg)[2,3]	Prey Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration (mg/kg)[6]	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Barium														
Areawide 95UCL	Dose/High TRV	0.04	6.57	0.24	0.0003	108.89	0.03	1	0.44	0.61	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	6.57	0.24	0.0003	108.89	0.03	1	0.44	0.61	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.04	28.59	1.05	0.0003	474.00	0.12	1	0.44	2.67	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	28.59	1.05	0.0003	474.00	0.12	1	0.44	2.67	NA	NA	NA	No TRV[13]
Beryllium														
Areawide 95UCL	Dose/High TRV	0.04	NB	0	0.0003	0.21	0.0001	1	0.44	0.0001	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	0.21	0.0001	1	0.44	0.0001	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.04	NB	0	0.0003	1.60	0.0004	1	0.44	0.001	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	1.60	0.0004	1	0.44	0.001	NA	NA	NA	No TRV[13]
Chromium														
Areawide 95UCL	Dose/High TRV	0.04	1.85	0.07	0.0003	60.91	0.02	1	0.44	0.19	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	1.85	0.07	0.0003	60.91	0.02	1	0.44	0.19	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.04	13.34	0.49	0.0003	440.00	0.11	1	0.44	1.37	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	13.34	0.49	0.0003	440.00	0.11	1	0.44	1.37	NA	NA	NA	No TRV[13]
Cobalt														
Areawide 95UCL	Dose/High TRV	0.04	NB	0	0.0003	13.07	0.003	1	0.44	0.01	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	13.07	0.003	1	0.44	0.01	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.04	NB	0	0.0003	34.80	0.01	1	0.44	0.02	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	34.80	0.01	1	0.44	0.02	NA	NA	NA	No TRV[13]
Copper														
Areawide 95UCL	Dose/High TRV	0.04	13.34	0.49	0.0003	88.44	0.02	1	0.44	1.17	52.26	0.41	53.05	0.02
	Dose/Low TRV	0.04	13.34	0.49	0.0003	88.44	0.02	1	0.44	1.17	2.30	0.64	2.14	0.55
Areawide Maximum	Dose/High TRV	0.04	103.13	3.80	0.0003	684.00	0.18	1	0.44	9.03	52.26	0.41	53.05	0.17
	Dose/Low TRV	0.04	103.13	3.80	0.0003	684.00	0.18	1	0.44	9.03	2.30	0.64	2.14	4.23
Lead														
Areawide 95UCL	Dose/High TRV	0.04	16.44	0.61	0.0003	116.79	0.03	1	0.44	1.44	8.75	0.80	7.77	0.19
	Dose/Low TRV	0.04	16.44	0.61	0.0003	116.79	0.03	1	0.44	1.44	0.01	0.08	0.02	74.00
Areawide Maximum	Dose/High TRV	0.04	136.28	5.03	0.0003	968.00	0.25	1	0.44	11.96	8.75	0.80	7.77	1.54
	Dose/Low TRV	0.04	136.28	5.03	0.0003	968.00	0.25	1	0.44	11.96	0.01	0.08	0.02	613.30
Mercury														
Areawide 95UCL	Dose/High TRV	0.04	NB	0	0.0003	10.20	0.003	1	0.44	0.006	0.18	1.00	0.15	0.04
	Dose/Low TRV	0.04	NB	0	0.0003	10.20	0.003	1	0.44	0.006	0.04	1.00	0.03	0.18
Areawide Maximum	Dose/High TRV	0.04	NB	0	0.0003	10.20	0.003	1	0.44	0.006	0.18	1.00	0.15	0.04
	Dose/Low TRV	0.04	NB	0	0.0003	10.20	0.003	1	0.44	0.006	0.04	1.00	0.03	0.18
Molybdenum														
Areawide 95UCL	Dose/High TRV	0.04	NB	0	0.0003	0.50	0.0001	1	0.44	0.0003	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	0.50	0.0001	1	0.44	0.0003	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.04	NB	0	0.0003	6.80	0.002	1	0.44	0.004	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	6.80	0.002	1	0.44	0.004	NA	NA	NA	No TRV[13]

TABLE 9-5 (Continued)

NORTHERN HARRIER HAZARD QUOTIENTS FOR THE UPLAND HABITAT
INVESTIGATION AREA A2
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

COPEC		Prey Ingestion Rate[1] (kg/day)	Prey Concentration (mg/kg)[2,3]	Prey Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration (mg/kg)[6]	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Nickel														
Areawide 95UCL	Dose/High TRV	0.04	NB	0	0.0003	37.42	0.01	1	0.44	0.02	55.26	0.58	52.31	0.0004
	Dose/Low TRV	0.04	NB	0	0.0003	37.42	0.01	1	0.44	0.02	1.38	0.61	1.29	0.02
Areawide Maximum	Dose/High TRV	0.04	NB	0	0.0003	169.00	0.04	1	0.44	0.10	55.26	0.58	52.31	0.002
	Dose/Low TRV	0.04	NB	0	0.0003	169.00	0.04	1	0.44	0.10	1.38	0.61	1.29	0.08
Selenium														
Areawide 95UCL	Dose/High TRV	0.04	0.98	0.04	0.0003	0.60	0.0002	1	0.44	0.08	0.93	1.11	0.77	0.11
	Dose/Low TRV	0.04	0.98	0.04	0.0003	0.60	0.0002	1	0.44	0.08	0.23	1.11	0.19	0.43
Areawide Maximum	Dose/High TRV	0.04	2.93	0.11	0.0003	1.80	0.0005	1	0.44	0.25	0.93	1.11	0.77	0.32
	Dose/Low TRV	0.04	2.93	0.11	0.0003	1.80	0.0005	1	0.44	0.25	0.23	1.11	0.19	1.29
Silver														
Areawide 95UCL	Dose/High TRV	0.04	NB	0	0.0003	0.48	0.0001	1	0.44	0.0003	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	0.48	0.0001	1	0.44	0.0003	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.04	NB	0	0.0003	5.80	0.001	1	0.44	0.003	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	5.80	0.001	1	0.44	0.003	NA	NA	NA	No TRV[13]
Thallium														
Areawide 95UCL	Dose/High TRV	0.04	NB	0	0.0003	0.44	0.0001	1	0.44	0.0003	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	0.44	0.0001	1	0.44	0.0003	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.04	NB	0	0.0003	1.60	0.0004	1	0.44	0.001	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	1.60	0.0004	1	0.44	0.001	NA	NA	NA	No TRV[13]
Tin														
Areawide 95UCL	Dose/High TRV	0.04	NB	0	0.0003	28.35	0.01	1	0.44	0.02	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	28.35	0.01	1	0.44	0.02	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.04	NB	0	0.0003	40.60	0.01	1	0.44	0.02	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	40.60	0.01	1	0.44	0.02	NA	NA	NA	No TRV[13]
Vanadium														
Areawide 95UCL	Dose/High TRV	0.04	NB	0	0.0003	74.51	0.02	1	0.44	0.04	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	74.51	0.02	1	0.44	0.04	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.04	NB	0	0.0003	241.00	0.06	1	0.44	0.14	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	241.00	0.06	1	0.44	0.14	NA	NA	NA	No TRV[13]
Zinc														
Areawide 95UCL	Dose/High TRV	0.04	191.38	7.06	0.0003	215.53	0.06	1	0.44	16.13	172.00	1.00	146.17	0.11
	Dose/Low TRV	0.04	191.38	7.06	0.0003	215.53	0.06	1	0.44	16.13	17.20	1.00	14.62	1.10
Areawide Maximum	Dose/High TRV	0.04	1758.18	64.84	0.0003	1,980.00	0.51	1	0.44	148.19	172.00	1.00	146.17	1.01
	Dose/Low TRV	0.04	1758.18	64.84	0.0003	1,980.00	0.51	1	0.44	148.19	17.20	1.00	14.62	10.14
LMW PAH														
Areawide 95UCL	Dose/High TRV	0.04	NB	0	0.0003	0.10	0.00003	1	0.44	0.0001	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	0.10	0.00003	1	0.44	0.0001	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.04	NB	0	0.0003	0.64	0.0002	1	0.44	0.0004	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	0.64	0.0002	1	0.44	0.0004	NA	NA	NA	No TRV[13]

TABLE 9-5 (Continued)

NORTHERN HARRIER HAZARD QUOTIENTS FOR THE UPLAND HABITAT
INVESTIGATION AREA A2
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

COPEC		Prey Consumption[1] (kg/day)	Prey Concentration (mg/kg)[2,3]	Prey Daily Dose[4] (mg/day)	Soil Consumption[5] (kg/day)	Soil Concentration (mg/kg)[6]	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
HMW PAH														
Areawide 95UCL	Dose/High TRV	0.04	NB	0	0.0003	0.85	0.0002	1	0.44	0.0005	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	0.85	0.0002	1	0.44	0.0005	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.04	NB	0	0.0003	3.79	0.001	1	0.44	0.002	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	3.79	0.001	1	0.44	0.002	NA	NA	NA	No TRV[13]
DDEs														
Areawide 95UCL	Dose/High TRV	0.04	0.001	0.00004	0.0003	0.004	0.000001	1	0.44	0.0001	0.60	1.00	0.51	0.0002
	Dose/Low TRV	0.04	0.001	0.00004	0.0003	0.004	0.000001	1	0.44	0.0001	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.04	0.01	0.0004	0.0003	0.04	0.00001	1	0.44	0.001	0.60	1.00	0.51	0.002
	Dose/Low TRV	0.04	0.01	0.0004	0.0003	0.04	0.00001	1	0.44	0.001	NA	NA	NA	No TRV[13]
DDTs														
Areawide 95UCL	Dose/High TRV	0.04	0.01	0.0005	0.0003	0.02	0.000005	1	0.44	0.001	1.50	1.00	1.27	0.001
	Dose/Low TRV	0.04	0.01	0.0005	0.0003	0.02	0.000005	1	0.44	0.001	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.04	0.16	0.01	0.0003	0.21	0.00005	1	0.44	0.01	1.50	1.00	1.27	0.01
	Dose/Low TRV	0.04	0.16	0.01	0.0003	0.21	0.00005	1	0.44	0.01	NA	NA	NA	No TRV[13]
Total DDT														
Areawide 95UCL	Dose/High TRV	0.04	NB	0	0.0003	0.04	0.00001	1	0.44	0.00002	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	0.04	0.00001	1	0.44	0.00002	0.01	3.50	0.01	0.004
Areawide Maximum	Dose/High TRV	0.04	NB	0	0.0003	0.50	0.0001	1	0.44	0.0003	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	0.50	0.0001	1	0.44	0.0003	0.01	3.50	0.01	0.05
Gamma-BHC														
Areawide 95UCL	Dose/High TRV	0.04	NB	0	0.0003	0.002	0.000001	1	0.44	0.000001	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	0.002	0.000001	1	0.44	0.000001	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.04	NB	0	0.0003	0.01	0.000004	1	0.44	0.00001	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	0.01	0.000004	1	0.44	0.00001	NA	NA	NA	No TRV[13]
Heptachlor														
Areawide 95UCL	Dose/High TRV	0.04	NB	0	0.0003	0.0004	0.0000001	1	0.44	0.0000002	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	0.0004	0.0000001	1	0.44	0.0000002	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.04	NB	0	0.0003	0.005	0.000001	1	0.44	0.000003	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	0.005	0.000001	1	0.44	0.000003	NA	NA	NA	No TRV[13]
Methoxychlor														
Areawide 95UCL	Dose/High TRV	0.04	NB	0	0.0003	0.01	0.000003	1	0.44	0.00001	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	0.01	0.000003	1	0.44	0.00001	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.04	NB	0	0.0003	0.02	0.000005	1	0.44	0.00001	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	0.02	0.000005	1	0.44	0.00001	NA	NA	NA	No TRV[13]
Total Chlordane														
Areawide 95UCL	Dose/High TRV	0.04	NB	0	0.0003	0.02	0.000004	1	0.44	0.00001	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	0.02	0.000004	1	0.44	0.00001	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.04	NB	0	0.0003	0.07	0.00002	1	0.44	0.00004	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.04	NB	0	0.0003	0.07	0.00002	1	0.44	0.00004	NA	NA	NA	No TRV[13]

TABLE 9-5 (Continued)

NORTHERN HARRIER HAZARD QUOTIENTS FOR THE UPLAND HABITAT
INVESTIGATION AREA A2
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95th percent upper confidence limit on the arithmetic mean
BAF	Bioaccumulation factor
BHC	Hexachlorocyclohexane
COPEC	Chemical of potential ecological concern
DDE	Dichlorodiphenyldichloroethene
DDT	Dichlorodiphenyltrichloroethane
EFA WEST	Naval Facilities Engineering Command, Engineering Field Activity West
HMW	High molecular weight
HQ	Hazard quotient
kg	Kilogram
kg/day	Kilograms per day
LMW	Low molecular weight
mg/day	Milligrams per day
mg/kg	Milligrams per kilogram
mg/kg/day	Milligrams per kilogram per day
NA	Not applicable
NB	No BAF was available.
PAH	Polynuclear aromatic hydrocarbon
SUF	Site use factor
TRV	Toxicity reference value

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for all birds and the averaged food requirement conversion for insectivorous birds.
2 The 95UCL or habitat area maximum (see note 6) for all site-collected soil samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 0 mg/kg because no BAF was available.
3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).
4 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration.
5 Rate for the Bald Eagle in Pascoe and others (1996); 0.7 percent of prey ingestion rate.
6 For average doses, lesser of 95UCL or detected maximum of all site-collected soil samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected soil samples was used.
7 Soil daily dose was calculated by multiplying the soil ingestion rate by 95UCL or habitat area maximum (see note 6) soil concentration.
8 Average adult weight from Dunning (1993).
9 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + soil daily dose)*SUF)/receptor species body weight.
10 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.
11 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-1.2)}$.
12 The HQ was calculated using total daily dose/allometrically adjusted TRV.
13 Sufficient data are not available to derive a TRV. This chemical was evaluated qualitatively.

TABLE 9-6

QUALITATIVE EVALUATION OF CHEMICALS OF ECOLOGICAL CONCERN WITHOUT MAMMALIAN TOXICITY REFERENCE VALUES FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT MARE ISLAND, CALIFORNIA

Receptor	Study	Effect Type	Dose to Test Species (mg/kg-day)	Test Species (Body Weight)	Allometrically Converted Dose (mg/kg-day)	Food-chain Modeled Maximum Dose (mg/kg-day)	Food-chain Modeled Average Dose (mg/kg-day)	Does the Food-chain Modeled Dose Exceed Literature Doses?
Aluminum								
Salt Marsh Harvest Mouse	Gomez and others 1986	No effect	195	Rat	NA	277.37	199.94	See Section 9.2.2.4
	Domingo and others 1987	No effect	108	Rat	NA			
	Domingo and others 1987	LOAEL (decreased weight gain)	540	Rat	NA			
Antimony								
Salt Marsh Harvest Mouse	Schroeder and others 1975a	No effect	5	Long-Evans Rats (289.75 g)	6.08	0.86	3.67	No
	Dieter and others 1991	No effect	168	F344/N Rats (124 g)	194.1			
Barium								
Gray Fox	McCauley and others 1985	No effect	15	Rats	NA	1.91	0.44	No
	Tardiff and others 1989	No effect	35	Rat	NA			
Salt Marsh Harvest Mouse	McCauley and others 1985	No effect	15	Rats	NA	10.29	5.19	No
	Tardiff and others 1989	No effect	35	Rat	NA			
Beryllium								
Gray Fox	Schroeder and Mitchener 1975a	No effect	0.70	Rats (211 g)	0.59	< 0.01	< 0.01	No
	Schroeder and Mitchener 1975b	No effect	0.95	Mice (31 g)	0.71			
	Morgareidge and others 1975	No effect	31	Rats (211 g)	26.03			
Salt Marsh Harvest Mouse	Schroeder and Mitchener 1975a	No effect	0.70	Rats (211 g)	0.84	0.01	< 0.01	No
	Schroeder and Mitchener 1975b	No effect	0.95	Mice (31 g)	1.01			
	Morgareidge and others 1975	No effect	31	Rats (211 g)	37.0			

TABLE 9-6 (Continued)

QUALITATIVE EVALUATION OF CHEMICALS OF ECOLOGICAL CONCERN WITHOUT MAMMALIAN TOXICITY REFERENCE VALUES FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT MARE ISLAND, CALIFORNIA

Receptor	Study	Effect Type	Dose to Test Species (mg/kg-day)	Test Species (Body Weight)	Allometrically Converted Dose (mg/kg-day)	Food-chain Modeled Maximum Dose (mg/kg-day)	Food-chain Modeled Average Dose (mg/kg-day)	Does the Food-chain Modeled Dose Exceed Literature Doses?
Chromium								
Gray Fox	Preston and others 1976	No effect	50	Guinea pig (925 g)	45.88	1.17	0.16	No
Salt Marsh Harvest Mouse	Preston and others 1976	No effect	50	Guinea pig (925 g)	65.16	1.93	0.65	No
Molybdenum								
Gray Fox	Rana and Prakash 1986	Induced collagenesis in the liver	1000	Albino rats (100 g)	802.9	0.01	< 0.01	No
	Winston and Trainor 1978	No effect in serum glucose	0.2	Sprague-Dawley rats (365 g)	0.17			
Salt Marsh Harvest Mouse	Rana and Prakash 1986	Induced collagenesis in the liver	1000	Albino rats (100 g)	1140.4	4.32	1.72	See Section 9.2.2.4
	Winston and Trainor 1978	No effect in serum glucose	0.2	Sprague-Dawley rats (365 g)	0.25			
Tin								
Gray Fox	de Groot and others 1973	No effect	32	Rat	NA	0.05	0.04	No
	NTP 1982	No effect	60	Rat	NA			
	Schroeder and Balassa 1967	No effect	0.7	Mouse	NA			
Salt Marsh Harvest Mouse	de Groot and others 1973	No effect	32	Rat	NA	0.03	0.01	No
	NTP 1982	No effect	60	Rat	NA			
	Schroeder and Balassa 1967	No effect	0.7	Mouse	NA			
Vanadium								
Gray Fox	Susic and Kentera 1986	Increased ventricular pressure	15	Rat (211 g)	12.60	0.31	0.10	No
	Mountain and others 1953	Decreased weight gain	30	Rat (211 g)	25.19			
Salt Marsh Harvest Mouse	Susic and Kentera 1986	Increased ventricular pressure	15	Rat (211 g)	17.89	1.48	0.63	No
	Mountain and others 1953	Decreased weight gain	30	Rat (211 g)	35.78			

TABLE 9-6 (Continued)

QUALITATIVE EVALUATION OF CHEMICALS OF ECOLOGICAL CONCERN WITHOUT MAMMALIAN TOXICITY REFERENCE VALUES FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT MARE ISLAND, CALIFORNIA

Receptor	Study	Effect Type	Dose to Test Species (mg/kg-day)	Test Species (Body Weight)	Allometrically Converted Dose (mg/kg-day)	Food-chain Modeled Maximum Dose (mg/kg-day)	Food-chain Modeled Average Dose (mg/kg-day)	Does the Food-chain Modeled Dose Exceed Literature Doses?
Total Chlordanes								
Gray Fox	Balash and others 1987	No effect	100	Swiss mice	NA	< 0.01	< 0.01	No
	Kwasawinah and Grutsch 1989	No effect	0.18	Charles River mice	NA			
	Cranmer and others 1984	No effect	8	F2 dihybrid mice	NA			
Salt Marsh Harvest Mouse	Balash and others 1987	No effect	100	Swiss mice	NA	< 0.01	< 0.01	No
	Kwasawinah and Grutsch 1989	No effect	0.18	Charles River mice	NA			
	Cranmer and others 1984	No effect	8	F2 dihybrid mice	NA			

Notes:

g	Gram
LOAEL	Lowest observed adverse effects level
mg/kg-day	Milligrams per kilogram body weight per day
NA	An allometrically converted dose could not be calculated if the test species body weight was not identified.
NTP	National Toxicology Program

TABLE 9-7

QUALITATIVE EVALUATION OF CHEMICALS OF ECOLOGICAL CONCERN WITHOUT AVIAN TOXICITY REFERENCE VALUES FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT MARE ISLAND, CALIFORNIA

Receptor	Study	Effect Type	Dose to Test Species (mg/kg-day)	Test Species (Body Weight)	Allometrically Converted Dose (mg/kg-day)	Food-chain Modeled Maximum Dose (mg/kg-day)	Food-chain Modeled 95UCL Dose (mg/kg-day)	Does the Food-chain Modeled Dose Exceed Literature Doses?
Chromium								
Northern Harrier	Rosomer and Others 1961	No effect	Chicken (800 g)	100	88.77	1.37	0.19	No
	Haseltine and Others 1985	No effect	Black Duck (1,172 g)	50	41.12			
Molybdenum								
Northern Harrier	Kratzer 1952	Growth rate, hemoglobin effects	S.C. White Leghorn Chickens (160 g)	8.87	10.86	< 0.01	< 0.01	No
	Kratzer 1952	Growth rate, hemoglobin effects	Bronze poult (251 g)	7.78	8.71			
HMW PAHs								
Northern Harrier	Bond and Others 1981	No effect	Chickens (3,828 g)	0.10	0.06	< 0.01	< 0.01	No
	Penn and Snyder 1988	Increase in arterio-sclerotic plaques	White Leghorn Chickens (3,822 g)	40.0	25.97			

Notes:

95UCL 95 percent upper confidence limit on the arithmetic mean
g Gram
HMW High molecular weight
mg/kg-day Milligram per kilogram body weight per day
N/A An allometrically converted dose could not be calculates if test species body weight was not identified.
PAH Polynuclear aromatic hydrocarbon

TABLE 9-8

SALT MARSH HARVEST MOUSE BIOAVAILABILITY ADJUSTED DOSE CALCULATIONS AND HAZARD QUOTIENTS
INVESTIGATION AREA A2
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

COPEC		Prey Ingestion Rate (kg/day)[1]	Prey Concentration (mg/kg)[2,3]	Tissue Bioavailability Ratio[4]	Prey Concentration Adjusted for Bioavailability (mg/kg)[5]	Prey Daily Dose (mg/day)[6]	Sediment Ingestion Rate (kg/day)[7]	Sediment Concentration (mg/kg)[8]	Ratio of Extractable Metal Concentration[9]	Sediment Concentration Using WET Result (mg/kg)[10]	Sediment Daily Dose (mg/day)[11]	SUF	Body Weight (kg)[12]	Total Daily Dose (mg/kg/day)[13]	TRV (mg/kg/day)[14]	Test Species Body Weight (kg)[14]	Allometrically Adjusted TRV (mg/kg/day)[15]	HQ (based on adjusted TRV)[16]
Arsenic																		
Areawide 95UCL	Dose/High TRV	0.003	1.25	NA	NA	0.004	0.0001	17.80	NA	NA	0.001	1	0.01	0.46	4.70	0.11	5.39	0.09
	Dose/Low TRV	0.003	1.25	NA	NA	0.004	0.0001	17.80	NA	NA	0.001	1	0.01	0.46	0.32	0.33	0.39	1.17
Areawide Maximum	Dose/High TRV	0.003	3.60	NA	NA	0.01	0.0001	51.10	NA	NA	0.004	1	0.01	1.32	4.70	0.11	5.39	0.24
	Dose/Low TRV	0.003	3.60	NA	NA	0.01	0.0001	51.10	NA	NA	0.004	1	0.01	1.32	0.32	0.33	0.39	3.36
Cadmium																		
Areawide 95UCL	Dose/High TRV	0.003	0.22	NA	NA	0.001	0.0001	0.68	NA	NA	0.00005	1	0.01	0.07	2.64	0.03	2.81	0.02
	Dose/Low TRV	0.003	0.22	NA	NA	0.001	0.0001	0.68	NA	NA	0.00005	1	0.01	0.07	0.06	0.03	0.06	1.03
Areawide Maximum	Dose/High TRV	0.003	2.31	NA	NA	0.01	0.0001	7.00	NA	NA	0.0005	1	0.01	0.68	2.64	0.03	2.81	0.24
	Dose/Low TRV	0.003	2.31	NA	NA	0.01	0.0001	7.00	NA	NA	0.0005	1	0.01	0.68	0.06	0.03	0.06	10.57
Copper																		
Areawide 95UCL	Dose/High TRV	0.003	13.44	NA	NA	0.04	0.0001	94.75	0.05	4.74	0.0003	1	0.01	3.70	631.58	0.02	662.27	0.01
	Dose/Low TRV	0.003	13.44	NA	NA	0.04	0.0001	94.75	0.05	4.74	0.0003	1	0.01	3.70	2.67	0.03	2.83	1.31
Areawide Maximum	Dose/High TRV	0.003	45.96	NA	NA	0.14	0.0001	324.00	0.05	16.20	0.001	1	0.01	12.67	631.58	0.02	662.27	0.02
	Dose/Low TRV	0.003	45.96	NA	NA	0.14	0.0001	324.00	0.05	16.20	0.001	1	0.01	12.67	2.67	0.03	2.83	4.47
Lead																		
Areawide 95UCL	Dose/High TRV	0.003	4.97	0.0067	0.033	0.00010	0.0001	95.29	0.06	6.00	0.0004	1	0.01	0.05	240.64	0.02	248.16	0.0002
	Dose/Low TRV	0.003	4.97	0.0067	0.033	0.00010	0.0001	95.29	0.06	6.00	0.0004	1	0.01	0.05	0.002	0.21	0.002	27.12
Areawide Maximum	Dose/High TRV	0.003	22.02	0.0067	0.15	0.00045	0.0001	422.00	0.06	26.59	0.002	1	0.01	0.21	240.64	0.02	248.16	0.001
	Dose/Low TRV	0.003	22.02	0.0067	0.15	0.00045	0.0001	422.00	0.06	26.59	0.002	1	0.01	0.21	0.002	0.21	0.002	120.11
Manganese																		
Areawide 95UCL	Dose/High TRV	0.003	70.02	NA	NA	0.21	0.0001	560.18	NA	NA	0.04	1	0.01	22.81	159.09	0.03	168.68	0.14
	Dose/Low TRV	0.003	70.02	NA	NA	0.21	0.0001	560.18	NA	NA	0.04	1	0.01	22.81	13.70	0.03	14.66	1.56
Areawide Maximum	Dose/High TRV	0.003	218.75	NA	NA	0.67	0.0001	1750.00	NA	NA	0.13	1	0.01	71.26	159.09	0.03	168.68	0.42
	Dose/Low TRV	0.003	218.75	NA	NA	0.67	0.0001	1750.00	NA	NA	0.13	1	0.01	71.26	13.70	0.03	14.66	4.86
Nickel																		
Areawide 95UCL	Dose/High TRV	0.003	5.14	0.03	0.13	0.0004	0.0001	94.54	0.04	3.40	0.0003	1	0.01	0.06	31.6	0.25	38.06	0.002
	Dose/Low TRV	0.003	5.14	0.03	0.13	0.0004	0.0001	94.54	0.04	3.40	0.0003	1	0.01	0.06	0.13	0.25	0.16	0.36
Areawide Maximum	Dose/High TRV	0.003	8.70	0.03	0.22	0.001	0.0001	160.00	0.04	5.76	0.0004	1	0.01	0.10	31.6	0.25	38.06	0.003
	Dose/Low TRV	0.003	8.70	0.03	0.22	0.001	0.0001	160.00	0.04	5.76	0.0004	1	0.01	0.10	0.13	0.25	0.16	0.61
Zinc																		
Areawide 95UCL	Dose/High TRV	0.003	33.22	NA	NA	0.10	0.0001	280.37	0.05	13.18	0.001	1	0.01	9.16	411.43	0.18	485.20	0.02
	Dose/Low TRV	0.003	33.22	NA	NA	0.10	0.0001	280.37	0.05	13.18	0.001	1	0.01	9.16	9.60	0.03	10.09	0.91
Areawide Maximum	Dose/High TRV	0.003	219.18	NA	NA	0.67	0.0001	1,850.00	0.05	86.95	0.01	1	0.01	60.47	411.43	0.18	485.20	0.12
	Dose/Low TRV	0.003	219.18	NA	NA	0.67	0.0001	1,850.00	0.05	86.95	0.01	1	0.01	60.47	9.60	0.03	10.09	6.00

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95 percent upper confidence limit on the arithmetic mean
BAF	Bioaccumulation factor
COPEC	Chemical of potential ecological concern
EFA WEST	Naval Facilities Engineering Command, Engineering Field West
HQ	Hazard quotient
kg	Kilogram
kg/day	Kilograms per day
mg/day	Milligrams per day
mg/kg	Milligrams per kilogram
mg/kg/day	Milligrams per kilogram per day
NA	Not available
NB	No BAF was available.
SUF	Site use factor
TRV	Toxicity reference value
USACE	U.S. Army Corps of Engineers
WET	Waste extraction test

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for rodents and the averaged food requirement conversion for herbivores.
2 The 95UCL or habitat area maximum (see note 8) for all site-collected sediment samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 0 mg/kg because no BAF was available.
3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 81.6 percent in USACE (1995).
4 Literature-based ratio used to determine bioavailability of chemicals in prey tissue.
5 Prey concentration adjusted for bioavailability was calculated by multiplying the prey concentration by the tissue bioavailability ratio.
6 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration adjusted for bioavailability.
7 Rate for the meadow vole in Beyer and others (1994); 2.4 percent of prey ingestion rate.
8 For average doses, lesser of 95UCL or detected maximum of all site-collected sediment samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected sediment samples was used.
9 Ratio developed from WET results used to determine bioavailability of chemicals in sediment.
10 Sediment concentration using WET results was calculated by muliplying sediment concentration by the ratio of extractable metal concentration.
11 Sediment daily dose was calculated by multiplying the sediment ingestion rate by sediment concentration adjusted by the extractable metal ratio.
12 Average adult weight from a San Pablo Bay (Gallinas) populations measured by Fisler (1965).
13 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + sediment daily dose)*SUF)/receptor species body weight.
14 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.
15 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight) $^{(1-0.94)}$.
16 The HQ was calculated using total daily dose/allometrically adjusted TRV.

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TABLE 9-9

SALT MARSH HARVEST MOUSE AMBIENT DOSE CALCULATIONS AND HAZARD QUOTIENTS
INVESTIGATION AREA A2
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

COPEC	Prey Ingestion Rate (kg/day)[1]	Prey Concentration (mg/kg)[2,3]	Tissue Bioavailability Ratio[4]	Prey Concentration Adjusted for Bioavailability[5]	Prey Daily Dose (mg/day)[6]	Sediment Ingestion Rate (kg/day)[7]	Sediment Concentration (mg/kg)[8]	Ratio of Extractable Metal Concentration[9]	Sediment Concentration Using WET Result (mg/kg)[10]	Sediment Daily Dose (mg/day)[11]	SUF	Body Weight (kg)[12]	Total Daily Dose (mg/kg/day)[13]	TRV (mg/kg/day)[14]	Test Species Body Weight (kg)[14]	Allometrically Adjusted TRV (mg/kg/day)[15]	HQ (based on adjusted TRV)[16]
Arsenic																	
Dose/High TRV	0.003	1.08	NA	NA	0.003	0.0001	15.30	NA	NA	0.001	1	0.01	0.39	4.70	0.11	5.39	0.07
Dose/Low TRV	0.003	1.08	NA	NA	0.003	0.0001	15.30	NA	NA	0.001	1	0.01	0.39	0.32	0.33	0.39	1.01
Cadmium																	
Dose/High TRV	0.003	0.11	NA	NA	0.0003	0.0001	0.33	NA	NA	0.00002	1	0.01	0.03	2.64	0.03	2.81	0.01
Dose/Low TRV	0.003	0.11	NA	NA	0.0003	0.0001	0.33	NA	NA	0.00002	1	0.01	0.03	0.06	0.03	0.06	0.50
Copper																	
Dose/High TRV	0.003	9.66	NA	NA	0.03	0.0001	68.10	0.05	3.41	0.0003	1	0.01	2.66	631.58	0.02	662.27	0.004
Dose/Low TRV	0.003	9.66	NA	NA	0.03	0.0001	68.10	0.05	3.41	0.0003	1	0.01	2.66	2.67	0.03	2.83	0.94
Lead																	
Dose/High TRV	0.003	2.25	0.0067	0.015	0.000046	0.0001	43.20	0.06	2.72	0.0002	1	0.01	0.02	240.64	0.02	248.16	0.0001
Dose/Low TRV	0.003	2.25	0.0067	0.015	0.000046	0.0001	43.20	0.06	2.72	0.0002	1	0.01	0.02	0.002	0.21	0.002	12.30
Manganese																	
Dose/High TRV	0.003	NA	NA	NA	NA	0.0001	NA	NA	NA	NA	1	0.01	NA	159.09	0.03	168.68	NA
Dose/Low TRV	0.003	NA	NA	NA	NA	0.0001	NA	NA	NA	NA	1	0.01	NA	13.7	0.03	14.66	NA
Nickel																	
Dose/High TRV	0.003	6.09	0.03	0.15	0.0005	0.0001	112.00	0.04	4.03	0.0003	1	0.01	0.07	31.6	0.25	38.06	0.002
Dose/Low TRV	0.003	6.09	0.03	0.15	0.0005	0.0001	112.00	0.04	4.03	0.0003	1	0.01	0.07	0.13	0.25	0.16	0.42
Zinc																	
Dose/High TRV	0.003	18.72	NA	NA	0.06	0.0001	158.00	0.05	7.43	0.0005	1	0.01	5.16	411.43	0.18	485.20	0.01
Dose/Low TRV	0.003	18.72	NA	NA	0.06	0.0001	158.00	0.05	7.43	0.0005	1	0.01	5.16	9.60	0.03	10.09	0.51

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95 percent upper confidence limit on the arithmetic mean
BAF	Bioaccumulation factor
COPEC	Chemical of potential ecological concern
EFA WEST	Naval Facilities Engineering Command, Engineering Field West
HQ	Hazard quotient
kg	Kilogram
kg/day	Kilograms per day
mg/day	Milligrams per day
mg/kg	Milligrams per kilogram
mg/kg/day	Milligram per kilogram per day
NA	Not available
NB	No BAF was available.
RWQCB	Regional Water Quality Control Board
SUF	Site use factor
TRV	Toxicity reference value
USACE	U.S. Army Corps of Engineers
WET	Waste extraction test

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for rodents and the averaged food requirement conversion for herbivores.
2 The ambient sediment concentrations (see note 8) were converted to tissue concentrations using BAFs. Prey concentrations labeled "NB" were estimated as 0 mg/kg because no BAF was available.
3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 81.6 percent inUSACE (1995).
4 Literature-based ratio used to determine bioavailability of chemicals in prey tissue.
5 Prey concentration adjusted for bioavailability was calculated by multiplying the prey concentration by the tissue bioavailability ratio.
6 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration adjusted for bioavailability.
7 Rate for the meadow vole in Beyer and others (1994); 2.4 percent of prey ingestion rate.
8 RWQCB San Francisco estuary ambient concentrations (100 percent fines).
9 Ratio developed from WET results used to determine bioavailability of chemicals in sediment.
10 Sediment concentration using WET results was calculated by muliplying sediment concentration by the ratio of extractable metal concentration.
11 Sediment daily dose was calculated by multiplying the sediment ingestion rate by ambient sediment concentration.
12 Average adult weight from a San Pablo Bay (Gallinas) population measured by Fisler (1965).
13 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + sediment daily dose)*SUF)/indicator species body weight.
14 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.
15 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-0.94)}$.
16 The HQ was calculated using total daily dose/allometrically adjusted TRV.

TABLE 9-10

GRAY FOX BIOAVAILABILITY ADJUSTED DOSE CALCULATIONS AND HAZARD QUOTIENTS
INVESTIGATION AREA A2
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

COPEC		Prey Ingestion Rate (kg/day)[1]	Prey Concentration (mg/kg)[2,3]	Tissue Bioavailability Ratio[4]	Prey Concentration Adjusted for Bioavailability (mg/kg)[5]	Prey Daily Dose (mg/day)[6]	Soil Ingestion Rate (kg/day)[7]	Soil Concentration (mg/kg)[8]	Ratio of Extractable Metal Concentration[9]	Soil Concentration Using WET Result (mg/kg)[10]	Soil Daily Dose (mg/day)[11]	SUF	Body Weight (kg)[12]	Total Daily Dose (mg/kg/day)[13]	TRV (mg/kg/day)[14]	Test Species Body Weight (kg)[14]	Allometrically Adjusted TRV (mg/kg/day)[15]	HQ (based on adjusted TRV)[16]
Lead																		
Areawide 95UCL	Dose/High TRV	0.18	16.44	0.01	0.11	0.02	0.005	116.79	0.10	11.45	0.06	1	3.88	0.02	240.64	0.02	174.72	0.0001
	Dose/Low TRV	0.18	16.44	0.01	0.11	0.02	0.005	116.79	0.10	11.45	0.06	1	3.88	0.02	0.002	0.21	0.001	15.67
Areawide Maximum	Dose/High TRV	0.18	136.28	0.01	0.91	0.16	0.005	968.00	0.10	94.86	0.47	1	3.88	0.16	240.64	0.02	174.72	0.001
	Dose/Low TRV	0.18	136.28	0.01	0.91	0.16	0.005	968.00	0.10	94.86	0.47	1	3.88	0.16	0.002	0.21	0.001	129.87
Nickel																		
Areawide Maximum	Dose/High TRV	0.18	NB	0.03	NA	0	4.005	169.00	0.041	6.93	27.75	1	3.88	7.15	31.60	0.25	26.80	0.27
	Dose/Low TRV	0.18	NB	0.03	NA	0	4.005	169.00	0.041	6.93	27.75	1	3.88	7.15	0.13	0.25	0.11	63.41
Selenium																		
Areawide 95UCL	Dose/High TRV	0.18	0.98	NA	NA	0.17	0.005	0.60	NA	NA	0.003	1	3.88	0.05	1.21	0.02	0.89	0.05
	Dose/Low TRV	0.18	0.98	NA	NA	0.17	0.005	0.60	NA	NA	0.003	1	3.88	0.05	0.05	0.19	0.04	1.09
Areawide Maximum	Dose/High TRV	0.18	2.93	NA	NA	0.52	0.005	1.80	NA	NA	0.01	1	3.88	0.14	1.21	0.02	0.89	0.15
	Dose/Low TRV	0.18	2.93	NA	NA	0.52	0.005	1.80	NA	NA	0.01	1	3.88	0.14	0.05	0.19	0.04	3.27
Zinc																		
Areawide 95UCL	Dose/High TRV	0.18	191.38	NA	NA	33.93	0.005	215.53	0.06	11.85	0.06	1	3.88	8.76	411.43	0.18	341.62	0.03
	Dose/Low TRV	0.18	191.38	NA	NA	33.93	0.005	215.53	0.06	11.85	0.06	1	3.88	8.76	9.60	0.03	7.10	1.23
Areawide Maximum	Dose/High TRV	0.18	1,758.18	NA	NA	311.74	0.005	1,980.00	0.06	108.90	0.54	1	3.88	80.49	411.43	0.18	341.62	0.24
	Dose/Low TRV	0.18	1,758.18	NA	NA	311.74	0.005	1,980.00	0.06	108.90	0.54	1	3.88	80.49	9.60	0.03	7.10	11.33

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95 percent upper confidence limit on the arithmetic mean	mg/day	Milligrams per day
BAF	Bioaccumulation factor	mg/kg	Milligrams per kilogram
COPEC	Chemical of potential ecological concern	mg/kg/day	Milligrams per kilogram per day
EFA WEST	Naval Facilities Engineering Command, Engineering Field Activity West	NA	Not applicable
EPA	U.S. Environmental Protection Agency	NB	No BAF was available.
HQ	Hazard quotient	SUF	Site use factor
kg	Kilogram	TRV	Toxicity reference value
kg/day	Kilograms per day	WET	Waste extraction test

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for eutherian mammals and the averaged food requirement conversion for omnivores.
2 The 95UCL or habitat area maximum (see note 8) for all site-collected soil samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 0 mg/kg because no BAF was available.
3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).
4 Literature-based ratio used to determine bioavailability of chemicals in prey tissue.
5 Prey concentration adjusted for bioavailability was calculated by multiplying the prey concentration by the tissue bioavailability ratio.
6 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration adjusted for bioavailability.
7 Rate for the red fox in Beyer and others (1994); 2.8 percent of prey ingestion rate.
8 For average doses, lesser of 95UCL or detected maximum of all site-collected soil samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected soil samples was used.
9 Ratio developed from WET results used to determine bioavailability of chemicals in soil.
10 Soil concentration using WET results was calculated by muliplying soil concentration by the ratio of extractable metal concentration.
11 Soil daily dose was calculated by multiplying the soil ingestion rate by soil concentration adjusted by the extractable metal ratio.
12 Average adult weight from Silva and Downing (1993).
13 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + soil daily dose)*SUF)/receptor species body weight.
14 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.
15 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-0.94)}$.
16 The HQ was calculated using total daily dose/allometrically adjusted TRV.

TABLE 9-11

GRAY FOX AMBIENT DOSE CALCULATIONS AND HAZARD QUOTIENTS
INVESTIGATION AREA A2
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

COPEC	Prey Ingestion Rate (kg/day)[1]	Prey Concentration (mg/kg)[2,3]	Tissue Bioavailability Ratio[4]	Prey Concentration Adjusted for Bioavailability[5]	Prey Daily Dose (mg/day)[6]	Soil Ingestion Rate (kg/day)[7]	Soil Concentration (mg/kg)[8]	Ratio of Extractable Metal Concentration[9]	Soil Concentration Using WET Result (mg/kg)[10]	Soil Daily Dose (mg/day)[11]	SUF	Body Weight (kg)[12]	Total Daily Dose (mg/kg/day)[13]	TRV (mg/kg/day)[14]	Test Species Body Weight (kg)[14]	Allometrically Adjusted TRV (mg/kg/day)[15]	HQ (based on adjusted TRV)[16]
Lead																	
Dose/High TRV	0.18	8.31	0.01	0.06	0.01	0.005	59.00	0.10	5.78	0.03	1	3.88	0.01	240.64	0.02	174.72	0.0001
Dose/Low TRV	0.18	8.31	0.01	0.06	0.01	0.005	59.00	0.10	5.78	0.03	1	3.88	0.01	0.002	0.21	0.001	7.92
Nickel																	
Dose/High TRV	0.18	NB	0.03	NA	0	0.005	130.00	0.04	5.33	0.03	1	3.88	0.01	31.60	0.25	26.80	0.0003
Dose/Low TRV	0.18	NB	0.03	NA	0	0.005	130.00	0.04	5.33	0.03	1	3.88	0.01	0.13	0.25	0.11	0.06
Selenium																	
Dose/High TRV	0.18	NA	NA	NA	NA	0.005	NA	NA	NA	NA	1	3.88	NA	1.21	0.02	0.89	NA
Dose/Low TRV	0.18	NA	NA	NA	NA	0.005	NA	NA	NA	NA	1	3.88	NA	0.05	0.19	0.04	NA
Zinc																	
Dose/High TRV	0.18	204.23	NA	NA	36.21	0.005	230.00	0.06	12.65	0.06	1	3.88	9.35	411.43	0.18	341.62	0.03
Dose/Low TRV	0.18	204.23	NA	NA	36.21	0.005	230.00	0.06	12.65	0.06	1	3.88	9.35	9.60	0.03	7.10	1.32

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95 percent upper confidence limit on the arithmetic mean	mg/day	Milligrams per day
BAF	Bioaccumulation factor	mg/kg	Milligrams per kilogram
COPEC	Chemical of potential ecological concern	mg/kg/day	Milligrams per kilogram per day
EFA WEST	Naval Facilities Engineering Command, Engineering Field Activity Wes	NA	Not applicable
EPA	U.S. Environmental Protection Agency	NB	No BAF was available.
HQ	Hazard quotient	SUF	Site use factor
kg	Kilogram	TRV	Toxicity reference value
kg/day	Kilograms per day	WET	Waste extraction test

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for eutherian mammals and the averaged food requirement conversion for omnivores.
2 The ambient soil concentrations (see note 8) were converted to tissue concentrations using BAFs. Prey concentrations labeled "NB" were estimated as 0 mg/kg because no BAF was available.
3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).
4 Literature-based ratio used to determine bioavailability of chemicals in prey tissue.
5 Prey concentration adjusted for bioavailability was calculated by multiplying the prey concentration by the tissue bioavailability ratio.
6 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration adjusted for bioavailability.
7 Rate for the red fox in Beyer and others (1994); 2.8 percent of prey ingestion rate.
8 Mare Island 95th percentile ambient fill concentrations (PRC Environmental Management, Inc. 1995e; Tetra Tech EM Inc. 1999b).
9 Ratio developed from WET results used to determine bioavailability of chemicals in soil.
10 Soil concentration using WET results was calculated by muliplying soil concentration by the ratio of extractable metal concentration.
11 Soil daily dose was calculated by multiplying the soil ingestion rate by ambient soil concentration.
12 Average adult weight from Silva and Downing (1995).
13 Total daily dose is calculated using the following equation: total daily dose = ([prey daily dose + soil daily dose]*SUF)/indicator species body weight.
14 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.
15 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-1.2)}$.
16 The HQ was calculated using total daily dose/allometrically adjusted TRV.

TABLE 9-12

NORTHERN HARRIER BIOAVAILABILITY ADJUSTED DOSE CALCULATIONS AND HAZARD QUOTIENTS
INVESTIGATION AREA A2
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

COPEC		Prey Ingestion Rate (kg/day)[1]	Prey Concentration (mg/kg)[2,3]	Tissue Bioavailability Ratio[4]	Prey Concentration Adjusted for Bioavailability (mg/kg)[5]	Prey Daily Dose (mg/day)[6]	Soil Ingestion Rate (kg/day)[7]	Soil Concentration (mg/kg)[8]	Ratio of Extractable Metal Concentration[9]	Soil Concentration Using WET Result (mg/kg)[10]	Soil Daily Dose (mg/day)[11]	SUF	Body Weight (kg)[12]	Total Daily Dose (mg/kg/day)[13]	TRV (mg/kg/day)[14]	Test Species Body Weight (kg)[14]	Allometrically Adjusted TRV (mg/kg/day)[15]	HQ (based on adjusted TRV)[16]
Copper																		
Areawide Maximum	Dose/High TRV	0.04	103.13	NA	NA	3.80	0.0003	684.00	0.06	37.62	0.01	1	0.44	8.65	52.26	0.41	53.05	0.16
	Dose/Low TRV	0.04	103.13	NA	NA	3.80	0.0003	684.00	0.06	37.62	0.01	1	0.44	8.65	2.30	0.64	2.14	4.05
Lead																		
Areawide 95UCL	Dose/High TRV	0.04	16.44	0.20	3.29	0.12	0.0003	116.79	0.10	11.45	0.003	1	0.44	0.28	8.75	0.80	7.77	0.036
	Dose/Low TRV	0.04	16.44	0.20	3.29	0.12	0.0003	116.79	0.10	11.45	0.003	1	0.44	0.28	0.01	0.08	0.02	14.44
Areawide Maximum	Dose/High TRV	0.04	136.28	0.20	27.26	5.03	0.0003	968.00	0.10	94.86	0.02	1	0.44	11.45	8.75	0.80	7.77	1.47
	Dose/Low TRV	0.04	136.28	0.20	27.26	5.03	0.0003	968.00	0.10	94.86	0.02	1	0.44	11.45	0.01	0.08	0.02	587.10
Selenium																		
Areawide Maximum	Dose/High TRV	0.04	2.93	NA	NA	0.11	0.0003	1.80	NA	NA	0.0005	1	0.44	0.25	0.93	1.11	0.77	0.32
	Dose/Low TRV	0.04	2.93	NA	NA	0.11	0.0003	1.80	NA	NA	0.0005	1	0.44	0.25	0.23	1.11	0.19	1.29
Zinc																		
Areawide 95UCL	Dose/High TRV	0.04	191.38	0.25	47.85	1.76	0.0003	215.53	0.06	11.85	0.003	1	0.44	4.01	172.00	1.00	146.17	0.03
	Dose/Low TRV	0.04	191.38	0.25	47.85	1.76	0.0003	215.53	0.06	11.85	0.003	1	0.44	4.01	17.20	1.00	14.62	0.27
Areawide Maximum	Dose/High TRV	0.04	1,758.18	0.25	439.54	64.84	0.0003	1,980.00	0.06	108.90	0.03	1	0.44	147.09	172.00	1.00	146.17	1.01
	Dose/Low TRV	0.04	1,758.18	0.25	439.54	64.84	0.0003	1,980.00	0.06	108.90	0.03	1	0.44	147.09	17.20	1.00	14.62	10.06

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95 percent upper confidence limit on the arithmetic mean	mg/day	Milligrams per day
BAF	Bioaccumulation factor	mg/kg	Milligrams per kilogram
COPEC	Chemical of potential ecological concern	mg/kg/day	Milligrams per kilogram per day
EFA WEST	Naval Facilities Engineering Command, Engineering Field Activity West	NB	No BAF was available.
HQ	Hazard quotient	SUF	Site use factor
kg	Kilogram	TRV	Toxicity reference value
kg/day	Kilograms per day	WET	Waste extraction test

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for all birds and the averaged food requirement conversion for insectivorous birds.
2 The 95UCL or habitat area maximum (see note 8) for all site-collected soil samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 0 mg/kg because no BAF was available.
3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).
4 Literature-based ratio used to determine bioavailability of chemicals in prey tissue.
5 Prey concentration adjusted for bioavailability was calculated by multiplying the prey concentration by the tissue bioavailability ratio.
6 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration adjusted for bioavailability.
7 Rate for the Bald Eagle in Pascoe and others (1996); 0.7 percent of prey ingestion rate.
8 For average doses, lesser of 95UCL or detected maximum of all site-collected soil samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected soil samples was used.
9 Ratio developed from WET results used to determine bioavailability of chemicals in soil.
10 Soil concentration using WET results was calculated by muliplying soil concentration by the ratio of extractable metal concentration.
11 Soil daily dose was calculated by multiplying the sediment ingestion rate by soil concentration adjusted by the extractable metal ratio.
12 Average adult weight from Dunning (1993).
13 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + soil daily dose)*SUF)/receptor species body weight.
14 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.
15 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-1.2)}$.
16 The HQ was calculated using total daily dose/allometrically adjusted TRV.

TABLE 9-13

NORTHERN HARRIER AMBIENT DOSE CALCULATIONS AND HAZARD QUOTIENTS
INVESTIGATION AREA A2
FINAL ONSHORE ECOLOGICAL RISK ASSESSMENT
MARE ISLAND, CALIFORNIA

COPEC	Prey Ingestion Rate (kg/day)[1]	Prey Concentration (mg/kg)[2,3]	Tissue Bioavailability Ratio[4]	Prey Concentration Adjusted for Bioavailability[5]	Prey Daily Dose (mg/day)[6]	Soil Ingestion Rate (kg/day)[7]	Soil Concentration (mg/kg)[8]	Ratio of Extractable Metal Concentration[9]	Soil Concentration Using WET Result (mg/kg)[10]	Soil Daily Dose (mg/day)[11]	SUF	Body Weight (kg)[12]	Total Daily Dose (mg/kg/day)[13]	TRV (mg/kg/day)[14]	Test Species Body Weight (kg)[14]	Allometrically Adjusted TRV (mg/kg/day)[15]	HQ (based on adjusted TRV)[16]
Copper																	
Dose/High TRV	0.04	18.09	NA	NA	0.67	0.0003	120.00	0.06	6.60	0.002	1	0.44	1.52	52.26	0.41	53.05	0.03
Dose/Low TRV	0.04	18.09	NA	NA	0.67	0.0003	120.00	0.06	6.60	0.002	1	0.44	1.52	2.30	0.64	2.14	0.71
Lead																	
Dose/High TRV	0.04	8.31	0.20	1.66	0.06	0.0003	59.00	0.10	5.78	0.001	1	0.44	0.14	8.75	0.80	7.77	0.018
Dose/Low TRV	0.04	8.31	0.20	1.66	0.06	0.0003	59.00	0.10	5.78	0.001	1	0.44	0.14	0.01	0.08	0.02	7.30
Selenium																	
Dose/High TRV	0.04	NA	NA	NA	NA	0.0003	NA	NA	NA	NA	1	0.44	NA	0.93	1.11	0.77	NA
Dose/Low TRV	0.04	NA	NA	NA	NA	0.0003	NA	NA	NA	NA	1	0.44	NA	0.23	1.11	0.19	NA
Zinc																	
Dose/High TRV	0.04	204.23	0.25	51.06	1.88	0.0003	230.00	0.06	12.65	0.003	1	0.44	4.28	172.00	1.00	146.00	0.03
Dose/Low TRV	0.04	204.23	0.25	51.06	1.88	0.0003	230.00	0.06	12.65	0.003	1	0.44	4.28	17.20	1.00	14.60	0.29

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL 95 percent upper confidence limit on the arithmetic mean
BAF Bioaccumulation factor
COPEC Chemical of potential ecological concern
EFA WEST Naval Facilities Engineering Command, Engineering Field Activity West
HQ Hazard quotient
kg Kilogram
kg/day Kilograms per day
mg/day Milligrams per day
mg/kg Milligrams per kilogram
mg/kg/day Milligrams per kilogram per day
NB No BAF was available.
SUF Site use factor
TRV Toxicity reference value
WET Waste extraction test

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for all birds and the averaged food requirement conversion for insectivorous birds.
2 The ambient soil concentrations (see note 8) were converted to tissue concentrations using BAFs. Prey concentrations labeled "NB" were estimated as 0 mg/kg because no BAF was available.
3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).
4 Literature-based ratio used to determine bioavailability of chemicals in prey tissue.
5 Prey concentration adjusted for bioavailability was calculated by multiplying the prey concentration by the tissue bioavailability ratio.
6 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration adjusted for bioavailability.
7 Rate for the Bald Eagle in Pascoe and others (1996); 0.7 percent of prey ingestion rate.
8 Mare Island 95th percentile ambient fill concentrations (PRC Environmental Management, Inc. 1995e; Tetra Tech EM Inc. 1999b).
9 Ratio developed from WET results used to determine bioavailability of chemicals in soil.
10 Soil concentration using WET results was calculated by muliplying soil concentration by the ratio of extractable metal concentration.
11 Soil daily dose was calculated by multiplying the sediment ingestion rate by ambient soil concentration.
12 Average adult weight from Dunning (1993).
13 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + soil daily dose)*SUF)/indicator species body weight.
14 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.
15 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-1.2)}$.
16 The HQ was calculated using total daily dose/allometrically adjusted TRV.

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
52	Supplemental ERA	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix M, Section M1.0. Tetra Tech EM Inc. September 22, 2008.

M1.0 INTRODUCTION

The final onshore ecological risk assessment (ERA) (Tetra Tech EM Inc. [Tetra Tech] 2002a) (Appendix L) assessed the ecological risk to onshore receptors from exposure to soil and sediments at Mare Island Naval Shipyard (Mare Island), including Investigation Area (IA) A2. Therefore, when the final IA A2 remedial investigation (RI) was published on August 8, 2002 (Tetra Tech 2002b), it referenced and summarized the onshore ERA document to address the ecological risk requirement for the RIs. The offshore areas of IA A2 are being addressed in a separate RI covering the entire Mare Island offshore area, IA K. The offshore RI has yet to be published because additional field work in support of the offshore baseline ecological risk assessment (BERA) is scheduled to begin in September 2008. This supplemental ecological evaluation provides an additional assessment of ecological risk at IA A2 and specifically focuses on the evaluation of risk to vertebrate receptors.

Regulatory agency comments on the final IA A2 RI (Appendix K) identified several requests for revisions to the screening-level ERA (SLERA) for IA A2. One request was to include the 2002 onshore ERA (Tetra Tech 2002a) containing the full SLERA for IA A2 with this RI. Therefore, the onshore ERA is provided in Appendix L and will be referenced often in this supplemental ecological evaluation.

Another request from the regulatory agencies was to include additional receptors in both the upland and wetland habitat evaluations. The Department of the Navy (Navy) therefore agreed to add the Western meadowlark (*Sturnella neglecta*), California vole (*Microtus californicus*), and ornate shrew (*Sorex ornatus*) to the receptor list for the upland habitat. For the wetland habitat, the Navy agreed to add the killdeer (*Charadrius vociferous*), mallard (breeding and non-breeding) (*Anas platyrhynchos*), great blue heron (*Ardea herodias*), California black rail (*Laterallus jamaicensis coturniculus*), and California clapper rail (*Rallus longirostris obsoletus*). The presence of the California black rail and California clapper rail has been documented at Mare Island on the southern end of IA J, not in IA A2 (Tetra Tech 2002a). Both rails were added to the wetland evaluation because no formal rail surveys have been conducted recently at IA A2.

Additionally, the existing dose models for the salt marsh harvest mouse (*Reithrodontomys raviventris*) in the wetland habitat and for the gray fox (*Urocyon cinereoargenteus*) and Northern harrier (*Circus cyaneus*) in the upland habitat were revised by using toxicity reference values (TRVs) from additional sources (including Sample and others 1996, Navy 1998, and EPA 2008) for the chemicals that lack Biological Technical Advisory Group (BTAG) values (Navy 1998). As requested by the regulatory agencies, updated hazard quotient (HQ) tables based on high and low TRVs are presented in Sections M3.1, M3.2, and M4.2 of this appendix.

This supplemental ecological evaluation includes components of the SLERA and Step 3a of the BERA risk refinement to characterize current and potential threats to the environment that may be posed by chemicals of potential ecological concern (COPEC) in soils and sediments at IA A2. The chemical data for soil and sediment used in this evaluation were presented in the onshore ERA and were taken directly from that document for this supplemental evaluation. Additionally,

median bioaccumulation factors (BAF) calculated in the onshore ERA were used in this assessment without modification.

Several methodologies were updated for this evaluation, in addition to the changes requested by the regulatory agencies. In accordance with Navy guidance (Navy 2004a), the background screen for chemicals was conducted after the SLERA as part of Step 3a of the BERA rather than at the start of the SLERA. As a first step of the SLERA, the initial COPEC screen was completed by using vertebrate ecological soil screening levels (Eco-SSLs) (EPA 2008) for soils. No COPEC screen was conducted for sediments. All detected chemicals in sediments were evaluated for vertebrates rather than using a screen against effects range-low (ER-Ls) (Long and others 1995) as was previously done in the onshore ERA.

The following sections present the overall approach (Section M2.0), the SLERA evaluation (Section M3.0), the BERA Step 3a refinement (Section M4.0), and references (Section M5.0). The food-chain model (FCM) calculations and resulting HQs for the SLERA and Step 3a risk refinement are presented in Attachment M1. Attachment M2 contains information on the toxicological effects of COPECs.

M2.0 SLERA APPROACH

A SLERA uses conservative assumptions and available scientific literature to evaluate potential risk to ecological receptors in an approach consistent with Steps 1 and 2 of the eight-step process described in the U.S. Environmental Protection Agency (EPA) guidance (EPA 1997, 1999, 2001). This approach also follows the Tier 1 approach presented in Navy guidance for conducting ERAs (Navy 1999b, 2004b) and California Environmental Protection Agency's Department of Toxic Substances Control (DTSC) guidance (DTSC 1996a, 1996b). The first two components of the DTSC process (scoping assessment and Phase I predictive assessment) are consistent with the EPA and Navy approaches. Substantive elements of the guidance documents provided by all three agencies were considered in the development of this SLERA.

A SLERA includes four primary phases: (1) problem formulation, (2) estimates of exposure, (3) evaluation of ecological effects, and (4) risk characterization. An ecological conceptual site model (CSM) is developed during the problem formulation phase to describe exposure pathways at the site, which guide selection of assessment and measurement endpoints. Conservative exposure parameters for representative receptors are identified in the exposure assessment using published literature and knowledge of the site. Chemical exposure levels that represent conservative thresholds for adverse ecological effects are identified from the literature during the ecological effects evaluation. Finally, the potential risks to selected assessment endpoints associated with the site are conservatively estimated during the risk characterization phase.

In Navy guidance, the two steps of a Tier 1 SLERA use existing data and conservative assumptions about chemical exposure. The primary objective of Step 1 is to identify complete exposure pathways between chemicals and selected ecological receptors at the site (Navy 1999b,

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
53	Supplemental ERA approach	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix M, Sections M2.0 through M2.3, and Appendix M, Tables M-1 through M-24. Tetra Tech EM Inc. September 22, 2008.

Several methodologies were updated for this evaluation, in addition to the changes requested by the regulatory agencies. In accordance with Navy guidance (Navy 2004a), the background screen for chemicals was conducted after the SLERA as part of Step 3a of the BERA rather than at the start of the SLERA. As a first step of the SLERA, the initial COPEC screen was completed by using vertebrate ecological soil screening levels (Eco-SSLs) (EPA 2008) for soils. No COPEC screen was conducted for sediments. All detected chemicals in sediments were evaluated for vertebrates rather than using a screen against effects range-low (ER-Ls) (Long and others 1995) as was previously done in the onshore ERA.

The following sections present the overall approach (Section M2.0), the SLERA evaluation (Section M3.0), the BERA Step 3a refinement (Section M4.0), and references (Section M5.0). The food-chain model (FCM) calculations and resulting HQs for the SLERA and Step 3a risk refinement are presented in Attachment M1. Attachment M2 contains information on the toxicological effects of COPECs.

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A SLERA includes four primary phases: (1) problem formulation, (2) estimates of exposure, (3) evaluation of ecological effects, and (4) risk characterization. An ecological conceptual site model (CSM) is developed during the problem formulation phase to describe exposure pathways at the site, which guide selection of assessment and measurement endpoints. Conservative exposure parameters for representative receptors are identified in the exposure assessment using published literature and knowledge of the site. Chemical exposure levels that represent conservative thresholds for adverse ecological effects are identified from the literature during the ecological effects evaluation. Finally, the potential risks to selected assessment endpoints associated with the site are conservatively estimated during the risk characterization phase.

In Navy guidance, the two steps of a Tier 1 SLERA use existing data and conservative assumptions about chemical exposure. The primary objective of Step 1 is to identify complete exposure pathways between chemicals and selected ecological receptors at the site (Navy 1999b,

2004b). In Step 2, risks are characterized using screening ecotoxicity estimates and conservative exposure assumptions when complete pathways were identified for the chemicals.

A scientific management decision point follows Step 2 of the SLERA. The scientific management decision point focuses on identifying the need for further evaluation (EPA 1997, 2001). If the data evaluated in Steps 1 and 2 indicate risk to ecological receptors at the site, then the Navy conducts a risk refinement step (Step 3a of a BERA).

M2.1 PROBLEM FORMULATION

The primary goal of the problem formulation phase is to identify and develop the following elements:

- Site location and history (see Appendix L, Section 9.1.1)
- Chemicals known or suspected to exist at IA A2 (see Appendix L, Section 9.1.3)
- Potential fate and transport of chemicals (See Appendix L, Section 9.1.3)
- Ecological setting (see Appendix L, Section 9.1.2)
- Ecological CSM (see Appendix L), including stressors (Section 9.1.3), exposure pathways and routes that may exist at the site (Section 9.1.3), and assessment and measurement endpoints (Section 9.1.5)
- Identification of COPECs to be evaluated in the SLERA and the Step 3a risk refinement (see Appendix L, Section 9.2.1.1)

As listed above, the majority of the IA A2 problem formulation has already been completed and is presented in the onshore ERA (Appendix L). However, the assessment and measurement endpoints, as well as the identification of COPECs, have been updated for the SLERA presented in this supplemental evaluation as discussed in Sections M2.1.1 and M2.1.2.

M2.1.1 Revised Assessment and Measurement Endpoints

EPA defines an assessment endpoint as an "explicit expression of the actual environmental values (for example, ecological resources) that are to be protected" (EPA 1997). Assessment endpoints are environmental characteristics that, if significantly impaired, would indicate a need for action by risk managers. Various definitions of valuable ecological resources include (1) those without which ecosystem function would be significantly impaired; (2) those that provide critical resources, such as habitat or fisheries; and (3) those perceived by humans as being valuable, such as endangered species and other issues addressed by legislation. Useful assessment endpoints define both valuable ecological resources at a site and the characteristics of resources to be protected, such as reproductive success or production per unit area. Plant and

invertebrate assessment endpoints for IA A2 were considered during development of the onshore ERA; however, this supplemental evaluation focuses on vertebrate receptors.

As requested by the regulatory agencies, the detected chemicals in sediments were compared with compared with ER-L and effects range-median (ER-M) values (Long and others 1995), as shown in Table M-1. These values are based on toxicological studies and represent the concentrations of chemicals below which biological adverse effects are unlikely. ER-Ls are based on data compiled from numerous studies in the United States that included sediment contaminant and biological effects information (Long and others 1995). The guidelines were developed to identify concentrations of contaminants that were associated with biological effects in the laboratory, field, or modeling studies. The ER-L is the chemical concentration measured at the 10th percentile of the effects data for each chemical. The ER-M is the chemical concentration measured at the 50th percentile or median of the effects data for each substance. Sediment concentrations below the ER-L are interpreted as "rarely" associated with adverse effects, concentrations between the ER-L and ER-M are "occasionally" associated with adverse effects, and concentrations above the ER-M are "frequently" associated with adverse effects (Long and others 1995).

In keeping with the methodology for the onshore ERA (Appendix L, Section 9.1.5), specific assessment endpoints include protection of populations of vertebrates, including mammals and birds. An effort was made to represent avian and mammalian species for both wetland and upland habitats in all feeding guilds. The SLERA modeled these wetland receptors:

- The tertiary consumer gray fox (*Urocyon cinereoargenteus*)
- The primary consumer salt marsh harvest mouse (*Reithrodontomys raviventris*)
- The tertiary consumer Northern harrier (*Circus cyaneus*)
- The tertiary consumer great blue heron (*Ardea herodias*)
- The secondary consumer mallard (*Anas platyrhynchos*) (breeding and non-breeding)
- The secondary consumer California black rail (*Laterallus jamaicensis coturniculus*)
- The secondary consumer California clapper rail (*Rallus longirostris obsoletus*)
- The secondary consumer killdeer (*Charadrius vociferous*)

The SLERA modeled the following upland receptors:

- The tertiary consumer gray fox (*Urocyon cinereoargenteus*)
- The primary consumer California vole (*Microtus californicus*)
- The secondary consumer ornate shrew (*Sorex ornatus*)
- The tertiary consumer Northern harrier (*Circus cyaneus*)
- The secondary consumer Western meadowlark (*Sturnella neglecta*)

The salt marsh harvest mouse and California clapper rail are federal and state of California endangered species. The California black rail is a California Department of Fish and Game Species of Concern. Presence of the California black rail and California clapper rail has not been documented at IA A2 in the past; however, recent surveys have not been conducted.

Ecological receptors for IA A2 were selected to represent species from different trophic guilds likely to be present at IA A2; recommendations in comments from the regulatory agencies on the final IA A2 RI (Appendix K) were also taken into account in identifying the receptors. The vertebrate receptors are generally described below in relation to their associated assessment endpoint.

Protection of Birds. The assessment endpoint for birds is maintenance of sufficient rates of survival, growth, and reproduction. Birds are important primary and secondary consumers and are themselves prey for carnivorous birds and mammals. Most species of birds have high social value to humans.

Protection of Mammals. The assessment endpoint for mammals is maintenance of sufficient rates of survival, growth, and reproduction. In addition to being important primary and secondary consumers, small mammals are essential prey for carnivorous birds and mammals. Most species of mammals have a high social value to humans.

Assessment endpoints usually cannot be directly measured; therefore, measurement endpoints related to assessment endpoints were identified. EPA defines a measurement endpoint as "a measurable ecological characteristic that is related to the valued characteristic chosen as the assessment endpoint and is a measure of biological effects (such as mortality, reproduction, or growth)" (EPA 1997). Measurement endpoints more closely reflect technical considerations in the risk assessment process; that is, measurement endpoints are focused on both direct measures of ecological effects such as toxicity tests and indirect measures such as using FCMs that allow for an evaluation of risk to representative receptors. Measurement endpoints can include measures of exposure or effect and are frequently numerical expressions of observations. Each measurement endpoint correlates directly with one of the defined assessment endpoints and was based on mechanisms of toxicity in the available literature. The measurement endpoints for each receptor class are listed below:

Protection of Birds. The measurement endpoint for birds is food-chain modeling with soil (0 to 2.0 feet below ground surface [bgs]) and sediment (0 to 2.0 feet bgs) concentrations and comparison with TRVs.

Protection of Mammals. The measurement endpoint for mammals is food-chain modeling with soil (0.0 to 2.0 feet bgs) and sediment (0 to 2.0 feet bgs) concentrations and comparison with TRVs.

M2.1.2 Identification of COPECs

Section 2.4.3 of the RI report provides a detailed discussion of the sampling conducted in support of the RI and SLERA. In general, a 100-foot grid system was established at the site in the upland and tidal wetland areas. Step-out samples were collected based on the results of initial samples. Additionally, results for samples collected in the wetland as part of the offshore ERA were also included in the data set for the SLERA. Soil and sediment samples were analyzed for metals, semivolatile organic compounds (SVOC), pesticides, polychlorinated biphenyls (PCB), and total petroleum hydrocarbons (TPH). Ecological screening criteria for vertebrates do not exist for sediment. Therefore, all detected chemicals in sediment were considered COPECs for the SLERA, with the exception of essential nutrients such as calcium, iron, magnesium, potassium, and sodium. Detected chemicals other than essential nutrients were considered COPECs for soils based on comparisons with ecological screening criteria, as discussed below.

Upland Habitat. Chemical concentrations in soil were compared with Eco-SSL (EPA 2008) benchmarks for terrestrial birds and mammals for protection of ecological receptors in the upland habitat. The Eco-SSL represents a group effort of a multi-stakeholder workgroup consisting of federal, state, consulting, industry, and academic participants led by the EPA Office of Superfund Remediation and Technology Innovation (OSRTI). The Eco-SSLs are concentrations of contaminants in soil that are protective of ecological receptors that commonly come into contact with soil or ingest biota that live in or on soil. These values can be used to identify those contaminants of potential concern in soils that would require further evaluation in a baseline ecological risk assessment. The Eco-SSLs should be used during Step 2 of the Superfund ERA process, the screening-level risk calculation (EPA 2003). EPA derived the Eco-SSLs to conserve resources by limiting the need for EPA and other risk assessors to perform repetitious toxicity data literature searches and data evaluations for the same contaminants at every site. Both the mammalian and avian Eco-SSLs were used to screen soil data at IA A2. Any chemical with a maximum concentration that was lower than the Eco-SSL was not evaluated further for that receptor group (mammals or birds) in the SLERA. Chemicals with maximum concentrations that exceeded a screening criterion were evaluated further as a COPEC in the SLERA for the appropriate receptor group. If a criterion did not exist, the chemical was also retained as a COPEC. Table M-2 presents the results of the COPEC screening for the upland habitat. The results of the COPEC identification process for birds and mammals are discussed in Sections M3.1 and M3.2.

If no ecological criterion or TRV was available for the FCM, the chemicals are considered COPECs for Step 3a. However, they are not considered risk drivers because they are retained by default.

M2.2 ASSESSMENT OF RISKS TO VERTEBRATES

The evaluation of risk to birds and mammals at IA A2 is based on the selected assessment and measurement endpoints identified in Section M2.1.1 and focused on exposures through the food ingestion pathway. Other pathways (ingestion of drinking water and dermal contact) were not

evaluated in this SLERA because exposure through these pathways is expected to be limited. Dermal exposure routes were not addressed quantitatively because they are considered less important (EPA 2000) and because limited data exist on exposure and absorption rates.

FCMs are used to assess exposure of birds and mammals to chemicals ingested in food or soil and sediment, especially for chemicals that bioaccumulate (Pascoe and others 1996). Risk was evaluated using an HQ approach, in which site-specific daily doses calculated using a FCM were compared with chemical-specific TRVs. The HQ was calculated by dividing the site-specific daily dose by the TRV. TRVs are daily doses consistent with effects observed in laboratory toxicity studies on birds or mammals.

Further details of the exposure assessment, effects characterization, and risk characterization are provided below.

M2.2.1 Quantitative Evaluation of Risk to Birds and Mammals Using Food Chain Modeling

The dose calculations were used as the primary line of evidence to identify the principal risk drivers for birds and mammals. $HQ_{max\ dose/low\ TRV}$ and $HQ_{max\ dose/high\ TRV}$ were used for chemicals with TRVs to quantitatively bound the risk posed by the site-specific daily dose.

Daily dose estimates were calculated for all receptors using life history parameters and foraging habits. Daily dose estimates calculated using maximum concentrations in soil were based on the assumptions and equations discussed below. Daily dose estimates for the average receptor for each chemical were then compared with low and high TRVs to calculate HQs. Average receptors were identified by using the average literature value for exposure parameters such as body weight, foraging range, and ingestion rate. Tables M-3 through M-13 present the exposure parameters used in the FCM to calculate the dose for each receptor. Chemical concentrations in soil or sediment were multiplied by Mare Island-specific median BAFs or literature BAFs to calculate the prey tissue concentration for the dose estimates, Mare Island-specific median BAFs were calculated as the ratio of a chemical concentration in a soil or sediment sample divided by the concentration of the chemical in a collocated tissue sample. Literature BAFs were used if median BAFs were not available. Table M-16 presents the BAFs used in the FCM. The HQ calculations are presented in their entirety in Attachment M1.

Consistent with EPA guidance, receptors were assumed to ingest 100 percent of the most contaminated food item (EPA 1997). Actual ingestion of other food items that contained lower concentrations of the chemical would result in lower risk. Maximum exposure was assessed within the context of the following linear food chains for the SLERA:

Sediment → Small Mammals → Gray Fox

Sediment → Plants → Salt Marsh Harvest Mouse

Sediment → Small Mammals → Northern Harrier

Sediment → Small Mammals and Amphibians → Great Blue Heron

Sediment → Plants and Invertebrates → Mallard

Sediment → Invertebrates → California Black Rail

Sediment → Invertebrates → California Clapper Rail

Sediment → Aquatic Insects → Killdeer

Soil → Small Mammals → Gray Fox

Soil → Plants → California Vole

Soil → Invertebrates → Ornate Shrew

Soil → Small Mammals → Northern Harrier

Soil → Plants and Invertebrates → Western Meadowlark

The following equations were used to estimate daily doses to the representative receptors:

$$\text{Gray Fox, Northern Harrier} = (\text{SUF})\frac{[(C_{\text{sm mammal}})(\text{IR}) + (C_{\text{soil or sediment}})(\text{IR})]}{\text{BW}}$$

$$\text{Salt Marsh Harvest Mouse} = (\text{SUF})\frac{[(C_{\text{plants}})(\text{IR}) + (C_{\text{sediment}})(\text{IR})]}{\text{BW}}$$

$$\text{Great Blue Heron} = (\text{SUF})\frac{[(C_{\text{mammals}})(\text{IR}) + (C_{\text{invertebrates}})(\text{IR}) + (C_{\text{sediment}})(\text{IR})]}{\text{BW}}$$

$$\text{Mallard}_{(\text{nonbreeding})} = (\text{SUF})\frac{[(C_{\text{plant}})(\text{IR}) + (C_{\text{sediment}})(\text{IR})]}{\text{BW}}$$

$$\text{Mallard}_{(\text{breeding})} = (\text{SUF})\frac{[(C_{\text{plant}})(\text{IR}) + (C_{\text{invertebrates}})(\text{IR}) + (C_{\text{sediment}})(\text{IR})]}{\text{BW}}$$

$$\text{California Black Rail} = (\text{SUF})\frac{[(C_{\text{plant}})(\text{IR}) + (C_{\text{invertebrates}})(\text{IR}) + (C_{\text{sediment}})(\text{IR})]}{\text{BW}}$$

$$\text{Clapper Rail} = (\text{SUF})\frac{[C_{\text{invertebrates}}(\text{IR}) + (C_{\text{sediment}})(\text{IR})]}{\text{BW}}$$

$$\text{Killdeer} = (\text{SUF})\frac{[(C_{\text{aquatic insects}})(\text{IR}) + (C_{\text{sediment}})(\text{IR})]}{\text{BW}}$$

$$\text{California Vole} = (\text{SUF})\frac{[(C_{\text{plant}})(\text{IR}) + (C_{\text{soil}})(\text{IR})]}{\text{BW}}$$

$$\text{Ornate Shrew} = (\text{SUF})\frac{[C_{invertebrates}(IR) + (C_{sediment})(IR)]}{BW}$$

$$\text{Western Meadowlark} = (\text{SUF})\frac{[(C_{plant})(IR) + (C_{earthworms})(IR) + (C_{soil})(IR)]}{BW}$$

where

Dose	=	Milligram per kilogram (mg/kg)-day
$C_{sediment}$	=	Concentration of COPEC in sediment (mg/kg)
C_{soil}	=	Concentration of COPEC in soil (mg/kg)
C_{plant}	=	(C_{soil})(plant BAF) (unitless)
$C_{invertebrate}$	=	($C_{sediment}$)(invertebrate BAF) (unitless)
C_{mammal}	=	(C_{soil})(small mammal BAF) (unitless)
$C_{aquatic\ insects}$	=	($C_{sediment}$)(aquatic insect BAF) (unitless)
IR	=	Ingestion rate (of prey items or soil ingested per day) (kilogram per day)
BW	=	Body weight of receptor species (kilogram)
SUF	=	Site use factor to account for proportion of the total foraging time that the organism spends at the site; assumed to be 1.0 in SLERA for all receptors

All vertebrate receptors were considered to be exposed to the maximum concentration of COPECs 100 percent of the time (SUF = 1.0) because of the conservative requirements of the SLERA (Navy 1999b; EPA 1997).

M2.2.1.1 Toxicological Effects on Birds and Mammals and Interpretation of Hazard Quotients

Site-specific daily dose estimates were compared with high and low TRVs to estimate the potential for adverse biological effects on each vertebrate receptor. Based on this comparison, the risk to representative vertebrate receptors was characterized; this comparison was performed in a manner consistent with EPA's HQ methodology, as follows (EPA 1997):

$$\textit{Vertebrate}\ \text{HQ} = \frac{\text{Dose}}{\text{TRV}} = \frac{(\text{mg/kg - day})}{(\text{mg/kg - day})}$$

where:

HQ	=	Hazard quotient (unitless)
Dose	=	Chemical-, receptor-, and site-specific daily dose estimate (mg/kg-day)
TRV	=	Chemical- and receptor-specific toxicity reference value (mg/kg-day)

Resulting HQ values from the FCM model should not be compared with one another because of differences in the degree of conservatism in the selection of TRVs for various chemicals and vertebrates; rather, they should be considered individually (Navy 1999b). TRVs and HQs for the ingestion models are discussed further below.

M2.2.1.2 Toxicity Reference Values

TRVs were derived by a work group through a collaborative effort involving the Navy and its contractors, as well as the EPA Region 9 BTAG. The BTAG includes federal, state, and local regulatory agencies and natural resource trustees (Navy 1998). For COPECs without BTAG TRVs, toxicological benchmarks for wildlife developed by Sample and others (1996) were used, if available. Each TRV represents a critical exposure level from a toxicological study and is supported by a data set of toxicological exposures and effects. In addition, TRVs from EPA's online database of Ecological Soil Screening-Levels were used (EPA 2008). The low TRV represents a no observed adverse effect levels (NOAEL) and the high TRV a dose at which a low to median adverse effect was observed in laboratory studies. Table M-15 lists the TRVs and their sources for birds and mammals. The TRVs in Table M-15 apply for both the wetland and upland habitat scenarios.

TRVs were derived separately for birds and mammals using available toxicological literature. General TRVs derived for mammals and birds were scaled to reflect the body size of each receptor at IA A2 using "allometric conversion." The underlying assumption of allometric conversion is that physiological functions, such as metabolic rates, are a function of body size (Opresko and others 1993). Allometric conversions assume that smaller animals have higher metabolic rates and are typically able to detoxify or eliminate ingested chemicals more quickly than can larger animals (Opresko and others 1993; Sample and others 1996). The allometric conversion equations developed by Sample and others (1998) were used to extrapolate doses in accordance with methods described by Opresko and others (1993) and Sample and Arenal (1999). The following allometric conversion equations were used for this food chain analysis:

Birds: $\text{TRV}_{\text{receptor}} = \text{TRV}_{\text{test organism}}\ (\text{BW}_{\text{test organism}} / \text{BW}_{\text{receptor}})^{(1.0\ -\ 1.2)}$

Mammals: $\text{TRV}_{\text{receptor}} = \text{TRV}_{\text{test organism}}\ (\text{BW}_{\text{test organism}} / \text{BW}_{\text{receptor}})^{(1.0\ -\ 0.94)}$

M2.2.1.3 Hazard Quotients

HQ values were calculated for all vertebrate COPECs where a TRV was available. Vertebrate HQs are used to estimate the level of risk posed to vertebrate receptors from the site-specific maximum total daily dose of a COPEC. Site-specific daily maximum doses were compared with the receptor-specific low and high TRV ($HQ_{max\ dose/low\ TRV}$ and $HQ_{max\ dose/high\ TRV}$). The table below summarizes the interpretation of each vertebrate HQ.

HQ = Dose/TRV	Low TRV	High TRV	Between Low and High TRV
Maximum Dose	$HQ_{(max\ dose/low\ TRV)} < 1.0$ indicates a negligible risk to the average receptor	$HQ_{(max\ dose/high\ TRV)} > 1.0$ indicates unacceptable risk to the average receptor	$HQ_{(max\ dose/high\ TRV)} < 1.0$ and $HQ_{(max\ dose/low\ TRV)} > 1.0$ indicates potential risk to the average receptor

Attachment M1 summarizes the complete dose calculations for each receptor and resulting HQs. Tables M-17, M-18, M-21, and M-22 summarize the HQs for each representative receptor and habitat in the wetlands and uplands.

M2.2.1.4 Chemicals with No Available TRVs

Although COPECs without benchmarks or TRVs are not currently considered risk drivers, chemicals cannot be eliminated during the SLERA simply because no TRVs are available (EPA 1997). Therefore, chemicals detected at the site were retained "by default" if no TRV was available (EPA 1997). COPECs retained by default because no TRVs are available were carried forward into the Step 3a risk refinement.

M2.3 UNCERTAINTY ANALYSIS

The uncertainty analysis associated with the ERA for IA A2 as well as ERAs for other Mare Island sites is presented in Section 14.0 of the onshore ERA (Appendix L). Therefore, an uncertainty analysis will not be presented here.

M3.0 SLERA EVALUATION OF POTENTIAL RISK TO BIRDS AND MAMMALS

The evaluation of risk to birds and mammals focused on selected assessment endpoints identified in Section M2.1.1. Risks to representative birds (Northern harrier, great blue heron, mallard, California black rail, California clapper rail, killdeer, and Western meadowlark) and mammals (gray fox, salt marsh harvest mouse, California vole, and ornate shrew) were evaluated.

TABLES

M-1 Comparison of COPEC Concentrations in Surface Sediment (~~0 to 2.0~~ 1.0 to 1.5 feet bgs) with Sediment Toxicity Benchmarks

M-2 Comparison of COPEC Concentrations in Surface Soil (0 to ~~2.0~~ 0.5 feet bgs) with Ecological Soil Screening Levels

M-3 Dose Parameters for the Gray Fox (*Urocyon cinereoargenteus*)

M-4 Dose Parameters for the Salt Marsh Harvest Mouse (*Reithrodontomys raviventris*)

M-5 Dose Parameters for the Northern Harrier (*Circus cyaneus*)

M-6 Dose Parameters for the Great Blue Heron (*Ardea herodias*)

M-7 Dose Parameters for the Mallard (*Anas platyrhynchos*)

M-8 Dose Parameters for the California Black Rail (*Laterallus jamaicensis coturniculus*)

M-9 Dose Parameters for the California Clapper Rail (*Rallus longirostris obsoletus*)

M-10 Dose Parameters for the Killdeer (*Charadrius vociferous*)

M-11 Dose Parameters for the California Vole (*Microtus californicus*)

M-12 Dose Parameters for the Ornate Shrew (*Sorex ornatus*)

M-13 Dose Parameters for the Western Meadowlark (*Sturnella neglecta*)

M-14 IA A2 Chemical Concentrations for Sediment and Soil for the Food Chain Models

M-15 Avian and Mammalian TRVs and Test Species Body Weights

M-16 Bioaccumulation Factors Used in the Food Chain Models

M-17 Wetland Bird and Mammal SLERA Hazard Quotients for IA A2

M-18 Upland Bird and Mammal SLERA Hazard Quotients for IA A2

M-19 COPECs Eliminated and Remaining After SLERA Completion

M-20 Background Screen of Upland Soils with Ambient Fill

M-21 Wetland Bird and Mammal Step 3a Hazard Quotients for IA A2

M-22 Upland Bird and Mammal Step 3a Hazard Quotients for IA A2

M-23 Wetland Bird and Mammal Step 3A Bioavailability Hazard Quotients for IA A2

M-24 Upland Bird and Mammal Step 3A Bioavailability Hazard Quotients for IA A2

TABLES

TABLE M-1: COMPARISON OF SURFACE SEDIMENT CONCENTRATIONS (1.0 TO 1.5 FEET BGS) WITH SEDIMENT TOXICITY BENCHMARKS

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

Analyte	Number of Detections/ Analyses	Maximum Detected Concentration (mg/kg)	Median Detection Concentration (mg/kg)	Number of Samples with Concentrations Greater than ER-L (mg/kg)	Number of Samples with Concentrations Greater than ER-M (mg/kg)	ER-L (mg/kg)	ER-M (mg/kg)
Metals							
Aluminum	33/33	39,600 J	30,300	NL	NM	NL	NM
Antimony	21/24	7.7 J	1	3	0	2	25
Arsenic	33/33	51.1	13.3	31	0	8.2	70
Barium	33/33	151 J	58.8	NL	NM	NL	NM
Beryllium	26/33	0.83	0.56	NL	NM	NL	NM
Cadmium	3/33	7	2.1	2	0	1.2	9.6
Chromium	32/33	294 J	93.5	23	0	81	370
Chromium VI	0/3	ND	ND	0	0	NL	NM
Cobalt	33/33	34.8 J	19.7	NL	NM	NL	NM
Copper	33/33	324 J	71.1	29	1	34	270
Lead	33/33	422 J	46.8	17	3	46.7	218
Manganese	33/33	1,750 J	325	NL	NM	NL	NM
Mercury	31/32	1.2 J	0.42	29	7	0.15	0.71
Molybdenum	13/33	3.8	2	NL	NM	NL	NM
Nickel	33/33	160 J	94.4	29	27	20.9	51.6
Selenium	24/32	2.1	1.2	NL	NM	NL	NM
Silver	0/28	ND	ND	0	0	1	3.7
Thallium	3/33	1.3 J	1	NL	NM	NL	NM
Tin	6/6	5.0 J	4.5	NL	NM	NL	NM
Vanadium	33/33	226	88.8	NL	NM	NL	NM
Zinc	33/33	1,850 J	142	14	1	150	410
Semivolatile Organic Compounds							
1-Methylnaphthalene	5/6	0.02 J	0.01	NL	NM	NL	NM
1-Methylphenanthrene	3/6	0.01 J	0.01	NL	NM	NL	NM
2,3,5-Trimethylnaphthalene	2/6	0.005 J	0.005	NL	NM	NL	NM
2,6-Dimethylnaphthalene	3/6	0.007 J	0.006	NL	NM	NL	NM
2-Methylnaphthalene	5/11	0.03	0.02	0	0	0.07	0.67
Acenaphthene	3/11	0.006 J	0.004	0	0	0.016	0.5
Acenaphthylene	3/11	0.003 J	0.003	0	0	0.044	0.64
Anthracene	6/11	0.02	0.01	0	0	0.0853	1.1

TABLE M-1: COMPARISON OF SURFACE SEDIMENT CONCENTRATIONS (1.0 TO 1.5 FEET BGS) WITH SEDIMENT TOXICITY BENCHMARKS

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

Analyte	Number of Detections/ Analyses	Maximum Detected Concentration (mg/kg)	Median Detection Concentration (mg/kg)	Number of Samples with Concentrations Greater than ER-L (mg/kg)	Number of Samples with Concentrations Greater than ER-M (mg/kg)	ER-L (mg/kg)	ER-M (mg/kg)
Semivolatile Organic Compounds (Continued)							
Benzo(a)anthracene	6/11	0.08	0.05	0	0	0.261	1.6
Benzo(a)pyrene	6/11	0.1	0.08	0	0	0.43	1.6
Benzo(b)fluoranthene	5/11	0.3 J	0.1	NL	NM	NL	NM
Benzo(e)pyrene	6/6	0.1	0.07	NL	NM	NL	NM
Benzo(g,h,i)perylene	6/11	0.1	0.09	NL	NM	NL	NM
Benzo(k)fluoranthene	3/11	0.07	0.06	NL	NM	NL	NM
Biphenyl	3/6	0.006 J	0.004	NL	NM	NL	NM
Chrysene	6/11	0.1	0.07	0	0	0.384	2.8
Dibenz(a,h)anthracene	5/11	0.04	0.02	0	0	0.0634	0.26
Fluoranthene	6/11	0.2	0.1	0	0	0.6	5.1
Fluorene	4/11	0.02 J	0.008	0	0	0.019	0.54
Indeno(1,2,3-cd)pyrene	6/11	0.1	0.07	NL	NM	NL	NM
Naphthalene	6/11	0.06 J	0.02	0	0	0.16	2.1
Perylene	6/6	0.1	0.07	NL	NM	NL	NM
Phenanthrene	6/11	0.06	0.05	0	0	0.24	1.5
Pyrene	7/11	0.2	0.1	0	0	0.665	2.6
Total PAHs	7/11	2	1	0	0	4.022	44.792
Pesticides							
2,4'-DDD	6/7	0.01	0.0006	NL	NM	NL	NM
4,4'-DDD	8/34	0.02	0.002	3	1	0.002	0.02
4,4'-DDE	6/34	0.008	0.003	4	0	0.0022	0.027
4,4'-DDT	7/34	0.02	0.0007	3	1	0.001	0.007
alpha-chlordane	2/34	0.002	0.001	NL	NM	NL	NM
Dieldrin	1/34	0.0006	0.0006	1	0	0.00002	0.008
Endrin Ketone	1/34	0.002	0.002	NL	NM	NL	NM
gamma-chlordane	2/34	0.002	0.001	NL	NM	NL	NM
Methoxychlor	1/34	0.001	0.001	NL	NM	NL	NM
Total chlordanes	2/34	0.004	0.002	2	0	0.0005	0.006
Total DDTs	10/34	0.06	0.005	10	1	0.00158	0.0461

TABLE M-1: COMPARISON OF SURFACE SEDIMENT CONCENTRATIONS (1.0 TO 1.5 FEET BGS) WITH SEDIMENT TOXICITY BENCHMARKS

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

Analyte	Number of Detections/ Analyses	Maximum Detected Concentration (mg/kg)	Median Detection Concentration (mg/kg)	Number of Samples with Concentrations Greater than ER-L (mg/kg)	Number of Samples with Concentrations Greater than ER-M (mg/kg)	ER-L (mg/kg)	ER-M (mg/kg)
Polychorinated Biphenyls							
Aroclor-1260	7/27	0.08	0.03	NL	NM	NL	NM
PCB-101	3/7	0.005	0.005	NL	NM	NL	NM
PCB-114	1/7	0.002	0.002	NL	NM	NL	NM
PCB-118	1/7	0.0003	0.0003	NL	NM	NL	NM
PCB-128	1/7	0.0004	0.0004	NL	NM	NL	NM
PCB-138	6/7	0.04	0.0008	NL	NM	NL	NM
PCB-153	4/7	0.05	0.009	NL	NM	NL	NM
PCB-157	1/7	0.1	0.1	NL	NM	NL	NM
PCB-170	2/7	0.05 J	0.03	NL	NM	NL	NM
PCB-180	4/7	0.1	0.01	NL	NM	NL	NM
PCB-187	3/7	0.04	0.01	NL	NM	NL	NM
PCB-195	2/7	0.007 J	0.006	NL	NM	NL	NM
PCB-206	2/7	0.002	0.001	NL	NM	NL	NM
PCB-209	1/7	0.001	0.001	NL	NM	NL	NM
PCB-66	1/7	0.0002	0.0002	NL	NM	NL	NM
Total PCBs	6/34	0.6	0.006	2	2	0.0227	0.18
Petroleum Indicators							
Diesel-range	1/34	39 J	39	NL	NM	NL	NM
Gasoline-range	2/33	620 Y	310	NL	NM	NL	NM
Motor-oil-range	18/34	1,100 Y	210	NL	NM	NL	NM

Notes: Inorganic results less than 10 are reported to two significant figures, and results greater than 10 are reported to three significant figures.
Organic results less than 10 are reported to one significant figure, and results greater than 10 are reported to two significant figures.
"R" and "Z" qualified data (rejected results and nonfuel total petroleum hydrocarbon results) were excluded from the statistical summary.

COPEC	Chemical of potential ecological concern
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethene
DDT	Dichlorodiphenyltrichloroethane
ER-L	Effects-range low (Long and others 1995)
ER-M	Effects-range median (Long and others 1995)
J	Estimated

TABLE M-1: COMPARISON OF SURFACE SEDIMENT CONCENTRATIONS (1.0 TO 1.5 FEET BGS) WITH SEDIMENT TOXICITY BENCHMARKS

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

Analyte	Number of Detections/ Analyses	Maximum Detected Concentration (mg/kg)	Median Detection Concentration (mg/kg)	Number of Samples with Concentrations Greater than ER-L (mg/kg)	Number of Samples with Concentrations Greater than ER-M (mg/kg)	ER-L (mg/kg)	ER-M (mg/kg)

Notes (Continued):

mg/kg	Milligram per kilogram
ND	Nondetected
NL	No ER-L has been established.
NM	No ER-M has been established.
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
Y	Chromatogram indicates the presence of petroleum fuel

Source:

Long, E.R., D.D. MacDonald, S.L. Smith, and F.D. Calder. 1995. "Incidence of Adverse Biological Effects Within Ranges of Chemical Concentrations in Marine and Estuarine Sediments." Environmental Management. Volume 19. Number 1. Pages 81 through 97.

TABLE M-2: COMPARISON OF SURFACE SOIL CONCENTRATIONS (0 TO 0.5 FEET BGS) WITH SOIL TOXICITY BENCHMARKS

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

Analyte	Number of Detections/ Analyses	Maximum Detected Concentration (mg/kg)	Average Detected Concentration (mg/kg)	Median Detected Concentration (mg/kg)	Avian Eco-SSL[1] (mg/kg)	Mammal Eco-SSL[1] (mg/kg)	Avian COPEC?	Mammal COPEC?
Metals								
Aluminum	71/71	25,400	11,500	11,200	NA	NA	Yes	Yes
Antimony	62/68	5.4	1.1	0.93	NA	0.27	Yes	Yes
Arsenic	62/71	25.1	5.3	4.6	43	46	No	No
Barium	71/71	474	95.5	79.4	NA	2000	Yes	No
Beryllium	53/71	1.6	0.22	0.19	NA	21	Yes	No
Cadmium	6/75	3.8	0.77	0.19	0.77	0.36	Yes	Yes
Chromium	75/75	440	46.9	28.5	26	34	Yes	Yes
Chromium VI	0/13	ND	ND	ND	NA	81	No	No
Cobalt	70/75	34.8	12.5	11.6	120	230	No	No
Copper	74/75	684	69.8	44.7	28	49	Yes	Yes
Lead	74/75	968	92.2	49.2	11	56	Yes	Yes
Manganese	75/75	1,470	491	445	4,300	4,000	No	No
Mercury	59/71	10.2	0.69	0.35	NA	NA	Yes	Yes
Molybdenum	16/71	6.8	0.92	0.32	NA	NA	Yes	Yes
Nickel	75/75	169	33	29.3	210	130	No	Yes
Selenium	44/67	1.8	0.7	0.62	1.2	0.63	Yes	Yes
Silver	4/75	5.8	1.8	0.59	4.2	14	Yes	No
Thallium	11/71	1.6	0.84	0.76	NA	NA	Yes	Yes
Tin	4/4	40.6	17.3	10.1	NA	NA	Yes	Yes
Titanium	4/4	6,470	4,800	4,650	NA	NA	Yes	Yes
Vanadium	75/75	241	66.1	55	7.8	280	Yes	No
Zinc	75/75	1,980	165	101	46	79	Yes	Yes
Semivolatile Organic Compounds								
1,2,4-Trichlorobenzene	1/27	0.04	0.04	0.04	NA	NA	Yes	Yes
2-Methylnaphthalene	1/27	0.2	0.2	0.2	NA	NA	Yes	Yes
Anthracene	4/27	0.2	0.05	0.02	NA	NA	Yes	Yes
Benzo(a)anthracene	10/27	0.3	0.1	0.08	NA	NA	Yes	Yes
Benzo(a)pyrene	12/21	0.3	0.1	0.1	NA	NA	Yes	Yes
Benzo(b)fluoranthene	10/21	0.6	0.2	0.2	NA	NA	Yes	Yes
Benzo(g,h,i)perylene	6/21	0.2	0.07	0.06	NA	NA	Yes	Yes
Benzo(k)fluoranthene	6/21	0.6	0.2	0.1	NA	NA	Yes	Yes
Carbazole	2/27	0.07	0.05	0.05	NA	NA	Yes	Yes

TABLE M-2: COMPARISON OF SURFACE SOIL CONCENTRATIONS (0 TO 0.5 FEET BGS) WITH SOIL TOXICITY BENCHMARKS

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

Analyte	Number of Detections/ Analyses	Maximum Detected Concentration (mg/kg)	Average Detected Concentration (mg/kg)	Median Detected Concentration (mg/kg)	Avian Eco-SSL[1] (mg/kg)	Mammal Eco-SSL[1] (mg/kg)	Avian COPEC?	Mammal COPEC?
Semivolatile Organic Compounds (Continued)								
Chrysene	19/27	0.8	0.2	0.09	NA	NA	Yes	Yes
Dibenz(a,h)anthracene	3/21	0.06	0.04	0.04	NA	NA	Yes	Yes
Fluoranthene	16/27	1	0.2	0.05	NA	NA	Yes	Yes
Fluorene	1/27	0.08	0.08	0.08	NA	NA	Yes	Yes
Indeno(1,2,3-cd)pyrene	5/21	0.1	0.06	0.07	NA	NA	Yes	Yes
Pentachlorophenol	1/26	0.5	0.5	0.5	2.1	2.8	No	No
Phenanthrene	9/27	0.5	0.1	0.06	NA	NA	Yes	Yes
Pyrene	19/27	0.6	0.1	0.07	NA	NA	Yes	Yes
Total PAHs	20/27	4	0.9	0.4	NA	NA	Yes	Yes
Pesticides								
4,4'-DDD	19/72	0.2	0.02	0.004	NA	NA	Yes	Yes
4,4'-DDE	11/72	0.04	0.009	0.006	NA	NA	Yes	Yes
4,4'-DDT	54/73	0.2	0.02	0.007	NA	NA	Yes	Yes
Aldrin	1/72	0.002	0.002	0.002	NA	NA	Yes	Yes
alpha-BHC	24/72	0.04	0.01	0.01	NA	NA	Yes	Yes
alpha-Chlordane	35/72	0.03	0.005	0.002	NA	NA	Yes	Yes
beta-BHC	13/72	0.01	0.005	0.003	NA	NA	Yes	Yes
delta-BHC	11/72	0.008	0.002	0.002	NA	NA	Yes	Yes
Dieldrin	7/72	0.006	0.004	0.004	0.022	0.0049	No	Yes
Endosulfan I	10/72	0.005	0.002	0.002	NA	NA	Yes	Yes
Endosulfan II	1/73	0.004	0.004	0.004	NA	NA	Yes	Yes
Endosulfan sulfate	13/73	0.02	0.006	0.003	NA	NA	Yes	Yes
Endrin	6/72	0.004	0.003	0.002	NA	NA	Yes	Yes
Endrin aldehyde	29/72	0.02	0.005	0.004	NA	NA	Yes	Yes
Endrin ketone	18/72	0.01	0.005	0.004	NA	NA	Yes	Yes
gamma-BHC (lindane)	19/72	0.01	0.004	0.003	NA	NA	Yes	Yes
gamma-Chlordane	29/72	0.03	0.006	0.002	NA	NA	Yes	Yes
Heptachlor	4/72	0.005	0.002	0.001	NA	NA	Yes	Yes
Heptachlor epoxide	12/72	0.004	0.001	0.0009	NA	NA	Yes	Yes
Methoxychlor	3/73	0.02	0.01	0.02	NA	NA	Yes	Yes
Total Chlordanes	35/72	0.07	0.01	0.005	NA	NA	Yes	Yes
Total DDTs	55/73	0.5	0.02	0.007	0.093	0.021	Yes	Yes

TABLE M-2: COMPARISON OF SURFACE SOIL CONCENTRATIONS (0 TO 0.5 FEET BGS) WITH SOIL TOXICITY BENCHMARKS

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

Analyte	Number of Detections/ Analyses	Maximum Detected Concentration (mg/kg)	Average Detected Concentration (mg/kg)	Median Detected Concentration (mg/kg)	Avian Eco-SSL[1] (mg/kg)	Mammal Eco-SSL[1] (mg/kg)	Avian COPEC?	Mammal COPEC?
Polychlorinated Biphenyls								
Aroclor-1254	1/75	0.2	0.2	0.2	NA	NA	Yes	Yes
Aroclor-1260	36/75	0.2	0.06	0.04	NA	NA	Yes	Yes
Petroleum Indicators								
Diesel-range	9/86	180	72	59	NA	NA	Yes	Yes
Gasoline-range	1/76	0.8	0.8	0.8	NA	NA	Yes	Yes
Motor-oil-range	80/86	6,600	670	380	NA	NA	Yes	Yes

Notes: Inorganic results less than 10 are reported to two significant figures, and results greater than 10 are reported to three significant figures.
"R" and "Z" qualified data (rejected results and nonfuel total petroleum hydrocarbons results) were excluded from the statistical summary.
Organic results less than 10 are reported to one significant figure, and results greater than 10 are reported to two significant figures.

1 Eco-SSLs are from EPA 2008.

BHC Benzene hexachloride
COPEC Chemical of potential ecological concern
DDD Dichlorodiphenyldichloroethane
DDE Dichlorodiphenyldichloroethene
DDT Dichlorodiphenyltrichloroethane
Eco-SSL Ecological soil screening level
mg/kg Milligrams per kilogram
NA Not available
ND Not detected
PAH Polycyclic aromatic hydrocarbon

Source:
EPA. 2008. “Interim Final Ecological Soil Screening Levels.” Office of Solid Waste and Emergency Response. Available on-line at: <http://www.epa.gov/ecotox/ecossl/>. Updated April 2008.

TABLE M-3: DOSE PARAMETERS FOR THE GRAY FOX (*Urocyon cinereoargenteus*)
Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

Parameter	Average Adult	Units	Reference/Notes
Ingestion Rate$_{food}$	0.15	kg/day	Calculated with body weight of 3,880 grams using the equation for the food requirement for intake of dry matter for carnivores (food ingestion rate = [0.323[BW(grams)]^0.744]/1000 (Nagy 2001).
Ingestion Rate$_{mammal}$	0.15	kg/day	Based on 100 percent of food ingestion rate.
Ingestion Rate$_{soil}$	0.0042	kg/day	2.8 percent of food ingestion rate based on red fox (Beyer and others 1994).
Soil and Sediment Concentrations	Maximum and 95UCL Concentrations	mg/kg	To be determined based on existing data for soil (0 to 0.5 feet bgs) and sediment (1.0 to 1.5 feet bgs) collected from the site.
Prey Concentrations	Maximum and 95UCL Concentrations	mg/kg	Rodent tissue data collected from site.
Diet Composition[a]	100%	small mammal tissue	Food will consist of 100 percent small mammal tissue because the grey fox was selected as the representative species for carnivorous mammals.
Foraging Range	296.5	acre	Average for four females in Davis, California (Fuller 1987, as cited in Zeiner and others 1990).
Site Use Factor	1	unitless	Used for maximum dose; based on conservative estimate of 100 percent site use as per EPA SLERA guidance (1997).
	0.11	unitless	Used for average dose for upland receptors; based on the site area (31.65 acres upland) divided by the foraging range.
	0.027	unitless	Used for average dose for wetland receptors; based on the site area (8.12 acres wetland) divided by the foraging range.
Body Weight	3.88	kg	Average of male and female gray fox body weights from Silva and Downing (1995).

Notes:

a	The gray fox feeds primarily on rodents and other animal matter (Zeiner and others 1990).
95UCL	One-sided 95 percent upper confidence limit of the mean
bgs	Below ground surface
BW	Body weight
EPA	U.S. Environmental Protection Agency
kg	Kilogram
kg/day	Kilogram per day
mg/kg	Milligram per kilogram
SLERA	Screening-level ecological risk assessment

Sources:

Beyer, W.N., E.E. Connor, and S. Gerould. 1994. "Estimates of Soil Ingestion by Wildlife." *Journal of Wildlife Management.* Volume 58, No. 2. Pages 375-382.

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TABLE M-4: DOSE PARAMETERS FOR THE SALT MARSH HARVEST MOUSE (*Reithrodontomys raviventris*)

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

Parameter	Average Adult	Units	Reference/Notes
Ingestion Rate$_{food}$	0.0039	kg/day	Calculated with body weight of 11 grams using the equation for the food requirement for intake of dry matter for herbivores (food ingestion rate = [0.859[BW(grams)]^0.628]/1,000) (Nagy 2001).
Ingestion Rate$_{pickleweed}$	0.0039	kg/day	Based on 100 percent of food ingestion rate.
Ingestion Rate$_{sediment}$	0.000093	kg/day	2.4 percent of food ingestion rate based on meadow vole (Beyer and others 1994).
Sediment Concentrations	Maximum and 95UCL Concentrations	mg/kg	To be determined based on existing data for sediment collected from the site (1.0 to 1.5 feet bgs).
Prey Concentrations	95UCL Concentrations	mg/kg	Plant (pickleweed) tissue data collected from site.
Diet Composition	100%	plants	Food will consist of 100 percent plant tissue because the salt marsh harvest mouse was selected as representative species for herbivorous mammals.
Foraging Range	0.3212	acre	Foraging range found in OEHHA (1999).
Site Use Factor	1	unitless	Used for maximum dose; based on conservative estimate of 100 percent site use as per EPA SLERA guidance (1997).
	1	unitless	Used for average dose; based on the site area (8.12 acres wetland) divided by the foraging range. Site area is larger than foraging range, thus a value of 1 was used.
Body Weight	0.011	kg	Based on body weight of average adult from San Pablo Bay population measured by Fisler (1965).

Notes:

95UCL	One-sided 95 percent upper confidence limit of the mean
bgs	Below ground surface
BW	Body weight
EPA	U.S. Environmental Protection Agency
kg	Kilogram
kg/day	Kilogram per day
mg/kg	Milligram per kilogram
OEHHA	Office of Environmental Health and Hazard Assessment
SLERA	Screening-level ecological risk assessment
USACE	U.S. Army Corps of Engineers

Sources:

Beyer, W.N., E.E. Connor, and S. Gerould. 1994. "Estimates of Soil Ingestion by Wildlife." *Journal of Wildlife Management.* Volume 58, No. 2. Pages 375-382.

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TABLE M-5: DOSE PARAMETERS FOR THE NORTHERN HARRIER (*Circus cyaneus*)
Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

Parameter	Average Adult	Units	Reference/Notes
Ingestion $Rate_{food}$	0.046	kg/day	Calculated with body weight of 411 grams using the equation for the food requirement for intake of dry matter for carnivorous birds (food ingestion rate = [0.849[BW(grams)]^0.663]/1000) (Nagy 2001).
Ingestion $Rate_{mammal}$	0.046	kg/day	Based on 100 percent food ingestion rate.
Ingestion $Rate_{soil}$	0.0026	kg/day	5.7 percent of food ingestion rate based on 90th percentile value for the red-tailed hawk (EPA 2007).
Soil and Sediment Concentrations	Maximum and 95UCL Concentrations	mg/kg	To be determined based on existing data for soil (0 to 0.5 feet bgs) and sediment (1.0 to 1.5 feet bgs) collected from the site.
Prey Concentrations	Maximum and 95UCL Concentrations	mg/kg	Rodent tissue data collected from site.
Diet Composition	100%	small mammal tissue	Food will consist of 100 percent small mammals.
Foraging Range	335	acre	Median daily foraging area in Michigan from Craighead and Craighead (1956), as cited in Zeiner and others (1990) (Range: 12.14-259 hectares).
Site Use Factor	1	unitless	Used for maximum dose; based on conservative estimate of 100 percent site use as per EPA SLERA guidance (1997).
	0.0945		Used for average dose for upland receptors; based on the site area (31.65 acres upland) divided by the foraging range.
	0.0242		Used for average dose for wetland receptors; based on the site area (8.12 acres wetland) divided by the foraging range.
Body Weight	0.411	kg	Average of males and females from Dunning (1993).

Notes:

95UCL	One-sided 95 percent upper confidence limit of the mean
BW	Body weight
EPA	U.S. Environmental Protection Agency
kg/day	Kilogram per day
mg/kg	Milligram per kilogram
SLERA	Screening-level ecological risk assessment

Sources:

Dunning, J.B. 1993. "*CRC Handbook of Avian Body Masses.*" CRC Press. Boca Raton, Florida.

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TABLE M-6: DOSE PARAMETERS FOR THE GREAT BLUE HERON (*Ardea herodias*)

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

Parameter	Average Adult	Units	Reference/Notes
Ingestion Rate$_{food}$	0.14	kg/day	Calculated with body weight of 2,295 grams using the equation for the food requirement for intake of dry matter for carnivorous birds (food ingestion rate = [0.849[BW(grams)]^0.663]/1000) (Nagy 2001).
Ingestion Rate$_{mammal}$	0.072	kg/day	Based on 50 percent of ingestion rate.
Ingestion Rate$_{invertebrate}$	0.072	kg/day	Based on 50 percent of ingestion rate.
Ingestion Rate$_{sediment}$	0.0047	kg/day	3.3 percent of ingestion rate, based on Mallard data from Beyer and others (1994).
Sediment Concentrations	Maximum and 95UCL Concentrations	mg/kg	Sediment collected from site (1.0 to 1.5 feet bgs).
Prey Concentrations	Maximum and 95UCL Concentrations	mg/kg	Rodent (50 percent) and invertebrate (50 percent) tissue data collected from site.
Diet Composition	50%	small mammal tissue	Food will consist of 50 percent small mammals and 50 percent invertebrates.
	50%	invertebrate tissue	
Foraging Range	11.15	acre	Defended foraging territories in Oregon in a freshwater marsh and an estuary from Butler (1992). The range is 1.5 to 20.8 acres. The mean is 11.15.
	10	miles	Flight distance from nest to feeding area from Krebs (1974), as cited in Zeiner (1990b).
Site Use Factor	1	unitless	Used for maximum dose; based on conservative estimate of 100 percent site use as per EPA SLERA guidance (1997).
	0.7283		Used for average dose; based on the site area (8.12 acres wetland) divided by the foraging range.
Body Weight	2.295	kg	Average calculated from Dunning (1993).

Notes:

95UCL	One-sided 95 percent upper confidence limit of the mean
bgs	Below ground surface
BW	Body weight
EPA	U.S. Environmental Protection Agency
kg	Kilogram
kg/day	Kilograms per day
kJ/g	Kilojoules per gram
mg/kg	Milligrams per kilogram
SLERA	Screening-level ecological risk assessment
SUF	Site use factor

Sources:

Beyer, W.N., E.E. Connor, and S. Gerould. 1994. "Estimates of Soil Ingestion by Wildlife." *Journal of Wildlife Management.* Volume 58, No. 2. Pages 375-382.

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TABLE M-7: DOSE PARAMETERS FOR THE MALLARD (*Anas platyrhynchos*)

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

Parameter	Average Adult	Units	Reference/Notes
Ingestion $Rate_{food}$	0.0802	kg/day	Calculated using mean body weight of 1161 grams in an allometric equation for all birds [0.638[BW(grams)]^0.685]/1,000 based on dry weight (Nagy 2001).
Ingestion $Rate_{plants(nonbreed)}$	0.0802	kg/day	Nonbreeding season: Plant (nonpickleweed) is 100 percent of ingestion rate.
Ingestion $Rate_{plants(breed)}$	0.0201	kg/day	Breeding season: 25 percent of ingestion rate is plants (nonpickleweed).
Ingestion $Rate_{invertebrates(breed)}$	0.0602	kg/day	Breeding season: 75 percent of ingestion rate is invertebrates.
Ingestion $Rate_{sediment}$	0.0026	kg/day	3.3 percent of ingestion rate; Mallard data from Beyer and others (1994).
Sediment Concentrations	Maximum and 95UCL Concentrations	mg/kg	Sediment collected from site (1.0 to 1.5 feet bgs).
Prey Concentrations	Maximum and 95UCL Concentrations	mg/kg	Nonbreeding season: Plant (nonpickleweed) tissue data collected from site.
			Breeding season: 25 percent plant (nonpickleweed) tissue data collected from the site, 75 percent invertebrate tissue data collected from the site
Diet Composition	100%	plant tissue	During nonbreeding season, food will consist of 50 percent plants (nonpickleweed).
	25%	plant tissue	During breeding season, food will consist of 25 percent plants (nonpickleweed) and 75 percent invertebrates.
	75%	invertebrate tissue	
Foraging Range	1,030	acres	Breeding home range of males and females in Minnesota forests from Gilmer and others (1975), as cited in Zeiner (1990). Minimum was 160 and maximum was 1,900 acres. The mean is 1,030 acres.
	30-40	mile	Flight distance from winter resting sites to foraging areas in winter, from Bellrose (1976) and Palmer (1976), both as cited in Zeiner (1990).
Site Use Factor	1	unitless	Used for maximum dose; based on conservative estimate of 100 percent site use as per EPA SLERA guidance (1997).
	0.00788		Used for average dose; based on the site area (8.12 acres wetland) divided by the foraging range.
Body Weight	1.161	kg	Average calculated from Heitmeyer (1988a) and Nelson and Martin (1953), both as cited in EPA (1993)

Notes:

95UCL	One-sided 95 percent upper confidence limit of the mean
EPA	U.S. Environmental Protection Agency
kg	Kilogram
kg/day	Kilograms per day
mg/kg	Milligrams per kilogram

Sources:

Beyer, W.N., E.E. Connor, and S. Gerould. 1994. "Estimates of Soil Ingestion by Wildlife." *Journal of Wildlife Management.* Volume 58, No. 2. Pages 375-382.

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TABLE M-8: DOSE PARAMETERS FOR THE CALIFORNIA BLACK RAIL (*Laterallus jamaicensis coturniculus*)
Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

Parameter	Average Adult	Units	Reference/Notes
Ingestion Rate$_{food}$	0.0064	kg/day	Calculated using mean body weight of 29 grams in an allometric equation for all birds [0.638[BW(grams)]^0.685]/1,000 based on dry weight (Nagy 2001).
Ingestion Rate$_{plant}$	0.00013	kg/day	Based on 20 percent food ingestion rate.
Ingestion Rate$_{invertebrate}$	0.0051	kg/day	Based on 80 percent food ingestion rate.
Ingestion Rate$_{sediment}$	0.00115	kg/day	18 percent of food ingestion rate, based on mean of four sandpiper species (Beyer and others 1994).
Sediment Concentrations	Maximum and 95UCL Concentrations	mg/kg	To be determined based on existing data for sediment collected from the site 1.0 to 1.5 feet bgs).
Prey Concentrations	Maximum and 95UCL Concentrations	mg/kg	Plant and invertebrate tissue data collected from site.
Diet Composition[a]	20%	plant tissue	Food is assumed to consist of 20 percent seeds (plants) and 80 percent invertebrates (Eddleman and others 1994).
	80%	invertebrate tissue	
Foraging Range	0.2224	acre	Mean and median of home range values (0.1 to 0.17 hectares) in Arizona study (Flores and Eddleman 1991).
Site Use Factor	1	unitless	Used for maximum dose; based on conservative estimate of 100 percent site use as per EPA SLERA guidance (1997).
	1		Used for average dose; based on the site area (8.12 acres wetland) divided by the foraging range. Site area is larger than foraging range, thus a value of 1 was used.
Body Weight	0.029	kg	Mean body weight of adults from Eddleman and others (1994).

Notes:

a	The black rail diet consists of seeds and invertebrates (Eddleman and others 1994).
95UCL	One-sided 95 percent upper confidence limit of the mean
bgs	Below ground surface
BW	Body weight
EPA	U.S. Environmental Protection Agency
kg	Kilogram
kg/day	Kilogram per day
mg/kg	Milligram per kilogram
SLERA	Screening-level ecological risk assessment

Sources:

Beyer, W.N., E.E. Connor, and S. Gerould. 1994. "Estimates of Soil Ingestion by Wildlife." *Journal of Wildlife Management.* Volume 58, No. 2. Pages 375-382.

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TABLE M-9: DOSE PARAMETERS FOR THE CALIFORNIA CLAPPER RAIL (*Rallus longirostris obsoletus*)
Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

Parameter	Average Adult	Units	Reference/Notes
Ingestion Rate$_{food}$	0.030	kg/day	Calculated using mean body weight of 279.7 grams in an allometric equation for all birds [0.638[BW(grams)]^0.685]/1,000 based on dry weight (Nagy 2001).
Ingestion Rate$_{invertebrate}$	0.030	kg/day	Based on 100 percent food ingestion rate.
Ingestion Rate$_{sediment}$	0.0054	kg/day	18 percent of food ingestion rate, based on mean of four sandpiper species (Beyer and others 1994).
Sediment Concentrations	Maximum and 95UCL Concentrations	mg/kg	To be determined based on existing data for soil collected from the site (1.0 to 1.5 feet bgs).
Prey Concentrations	Maximum and 95UCL Concentrations	mg/kg	Invertebrate tissue data collected from site.
Diet Composition[a]	100%	invertebrate tissue	Food will consist of 100 percent invertebrates.
Foraging Range	2.002	acre	Mean adult home range size in Orange, California, study (Zembal and others 1989).
Site Use Factor	1	unitless	Used for maximum dose; based on conservative estimate of 100 percent site use as per EPA SLERA guidance (1997).
	1		Used for average dose; based on the site area (8.12 acres wetland) divided by the foraging range. Site area is larger than foraging range, thus a value of 1 was used.
Body Weight	0.2797	kg	Mean body weight of sea-water acclimated adults from Hammons and others (1988).

Notes:

a Clapper rail diet consists mainly of invertebrates, including mussels, crabs, snails, worms, and insects (UC Berkeley 2004).

95UCL One-sided 95 percent upper confidence limit of the mean
bgs Below ground surface
BW Body weight
EPA U.S. Environmental Protection Agency
kg Kilogram
kg/day Kilogram per day
mg/kg Milligram per kilogram
SLERA Screening-level ecological risk assessment

Sources:

Beyer, W.N., E.E. Connor, and S. Gerould. 1994. "Estimates of Soil Ingestion by Wildlife." *Journal of Wildlife Management.* Volume 58, No. 2. Pages 375-382.

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TABLE M-10: DOSE PARAMETERS FOR THE KILLDEER *(Charadrius vociferous)*

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

Parameter	Average Adult	Units	Reference/Notes
Ingestion Rate$_{prey}$	0.018	kg/day	Calculated using mean body weight of 96 grams in an allometric equation for all birds [0.522 x (BW)^0.769] / 1,000 based on dry weight (Nagy 2001).
Ingestion Rate$_{sediment}$	0.00128	kg/day	7.3 percent of ingestion rate; based on least sandpiper data from Beyer and others (1994).
Sediment Concentrations	Maximum and 95UCL Concentrations	mg/kg	Sediment collected from site (1.0 to 1.5 feet bgs).
Prey Concentrations	Maximum and 95UCL Concentrations	mg/kg	Aquatic insect tissue data collected from site.
Diet Composition[a]	100%	invertebrate tissue	Food will consist of 100 percent invertebrates.
Foraging Range	1,629	acres	Flight distance to feeding location from nest is 0.9 miles, from Nickell (1943), as cited in Zeiner (1990). A calculated foraging range using 0.9 miles as a radius equals 2.5447 square miles, which equals 1,629 acres.
Site Use Factor	1	unitless	Used for maximum dose; based on conservative estimate of 100 percent site use as per EPA SLERA guidance (1997).
	0.00498		Used for average dose; based on the site area (8.12 acres wetland) divided by the foraging range.
Body Weight	0.0966	kg	Average calculated from Dunning (1993)

Notes:

95UCL	One-sided 95 percent upper confidence limit of the mean
EPA	U.S. Environmental Protection Agency
kg	Kilogram
kg/day	Kilograms per day
kJ/g	Kilojoules per gram
mg/kg	Milligrams per kilogram

Sources:

Beyer, W.N., E.E. Connor, and S. Gerould. 1994. "Estimates of Soil Ingestion by Wildlife." *Journal of Wildlife Management.* Volume 58, No. 2. Pages 375-382.

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TABLE M-11: DOSE PARAMETERS FOR THE CALIFORNIA VOLE (*Microtus californicus*)
Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

Parameter	Average Adult	Units	Reference/Notes
Ingestion Rate $_{food}$	0.0040	kg/day	Calculated with body weight of 25.25 grams using the equation for the food requirement for intake of dry matter for rodents (food ingestion rate = [0.332[BW(grams)]^0.774]/1000) (Nagy 2001).
Ingestion Rate $_{plant}$	0.0040	kg/day	Based on 100 percent of food ingestion rate.
Ingestion Rate $_{soil}$	0.000097	kg/day	2.4 percent of food ingestion rate based on the ingestion rate of the meadow vole (Beyer and others 1994).
Soil Concentrations	Maximum and 95UCL Concentrations	mg/kg	To be determined based on existing data for soil collected from the site (0 to 0.5 feet bgs).
Prey Concentrations	Maximum and 95UCL Concentrations	mg/kg	Plant tissue data collected from site.
Diet Composition [a]	100%	plant tissue	Food will consist of 100 percent plants because the California vole was selected as representative species for herbivorous mammals.
Foraging Range	0.02348	acre	Based on median of home ranges (0.00875 to 0.0103 hectares) provided in Heske (1987) and Ostfield (1986) as cited in Zeiner and others (1990).
Site Use Factor	1	unitless	Used for maximum dose; based on conservative estimate of 100 percent site use as per EPA SLERA guidance (1997).
	1		Used for average dose; based on the site area (31.65 acres upland) divided by the foraging range. Site area is larger than foraging range, thus a value of 1 was used.
Body Weight	0.02525	kg	Average of adults from Krohne (1981) and Lidicker and Ostfield (1991) as cited in Zeiner and others 1990.

Notes:

a	The California vole eats primarily the leafy parts of grasses, sedges, and herbs (Gill 1977 as cited in Zeiner and others 1990).
95UCL	One-sided 95 percent upper confidence limit of the mean
bgs	Below ground surface
BW	Body weight
EPA	U.S. Environmental Protection Agency
kg	Kilogram
kg/day	Kilogram per day
mg/kg	Milligram per kilogram
SLERA	Screening-level ecological risk assessment

References:

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TABLE M-12: DOSE PARAMETERS FOR THE ORNATE SHREW (*Sorex ornatus*)
Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

Parameter	Average Adult	Units	Reference/Notes
Ingestion Rate $_{food}$	0.0013	kg/day	Cal/EcoTox database; average of adult ingestion rates (wet) of 1.81 g/g BW/day and 1.26 g/g BW/day from Rust, 1978; equal to average of 1.81 g/g BW/day *5.29 g BW = 9.749 g/day and 1.26 g/g BW/day * 5.29 g BW = 6.6654 g/day; IRdry = IRwet* (1-%Tissue moisture) (OEHHA 2003).
Ingestion Rate $_{invertebrate}$	0.0013	kg/day	Based on 100 percent of food ingestion rate.
Ingestion Rate $_{soil}$	0.000039	kg/day	3 percent of dry weight ingestion rate; 90th percentile of shorttailed shrew Monte Carlo distribution (EPA 2003).
Soil Concentrations	Maximum and 95UCL Concentrations	mg/kg	To be determined based on existing data for soil collected from the site (0 to 0.5 feet bgs).
Food Concentrations	Maximum and 95UCL Concentrations	mg/kg	Invertebrate tissue data collected from site.
Diet Composition [a]	100%	invertebrate tissue	Food will consist of 100 percent invertebrates because the shrew was selected as representative species for insectivorous mammals.
Foraging Range	0.82	acre	(Breeding) Based on vagrant shrew study (Hawes 1977 cited in CDFG's California Wildlife Habitat Relationship System). Average home range was 0.82 acres (range 0.18 1.3 acres) for breeding shrews (CDFG 1986).
	0.26	acre	(Non-breeding) Based on vagrant shrew study (Hawes 1977 cited in CDFG's California Wildlife Habitat Relationship System). Average home range was 0.26 acres (range 0.13-0.49 acres) for non-breeding shrews (CDFG 1986).
Site Use Factor	1	unitless	Used for maximum dose; based on conservative estimate of 100 percent site use as per EPA SLERA guidance (1997).
	1		Used for average dose; based on the site area (31.65 acres upland) divided by the foraging range. Site area is larger than foraging range, thus a value of 1 was used.
Body Weight	0.0053	kg	Cal/EcoTox database; average of adult body weights from Rudd, 1955 (4.17-5.86 g; 4.25-5.3 g; Newman and Rudd, 1978 (5.0 - 6.4g); Rust, 1978 (5.12 g; 6.23g).

Notes:

a	The diet of the salt marsh wandering shrew consists primarily of invertebrates (CDFG 1986).
95UCL	One-sided 95 percent upper confidence limit of the mean
bgs	Below ground surface
BW	Body weight
EPA	U.S. Environmental Protection Agency
g	Gram
kg	Kilogram
kg/day	Kilogram per day
mg/kg	Milligram per kilogram
SLERA	Screening-level ecological risk assessment

References:

California Department of Fish and Game (CDFG). 1986. "Mammalian Species of Special Concern in California, Salt-Marsh Wandering Shrew." Available Online at: http://www.dfg.ca.gov/hcpb/cgi-bin/read_one.asp?specy=mammals&idNum=2

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TABLE M-13: DOSE PARAMETERS FOR THE WESTERN MEADOWLARK (*Sturnella neglecta*)

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

Parameter	Average Adult	Units	Reference/Notes
Ingestion $Rate_{food}$	0.015	kg/day	Calculated with body weight of 113.4 grams using the equation for the food requirement for intake of dry matter for temparate meadow birds (food ingestion rate = [1.048[BW(grams)]^0.567]/1,000) (Nagy 2001).
Ingestion $Rate_{plant}$	0.0057	kg/day	Based on 37 percent of food ingestion rate.
Ingestion $Rate_{invertebrate}$	0.0097	kg/day	Based on 63 percent of food ingestion rate.
Ingestion $Rate_{soil}$	0.0012	kg/day	8 percent food ingestion rate based on ingestion rate of Savannah sparrows from Williams (1987).
Soil Concentrations	Maximum and 95UCL Concentrations	mg/kg	To be determined based on existing data for soil collected from the site (0 to 2 feet bgs).
Prey Concentrations	Maximum and 95UCL Concentrations	mg/kg	Upland (nonpickleweed) plant tissue (37 percent) collected from site and earthworm tissue (63 percent) from bioaccumulation test.
Diet Composition[a]	37%	plant tissue	Food will consist of 37 percent plants and 63 percent invertebrates. Invertebrate and plant tissue concentrations will be based on bioaccumulation factors derived from site-collected tissue concentrations.
	63%	invertebrate tissue	
Foraging Range	7.413	acre	As recommended by the California Department of Fish and Game Office of Spill Prevention and Response and Frawley and Best 1991.
Site Use Factor	1	unitless	Used for maximum dose; based on conservative estimate of 100 percent site use as per EPA SLERA guidance (1997).
	1		Used for average dose; based on the site area (31.65 acres upland) divided by the foraging range. Site area is larger than foraging range, thus a value of 1 was used.
Body Weight	0.1134	kg	Based on average adult weight from Bryant (1941), as cited in California Environmental Protection Agency (2003).

Notes:

a The western meadowlark's diet consists of about 63 percent animal matter, generally insects, spiders, sowbugs, and snails, and about 37 percent grass, forb seeds, and grains (Bryant 1914, as cited in Zeiner and others 1990).

95UCL One-sided 95 percent upper confidence limit of the mean
bgs Below ground surface
BW Body weight
EPA U.S. Environmental Protection Agency
kg/day Kilogram per day
mg/kg Milligram per kilogram
SLERA Screening-level ecological risk assessment

Sources:

California Environmental Protection Agency. 2003. California Wildlife Biology, Exposure Factor, and Toxicity Database Ecotox Database Query for Western Meadowlark. Available Online at: http://www.oehha.org/scripts/cal_ecotox/species.asp

EPA. 1993. *Wildlife Exposure Factor Handbook Volume I*. Office of Research and Development. Washington DC. EPA/600/R-93/187a. December.

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TABLE M-14: IA A2 CHEMICAL CONCENTRATIONS FOR SEDIMENT AND SOIL FOR THE FOOD CHAIN MODELS
Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

	Sediment		Soil	
COPEC	**95UCL Concentration**	**Maximum Detected Concentration**	**95UCL Concentration**	**Maximum Detected Concentration**
Aluminum	28,545	39,600	NC	25,400
Antimony	1.8	7.7	NC	5.4
Arsenic	17.8	51.1	NC	25.1
Barium	76.12	151	108.89	474
Beryllium	0.49	0.83	0.21	1.6
Cadmium	0.68	7	NC	3.8
Chromium	98.37	294	60.91	440
Cobalt	20.61	34.8	13.07	34.8
Copper	94.75	324	88.44	684
Lead	95.29	422	116.79	968
Manganese	560.18	1750	NC	1470
Mercury	0.59	1.2	NC	10.2
Molybdenum	1.51	3.8	0.5	6.8
Nickel	94.54	160	37.42	169
Selenium	1.19	2.1	0.6	1.8
Silver	ND	ND	0.48	5.8
Thallium	0.66	1.3	0.44	1.6
Tin	2.24	5	28.35	40.6
Vanadium	95.84	226	74.51	241
Zinc	280.37	1,850	215.53	1,980
HMW PAH	NC	NC	0.851	3.788
LMW PAH	NC	NC	0.103	0.64
Total PAHs	NC	2	NC	4
DDT	0.0044	0.02	0.0185	0.21
DDE	0.0037	0.008	0.0039	0.037
Total DDTs	0.0194	0.06	0.0413	0.5
Dieldrin	NC	0.0006	NC	0.006
Heptachlor	ND	ND	0.0004	0.005
Methoxychlor	NC	0.001	0.0098	0.02
Total chlordane	NC	0.004	0.0152	0.07
Gamma-BHC	ND	ND	0.0022	0.014
Total PCBs	0.2829	0.6	NC	NC

Notes: All units are in milligram per kilogram.

95UCL	95th percentile upper confidence level on the arithmetic mean
BHC	Benzene hexachloride
DDE	Dichlorodiphenyldichloroethene
DDT	Dichlorodiphenyltrichloroethane
HMW	High molecular weight
LMW	Low molecular weight
NA	Not available
NC	Chemcial may not be a COPEC for Step 3A or calculated 95UCL was greater than maximum detected concentration.
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
TRV	Toxicity reference value

TABLE M-15: AVIAN AND MAMMALIAN TRVS AND TEST SPECIES BODY WEIGHTS

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

	Birds					Mammals					
Chemical	**High TRV**	**High TRV Body Weight**	**Low TRV**	**Low TRV Body Weight**	**Source of TRV and Body Weight for Birds**	**High TRV**	**High TRV Body Weight**	**Low TRV**	**Low TRV Body Weight**	**Source of TRV and Body Weight for Birds**	**Surrogate**
Aluminum	1097	0.16	109.7	0.16	Sample and others 1996	19.3	**High TRV**	1.93	0.03	Sample and others 1996	
Antimony	NA	NA	NA	NA	NA	1.25	0.03	0.125	0.03	Sample and others 1996	
Arsenic	22.01	1.17	5.5	1.17	Navy 1998	4.7	0.11	0.32	0.332	Navy 1998	
Barium	41.7	0.12	20.8	0.12	Sample and others 1996	19.8	0.35	5.1	0.435	Sample and others 1996	
Beryllium	NA	NA	NA	NA	NA	6.6	0.35	0.66	0.35	Sample and others 1996	
Cadmium	10.43	0.08	0.08	0.7985	Navy 1998	2.64	0.03141	0.06	0.0322	Navy 1998	
Chromium	5	1.25	1	1.25	Sample and others 1996	27370	0.35	2737	0.35	Sample and others 1996	
Cobalt	76.1	0.29	7.61	0.29	EPA 2008	20	0.2	1.2	0.275	Navy 1998	
Copper	52.26	0.41	2.3	0.64	Navy 1998	631.58	0.0247	2.67	0.03	Navy 1998	
Lead	8.75	0.80	0.014	0.084	Navy 1998	240.64	0.0187	1	0.208	Navy 1998, DTSC 2002	
Manganese	776	0.1965	77.6	0.1965	Navy 1998	159.09	0.0297	13.7	0.0346	Navy 1998	
Mercury	0.18	1.0	0.0039	1.0	Navy 1998	4	0.428	0.25	0.1875	Navy 1998	
Molybdenum	35.3	1.50	3.5	1.50	Sample and others 1996	2.6	0.03	0.26	0.03	Sample and others 1996	
Nickel	55.26	0.58	1.38	0.6138	Navy 1998	31.6	0.2486	0.133	0.2486	Navy 1998	
Selenium	0.93	1.1077	0.23	1.1077	Navy 1998	1.21	0.0246	0.05	0.1865	Navy 1998	
Silver	20.2	0.662	2.02	0.662	EPA 2008	60.2	8.86	6.02	8.86	EPA 2008	
Thallium	NA	NA	NA	NA	NA	1.43	0.065	0.48	0.065	Navy 1998	
Tin	16.9	0.15	6.8	0.15	Sample and others 1996	35	0.03	23.4	0.03	Sample and others 1996	
Vanadium	114	1.17	11.4	1.17	Sample and others 1996	2.1	0.26	0.21	0.26	Sample and others 1996	
Zinc	172	0.955	17.2	0.955	Navy 1998	411.43	0.175	9.6	0.0255	Navy 1998	
Chlordane	10.7	0.064	2.14	0.064	Sample and others 1996	9.2	0.03	4.6	0.03	Sample and others 1996	
DDE	0.6	1.0	0.0009	3.5	Navy 1998	16	0.32	0.8	0.32	Navy 1998	DDT
DDT	1.5	1.0	0.0009	3.5	Navy 1998	16	0.32	0.8	0.32	Navy 1998	
Dieldrin	0.77	0.466	0.077	0.466	Sample and others 1996	0.2	0.35	0.02	0.35	Sample and others 1996	
gamma-BHC	20	1.0	2	1.0	Sample and others 1996	3.75	3.75	0.05	0.05	Navy 1998	Lindane
Heptachlor	10.7	0.064	2.14	0.064	Sample and others 1996	6.8	0.20	0.13	0.10	Navy 1998	Chlordane
HMW PAH	NA	NA	NA	NA	NA	32.79	0.0305	1.31	0.0305	Navy 1998	Benzo(a)pyrene
LMW PAH	NA	NA	NA	NA	NA	150	0.2702	50.5	0.2765	Navy 1998	Naphthalene
Methoxychlor	NA	NA	NA	NA	NA	50	0.332	2.5	0.332	Navy 1998	
Total Chlordane	10.7	0.064	2.14	0.064	Sample and others 1996	9.2	0.03	4.6	0.03	Sample and others 1996	Chlordane
Total DDTs	1.5	1.0	0.0009	3.5	Navy 1998	16	0.32	0.8	0.32	Navy 1998	DDT
Total PAHs	NA	NA	NA	NA	NA	32.79	0.0305	1.31	0.0305	Navy 1998	Benzo(a)pyrene
Total PCBs	1.27	1.7154	0.09	0.80	Navy 1998	1.28	0.02285	0.36	0.2062	Navy 1998	

Notes: All units are shown in kilograms.

BHC	Benzene hexachloride
DDE	Dichlorodiphenyldichloroethene
DDT	Dichlorodiphenyltrichloroethane
HMW	High molecular weight
kg	Kilogram
LMW	Low molecular weight
NA	Not available
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
TRV	Toxicity reference value

Sources:

California Department of Toxic Substances (DTSC), Human and Ecological Risk Division. 2002. EcoNOTE 5, Revised U.S. Environmental Protection Agency (EPA). Region 9 Biological Technical Assistance Group (BTAG) Mammalian Toxicity Reference Value (TRV) for Lead: Justification and Rationale.

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TABLE M-16: BIOACCUMULATION FACTORS USED IN THE FOOD CHAIN MODELS

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

Analyte	Pickleweed	Source	Plants	Source	Earthworms	Source	Invertebrates	Source	Mammals	Source	Surrogates?
Aluminum	0.0016	a	0.00066	a	0.043	f	0.043	f	0.0073	a	
Antimony	1.72	a	0.19	a	1	d	1	d	1.27	a	
Arsenic	0.07	a	0.064	a	1.52	a	1.36	a	Regression	l	
Barium	0.23	a	0.057	a	0.091	f	0.091	f	0.06	a	
Beryllium	Regression	i	Regression	i	0.045	g	0.045	g	Regression	j	
Cadmium	0.33	a	0.25	a	2.38	a	NB	a	Regression	l	
Chromium	0.041	c	0.024	a	0.306	g	0.306	g	0.03	a	
Cobalt	0.0075	c	0.0075	c	0.122	g	0.122	g	Regression	l	
Copper	0.14	a	0.044	a	0.31	a	0.98	a	0.15	a	
Lead	0.052	a	0.0055	a	0.14	a	0.37	a	0.14	a	
Manganese	0.13	a	0.026	a	Regression	k	5.12	a	0.0205	f	
Mercury	0.59	a	0.61	a	1.693	g	1.693	g	0.0543	f	
Molybdenum	4.14	a	NB	a	NB	a	NB	a	NB	a	
Nickel	0.054	a	0.011	a	1.059	g	1.059	g	Regression	m	
Selenium	Regression	k	Regression	k	Regression	k	Regression	k	1.63	a	
Silver	0.014	c	0.014	c	2.045	f	2.045	f	0.004	f	
Thallium	NB	h	NB	h	NB	h	NB	h	NB	h	
Tin	NB	h	NB	h	NB	h	NB	h	NB	h	
Vanadium	0.00485	f	0.021	a	NB	a	NB	a	0.129	f	
Zinc	0.12	a	0.066	a	0.6	a	1.43	a	0.89	a	
DDE	Regression	i	6.38	a	Regression	i	Regression	i	0.27	a	
DDT	Regression	i	9.66	a	0.42	a	Regression	i	0.75	a	
Dieldrin	0.41	d	1.23	a	Regression	i	Regression	i	3.35	a	
Methoxychlor	0.11	e	0.11	e	30.6	b	30.6	b	NB	h	
gamma-BHC	0.27	e	0.27	e	29.5	b	29.5	b	NB	h	
Heptachlor	0.12	e	0.12	e	31.9	b	31.9	b	NB	h	
Total Chlordane	0.025	e	0.025	e	32.0	b	32.0	b	NB	h	
Total DDTs	Regression	i	Regression	i	Regression	i	Regression	i	Regression	i	
Total PCBs	0.013	e	0.013	e	Regression	j	Regression	j	NB	h	High risk PCBs
Total PAHs	Regression	i	Regression	i	1.33	b	1.33	b	0	d	Benzo(a)pyrene
HMW PAH	9.06	a	1.67	a	1.33	b	1.33	b	0	d	Benzo(a)pyrene
LMW PAH	12.2	d	12.2	d	4.4	b	4.4	b	0	d	Naphthalene

TABLE M-16: BIOACCUMULATION FACTORS USED IN THE FOOD CHAIN MODELS

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

Notes:

a	Bioaccumulation factor taken from Table G-77, Median Bioaccumulation Factors, from the Final Onshore Ecological Risk Assessment (Tetra Tech 2002).
b	Literature BAF taken from EPA 2003.
c	Literature BAF taken from Bechtel-Jacobs 1998.
d	Literature BAF taken from EPA 2005.
e	Literature BAF taken from RAIS 2006.
f	Literature BAF taken from Sample and others 1998.
g	Literature BAF taken from Sample and others 1999.
h	No site-specific or literature BAF was available; a default BAF of 1.0 was used in the evaluation.
i	BAF was calculated using the EPA 2005 regression formula.
j	BAF was calculated using the EPA 2003 regression formula.
k	BAF was calculated using the Sample and others 1999 regression formula.
l	BAF was calculated using the Sample and others 1998 regression formula.

BAF	Bioaccumulation factor
ERA	Ecological risk assessment

Sources:

Bechtel-Jacobs. 1998. Empirical Models for the Uptake of Inorganic Chemicals from Soil by Plants. Bechtel Jacobs Company LLC, Oak Ridge, TN. BJC/OR-133

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TABLE M-17: WETLAND BIRD AND MAMMAL SLERA HAZARD QUOTIENTS FOR IA A2

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

COPEC		Northern Harrier	Killdeer	Great Blue Heron	California Black Rail	California Clapper Rail	Mallard (Breeding)	Mallard (Non-Breeding)	Salt Marsh Harvest Mouse	Gray Fox
ALUMINUM										
Maximum	Dose/High TRV	0.21	0.84	0.077	**2.39**	0.77	0.109	0.056	**17.4**	**3.78**
	Dose/Low TRV	**2.13**	**8.36**	0.77	**23.9**	**7.74**	**1.09**	0.56	**174**	**37.8**
ANTIMONY										
Maximum	Dose/High TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	**3.56**	0.42
	Dose/Low TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	**35.6**	**4.17**
ARSENIC										
Maximum	Dose/High TRV	0.019	1.00	0.091	**1.38**	0.52	0.17	0.016	0.31	0.017
	Dose/Low TRV	0.078	**3.98**	0.36	**5.51**	**2.06**	0.69	0.062	**4.31**	0.23
BARIUM										
Maximum	Dose/High TRV	0.037	0.11	0.014	0.28	0.09	0.018	0.014	0.55	0.030
	Dose/Low TRV	0.074	0.23	0.027	0.56	0.18	0.037	0.029	**2.12**	0.12
BERYLLIUM										
Maximum	Dose/High TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	0.023	0.00018
	Dose/Low TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	0.23	0.0018
CADMIUM										
Maximum	Dose/High TRV	0.0087	0.13	0.013	0.189	0.067	0.023	0.0078	0.31	0.018
	Dose/Low TRV	**1.77**	**26.0**	**2.59**	**38.6**	**13.8**	**4.74**	**1.59**	**13.6**	0.79
CHROMIUM										
Maximum	Dose/High TRV	0.71	**6.75**	0.65	**11.8**	**4.17**	**1.11**	0.23	0.00020	0.000028
	Dose/Low TRV	**3.57**	**33.8**	**3.27**	**59.2**	**20.9**	**5.53**	**1.17**	0.0020	0.00028
COBALT										
Maximum	Dose/High TRV	0.0043	0.020	0.0021	0.045	0.015	0.0030	0.0010	0.016	0.0050
	Dose/Low TRV	0.043	0.20	0.021	0.45	0.15	0.030	0.010	0.27	0.082

TABLE M-17: WETLAND BIRD AND MAMMAL SLERA HAZARD QUOTIENTS FOR IA A2

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

COPEC		Northern Harrier	Killdeer	Great Blue Heron	California Black Rail	California Clapper Rail	Mallard (Breeding)	Mallard (Non-Breeding)	Salt Marsh Harvest Mouse	Gray Fox
COPPER										
Maximum	Dose/High TRV	0.14	**1.58**	0.16	**2.26**	0.84	0.27	0.027	0.028	0.0048
	Dose/Low TRV	**3.56**	**39.3**	**4.08**	**56.2**	**20.9**	**6.73**	0.67	**6.60**	**1.13**
LEAD										
Maximum	Dose/High TRV	**1.21**	**5.92**	0.70	**9.87**	**3.54**	0.96	0.12	0.045	0.016
	Dose/Low TRV	**483**	**2358**	**280**	**3,929**	**1,410**	**384**	**47**	**9.47**	**3.29**
MANGANESE										
Maximum	Dose/High TRV	0.017	**2.45**	0.22	**3.13**	**1.20**	0.42	0.0064	0.56	0.028
	Dose/Low TRV	0.17	**24.5**	**2.25**	**31.3**	**12.0**	**4.24**	0.064	**6.47**	0.32
MERCURY										
Maximum	Dose/High TRV	0.099	**3.41**	0.32	**4.95**	**1.74**	0.65	0.29	0.052	0.0011
	Dose/Low TRV	**4.57**	**157**	**14.8**	**229**	**80.4**	**30.0**	**13.3**	0.88	0.018
MOLYBDENUM										
Maximum	Dose/High TRV	0.016	0.036	0.0064	0.062	0.019	0.0081	0.0081	**2.02**	0.08
	Dose/Low TRV	0.17	0.37	0.064	0.62	0.19	0.082	0.082	**20.2**	0.78
NICKEL										
Maximum	Dose/High TRV	0.038	0.85	0.081	**1.20**	0.45	0.145	0.0077	0.12	0.0186
	Dose/Low TRV	**1.53**	**34.5**	**3.28**	**48.5**	**18.2**	**5.9**	0.31	**27.4**	**4.42**
SELENIUM										
Maximum	Dose/High TRV	0.52	0.56	0.15	0.93	0.30	0.11	0.090	0.334	0.15
	Dose/Low TRV	**2.10**	**2.25**	0.61	**3.76**	**1.22**	0.46	0.36	**7.15**	**3.25**
THALLIUM										
Maximum	Dose/High TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	0.29	0.047
	Dose/Low TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	0.88	0.14

TABLE M-17: WETLAND BIRD AND MAMMAL SLERA HAZARD QUOTIENTS FOR IA A2

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

COPEC		Northern Harrier	Killdeer	Great Blue Heron	California Black Rail	California Clapper Rail	Mallard (Breeding)	Mallard (Non-Breeding)	Salt Marsh Harvest Mouse	Gray Fox
TIN										
Maximum	Dose/High TRV	0.029	0.063	0.011	0.11	0.033	0.014	0.014	0.048	0.0077
	Dose/Low TRV	0.071	0.16	0.028	0.27	0.083	0.035	0.035	0.073	0.011
VANADIUM										
Maximum	Dose/High TRV	0.051	0.64	0.065	0.90	0.34	0.11	0.0074	0.90	0.77
	Dose/Low TRV	0.51	**6.36**	0.65	**9.03**	**3.37**	**1.08**	0.074	**9.04**	**7.74**
ZINC										
Maximum	Dose/High TRV	**1.35**	**4.64**	0.67	**6.39**	**2.39**	0.80	0.071	0.19	0.19
	Dose/Low TRV	**13.5**	**46.4**	**6.74**	**63.9**	**23.9**	**8.02**	0.71	**9.29**	**9.31**
TOTAL DDTs										
Maximum	Dose/High TRV	0.15	0.15	0.043	0.18	0.071	0.026	0.00053	0.00020	0.0048
	Dose/Low TRV	**320**	**315**	**92.2**	**395**	**153**	**54.7**	**1.12**	0.0040	0.095
DIELDRIN										
Maximum	Dose/High TRV	0.00030	0.0048	0.00049	0.0060	0.0023	0.00084	0.000057	0.00037	0.00046
	Dose/Low TRV	0.0030	0.048	0.0049	0.060	0.023	0.0084	0.00057	0.0037	0.0046
METHOXYCHLOR										
Maximum	Dose/High TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	0.00000077	0.00000093
	Dose/Low TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	0.000015	0.000019
TOTAL CHLORDANE										
Maximum	Dose/High TRV	0.000030	0.0020	0.00019	0.0025	0.00097	0.00035	0.00000084	0.0000071	0.000023
	Dose/Low TRV	0.00015	0.010	0.00095	0.012	0.0048	0.0017	0.0000042	0.000014	0.000047
TOTAL PAHs [a]										
Maximum	Dose/High TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	0.014	0.000089
	Dose/Low TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	0.35	0.0022

TABLE M-17: WETLAND BIRD AND MAMMAL SLERA HAZARD QUOTIENTS FOR IA A2

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

COPEC		Northern Harrier	Killdeer	Great Blue Heron	California Black Rail	California Clapper Rail	Mallard (Breeding)	Mallard (Non-Breeding)	Salt Marsh Harvest Mouse	Gray Fox
TOTAL PCBs										
Maximum	Dose/High TRV	0.074	0.16	0.029	0.23	0.087	0.028	0.0016	0.0058	0.026
	Dose/Low TRV	0.90	**1.98**	0.35	**2.81**	**1.05**	0.34	0.020	0.018	0.080

Notes:

Bold shaded values indicate a hazard quotient greater than 1.0.

a Total PAHs was modeled instead of high molecular weight and low molecular weight PAHs. The more conservative TRVs for benzo(a)pyrene were used.

BHC Benzene hexachloride
COPEC Chemical of potential ecological concern
DDT Dichlorodiphenyltrichloroethane
PAH Polycyclic aromatic hydrocarbons
TRV Toxicity reference value

TABLE M-18: UPLAND BIRD AND MAMMAL SLERA HAZARD QUOTIENTS FOR IA A2

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

COPEC		Western Meadowlark	Northern Harrier	California Vole	Ornate Shrew	Gray Fox
ALUMINUM						
Maximum	Dose/High TRV	0.36	0.14	**5.14**	**21.2**	**2.42**
	Dose/Low TRV	**3.57**	**1.37**	**51.4**	**212**	**24.2**
ANTIMONY						
Maximum	Dose/High TRV	No TRV	No TRV	0.15	0.983	0.29
	Dose/Low TRV	No TRV	No TRV	**1.46**	**9.83**	**2.92**
BARIUM						
Maximum	Dose/High TRV	0.25	0.12	--	--	--
	Dose/Low TRV	0.49	0.23	--	--	--
BERYLLIUM						
Maximum	Dose/High TRV	No TRV	No TRV	--	--	--
	Dose/Low TRV	No TRV	No TRV	--	--	--
CADMIUM						
Maximum	Dose/High TRV	0.078	0.0059	0.062	0.33	0.013
	Dose/Low TRV	**15.9**	**1.20**	**2.74**	**14.3**	0.55
CHROMIUM						
Maximum	Dose/High TRV	**5.41**	**1.07**	0.00011	0.0010	0.000042
	Dose/Low TRV	**27.1**	**5.34**	0.0011	0.010	0.00042
COPPER						
Maximum	Dose/High TRV	0.67	0.30	0.012	0.244	0.010
	Dose/Low TRV	**16.6**	**7.51**	**2.76**	**57.2**	**2.38**
LEAD						
Maximum	Dose/High TRV	**3.76**	**2.78**	0.019	0.37	0.036
	Dose/Low TRV	**1498**	**1108**	**4.03**	**76.1**	**7.55**
MERCURY						
Maximum	Dose/High TRV	**16.2**	0.84	0.22	0.83	0.009
	Dose/Low TRV	**750**	**38.8**	**3.67**	**13.9**	0.16
MOLYBDENUM						
Maximum	Dose/High TRV	0.047	0.029	0.424	0.60	0.14
	Dose/Low TRV	0.48	0.30	**4.24**	**5.95**	**1.40**
NICKEL						
Maximum	Dose/High TRV	--	--	0.026	**1.13**	0.019
	Dose/Low TRV	--	--	**6.20**	**269**	**4.58**
SELENIUM						
Maximum	Dose/High TRV	0.32	0.44	0.13	0.27	0.13
	Dose/Low TRV	**1.30**	**1.80**	**2.88**	**5.86**	**2.79**

TABLE M-18: UPLAND BIRD AND MAMMAL SLERA HAZARD QUOTIENTS FOR IA A2

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

COPEC		Western Meadowlark	Northern Harrier	California Vole	Ornate Shrew	Gray Fox
SILVER						
Maximum	Dose/High TRV	0.076	0.0022	--	--	--
	Dose/Low TRV	0.76	0.022	--	--	--
THALLIUM						
Maximum	Dose/High TRV	No TRV	No TRV	0.17	0.24	0.057
	Dose/Low TRV	No TRV	No TRV	0.52	0.72	0.17
TIN						
Maximum	Dose/High TRV	0.37	0.23	0.19	0.26	0.062
	Dose/Low TRV	0.92	0.58	0.28	0.39	0.093
VANADIUM						
Maximum	Dose/High TRV	0.327	0.054	--	--	--
	Dose/Low TRV	**3.27**	0.54	--	--	--
ZINC						
Maximum	Dose/High TRV	**1.15**	**1.44**	0.062	**1.40**	0.21
	Dose/Low TRV	**11.5**	**14.4**	**2.97**	**67.2**	**10.0**
LMW PAH						
Maximum	Dose/High TRV	No TRV	No TRV	0.0072	0.0037	0.0000055
	Dose/Low TRV	No TRV	No TRV	0.021	0.011	0.000016
HMW PAH						
Maximum	Dose/High TRV	No TRV	No TRV	0.031	0.035	0.00017
	Dose/Low TRV	No TRV	No TRV	0.78	0.87	0.0042
DDE						
Maximum	Dose/High TRV	0.17	0.0027	--	--	--
	Dose/Low TRV	**150**	**2.30**	--	--	--
DDT						
Maximum	Dose/High TRV	0.11	0.015	--	--	--
	Dose/Low TRV	**245**	**32.3**	--	--	--
TOTAL DDTs						
Maximum	Dose/High TRV	0.42	0.61	0.00052	0.056	0.019
	Dose/Low TRV	**889**	**1,310**	0.010	**1.12**	0.39
GAMMA-BHC						
Maximum	Dose/High TRV	0.0027	0.000099	0.00013	0.018	0.00015
	Dose/Low TRV	0.027	0.00099	0.013	**1.77**	0.015
HEPTACHLOR						
Maximum	Dose/High TRV	0.0011	0.000038	0.000015	0.0046	0.000035
	Dose/Low TRV	0.0057	0.00019	0.00082	0.25	0.0019

TABLE M-18: UPLAND BIRD AND MAMMAL SLERA HAZARD QUOTIENTS FOR IA A2

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

COPEC		Western Meadowlark	Northern Harrier	California Vole	Ornate Shrew	Gray Fox
METHOXYCHLOR						
Maximum	Dose/High TRV	No TRV	No TRV	0.0000073	0.0023	0.000019
	Dose/Low TRV	No TRV	No TRV	0.00015	0.047	0.00037
TOTAL CHLORDANE						
Maximum	Dose/High TRV	0.016	0.00053	0.000059	0.054	0.00041
	Dose/Low TRV	0.080	0.0027	0.00012	0.11	0.00082

Notes:

Bold shaded values indicate a hazard quotient greater than 1.0.

-- Not evaluated; chemical was not identified as a COPEC for this ecological receptor.
BHC Benzene hexachloride
COPEC Chemical of potential ecological concern
DDE Dichlorodiphenyldichloroethene
DDT Dichlorodiphenyltrichloroethane
HMW High molecular weight
LMW Low molecular weight
PAH Polycyclic aromatic hydrocarbon
TRV Toxicity reference value

TABLE M-19: COPECS ELIMINATED AND REMAINING AFTER SLERA COMPLETE

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

Analyte	Wetland Avian COPEC?	Wetland Mammalian COPEC?	Upland Avian COPEC?	Upland Mammalian COPEC?
Metals				
Aluminum	**Yes**	**Yes**	**Yes**	**Yes**
Antimony	Yes	**Yes**	Yes	**Yes**
Arsenic	**Yes**	**Yes**	No[a]	No[a]
Barium	No[b]	**Yes**	No[b]	No[a]
Beryllium	Yes	No[b]	Yes	No[a]
Cadmium	**Yes**	**Yes**	**Yes**	**Yes**
Chromium	**Yes**	No[b]	**Yes**	No[b]
Chromium VI	ND	ND	ND	ND
Cobalt	No[b]	No[b]	No[a]	No[a]
Copper	**Yes**	**Yes**	**Yes**	**Yes**
Lead	**Yes**	**Yes**	**Yes**	**Yes**
Manganese	**Yes**	**Yes**	No[a]	No[a]
Mercury	**Yes**	No[b]	**Yes**	**Yes**
Molybdenum	No[b]	**Yes**	No[b]	**Yes**
Nickel	**Yes**	**Yes**	No[a]	**Yes**
Selenium	**Yes**	**Yes**	**Yes**	**Yes**
Silver	ND	ND	Yes	No[a]
Thallium	Yes	No[b]	Yes	No[b]
Tin	No[b]	No[b]	No[b]	No[b]
Titanium	ND	ND	Yes	Yes
Vanadium	**Yes**	**Yes**	**Yes**	**Yes**
Zinc	**Yes**	**Yes**	**Yes**	**Yes**
Semivolatile Organic Compounds				
1-Methylnaphthalene	Yes	No[c]	ND	ND
1-Methylphenanthrene	Yes	Yes	ND	ND
1,2,4-Trichlorobenzene	ND	ND	Yes	Yes
2,3,5-Trimethylnaphthalene	Yes	No[c]	ND	ND
2,6-Dimethylnaphthalene	Yes	No[c]	ND	ND
2-Methylnaphthalene	Yes	No[c]	Yes	No[c]
Acenaphthene	Yes	No[c]	ND	ND
Acenaphthylene	Yes	No[c]	ND	ND
Anthracene	Yes	No[c]	Yes	Yes
Benzo(a)anthracene	Yes	No[c]	Yes	No[c]
Benzo(a)pyrene	Yes	No[c]	Yes	No[c]
Benzo(b)fluoranthene	Yes	No[c]	Yes	No[c]
Benzo(e)pyrene	Yes	No[c]	ND	ND
Benzo(g,h,i)perylene	Yes	No[c]	Yes	No[c]
Benzo(k)fluoranthene	Yes	No[c]	Yes	No[c]
Biphenyl	Yes	Yes	ND	ND

TABLE M-19: COPECS ELIMINATED AND REMAINING AFTER SLERA COMPLETE

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

Analyte	Wetland Avian COPEC?	Wetland Mammalian COPEC?	Upland Avian COPEC?	Upland Mammalian COPEC?
Semivolatile Organic Compounds (Continued)				
Carbazole	ND	ND	Yes	Yes
Chrysene	Yes	No[c]	Yes	No[c]
Dibenz(a,h)anthracene	Yes	No[c]	Yes	No[c]
Fluoranthene	Yes	No[c]	Yes	No[c]
Fluorene	Yes	No[c]	Yes	No[c]
Indeno(1,2,3-cd)pyrene	Yes	No[c]	Yes	No[c]
Pentachlorophenol	ND	ND	No[a]	No[a]
Naphthalene	Yes	No[c]	ND	ND
Perylene	Yes	No[c]	ND	No[c]
Phenanthrene	Yes	No[c]	Yes	No[c]
Pyrene	Yes	No[c]	Yes	No[c]
LMW PAHs	Yes	No[c]	Yes	No[b]
HMW PAHs	Yes	No[c]	Yes	No[b]
Total PAHs	Yes	No[b]	Yes	No[b]
Pesticides				
2,4'-DDD	Yes	No[c]	ND	ND
4,4'-DDD	Yes	No[c]	Yes	No[c]
4,4'-DDE	Yes	No[c]	**Yes**	No[c]
4,4'-DDT	Yes	No[c]	**Yes**	No[c]
Total DDTs	**Yes**	No[b]	**Yes**	**Yes**
Aldrin	ND	ND	Yes	Yes
alpha-BHC	ND	ND	Yes	Yes
alpha-chlordane	No[c]	No[c]	No[c]	No[c]
beta-BHC	ND	ND	Yes	Yes
delta-BHC	ND	ND	Yes	Yes
Dieldrin	No[b]	No[b]	No[a]	No[b]
Endosulfan I	ND	ND	Yes	Yes
Endosulfan II	ND	ND	Yes	Yes
Endosulfan sulfate	ND	ND	Yes	Yes
Endrin	ND	ND	Yes	Yes
Endrin aldehyde	ND	ND	Yes	Yes
Endrin Ketone	Yes	Yes	Yes	Yes
gamma-BHC (lindane)	ND	ND	No[b]	**Yes**
gamma-chlordane	No[c]	No[c]	No[c]	No[c]
Heptachlor	ND	ND	Yes	No[b]
Heptachlor epoxide	ND	ND	No[c]	No[c]
Methoxychlor	Yes	No[b]	Yes	No[b]
Total chlordanes	No[b]	No[b]	No[b]	No[b]

TABLE M-19: COPECS ELIMINATED AND REMAINING AFTER SLERA COMPLETE

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

Analyte	Wetland Avian COPEC?	Wetland Mammalian COPEC?	Upland Avian COPEC?	Upland Mammalian COPEC?
Polychorinated Biphenyls				
Aroclor-1254	ND	ND	Yes	Yes
Aroclor-1260	Yes	No[c]	Yes	Yes
PCB-101	Yes	No[c]	ND	ND
PCB-114	Yes	No[c]	ND	ND
PCB-118	Yes	No[c]	ND	ND
PCB-128	Yes	No[c]	ND	ND
PCB-138	Yes	No[c]	ND	ND
PCB-153	Yes	No[c]	ND	ND
PCB-157	Yes	No[c]	ND	ND
PCB-170	Yes	No[c]	ND	ND
PCB-180	Yes	No[c]	ND	ND
PCB-187	Yes	No[c]	ND	ND
PCB-195	Yes	No[c]	ND	ND
PCB-206	Yes	No[c]	ND	ND
PCB-209	Yes	No[c]	ND	ND
PCB-66	Yes	No[c]	ND	ND
Total PCBs	**Yes**	No[b]	NC	NC
Petroleum Indicators				
Diesel-range	Yes	Yes	Yes	Yes
Gasoline-range	Yes	Yes	Yes	Yes
Motor-oil-range	Yes	Yes	Yes	Yes

Notes:
Bold value indicates hazard quotient for chemical was greater than 1.0.
a This chemical was eliminated as a COPEC as a result of the initial COPEC screening for the SLERA.
b This chemical was eliminated as a COPEC as a result of the food-chain modeling for the SLERA.
c This chemical was included in the sum of a chemical group, which was eliminated as a COPEC as a result of the food-chain modeling for the SLERA.

BHC Benzene hexachloride
COPEC Chemical of potential ecological concern
DDD Dichlorodiphenyldichloroethane
DDE Dichlorodiphenyldichloroethene
DDT Dichlorodiphenyltrichloroethane
HMW High molecular weight
LMW Low molecular weight
NC This sum was not calculated for this habitat
ND Nondetected for this habitat
PAH Polycyclic aromatic hydrocarbon
PCB Polychlorinated biphenyl

TABLE M-20: BACKGROUND SCREEN OF UPLAND SOILS WITH AMBIENT FILL

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

Analyte	Number of Detections/Analyses	Maximum Detected Concentration (mg/kg)	Mare Island 95th Percentile Ambient Fill Values (mg/kg)	Number of Samples with Concentrations Greater than the 95th Ambient	Step 3a COPEC?
Metals					
Aluminum	71/71	25,400	35,000	0	No
Antimony	62/68	5.4	8.5	0	No
Beryllium	53/71	1.6	0.9	1	Yes
Cadmium	6/75	3.8	5.2	0	No
Chromium	75/75	440	140	3	Yes
Copper	74/75	684	120	6	Yes
Lead	74/75	968	59	33	Yes
Mercury	59/71	10.2	2	2	Yes
Nickel	75/75	169	130	2	Yes
Zinc	75/75	1,980	230	9	Yes

Notes:

Ambient	Estimated ambient metal concentrations in Mare Island fill soils (PRC Environmental Management Inc. 1995; Tetra Tech EM Inc. 1999).
COPEC	Chemical of potential ecological concern
mg/kg	Milligrams per kilogram
NA	Not available

Sources:

PRC Environmental Management, Inc. 1995. "Draft Technical Memorandum: Estimation of Ambient Metal Concentrations in Soils." December 14.

Tetra Tech EM, Inc. 1999. Personal Communication Between Penny Wilson of TtEMI and David Godsey of EFA West Regarding Telephone Conversation Between David Godsey and Toby Lemmon, a Former Shipyard Worker. June 2.

TABLE M-21: WETLAND BIRD AND MAMMAL STEP 3A HAZARD QUOTIENTS FOR IA A2

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

COPEC		Northern Harrier	Killdeer	Great Blue Heron	California Black Rail	California Clapper Rail	Mallard (Breeding)	Mallard (Non-Breeding)	Salt Marsh Harvest Mouse	Gray Fox
ALUMINUM										
95UCL	Dose/High TRV	0.0037	0.0030	0.040	**1.72**	0.56	0.00062	0.00032	**12.6**	0.075
	Dose/Low TRV	0.037	0.030	0.40	**17.2**	**5.58**	0.0062	0.0032	**126**	0.75
ANTIMONY										
95UCL	Dose/High TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	0.83	0.0027
	Dose/Low TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	**8.32**	0.027
ARSENIC										
95UCL	Dose/High TRV	0.00017	0.0017	0.023	0.48	0.18	0.00047	0.000043	0.11	0.00016
	Dose/Low TRV	0.00067	0.0069	0.092	**1.92**	0.72	0.0019	0.00017	**1.50**	0.0022
BARIUM										
95UCL	Dose/High TRV	--	--	--	--	--	--	--	0.28	0.00042
	Dose/Low TRV	--	--	--	--	--	--	--	**1.07**	0.0016
CADMIUM										
95UCL	Dose/High TRV	0.000052	0.000062	0.00108	0.018	0.0065	0.000018	0.0000059	0.030	0.00014
	Dose/Low TRV	0.011	0.013	0.22	**3.75**	**1.34**	0.0036	0.0012	**1.32**	0.0061
CHROMIUM										
95UCL	Dose/High TRV	0.0058	0.011	0.16	**3.96**	**1.40**	0.0029	0.00062	--	--
	Dose/Low TRV	0.029	0.056	0.80	**19.8**	**6.98**	0.015	0.0031	--	--
COPPER										
95UCL	Dose/High TRV	0.0010	0.0023	0.035	0.66	0.25	0.00062	0.000062	0.0083	0.000039
	Dose/Low TRV	0.025	0.057	0.87	**16.4**	**6.10**	0.016	0.0015	**1.93**	0.0090
LEAD										
95UCL	Dose/High TRV	0.0066	0.0067	0.12	**2.23**	0.80	0.0017	0.00021	0.010	0.00010
	Dose/Low TRV	**2.64**	**2.65**	**46.1**	**887**	**318**	0.68	0.084	**2.14**	0.020

TABLE M-21: WETLAND BIRD AND MAMMAL STEP 3A HAZARD QUOTIENTS FOR IA A2

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

COPEC		Northern Harrier	Killdeer	Great Blue Heron	California Black Rail	California Clapper Rail	Mallard (Breeding)	Mallard (Non-Breeding)	Salt Marsh Harvest Mouse	Gray Fox
MANGANESE										
95UCL	Dose/High TRV	0.00013	0.0039	0.052	**1.00**	0.39	0.0011	0.000016	0.18	0.00024
	Dose/Low TRV	0.0013	0.039	0.52	**10.0**	**3.86**	0.011	0.00016	**2.07**	0.0028
MERCURY										
95UCL	Dose/High TRV	0.0012	0.0084	0.11	**2.43**	0.86	0.0025	0.0011	--	--
	Dose/Low TRV	0.054	0.39	**5.29**	**112.4**	**39.5**	0.12	0.051	--	--
MOLYBDENUM										
95UCL	Dose/High TRV	--	--	--	--	--	--	--	0.80	0.00085
	Dose/Low TRV	--	--	--	--	--	--	--	**8.02**	0.0085
NICKEL										
95UCL	Dose/High TRV	0.00062	0.0025	0.035	0.71	0.27	0.00067	0.000036	0.068	0.00036
	Dose/Low TRV	0.025	0.10	**1.43**	**28.7**	**10.7**	0.027	0.0014	**16.2**	0.087
SELENIUM										
95UCL	Dose/High TRV	0.0071	0.0018	0.065	0.58	0.19	0.00057	0.00038	0.18	0.0024
	Dose/Low TRV	0.029	0.0073	0.26	**2.3**	0.79	0.0023	0.0015	**3.83**	0.050
VANADIUM										
95UCL	Dose/High TRV	0.00052	0.0013	0.020	0.38	0.143	0.00036	0.000025	0.38	0.0090
	Dose/Low TRV	0.0052	0.013	0.200	**3.83**	**1.43**	0.0036	0.00025	**3.83**	0.090
ZINC										
95UCL	Dose/High TRV	0.0049	0.0035	0.074	0.97	0.36	0.00096	0.000085	0.029	0.00080
	Dose/Low TRV	0.049	0.035	0.74	**9.7**	**3.63**	0.0096	0.00085	**1.41**	0.039
TOTAL DDTs										
95UCL	Dose/High TRV	0.0017	0.00028	0.014	0.070	0.027	0.000077	0.0000017	--	--
	Dose/Low TRV	**3.67**	0.60	**29.8**	**150**	**58.0**	0.16	0.0036	--	--

TABLE M-21: WETLAND BIRD AND MAMMAL STEP 3A HAZARD QUOTIENTS FOR IA A2

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

COPEC		Northern Harrier	Killdeer	Great Blue Heron	California Black Rail	California Clapper Rail	Mallard (Breeding)	Mallard (Non-Breeding)	Salt Marsh Harvest Mouse	Gray Fox
TOTAL PAHs										
95UCL	Dose/High TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	--	--
	Dose/Low TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	No TRV	--	--
TOTAL PCBs										
95UCL	Dose/High TRV	0.00085	0.00038	0.010	0.11	0.041	0.00010	0.0000060	--	--
	Dose/Low TRV	0.010	0.0047	0.12	**1.32**	0.50	0.0012	0.000073	--	--

Notes:

Bold shaded values indicate a hazard quotient greater than 1.0.

-- Not evaluated; chemical was not identified as a COPEC for this ecological receptor.
95UCL 95 percent upper confidence limit on the arithmetic mean
BHC Benzene hexachloride
COPEC Chemical of potential ecological concern
DDT Dichlorodiphenyltrichloroethane
TRV Toxicity reference value

TABLE M-22: UPLAND BIRD AND MAMMAL STEP 3A HAZARD QUOTIENTS FOR IA A2

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

COPEC		Western Meadowlark	Northern Harrier	California Vole	Ornate Shrew	Gray Fox
CHROMIUM						
95UCL	Dose/High TRV	0.75	0.014	--	--	--
	Dose/Low TRV	**3.75**	0.070	--	--	--
COPPER						
95UCL	Dose/High TRV	0.086	0.0037	0.0015	0.032	0.00014
	Dose/Low TRV	**2.14**	0.092	0.36	**7.39**	0.033
LEAD						
95UCL	Dose/High TRV	0.45	0.032	0.0023	0.044	0.00047
	Dose/Low TRV	**181**	**12.6**	0.49	**9.19**	0.097
MERCURY						
95UCL [a]	Dose/High TRV	**16.2**	0.080	0.22	0.83	0.0010
	Dose/Low TRV	**750**	**3.67**	**3.67**	**13.9**	0.017
MOLYBDENUM						
95UCL	Dose/High TRV	--	--	0.031	0.044	0.0011
	Dose/Low TRV	--	--	0.31	0.44	0.011
NICKEL						
95UCL	Dose/High TRV	--	--	0.0058	0.25	0.00082
	Dose/Low TRV	--	--	**1.37**	**59.6**	0.19
SELENIUM						
95UCL	Dose/High TRV	0.13	0.014	0.040	0.12	0.0046
	Dose/Low TRV	0.52	0.057	0.86	**2.60**	0.099
VANADIUM						
95UCL	Dose/High TRV	0.10	0.0016	--	--	--
	Dose/Low TRV	**1.01**	0.016	--	--	--
ZINC						
95UCL	Dose/High TRV	0.13	0.015	0.0067	0.15	0.0024
	Dose/Low TRV	**1.25**	0.15	0.32	**7.31**	0.12
DDE						
95UCL	Dose/High TRV	0.023	0.000027	--	--	--
	Dose/Low TRV	**19.8**	0.023	--	--	--
DDT						
95UCL	Dose/High TRV	0.010	0.00013	--	--	--
	Dose/Low TRV	**21.6**	0.27	--	--	--
TOTAL DDTs						
95UCL	Dose/High TRV	0.049	0.011	--	--	--
	Dose/Low TRV	**105**	**23.6**	--	--	--
GAMMA-BHC						
95UCL	Dose/High TRV	--	--	0.000020	0.0029	0.0000025
	Dose/Low TRV	--	--	0.0020	0.28	0.00024

TABLE M-22: UPLAND BIRD AND MAMMAL STEP 3A HAZARD QUOTIENTS FOR IA A2

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

Notes:	**Bold** shaded values indicate a hazard quotient greater than 1.0.
a	A 95UCL concentration was not calculated; 95UCL could not be calculated for distribution, chemcial may not be a COPEC for Step 3A, or concentration is below ambient.
--	Not evaluated; chemical was not identified as a COPEC for this ecological receptor.
95UCL	95 percent upper confidence limit on the arithmetic mean
BHC	Benzene hexachloride
COPEC	Chemical of potential ecological concern
DDE	Dichlorodiphenyldichloroethene
DDT	Dichlorodiphenyltrichloroethane
HMW	High molecular weight
LMW	Low molecular weight
PAH	Polycyclic aromatic hydrocarbon
TRV	Toxicity reference value

TABLE M-23: WETLAND BIRD AND MAMMAL STEP 3A BIOAVAILABILITY DOSE HAZARD QUOTIENTS FOR IA A2

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

COPEC		Northern Harrier	Killdeer	Great Blue Heron	California Black Rail	California Clapper Rail	Mallard (Breeding)	Mallard (Non-Breeding)	Salt Marsh Harvest Mouse	Gray Fox
CHROMIUM										
95UCL	Dose/High TRV	NA	NA	NA	**2.34**	0.89	NA	NA	NA	NA
	Dose/Low TRV	NA	NA	NA	**11.7**	**4.45**	NA	NA	NA	NA
COPPER										
95UCL	Dose/High TRV	NA	NA	NA	0.35	0.21	NA	NA	NA	NA
	Dose/Low TRV	NA	NA	NA	**8.66**	**5.20**	NA	NA	NA	NA
LEAD										
95UCL	Dose/High TRV	0.0048	0.0056	0.10	**1.44**	0.55	NA	NA	NA	NA
	Dose/Low TRV	**1.93**	**2.24**	**41.1**	**574**	**221**	NA	NA	NA	NA
MERCURY										
95UCL	Dose/High TRV	NA	NA	0.11	**2.17**	0.78	NA	NA	NA	NA
	Dose/Low TRV	NA	NA	**5.10**	**100**	**35.8**	NA	NA	NA	NA
NICKEL										
95UCL	Dose/High TRV	NA	NA	0.033	0.37	0.23	NA	NA	NA	NA
	Dose/Low TRV	NA	NA	**1.35**	**14.9**	**9.24**	NA	NA	NA	NA
ZINC										
95UCL	Dose/High TRV	NA	NA	NA	0.84	0.32	NA	NA	NA	NA
	Dose/Low TRV	NA	NA	NA	**8.44**	**3.24**	NA	NA	NA	NA

Notes:

Bold shaded values indicate a hazard quotient greater than 1.0.

-- Not evaluated; chemical was not identified as a COPEC for this ecological receptor.
95UCL 95 percent upper confidence limit on the arithmetic mean
COPEC Chemical of potential ecological concern
NA Not applicable; hazard quotient for high TRV in Step 3A was not exceeded.
TRV Toxicity reference value

TABLE M-24: UPLAND BIRD AND MAMMAL STEP 3A BIOAVAILABILITY DOSE HAZARD QUOTIENTS FOR IA A2

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area
Mare Island Naval Shipyard, Vallejo, California

COPEC		Western Meadowlark	Northern Harrier	California Vole	Ornate Shrew	Gray Fox
CHROMIUM						
95UCL	Dose/High TRV	0.54	NA	NA	NA	NA
	Dose/Low TRV	**2.71**	NA	NA	NA	NA
COPPER						
95UCL	Dose/High TRV	0.064	NA	NA	NA	NA
	Dose/Low TRV	**1.59**	NA	NA	NA	NA
LEAD						
95UCL	Dose/High TRV	0.26	0.023	NA	NA	NA
	Dose/Low TRV	**104**	**9.33**	NA	NA	NA
MERCURY						
95UCL	Dose/High TRV	**15.3**	0.039	NA	NA	NA
	Dose/Low TRV	**706**	**1.81**	NA	NA	NA
ZINC						
95UCL	Dose/High TRV	0.11	NA	NA	NA	NA
	Dose/Low TRV	**1.05**	NA	NA	NA	NA

Notes:

Bold shaded values indicate a hazard quotient greater than 1.0.

-- Not evaluated; chemical was not identified as a COPEC for this ecological receptor.
95UCL 95 percent upper confidence limit on the arithmetic mean
COPEC Chemical of potential ecological concern
NA Not applicable; hazard quotient for high TRV in Step 3A was not exceeded.
TRV Toxicity reference value

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
54	Results of Steps 1 and 2	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix M, Section M3.3. Tetra Tech EM Inc. September 22, 2008.

All other chemicals listed in Tables M-1 and M-2 are mammalian COPECs in the SLERA. An estimated daily dose for each COPEC was calculated for the gray fox, salt marsh harvest mouse, California vole, and ornate shrew based on life history and foraging habits. As specified in both Navy (1999b) and EPA (1997) guidance for SLERAs, all estimated doses were calculated using the maximum site-specific concentrations in soil and sediment.

Estimated daily doses of COPECs were compared with low and high TRVs for each mammalian receptor. Tables M-17 and M-18 present the calculated HQs for all COPECs. Below is a list of chemicals that were eliminated as COPECs because their HQs using the low TRV were less than 1.0 for each mammalian receptor:

Wetland Mammals

- Beryllium, chromium, cobalt mercury, thallium, tin, total DDTs, dieldrin, methoxychlor, total chlordane, total PAHs, and total PCBs

Upland Mammals

- Chromium, thallium, tin, low molecular weight (LMW) polycyclic aromatic hydrocarbons (PAHs), high molecular weight (HMW) PAHs, dichlorodiphenyl-trichloroethane (DDT), total DDTs, heptachlor, methoxychlor, and total chlordane

No other screening or analysis was conducted in the SLERA after the FCM HQs were generated. Chemicals that remain mammalian COPECs after the SLERA are presented in Table M-19. Chemicals without a mammalian TRV (Table M-19) are discussed qualitatively in Step 3a (Section M4.0).

M3.3 SLERA CONCLUSIONS

The SLERA results indicate that maximum concentrations at IA A2 pose unacceptable residual risk from inorganic and organic chemicals to avian and mammalian receptors in the wetland and upland habitats based on the conservative assumptions of the SLERA. All chemicals that remained as COPECs are evaluated further in Section M4.0, BERA Step 3a Risk Refinement. The following risk drivers, based on an HQ greater than 1.0 for at least one vertebrate species in the habitat, were identified as requiring further evaluation in Step 3a for one or more receptors to assess whether they pose risk to ecological receptors at IA A2. Table M-19 shows COPECs for the various types of receptors.

Wetland COPEC Risk Drivers

- Metals: Aluminum, antimony, arsenic, barium, cadmium, chromium, copper, lead, manganese, mercury, molybdenum, nickel, selenium, vanadium, and zinc
- Pesticides: Total DDT
- PCBs: Total PCB

Upland COPEC Risk Drivers

- Metals: Aluminum, antimony, cadmium, chromium, copper, lead, mercury, molybdenum, selenium, thallium, and zinc
- Pesticides: Total DDT

Additionally, all chemicals without toxicity benchmarks or TRVs are available (Table M-19) are evaluated in the Step 3a risk refinement.

M4.0 BERA STEP 3A RISK REFINEMENT

Based on the SLERA results, a number of chemicals in soil at IA A2 were identified as posing risk to vertebrate receptors. EPA guidance on conducting ERAs recommends that the list of COPECs be reevaluated in the problem formulation step of the BERA to account for site-specific and regional conditions (EPA 2001). In addition, Navy guidance (Navy 1999a) suggests intermediate refinement step (Step 3a risk refinement) if the SLERA indicates unacceptable or uncertain risk. As part of this preliminary evaluation of potential risk to ecological receptors, the Navy screened concentrations of metals in upland soil samples against ambient metal concentrations in Mare Island fill soils (PRC Environmental Management Inc. [PRC] 1995, Tetra Tech 1999) and conducted a complete Step 3a risk refinement. The Navy and the regulatory agencies will use the results of Step 3a to assess the need for any further evaluation of ecological risk at IA A2.

Specific variables reassessed in Step 3a include the following:

1. A comparison with ambient fill concentrations was conducted to exclude from further evaluation COPECs with a maximum concentrations less than 95th percentile ambient background concentrations (Navy 2004a). Statistical methods used in the SLERA for calculation of 95 percent upper confidence limit on the arithmetic mean (95 UCLs) are described in Appendix L.

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
55	Risk refinement step	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix M, Section M4.0. Tetra Tech EM Inc. September 22, 2008.

- Metals: Aluminum, antimony, arsenic, barium, cadmium, chromium, copper, lead, manganese, mercury, molybdenum, nickel, selenium, vanadium, and zinc
- Pesticides: Total DDT
- PCBs: Total PCB

Upland COPEC Risk Drivers

- Metals: Aluminum, antimony, cadmium, chromium, copper, lead, mercury, molybdenum, selenium, thallium, and zinc
- Pesticides: Total DDT

Additionally, all chemicals without toxicity benchmarks or TRVs are available (Table M-19) are evaluated in the Step 3a risk refinement.

M4.0 BERA STEP 3A RISK REFINEMENT

Based on the SLERA results, a number of chemicals in soil at IA A2 were identified as posing risk to vertebrate receptors. EPA guidance on conducting ERAs recommends that the list of COPECs be reevaluated in the problem formulation step of the BERA to account for site-specific and regional conditions (EPA 2001). In addition, Navy guidance (Navy 1999a) suggests intermediate refinement step (Step 3a risk refinement) if the SLERA indicates unacceptable or uncertain risk. As part of this preliminary evaluation of potential risk to ecological receptors, the Navy screened concentrations of metals in upland soil samples against ambient metal concentrations in Mare Island fill soils (PRC Environmental Management Inc. [PRC] 1995, Tetra Tech 1999) and conducted a complete Step 3a risk refinement. The Navy and the regulatory agencies will use the results of Step 3a to assess the need for any further evaluation of ecological risk at IA A2.

Specific variables reassessed in Step 3a include the following:

1. A comparison with ambient fill concentrations was conducted to exclude from further evaluation COPECs with a maximum concentrations less than 95th percentile ambient background concentrations (Navy 2004a). Statistical methods used in the SLERA for calculation of 95 percent upper confidence limit on the arithmetic mean (95 UCLs) are described in Appendix L.

2. HQs in the FCM were revised based on site-specific information and less conservative receptor-specific assumptions. The 95 UCL concentrations in soil or sediment were used in the FCM instead of the maximum concentrations. Actual foraging ranges also were used to calculate more realistic SUFs when applicable for use in the FCM. HQs in Step 3a were calculated using the same methodology as presented in Section M2.2.1.

3. The magnitude of exposure for vertebrate COPECs was evaluated by assessing HQ values, background concentrations, the spatial distribution, and the receptor SUF.

4. COPECs without avian or mammalian TRVs were evaluated by comparing estimated doses with literature-reported doses associated with effect or no effect levels. The chemical properties and toxicological effects of COPECs also were evaluated. Best professional judgment was used in interpreting literature data when information on a COPEC was limited.

The following sections discuss the use of 95 UCLs and refined assumptions for COPECs and then describe the results of the Step 3a risk refinement.

M4.1 STEP 3A BACKGROUND SCREEN

COPECs identified for the BERA in upland soils at IA A2 were first evaluated by conducting a background screen. The maximum concentrations of metals in upland soils were compared with Mare Island ambient fill concentrations (PRC 1995, Tetra Tech 1999), in accordance with Navy policy on background analysis (Navy 1999a).

Results of the background screen were used to eliminate those COPECs when the maximum site concentrations are below background. Chemicals detected at concentrations below background were eliminated from further evaluation in the Step 3a risk refinement. If no background concentration was available for a chemical, then the chemical was retained for further evaluation in the Step 3a risk refinement. Table M-20 shows the background screen for COPECs from the SLERA.

The following metals were eliminated as COPECs in the upland habitat based on the results of the background screen: aluminum, antimony, and cadmium (Table M-20).

M4.2 REFINEMENT PARAMETERS

Doses were recalculated for birds and mammals based on 95 UCL concentrations for sediment and soil and a more realistic SUFs (Attachment M1). Revised SUFs were calculated by dividing the site acreage (31.65 acres upland and 8.12 acres wetland) by the foraging range of the receptors to yield a more realistic prediction of the receptors' use of the sites and the resulting exposure to COPECs. If the calculation yielded a SUF greater than 1.0, the default value of 1.0 was used. The revised SUFs are found in Tables M-3 through M-13. The SUF for the salt marsh

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
56	Dose calculations	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix M, Attachment M1, Tables M1-1 through M1-14. Tetra Tech EM Inc. September 22, 2008.
	calculations		Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix M, Attachment M1, Tables M1-1 through M1-14. Tetra Tech EM Inc. September 22, 2008.

TABLES

M1-1 Gray Fox Dose Calculations and Hazard Quotients, Wetland

M1-2 Gray Fox Dose Calculations and Hazard Quotients, Upland

M1-3 Salt Marsh Harvest Mouse Dose Calculations and Hazard Quotients, Wetland

M1-4 Northern Harrier Dose Calculations and Hazard Quotients, Wetland

M1-5 Northern Harrier Dose Calculations and Hazard Quotients, Upland

M1-6 Great Blue Heron Dose Calculations and Hazard Quotients, Wetland

M1-7 Mallard (Non-breeding) Dose Calculations and Hazard Quotients, Wetland

M1-8 Mallard (Breeding) Dose Calculations and Hazard Quotients, Wetland

M1-9 California Black Rail Dose Calculations and Hazard Quotients, Wetland

M1-10 California Clapper Rail Dose Calculations and Hazard Quotients, Wetland

M1-11 Killdeer Dose Calculations and Hazard Quotients, Wetland

M1-12 California Vole Dose Calculations and Hazard Quotients, ~~Wetland~~ Upland

M1-13 Ornate Shrew Dose Calculations and Hazard Quotients, ~~Wetland~~ Upland

M1-14 Western Meadowlark Dose Calculations and Hazard Quotients, Upland

TABLE M1-1: GRAY FOX DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Mammal BAF[2] (unitless)	Mammal Concentration[3] (mg/kg)	Mammal Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Aluminum															
Areawide 95UCL	Dose/High TRV	0.15	0.0073	208	31.5	0.0042	28,545	121	0.027	3.88	1.07	19.30	0.030	14.4	0.075
	Dose/Low TRV	0.15	0.0073	208	31.5	0.0042	28,545	121	0.027	3.88	1.07	1.93	0.030	1.44	0.75
Areawide Maximum	Dose/High TRV	0.15	0.0073	289	43.7	0.0042	39,600	168	1	3.88	54.4	19.30	0.030	14.4	**3.78**
	Dose/Low TRV	0.15	0.0073	289	43.7	0.0042	39,600	168	1	3.88	54.4	1.93	0.030	1.44	**37.8**
Antimony															
Areawide 95UCL	Dose/High TRV	0.15	1.27	2.29	0.35	0.0042	1.80	0.0076	0.027	3.88	0.0025	1.25	0.030	0.93	0.0027
	Dose/Low TRV	0.15	1.27	2.29	0.35	0.0042	1.80	0.0076	0.027	3.88	0.0025	0.13	0.030	0.093	0.027
Areawide Maximum	Dose/High TRV	0.15	1.27	9.78	1.48	0.0042	7.70	0.033	1	3.88	0.39	1.25	0.030	0.93	0.42
	Dose/Low TRV	0.15	1.27	9.78	1.48	0.0042	7.70	0.033	1	3.88	0.39	0.13	0.030	0.093	**4.17**
Arsenic															
Areawide 95UCL	Dose/High TRV	0.15	Regression	0.083	0.013	0.0042	17.8	0.075	0.027	3.88	0.00062	4.70	0.110	3.80	0.00016
	Dose/Low TRV	0.15	Regression	0.083	0.013	0.0042	17.8	0.075	0.027	3.88	0.00062	0.32	0.332	0.28	0.0022
Areawide Maximum	Dose/High TRV	0.15	Regression	0.20	0.030	0.0042	51.1	0.22	1	3.88	0.063	4.70	0.110	3.80	0.017
	Dose/Low TRV	0.15	Regression	0.20	0.030	0.0042	51.1	0.22	1	3.88	0.063	0.32	0.332	0.28	0.23
Barium															
Areawide 95UCL	Dose/High TRV	0.15	0.060	4.57	0.69	0.0042	76.1	0.32	0.027	3.88	0.0071	19.80	0.350	17.1	0.00042
	Dose/Low TRV	0.15	0.060	4.57	0.69	0.0042	76.1	0.32	0.027	3.88	0.0071	5.10	0.435	4.47	0.0016
Areawide Maximum	Dose/High TRV	0.15	0.060	9.06	1.37	0.0042	151	0.64	1	3.88	0.52	19.80	0.350	17.1	0.030
	Dose/Low TRV	0.15	0.060	9.06	1.37	0.0042	151	0.64	1	3.88	0.52	5.10	0.435	4.47	0.12
Beryllium															
Areawide 95UCL	Dose/High TRV	0.15	Regression	0.0026	0.00039	0.0042	0.49	0.0021	0.027	3.88	0.000017	6.60	0.350	5.71	0.0000030
	Dose/Low TRV	0.15	Regression	0.0026	0.00039	0.0042	0.49	0.0021	0.027	3.88	0.000017	0.66	0.350	0.57	0.000030
Areawide Maximum	Dose/High TRV	0.15	Regression	0.0038	0.00058	0.0042	0.83	0.0035	1	3.88	0.0011	6.60	0.350	5.71	0.00018
	Dose/Low TRV	0.15	Regression	0.0038	0.00058	0.0042	0.83	0.0035	1	3.88	0.0011	0.66	0.350	0.57	0.0018
Cadmium															
Areawide 95UCL	Dose/High TRV	0.15	Regression	0.24	0.036	0.0042	0.68	0.0029	0.027	3.88	0.00027	2.64	0.031	1.98	0.00014
	Dose/Low TRV	0.15	Regression	0.24	0.036	0.0042	0.68	0.0029	0.027	3.88	0.00027	0.060	0.032	0.045	0.0061
Areawide Maximum	Dose/High TRV	0.15	Regression	0.71	0.11	0.0042	7.00	0.030	1	3.88	0.035	2.64	0.031	1.98	0.018
	Dose/Low TRV	0.15	Regression	0.71	0.11	0.0042	7.00	0.030	1	3.88	0.035	0.060	0.032	0.045	0.79
Chromium															
Areawide 95UCL	Dose/High TRV	0.15	0.030	2.95	0.45	0.0042	98.4	0.42	0.027	3.88	0.0061	27,370.00	0.350	23,691	0.00000026
	Dose/Low TRV	0.15	0.030	2.95	0.45	0.0042	98.4	0.42	0.027	3.88	0.0061	2,737	0.350	2,369	0.0000026
Areawide Maximum	Dose/High TRV	0.15	0.030	8.82	1.33	0.0042	294	1.24	1	3.88	0.66	27,370.00	0.350	23,691	0.000028
	Dose/Low TRV	0.15	0.030	8.82	1.33	0.0042	294	1.24	1	3.88	0.66	2,737	0.350	2,369	0.00028
Cobalt															
Areawide 95UCL	Dose/High TRV	0.15	Regression	0.60	0.091	0.0042	20.6	0.087	0.027	3.88	0.0013	20.00	0.200	16.7	0.00007
	Dose/Low TRV	0.15	Regression	0.60	0.091	0.0042	20.6	0.087	0.027	3.88	0.0013	1.20	0.275	1.02	0.0012
Areawide Maximum	Dose/High TRV	0.15	Regression	1.19	0.180	0.0042	34.8	0.15	1	3.88	0.084	20.00	0.200	16.7	0.0050
	Dose/Low TRV	0.15	Regression	1.19	0.180	0.0042	34.8	0.15	1	3.88	0.084	1.20	0.275	1.02	0.08
Copper															
Areawide 95UCL	Dose/High TRV	0.15	0.15	14.2	2.15	0.0042	94.8	0.40	0.027	3.88	0.018	632	0.025	466	0.000039
	Dose/Low TRV	0.15	0.15	14.2	2.15	0.0042	94.8	0.40	0.027	3.88	0.018	2.67	0.030	1.99	0.0090
Areawide Maximum	Dose/High TRV	0.15	0.15	48.6	7.34	0.0042	324	1.37	1	3.88	2.25	632	0.025	466	0.0048
	Dose/Low TRV	0.15	0.15	48.6	7.34	0.0042	324	1.37	1	3.88	2.25	2.67	0.030	1.99	**1.13**
Lead															
Areawide 95UCL	Dose/High TRV	0.15	0.14	13.3	2.02	0.0042	95.3	0.40	0.027	3.88	0.017	241	0.019	175	0.000098
	Dose/Low TRV	0.15	0.14	13.3	2.02	0.0042	95.3	0.40	0.027	3.88	0.017	1.00	0.208	0.84	0.020
Areawide Maximum	Dose/High TRV	0.15	0.14	59.1	8.93	0.0042	422	1.79	1	3.88	2.76	241	0.019	175	0.016
	Dose/Low TRV	0.15	0.14	59.1	8.93	0.0042	422	1.79	1	3.88	2.76	1.00	0.208	0.84	**3.29**

TABLE M1-1: GRAY FOX DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Mammal BAF[2] (unitless)	Mammal Concentration[3] (mg/kg)	Mammal Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Manganese															
Areawide 95UCL	Dose/High TRV	0.15	0.021	11.5	1.74	0.0042	560	2.37	0.027	3.88	0.029	159	0.030	119	0.00024
	Dose/Low TRV	0.15	0.021	11.5	1.74	0.0042	560	2.37	0.027	3.88	0.029	13.70	0.035	10.3	0.0028
Areawide Maximum	Dose/High TRV	0.15	0.021	35.9	5.42	0.0042	1,750	7.40	1	3.88	3.31	159	0.030	119	0.028
	Dose/Low TRV	0.15	0.021	35.9	5.42	0.0042	1,750	7.40	1	3.88	3.31	13.70	0.035	10.3	0.32
Mercury															
Areawide 95UCL	Dose/High TRV	0.15	0.054	0.032	0.0048	0.0042	0.59	0.0025	0.027	3.88	0.000052	4.00	0.428	3.50	0.000015
	Dose/Low TRV	0.15	0.054	0.032	0.0048	0.0042	0.59	0.0025	0.027	3.88	0.000052	0.25	0.188	0.21	0.00025
Areawide Maximum	Dose/High TRV	0.15	0.054	0.065	0.0098	0.0042	1.20	0.0051	1	3.88	0.0038	4.00	0.428	3.50	0.0011
	Dose/Low TRV	0.15	0.054	0.065	0.0098	0.0042	1.20	0.0051	1	3.88	0.0038	0.25	0.188	0.21	0.018
Molybdenum															
Areawide 95UCL	Dose/High TRV	0.15	NB	1.51	0.23	0.0042	1.51	0.0064	0.027	3.88	0.0017	2.60	0.030	1.94	0.00085
	Dose/Low TRV	0.15	NB	1.51	0.23	0.0042	1.51	0.0064	0.027	3.88	0.0017	0.26	0.030	0.19	0.0085
Areawide Maximum	Dose/High TRV	0.15	NB	3.80	0.57	0.0042	3.80	0.016	1	3.88	0.15	2.60	0.030	1.94	0.078
	Dose/Low TRV	0.15	NB	3.80	0.57	0.0042	3.80	0.016	1	3.88	0.15	0.26	0.030	0.19	0.78
Nickel															
Areawide 95UCL	Dose/High TRV	0.15	Regression	6.51	0.98	0.0042	94.5	0.40	0.027	3.88	0.010	31.60	0.249	26.8	0.00036
	Dose/Low TRV	0.15	Regression	6.51	0.98	0.0042	94.5	0.40	0.027	3.88	0.010	0.13	0.249	0.11	0.087
Areawide Maximum	Dose/High TRV	0.15	Regression	8.31	1.26	0.0042	160	0.68	1	3.88	0.50	31.60	0.249	26.8	0.019
	Dose/Low TRV	0.15	Regression	8.31	1.26	0.0042	160	0.68	1	3.88	0.50	0.13	0.249	0.11	**4.42**
Selenium															
Areawide 95UCL	Dose/High TRV	0.15	1.63	1.94	0.29	0.0042	1.19	0.0050	0.027	3.88	0.0021	1.21	0.025	0.89	0.0024
	Dose/Low TRV	0.15	1.63	1.94	0.29	0.0042	1.19	0.0050	0.027	3.88	0.0021	0.05	0.187	0.042	0.050
Areawide Maximum	Dose/High TRV	0.15	1.63	3.42	0.52	0.0042	2.10	0.0089	1	3.88	0.14	1.21	0.025	0.89	0.15
	Dose/Low TRV	0.15	1.63	3.42	0.52	0.0042	2.10	0.0089	1	3.88	0.14	0.05	0.187	0.042	**3.25**
Thallium															
Areawide 95UCL	Dose/High TRV	0.15	NB	0.66	0.10	0.0042	0.66	0.0028	0.027	3.88	0.00072	1.43	0.065	1.12	0.00065
	Dose/Low TRV	0.15	NB	0.66	0.10	0.0042	0.66	0.0028	0.027	3.88	0.00072	0.48	0.065	0.38	0.0019
Areawide Maximum	Dose/High TRV	0.15	NB	1.30	0.20	0.0042	1.30	0.0055	1	3.88	0.052	1.43	0.065	1.12	0.05
	Dose/Low TRV	0.15	NB	1.30	0.20	0.0042	1.30	0.0055	1	3.88	0.052	0.48	0.065	0.38	0.14
Tin															
Areawide 95UCL	Dose/High TRV	0.15	NB	2.24	0.34	0.0042	2.24	0.0095	0.027	3.88	0.0025	35.0	0.030	26.1	0.000094
	Dose/Low TRV	0.15	NB	2.24	0.34	0.0042	2.24	0.0095	0.027	3.88	0.0025	23.4	0.030	17.5	0.00014
Areawide Maximum	Dose/High TRV	0.15	NB	5.00	0.76	0.0042	5.00	0.021	1	3.88	0.20	35.0	0.030	26.1	0.0077
	Dose/Low TRV	0.15	NB	5.00	0.76	0.0042	5.00	0.021	1	3.88	0.20	23.4	0.030	17.5	0.011
Vanadium															
Areawide 95UCL	Dose/High TRV	0.15	0.13	12.4	1.87	0.0042	95.8	0.41	0.027	3.88	0.016	2.10	0.260	1.79	0.0090
	Dose/Low TRV	0.15	0.13	12.4	1.87	0.0042	95.8	0.41	0.027	3.88	0.016	0.21	0.260	0.18	0.090
Areawide Maximum	Dose/High TRV	0.15	0.13	29.2	4.41	0.0042	226	0.96	1	3.88	1.38	2.10	0.260	1.79	0.77
	Dose/Low TRV	0.15	0.13	29.2	4.41	0.0042	226	0.96	1	3.88	1.38	0.21	0.260	0.18	**7.74**
Zinc															
Areawide 95UCL	Dose/High TRV	0.15	0.89	250	37.7	0.0042	280	1.19	0.027	3.88	0.27	411.43	0.175	342	0.00080
	Dose/Low TRV	0.15	0.89	250	37.7	0.0042	280	1.19	0.027	3.88	0.27	9.60	0.026	7.10	0.039
Areawide Maximum	Dose/High TRV	0.15	0.89	1647	249	0.0042	1,850	7.83	1	3.88	66.1	411.43	0.175	342	0.19
	Dose/Low TRV	0.15	0.89	1647	249	0.0042	1,850	7.83	1	3.88	66.1	9.60	0.026	7.10	**9.31**
Total DDTs															
Areawide 95UCL	Dose/High TRV	0.15	Regression	0.79	0.12	0.0042	0.019	0.000082	0.027	3.88	0.00085	16.0	0.320	13.78	0.000062
	Dose/Low TRV	0.15	Regression	0.79	0.12	0.0042	0.019	0.000082	0.027	3.88	0.00085	0.80	0.320	0.69	0.0012
Areawide Maximum	Dose/High TRV	0.15	Regression	1.68	0.25	0.0042	0.060	0.00025	1	3.88	0.065	16.0	0.320	13.78	0.0048
	Dose/Low TRV	0.15	Regression	1.68	0.25	0.0042	0.060	0.00025	1	3.88	0.065	0.80	0.320	0.69	0.095

TABLE M1-1: GRAY FOX DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Mammal BAF[2] (unitless)	Mammal Concentration[3] (mg/kg)	Mammal Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Dieldrin															
Areawide 95UCL	Dose/High TRV	0.15	3.35	0.0020	0.00030	0.0042	0.00060	0.0000025	0.027	3.88	0.0000022	0.20	0.350	0.17	0.000012
	Dose/Low TRV	0.15	3.35	0.0020	0.00030	0.0042	0.00060	0.0000025	0.027	3.88	0.0000022	0.020	0.350	0.017	0.00012
Areawide Maximum	Dose/High TRV	0.15	3.35	0.0020	0.00030	0.0042	0.00060	0.0000025	1	3.88	0.000079	0.20	0.350	0.17	0.00046
	Dose/Low TRV	0.15	3.35	0.0020	0.00030	0.0042	0.00060	0.0000025	1	3.88	0.000079	0.020	0.350	0.017	0.0046
Methoxychlor															
Areawide 95UCL	Dose/High TRV	0.15	NB	0.0010	0.00015	0.0042	0.0010	0.0000042	0.027	3.88	0.0000011	50.0	0.332	43.1	0.000000025
	Dose/Low TRV	0.15	NB	0.0010	0.00015	0.0042	0.0010	0.0000042	0.027	3.88	0.0000011	2.50	0.332	2.16	0.00000051
Areawide Maximum	Dose/High TRV	0.15	NB	0.0010	0.00015	0.0042	0.0010	0.0000042	1	3.88	0.000040	50.0	0.332	43.1	0.00000093
	Dose/Low TRV	0.15	NB	0.0010	0.00015	0.0042	0.0010	0.0000042	1	3.88	0.000040	2.50	0.332	2.16	0.000019
Total Chlordane															
Areawide 95UCL	Dose/High TRV	0.15	NB	0.0040	0.00060	0.0042	0.0040	0.000017	0.027	3.88	0.0000044	9.20	0.030	6.87	0.00000064
	Dose/Low TRV	0.15	NB	0.0040	0.00060	0.0042	0.0040	0.000017	0.027	3.88	0.0000044	4.60	0.030	3.44	0.0000013
Areawide Maximum	Dose/High TRV	0.15	NB	0.0040	0.00060	0.0042	0.0040	0.000017	1	3.88	0.00016	9.20	0.030	6.87	0.000023
	Dose/Low TRV	0.15	NB	0.0040	0.00060	0.0042	0.0040	0.000017	1	3.88	0.00016	4.60	0.030	3.44	0.000047
Total PAHs															
Areawide 95UCL	Dose/High TRV	0.15	0	0.00	0.00	0.0042	2.00	0.0085	0.027	3.88	0.000060	32.8	0.031	24.5	0.0000024
	Dose/Low TRV	0.15	0	0.00	0.00	0.0042	2.00	0.0085	0.027	3.88	0.000060	1.31	0.031	0.98	0.000061
Areawide Maximum	Dose/High TRV	0.15	0	0.00	0.00	0.0042	2.00	0.0085	1	3.88	0.0022	32.8	0.031	24.5	0.000089
	Dose/Low TRV	0.15	0	0.00	0.00	0.0042	2.00	0.0085	1	3.88	0.0022	1.31	0.031	0.98	0.0022
Total PCBs															
Areawide 95UCL	Dose/High TRV	0.15	NB	0.28	0.043	0.0042	0.28	0.0012	0.027	3.88	0.00031	1.28	0.023	0.94	0.00033
	Dose/Low TRV	0.15	NB	0.28	0.043	0.0042	0.28	0.0012	0.027	3.88	0.00031	0.36	0.206	0.30	0.0010
Areawide Maximum	Dose/High TRV	0.15	NB	0.60	0.091	0.0042	0.60	0.0025	1	3.88	0.024	1.28	0.023	0.94	0.026
	Dose/Low TRV	0.15	NB	0.60	0.091	0.0042	0.60	0.0025	1	3.88	0.024	0.36	0.206	0.30	0.080

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95 percent upper confidence limit on the arithmetic mean	mg/kg	Milligram per kilogram
BAF	Bioaccumulation factor	mg/kg/day	Milligram per kilogram per day
COPEC	Chemical of potential ecological concern	NA	Not available
DDT	Dichlorodiphenyltrichloroethane	NB	No BAF was available.
EFA WEST	Naval Facilities Engineering Command, Engineering Field West	PCB	Polychlorinated biphenyl
HQ	Hazard quotient	SUF	Site use factor
kg/day	Kilogram per day	TRV	Toxicity reference value
mg/day	Milligram per day	USACE	U.S. Army Corps of Engineers

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for rodents and the averaged food requirement conversion for herbivores.

2 The 95UCL or habitat area maximum (see note 6) for all site-collected soil samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 1 mg/kg because no BAF was available.

3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).

4 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration.

5 Rate for the meadow vole in Beyer and others (1994); 2.4 percent of prey ingestion rate.

6 For average doses, lesser of 95UCL or detected maximum of all site-collected sediment samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected sediment samples was used.

7 Sediment daily dose was calculated by multiplying the sediment ingestion rate by 95UCL or habitat area maximum (see note 6) sediment concentration.

8 Average adult weight from a San Pablo Bay (Gallinas) population measured by Fisler (1965).

9 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + sediment daily dose)*SUF)/receptor species body weight.

10 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.

11 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-0.94)}$.

12 The HQ was calculated using total daily dose/allometrically adjusted TRV.

13 Sufficient data are not available to derive a TRV. This chemical was evaluated qualitatively.

TABLE M1-2: GRAY FOX DOSE CALCULATIONS AND HAZARD QUOTIENTS, UPLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Mammal BAF[2] (unitless)	Mammal Concentration[3] (mg/kg)	Mammal Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration[6] (mg/kg)	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Aluminum															
Areawide 95UCL	Dose/High TRV	0.15	0.0073	185	28.0	0.0042	25,400	107	0.107	3.88	3.73	19.30	0.030	14.42	0.26
	Dose/Low TRV	0.15	0.0073	185	28.0	0.0042	25,400	107	0.107	3.88	3.73	1.93	0.030	1.44	**2.59**
Areawide Maximum	Dose/High TRV	0.15	0.0073	185	28.0	0.0042	25,400	107	1	3.88	34.9	19.30	0.030	14.42	**2.42**
	Dose/Low TRV	0.15	0.0073	185	28.0	0.0042	25,400	107	1	3.88	34.9	1.93	0.030	1.44	**24.2**
Antimony															
Areawide 95UCL	Dose/High TRV	0.15	1.27	6.86	1.04	0.0042	5.40	0.023	0.107	3.88	0.029	1.25	0.030	0.93	0.031
	Dose/Low TRV	0.15	1.27	6.86	1.04	0.0042	5.40	0.023	0.107	3.88	0.029	0.13	0.030	0.09	0.31
Areawide Maximum	Dose/High TRV	0.15	1.27	6.86	1.04	0.0042	5.40	0.023	1	3.88	0.27	1.25	0.030	0.93	0.29
	Dose/Low TRV	0.15	1.27	6.86	1.04	0.0042	5.40	0.023	1	3.88	0.27	0.13	0.030	0.09	**2.92**
Cadmium															
Areawide 95UCL	Dose/High TRV	0.15	Regression	0.53	0.081	0.0042	3.80	0.016	0.107	3.88	0.0027	2.64	0.031	1.98	0.0013
	Dose/Low TRV	0.15	Regression	0.53	0.081	0.0042	3.80	0.016	0.107	3.88	0.0027	0.060	0.032	0.05	0.059
Areawide Maximum	Dose/High TRV	0.15	Regression	0.53	0.081	0.0042	3.80	0.016	1	3.88	0.025	2.64	0.031	1.98	0.013
	Dose/Low TRV	0.15	Regression	0.53	0.081	0.0042	3.80	0.016	1	3.88	0.025	0.060	0.032	0.05	0.55
Chromium															
Areawide 95UCL	Dose/High TRV	0.15	0.030	1.83	0.28	0.0042	60.9	0.26	0.107	3.88	0.015	27,370	0.350	23,691.30	0.00000062
	Dose/Low TRV	0.15	0.030	1.83	0.28	0.0042	60.9	0.26	0.107	3.88	0.015	2,737	0.350	2,369.13	0.0000062
Areawide Maximum	Dose/High TRV	0.15	0.030	13.2	1.99	0.0042	440	1.86	1	3.88	0.99	27,370	0.350	23,691.30	0.000042
	Dose/Low TRV	0.15	0.030	13.2	1.99	0.0042	440	1.86	1	3.88	0.99	2,737	0.350	2,369.13	0.00042
Copper															
Areawide 95UCL	Dose/High TRV	0.15	0.15	13.3	2.00	0.0042	88.4	0.37	0.107	3.88	0.065	631.58	0.025	466.29	0.00014
	Dose/Low TRV	0.15	0.15	13.3	2.00	0.0042	88.4	0.37	0.107	3.88	0.065	2.67	0.030	1.99	0.033
Areawide Maximum	Dose/High TRV	0.15	0.15	103	15.5	0.0042	684	2.89	1	3.88	4.74	631.58	0.025	466.29	0.010
	Dose/Low TRV	0.15	0.15	103	15.5	0.0042	684	2.89	1	3.88	4.74	2.67	0.030	1.99	**2.38**
Lead															
Areawide 95UCL	Dose/High TRV	0.15	0.14	16.4	2.47	0.0042	117	0.49	0.107	3.88	0.082	240.64	0.019	174.72	0.00047
	Dose/Low TRV	0.15	0.14	16.4	2.47	0.0042	117	0.49	0.107	3.88	0.082	1.00	0.208	0.84	0.097
Areawide Maximum	Dose/High TRV	0.15	0.14	136	20.5	0.0042	968	4.10	1	3.88	6.33	240.64	0.019	174.72	0.036
	Dose/Low TRV	0.15	0.14	136	20.5	0.0042	968	4.10	1	3.88	6.33	1.00	0.208	0.84	**7.55**
Mercury															
Areawide 95UCL	Dose/High TRV	0.15	0.054	0.55	0.084	0.0042	10.2	0.043	0.107	3.88	0.0035	4.00	0.428	3.50	0.0010
	Dose/Low TRV	0.15	0.054	0.55	0.084	0.0042	10.2	0.043	0.107	3.88	0.0035	0.25	0.188	0.21	0.017
Areawide Maximum	Dose/High TRV	0.15	0.054	0.55	0.084	0.0042	10.2	0.043	1	3.88	0.033	4.00	0.428	3.50	0.0093
	Dose/Low TRV	0.15	0.054	0.55	0.084	0.0042	10.2	0.043	1	3.88	0.033	0.25	0.188	0.21	0.16
Molybdenum															
Areawide 95UCL	Dose/High TRV	0.15	NB	0.50	0.076	0.0042	0.50	0.0021	0.107	3.88	0.0021	2.60	0.030	1.94	0.0011
	Dose/Low TRV	0.15	NB	0.50	0.076	0.0042	0.50	0.0021	0.107	3.88	0.0021	0.26	0.030	0.19	0.011
Areawide Maximum	Dose/High TRV	0.15	NB	6.80	1.03	0.0042	6.80	0.029	1	3.88	0.27	2.60	0.030	1.94	0.14
	Dose/Low TRV	0.15	NB	6.80	1.03	0.0042	6.80	0.029	1	3.88	0.27	0.26	0.030	0.19	**1.40**
Nickel															
Areawide 95UCL	Dose/High TRV	0.15	Regression	4.23	0.64	0.0042	37.4	0.16	0.107	3.88	0.022	31.6	0.249	26.80	0.00082
	Dose/Low TRV	0.15	Regression	4.23	0.64	0.0042	37.4	0.16	0.107	3.88	0.022	0.13	0.249	0.11	0.19
Areawide Maximum	Dose/High TRV	0.15	Regression	8.53	1.29	0.0042	169	0.72	1	3.88	0.52	31.6	0.249	26.80	0.019
	Dose/Low TRV	0.15	Regression	8.53	1.29	0.0042	169	0.72	1	3.88	0.52	0.13	0.249	0.11	**4.58**
Bioavailable Dose	Dose/High TRV	0.15	Regression	4.23	0.64	0.0042	1.53	0.0065	0.107	3.88	0.018	31.6	0.249	26.80	0.00066
(95UCL)	Dose/Low TRV	0.15	Regression	4.23	0.64	0.0042	1.53	0.0065	0.107	3.88	0.018	0.13	0.249	0.11	0.16
Selenium															
Areawide 95UCL	Dose/High TRV	0.15	1.63	0.98	0.15	0.0042	0.60	0.0025	0.107	3.88	0.0041	1.21	0.025	0.89	0.0046
	Dose/Low TRV	0.15	1.63	0.98	0.15	0.0042	0.60	0.0025	0.107	3.88	0.0041	0.05	0.187	0.04	0.099
Areawide Maximum	Dose/High TRV	0.15	1.63	2.93	0.44	0.0042	1.80	0.0076	1	3.88	0.12	1.21	0.025	0.89	0.13
	Dose/Low TRV	0.15	1.63	2.93	0.44	0.0042	1.80	0.0076	1	3.88	0.12	0.05	0.187	0.04	**2.79**

TABLE M1-2: GRAY FOX DOSE CALCULATIONS AND HAZARD QUOTIENTS, UPLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Mammal BAF[2] (unitless)	Mammal Concentration[3] (mg/kg)	Mammal Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration[6] (mg/kg)	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Thallium															
Areawide 95UCL	Dose/High TRV	0.15	NB	0.44	0.066	0.0042	0.44	0.0019	0.107	3.88	0.0019	1.43	0.065	1.12	0.0017
	Dose/Low TRV	0.15	NB	0.44	0.066	0.0042	0.44	0.0019	0.107	3.88	0.0019	0.48	0.065	0.38	0.0050
Areawide Maximum	Dose/High TRV	0.15	NB	1.60	0.24	0.0042	1.60	0.0068	1	3.88	0.064	1.43	0.065	1.12	0.06
	Dose/Low TRV	0.15	NB	1.60	0.24	0.0042	1.60	0.0068	1	3.88	0.064	0.48	0.065	0.38	0.17
Tin															
Areawide 95UCL	Dose/High TRV	0.15	NB	28.4	4.28	0.0042	28.4	0.12	0.107	3.88	0.12	35.0	0.030	26.14	0.0046
	Dose/Low TRV	0.15	NB	28.4	4.28	0.0042	28.4	0.12	0.107	3.88	0.12	23.4	0.030	17.48	0.0069
Areawide Maximum	Dose/High TRV	0.15	NB	40.6	6.14	0.0042	40.6	0.17	1	3.88	1.63	35.0	0.030	26.14	0.062
	Dose/Low TRV	0.15	NB	40.6	6.14	0.0042	40.6	0.17	1	3.88	1.63	23.4	0.030	17.48	0.093
Zinc															
Areawide 95UCL	Dose/High TRV	0.15	0.89	191.8	29.0	0.0042	216	0.91	0.107	3.88	0.82	411.43	0.175	341.62	0.0024
	Dose/Low TRV	0.15	0.89	191.8	29.0	0.0042	216	0.91	0.107	3.88	0.82	9.60	0.026	7.10	0.12
Areawide Maximum	Dose/High TRV	0.15	0.89	1762	266	0.0042	1,980	8.38	1	3.88	70.8	411.43	0.175	341.62	0.21
	Dose/Low TRV	0.15	0.89	1762	266	0.0042	1,980	8.38	1	3.88	70.8	9.60	0.026	7.10	**9.97**
LMW PAH															
Areawide 95UCL	Dose/High TRV	0.15	0	0.00	0.00	0.0042	0.10	0.00044	0.107	3.88	0.000012	150.00	0.270	127.84	0.00000009
	Dose/Low TRV	0.15	0	0.00	0.00	0.0042	0.10	0.00044	0.107	3.88	0.000012	50.50	0.277	43.10	0.00000028
Areawide Maximum	Dose/High TRV	0.15	0	0.00	0.00	0.0042	0.64	0.0027	1	3.88	0.00070	150.00	0.270	127.84	0.0000055
	Dose/Low TRV	0.15	0	0.00	0.00	0.0042	0.64	0.0027	1	3.88	0.00070	50.50	0.277	43.10	0.000016
HMW PAH															
Areawide 95UCL	Dose/High TRV	0.15	0	0.00	0.00	0.0042	0.85	0.0036	0.107	3.88	0.00010	32.79	0.031	24.52	0.0000040
	Dose/Low TRV	0.15	0	0.00	0.00	0.0042	0.85	0.0036	0.107	3.88	0.00010	1.31	0.031	0.98	0.00010
Areawide Maximum	Dose/High TRV	0.15	0	0.00	0.00	0.0042	3.79	0.016	1	3.88	0.0041	32.79	0.031	24.52	0.00017
	Dose/Low TRV	0.15	0	0.00	0.00	0.0042	3.79	0.016	1	3.88	0.0041	1.31	0.031	0.98	0.0042
Total DDTs															
Areawide 95UCL	Dose/High TRV	0.15	Regression	1.31	0.20	0.0042	0.041	0.00017	0.107	3.88	0.0055	16.00	0.320	13.78	0.00040
	Dose/Low TRV	0.15	Regression	1.31	0.20	0.0042	0.041	0.00017	0.107	3.88	0.0055	0.80	0.320	0.69	0.0079
Areawide Maximum	Dose/High TRV	0.15	Regression	6.85	1.03	0.0042	0.50	0.0021	1	3.88	0.27	16.00	0.320	13.78	0.019
	Dose/Low TRV	0.15	Regression	6.85	1.03	0.0042	0.50	0.0021	1	3.88	0.27	0.80	0.320	0.69	0.39
gamma-BHC															
Areawide 95UCL	Dose/High TRV	0.15	NB	0.0022	0.00033	0.0042	0.0022	0.0000093	0.107	3.88	0.0000094	3.75	3.750	3.74	0.0000025
	Dose/Low TRV	0.15	NB	0.0022	0.00033	0.0042	0.0022	0.0000093	0.107	3.88	0.0000094	0.05	0.050	0.04	0.00024
Areawide Maximum	Dose/High TRV	0.15	NB	0.014	0.0021	0.0042	0.014	0.000059	1	3.88	0.00056	3.75	3.750	3.74	0.00015
	Dose/Low TRV	0.15	NB	0.014	0.0021	0.0042	0.014	0.000059	1	3.88	0.00056	0.05	0.050	0.04	0.015
Heptachlor															
Areawide 95UCL	Dose/High TRV	0.15	NB	0.00040	0.000060	0.0042	0.00040	0.0000017	0.107	3.88	0.0000017	6.80	0.204	5.70	0.00000030
	Dose/Low TRV	0.15	NB	0.00040	0.000060	0.0042	0.00040	0.0000017	0.107	3.88	0.0000017	0.13	0.100	0.10	0.000016
Areawide Maximum	Dose/High TRV	0.15	NB	0.0050	0.00076	0.0042	0.0050	0.000021	1	3.88	0.00020	6.80	0.204	5.70	0.000035
	Dose/Low TRV	0.15	NB	0.0050	0.00076	0.0042	0.0050	0.000021	1	3.88	0.00020	0.13	0.100	0.10	0.0019
Methoxychlor															
Areawide 95UCL	Dose/High TRV	0.15	NB	0.0098	0.0015	0.0042	0.0098	0.000041	0.107	3.88	0.000042	50.00	0.332	43.14	0.0000010
	Dose/Low TRV	0.15	NB	0.0098	0.0015	0.0042	0.0098	0.000041	0.107	3.88	0.000042	2.50	0.332	2.16	0.000019
Areawide Maximum	Dose/High TRV	0.15	NB	0.020	0.0030	0.0042	0.020	0.000085	1	3.88	0.00080	50.00	0.332	43.14	0.000019
	Dose/Low TRV	0.15	NB	0.020	0.0030	0.0042	0.020	0.000085	1	3.88	0.00080	2.50	0.332	2.16	0.00037
Total Chlordane															
Areawide 95UCL	Dose/High TRV	0.15	NB	0.015	0.0023	0.0042	0.015	0.000064	0.107	3.88	0.000065	9.20	0.030	6.87	0.0000095
	Dose/Low TRV	0.15	NB	0.015	0.0023	0.0042	0.015	0.000064	0.107	3.88	0.000065	4.60	0.030	3.44	0.000019
Areawide Maximum	Dose/High TRV	0.15	NB	0.070	0.011	0.0042	0.070	0.00030	1	3.88	0.0028	9.20	0.030	6.87	0.00041
	Dose/Low TRV	0.15	NB	0.070	0.011	0.0042	0.070	0.00030	1	3.88	0.0028	4.60	0.030	3.44	0.00082

TABLE M1-2: GRAY FOX DOSE CALCULATIONS AND HAZARD QUOTIENTS, UPLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC	Total Prey Ingestion Rate[1] (kg/day)	Mammal BAF[2] (unitless)	Mammal Concentration[3] (mg/kg)	Mammal Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration[6] (mg/kg)	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL 95 percent upper confidence limit on the arithmetic mean
BAF Bioaccumulation factor
BHC Benzene hexachloride
COPEC Chemical of potential ecological concern
DDT Dichlorodiphenyltrichloroethane
EFA WEST Naval Facilities Engineering Command, Engineering Field Activity West
EPA U.S. Environmental Protection Agency
HMW High molecular weight
HQ Hazard quotient
kg Kilogram
kg/day Kilogram per day
LMW Low molecular weight
mg/day Milligram per day
mg/kg Milligram per kilogram
mg/kg/day Milligram per kilogram per day
NA Not applicable
NB No BAF was available.
PAH Polycyclic aromatic hydrocarbon
SUF Site use factor
TRV Toxicity reference value

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for eutherian mammals and the averaged food requirement conversion for omnivores.
2 The 95UCL or habitat area maximum (see note 6) for all site-collected soil samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 1 mg/kg because no BAF was available.
3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).
4 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration.
5 Rate for the red fox in Beyer and others (1994); 2.8 percent of prey ingestion rate.
6 For average doses, lesser of 95UCL or detected maximum of all site-collected soil samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected soil samples was used.
7 Soil daily dose was calculated by multiplying the soil ingestion rate by 95UCL or habitat area maximum (see note 6) soil concentration.
8 Average adult weight from Silva and Downing (1995).
9 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + soil daily dose)*SUF)/receptor species body weight.
10 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.
11 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-0.94)}$.
12 The HQ was calculated using total daily dose/allometrically adjusted TRV.
13 Sufficient data are not available to derive a TRV. This chemical was evaluated qualitatively.

TABLE M1-3: SALT MARSH HARVEST MOUSE DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Pickleweed BAF[2] (unitless)	Pickleweed Concentration[3] (mg/kg)	Pickleweed Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Aluminum															
Areawide 95UCL	Dose/High TRV	0.004	0.0016	45.7	0.18	0.000093	28,545	2.65	1	0.011	257	19.3	0.030	20.50	**12.6**
	Dose/Low TRV	0.004	0.0016	45.7	0.18	0.000093	28,545	2.65	1	0.011	257	1.93	0.030	2.05	**126**
Areawide Maximum	Dose/High TRV	0.004	0.0016	63.4	0.25	0.000093	39,600	3.68	1	0.011	357	19.3	0.030	20.50	**17.4**
	Dose/Low TRV	0.004	0.0016	63.4	0.25	0.000093	39,600	3.68	1	0.011	357	1.93	0.030	2.05	**174**
Antimony															
Areawide 95UCL	Dose/High TRV	0.004	1.72	3.10	0.012	0.000093	1.80	0.00017	1	0.011	1.11	1.25	0.030	1.33	0.83
	Dose/Low TRV	0.004	1.72	3.10	0.012	0.000093	1.80	0.00017	1	0.011	1.11	0.13	0.030	0.13	**8.32**
Areawide Maximum	Dose/High TRV	0.004	1.72	13.2	0.051	0.000093	7.70	0.00072	1	0.011	4.73	1.25	0.030	1.33	**3.56**
	Dose/Low TRV	0.004	1.72	13.2	0.051	0.000093	7.70	0.00072	1	0.011	4.73	0.13	0.030	0.13	**35.6**
Arsenic															
Areawide 95UCL	Dose/High TRV	0.004	0.070	1.25	0.0048	0.000093	17.8	0.0017	1	0.011	0.59	4.70	0.110	5.40	0.11
	Dose/Low TRV	0.004	0.070	1.25	0.0048	0.000093	17.8	0.0017	1	0.011	0.59	0.32	0.332	0.39	**1.50**
Areawide Maximum	Dose/High TRV	0.004	0.070	3.58	0.014	0.000093	51.1	0.0047	1	0.011	1.69	4.70	0.110	5.40	0.31
	Dose/Low TRV	0.004	0.070	3.58	0.014	0.000093	51.1	0.0047	1	0.011	1.69	0.32	0.332	0.39	**4.31**
Barium															
Areawide 95UCL	Dose/High TRV	0.004	0.23	17.5	0.068	0.000093	76.1	0.0071	1	0.011	6.81	19.80	0.350	24.37	0.28
	Dose/Low TRV	0.004	0.23	17.5	0.068	0.000093	76.1	0.0071	1	0.011	6.81	5.10	0.435	6.36	**1.07**
Areawide Maximum	Dose/High TRV	0.004	0.23	34.7	0.13	0.000093	151	0.014	1	0.011	13.5	19.80	0.350	24.37	0.55
	Dose/Low TRV	0.004	0.23	34.7	0.13	0.000093	151	0.014	1	0.011	13.5	5.10	0.435	6.36	**2.12**
Beryllium															
Areawide 95UCL	Dose/High TRV	0.004	Regression	0.35	0.0013	0.000093	0.49	0.000046	1	0.011	0.13	6.60	0.350	8.12	0.016
	Dose/Low TRV	0.004	Regression	0.35	0.0013	0.000093	0.49	0.000046	1	0.011	0.13	0.66	0.350	0.81	0.16
Areawide Maximum	Dose/High TRV	0.004	Regression	0.51	0.0020	0.000093	0.83	0.000077	1	0.011	0.19	6.60	0.350	8.12	0.023
	Dose/Low TRV	0.004	Regression	0.51	0.0020	0.000093	0.83	0.000077	1	0.011	0.19	0.66	0.350	0.81	0.23
Cadmium															
Areawide 95UCL	Dose/High TRV	0.004	0.33	0.22	0.00087	0.000093	0.68	0.000063	1	0.011	0.085	2.64	0.031	2.81	0.030
	Dose/Low TRV	0.004	0.33	0.22	0.00087	0.000093	0.68	0.000063	1	0.011	0.085	0.06	0.032	0.06	**1.32**
Areawide Maximum	Dose/High TRV	0.004	0.33	2.31	0.0089	0.000093	7.00	0.00065	1	0.011	0.87	2.64	0.031	2.81	0.31
	Dose/Low TRV	0.004	0.33	2.31	0.0089	0.000093	7.00	0.00065	1	0.011	0.87	0.06	0.032	0.06	**13.6**
Chromium															
Areawide 95UCL	Dose/High TRV	0.004	0.041	4.03	0.016	0.000093	98.4	0.0091	1	0.011	2.25	27,370	0.350	33,685	0.000067
	Dose/Low TRV	0.004	0.041	4.03	0.016	0.000093	98.4	0.0091	1	0.011	2.25	2,737	0.350	3,368	0.00067
Areawide Maximum	Dose/High TRV	0.004	0.041	12.1	0.047	0.000093	294	0.027	1	0.011	6.73	27,370	0.350	33,685	0.00020
	Dose/Low TRV	0.004	0.041	12.1	0.047	0.000093	294	0.027	1	0.011	6.73	2,737	0.350	3,368	0.0020
Cobalt															
Areawide 95UCL	Dose/High TRV	0.004	0.0075	0.15	0.00060	0.000093	20.6	0.0019	1	0.011	0.23	20.0	0.200	23.80	0.010
	Dose/Low TRV	0.004	0.0075	0.15	0.00060	0.000093	20.6	0.0019	1	0.011	0.23	1.20	0.275	1.46	0.16
Areawide Maximum	Dose/High TRV	0.004	0.0075	0.26	0.0010	0.000093	34.8	0.0032	1	0.011	0.39	20.0	0.200	23.80	0.016
	Dose/Low TRV	0.004	0.0075	0.26	0.0010	0.000093	34.8	0.0032	1	0.011	0.39	1.20	0.275	1.46	0.27
Copper															
Areawide 95UCL	Dose/High TRV	0.004	0.14	13.3	0.051	0.000093	94.8	0.0088	1	0.011	5.47	631.58	0.025	662.99	0.0083
	Dose/Low TRV	0.004	0.14	13.3	0.051	0.000093	94.8	0.0088	1	0.011	5.47	2.67	0.030	2.84	**1.93**
Areawide Maximum	Dose/High TRV	0.004	0.14	45.4	0.18	0.000093	324	0.0301	1	0.011	18.7	631.58	0.025	662.99	0.028
	Dose/Low TRV	0.004	0.14	45.4	0.18	0.000093	324	0.0301	1	0.011	18.7	2.67	0.030	2.84	**6.60**
Lead															
Areawide 95UCL	Dose/High TRV	0.004	0.052	4.96	0.019	0.000093	95.3	0.0089	1	0.011	2.55	240.6	0.019	248.42	0.010
	Dose/Low TRV	0.004	0.052	4.96	0.019	0.000093	95.3	0.0089	1	0.011	2.55	1.00	0.208	1.19	**2.14**
Areawide Maximum	Dose/High TRV	0.004	0.052	21.9	0.085	0.000093	422	0.039	1	0.011	11.3	240.6	0.019	248.42	0.045
	Dose/Low TRV	0.004	0.052	21.9	0.085	0.000093	422	0.039	1	0.011	11.3	1.00	0.208	1.19	**9.47**

TABLE M1-3: SALT MARSH HARVEST MOUSE DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Pickleweed BAF[2] (unitless)	Pickleweed Concentration[3] (mg/kg)	Pickleweed Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Manganese															
Areawide 95UCL	Dose/High TRV	0.004	0.13	72.8	0.28	0.000093	560	0.052	1	0.011	30.4	159.1	0.030	168.86	0.18
	Dose/Low TRV	0.004	0.13	72.8	0.28	0.000093	560	0.052	1	0.011	30.4	13.7	0.035	14.68	**2.07**
Areawide Maximum	Dose/High TRV	0.004	0.13	227.5	0.88	0.000093	1,750	0.16	1	0.011	94.9	159.1	0.030	168.86	0.56
	Dose/Low TRV	0.004	0.13	227.5	0.88	0.000093	1,750	0.16	1	0.011	94.9	13.7	0.035	14.68	**6.47**
Mercury															
Areawide 95UCL	Dose/High TRV	0.004	0.59	0.35	0.0013	0.000093	0.59	0.000055	1	0.011	0.13	4.00	0.428	4.98	0.026
	Dose/Low TRV	0.004	0.59	0.35	0.0013	0.000093	0.59	0.000055	1	0.011	0.13	0.25	0.188	0.30	0.43
Areawide Maximum	Dose/High TRV	0.004	0.59	0.71	0.0027	0.000093	1.20	0.00011	1	0.011	0.26	4.00	0.428	4.98	0.052
	Dose/Low TRV	0.004	0.59	0.71	0.0027	0.000093	1.20	0.00011	1	0.011	0.26	0.25	0.188	0.30	0.88
Molybdenum															
Areawide 95UCL	Dose/High TRV	0.004	4.14	6.25	0.024	0.000093	1.51	0.00014	1	0.011	2.21	2.60	0.030	2.76	0.80
	Dose/Low TRV	0.004	4.14	6.25	0.024	0.000093	1.51	0.00014	1	0.011	2.21	0.26	0.030	0.28	**8.02**
Areawide Maximum	Dose/High TRV	0.004	4.14	15.7	0.061	0.000093	3.80	0.00035	1	0.011	5.57	2.60	0.030	2.76	**2.02**
	Dose/Low TRV	0.004	4.14	15.7	0.061	0.000093	3.80	0.00035	1	0.011	5.57	0.26	0.030	0.28	**20.2**
Nickel															
Areawide 95UCL	Dose/High TRV	0.004	0.054	5.11	0.020	0.000093	94.5	0.0088	1	0.011	2.60	31.60	0.249	38.1	0.068
	Dose/Low TRV	0.004	0.054	5.11	0.020	0.000093	94.5	0.0088	1	0.011	2.60	0.13	0.249	0.16	**16.2**
Areawide Maximum	Dose/High TRV	0.004	0.054	8.64	0.033	0.000093	160	0.015	1	0.011	4.39	31.60	0.249	38.1	0.12
	Dose/Low TRV	0.004	0.054	8.64	0.033	0.000093	160	0.015	1	0.011	4.39	0.13	0.249	0.16	**27.4**
Selenium															
Areawide 95UCL	Dose/High TRV	0.004	Regression	0.62	0.0024	0.000093	1.19	0.00011	1	0.011	0.23	1.21	0.025	1.27	0.18
	Dose/Low TRV	0.004	Regression	0.62	0.0024	0.000093	1.19	0.00011	1	0.011	0.23	0.05	0.187	0.059	**3.83**
Areawide Maximum	Dose/High TRV	0.004	Regression	1.15	0.0045	0.000093	2.10	0.00020	1	0.011	0.42	1.21	0.025	1.27	0.33
	Dose/Low TRV	0.004	Regression	1.15	0.0045	0.000093	2.10	0.00020	1	0.011	0.42	0.05	0.187	0.059	**7.1**
Thallium															
Areawide 95UCL	Dose/High TRV	0.004	NB	0.66	0.0026	0.000093	0.66	0.000061	1	0.011	0.24	1.43	0.065	1.59	0.15
	Dose/Low TRV	0.004	NB	0.66	0.0026	0.000093	0.66	0.000061	1	0.011	0.24	0.48	0.065	0.53	0.45
Areawide Maximum	Dose/High TRV	0.004	NB	1.30	0.0050	0.000093	1.30	0.00012	1	0.011	0.47	1.43	0.065	1.59	0.29
	Dose/Low TRV	0.004	NB	1.30	0.0050	0.000093	1.30	0.00012	1	0.011	0.47	0.48	0.065	0.53	0.88
Tin															
Areawide 95UCL	Dose/High TRV	0.004	NB	2.24	0.0087	0.000093	2.24	0.00021	1	0.011	0.81	35.0	0.030	37.2	0.022
	Dose/Low TRV	0.004	NB	2.24	0.0087	0.000093	2.24	0.00021	1	0.011	0.81	23.4	0.030	24.9	0.032
Areawide Maximum	Dose/High TRV	0.004	NB	5.00	0.019	0.000093	5.00	0.00046	1	0.011	1.80	35.0	0.030	37.2	0.048
	Dose/Low TRV	0.004	NB	5.00	0.019	0.000093	5.00	0.00046	1	0.011	1.80	23.4	0.030	24.9	0.073
Vanadium															
Areawide 95UCL	Dose/High TRV	0.004	0.0049	0.46	0.0018	0.000093	95.8	0.0089	1	0.011	0.97	2.10	0.260	2.54	0.38
	Dose/Low TRV	0.004	0.0049	0.46	0.0018	0.000093	95.8	0.0089	1	0.011	0.97	0.21	0.260	0.25	**3.83**
Areawide Maximum	Dose/High TRV	0.004	0.0049	1.10	0.0042	0.000093	226	0.021	1	0.011	2.30	2.10	0.260	2.54	0.90
	Dose/Low TRV	0.004	0.0049	1.10	0.0042	0.000093	226	0.021	1	0.011	2.30	0.21	0.260	0.25	**9.0**
Zinc															
Areawide 95UCL	Dose/High TRV	0.004	0.12	33.6	0.13	0.000093	280	0.026	1	0.011	14.2	411	0.175	486	0.029
	Dose/Low TRV	0.004	0.12	33.6	0.13	0.000093	280	0.026	1	0.011	14.2	9.60	0.026	10.1	**1.41**
Areawide Maximum	Dose/High TRV	0.004	0.12	222.0	0.86	0.000093	1,850	0.17	1	0.011	93.8	411	0.175	486	0.19
	Dose/Low TRV	0.004	0.12	222.0	0.86	0.000093	1,850	0.17	1	0.011	93.8	9.60	0.026	10.1	**9.29**
Total DDTs															
Areawide 95UCL	Dose/High TRV	0.004	Regression	0.0042	0.000016	0.000093	0.019	0.0000018	1	0.011	0.0016	16.0	0.320	19.59	0.000083
	Dose/Low TRV	0.004	Regression	0.0042	0.000016	0.000093	0.019	0.0000018	1	0.011	0.0016	0.80	0.320	0.98	0.0017
Areawide Maximum	Dose/High TRV	0.004	Regression	0.010	0.000038	0.000093	0.060	0.0000056	1	0.011	0.004	16.0	0.320	19.59	0.00020
	Dose/Low TRV	0.004	Regression	0.010	0.000038	0.000093	0.060	0.0000056	1	0.011	0.004	0.80	0.320	0.98	0.0040

TABLE M1-3: SALT MARSH HARVEST MOUSE DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Pickleweed BAF[2] (unitless)	Pickleweed Concentration[3] (mg/kg)	Pickleweed Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Dieldrin															
Areawide 95UCL	Dose/High TRV	0.004	0.41	0.00025	0.00000095	0.000093	0.00060	0.000000056	1	0.011	0.000092	0.20	0.350	0.25	0.00037
	Dose/Low TRV	0.004	0.41	0.00025	0.00000095	0.000093	0.00060	0.000000056	1	0.011	0.000092	0.02	0.350	0.025	0.0037
Areawide Maximum	Dose/High TRV	0.004	0.41	0.00025	0.00000095	0.000093	0.00060	0.000000056	1	0.011	0.000092	0.20	0.350	0.25	0.00037
	Dose/Low TRV	0.004	0.41	0.00025	0.00000095	0.000093	0.00060	0.000000056	1	0.011	0.000092	0.02	0.350	0.025	0.0037
Methoxychlor															
Areawide 95UCL	Dose/High TRV	0.004	0.11	0.00011	0.00000043	0.000093	0.0010	0.000000093	1	0.011	0.00005	50.0	0.332	61.3	0.00000077
	Dose/Low TRV	0.004	0.11	0.00011	0.00000043	0.000093	0.0010	0.000000093	1	0.011	0.00005	2.50	0.332	3.07	0.000015
Areawide Maximum	Dose/High TRV	0.004	0.11	0.00011	0.00000043	0.000093	0.0010	0.000000093	1	0.011	0.00005	50.0	0.332	61.3	0.00000077
	Dose/Low TRV	0.004	0.11	0.00011	0.00000043	0.000093	0.0010	0.000000093	1	0.011	0.00005	2.50	0.332	3.07	0.000015
Total Chlordane															
Areawide 95UCL	Dose/High TRV	0.004	0.025	0.00010	0.00000039	0.000093	0.0040	0.00000037	1	0.011	0.0001	9.20	0.030	9.77	0.0000071
	Dose/Low TRV	0.004	0.025	0.00010	0.00000039	0.000093	0.0040	0.00000037	1	0.011	0.0001	4.60	0.030	4.89	0.000014
Areawide Maximum	Dose/High TRV	0.004	0.025	0.00010	0.00000039	0.000093	0.0040	0.00000037	1	0.011	0.0001	9.20	0.030	9.77	0.0000071
	Dose/Low TRV	0.004	0.025	0.00010	0.00000039	0.000093	0.0040	0.00000037	1	0.011	0.0001	4.60	0.030	4.89	0.000014
Total PAHs															
Areawide 95UCL	Dose/High TRV	0.004	Regression	1.34	0.0052	0.000093	2.00	0.00019	1	0.011	0.49	32.79	0.031	34.9	0.014
	Dose/Low TRV	0.004	Regression	1.34	0.0052	0.000093	2.00	0.00019	1	0.011	0.49	1.31	0.031	1.39	0.35
Areawide Maximum	Dose/High TRV	0.004	Regression	1.34	0.0052	0.000093	2.00	0.00019	1	0.011	0.49	32.79	0.031	34.9	0.014
	Dose/Low TRV	0.004	Regression	1.34	0.0052	0.000093	2.00	0.00019	1	0.011	0.49	1.31	0.031	1.39	0.35
Total PCBs															
Areawide 95UCL	Dose/High TRV	0.004	0.01	0.0037	0.000014	0.000093	0.28	0.000026	1	0.011	0.00	1.28	0.023	1.34	0.0028
	Dose/Low TRV	0.004	0.01	0.0037	0.000014	0.000093	0.28	0.000026	1	0.011	0.00	0.36	0.21	0.43	0.0086
Areawide Maximum	Dose/High TRV	0.004	0.01	0.0078	0.000030	0.000093	0.60	0.000056	1	0.011	0.01	1.28	0.023	1.34	0.0058
	Dose/Low TRV	0.004	0.01	0.0078	0.000030	0.000093	0.60	0.000056	1	0.011	0.01	0.36	0.21	0.43	0.018

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95 percent upper confidence limit on the arithmetic mean	NB	No BAF was available.
BAF	Bioaccumulation factor	mg/kg	Milligram per kilogram
COPEC	Chemical of potential ecological concern	mg/kg/day	Milligram per kilogram per day
DDT	Dichlorodiphenyltrichloroethane	NA	Not available
kg/day	Kilogram per day	PCB	Polychlorinated biphenyl
mg/day	Milligram per day	SUF	Site use factor
EFA WEST	Naval Facilities Engineering Command, Engineering Field West	TRV	Toxicity reference value
HQ	Hazard quotient	USACE	U.S. Army Corps of Engineers

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for rodents and the averaged food requirement conversion for herbivores.

2 The 95UCL or habitat area maximum (see note 6) for all site-collected soil samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 1 mg/kg because no BAF was a

3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).

4 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration.

5 Rate for the meadow vole in Beyer and others (1994); 2.4 percent of prey ingestion rate.

6 For average doses, lesser of 95UCL or detected maximum of all site-collected sediment samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected sediment samples was used.

7 Sediment daily dose was calculated by multiplying the sediment ingestion rate by 95UCL or habitat area maximum (see note 6) sediment concentration.

8 Average adult weight from a San Pablo Bay (Gallinas) population measured by Fisler (1965).

9 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + sediment daily dose)*SUF)/receptor species body weight.

10 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.

11 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-0.94)}$.

12 The HQ was calculated using total daily dose/allometrically adjusted TRV.

13 Sufficient data are not available to derive a TRV. This chemical was evaluated qualitatively.

TABLE M1-4: NORTHERN HARRIER DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Mammal BAF[2] (unitless)	Mammal Concentration[3] (mg/kg)	Mammal Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Aluminum															
Areawide 95UCL	Dose/High TRV	0.046	0.0073	208	9.57	0.0026	28,545	74.69	0.024	0.41	4.97	1,097	0.155	1,333	0.0037
	Dose/Low TRV	0.046	0.0073	208	9.57	0.0026	28,545	74.69	0.024	0.41	4.97	109.7	0.155	133	0.037
Areawide Maximum	Dose/High TRV	0.046	0.0073	289	13.3	0.0026	39,600	103.6	1	0.41	284	1,097	0.155	1,333	0.21
	Dose/Low TRV	0.046	0.0073	289	13.3	0.0026	39,600	103.6	1	0.41	284	109.7	0.155	133	**2.13**
Antimony															
Areawide 95UCL	Dose/High TRV	0.046	1.27	2.29	0.105	0.0026	1.80	0.0047	0.024	0.41	0.0065	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	1.27	2.29	0.105	0.0026	1.80	0.0047	0.024	0.41	0.0065	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.046	1.27	9.78	0.449	0.0026	7.70	0.0201	1	0.41	1.14	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	1.27	9.78	0.449	0.0026	7.70	0.0201	1	0.41	1.14	NA	NA	NA	No TRV[13]
Arsenic															
Areawide 95UCL	Dose/High TRV	0.046	Regression	0.08	0.0038	0.0026	17.8	0.05	0.024	0.41	0.0030	22.01	1.172	17.8	0.00017
	Dose/Low TRV	0.046	Regression	0.08	0.0038	0.0026	17.8	0.05	0.024	0.41	0.0030	5.50	1.172	4.46	0.00067
Areawide Maximum	Dose/High TRV	0.046	Regression	0.20	0.0090	0.0026	51.1	0.13	1	0.41	0.35	22.01	1.172	17.8	0.019
	Dose/Low TRV	0.046	Regression	0.20	0.0090	0.0026	51.1	0.13	1	0.41	0.35	5.50	1.172	4.46	0.078
Barium															
Areawide 95UCL	Dose/High TRV	0.046	0.060	4.57	0.21	0.0026	76.1	0.20	0.024	0.41	0.024	41.70	0.121	53.3	0.00045
	Dose/Low TRV	0.046	0.060	4.57	0.21	0.0026	76.1	0.20	0.024	0.41	0.024	20.80	0.121	26.6	0.00091
Areawide Maximum	Dose/High TRV	0.046	0.060	9.06	0.42	0.0026	151	0.40	1	0.41	1.97	41.70	0.121	53.3	0.037
	Dose/Low TRV	0.046	0.060	9.06	0.42	0.0026	151	0.40	1	0.41	1.97	20.80	0.121	26.6	0.074
Beryllium															
Areawide 95UCL	Dose/High TRV	0.046	Regression	0.0026	0.000119	0.0026	0.49	0.0013	0.024	0.41	0.000083	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	Regression	0.0026	0.000	0.0026	0.49	0.0013	0.024	0.41	0.000083	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.046	Regression	0.0038	0.000	0.0026	0.83	0.0022	1	0.41	0.0057	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	Regression	0.0038	0.000	0.0026	0.83	0.0022	1	0.41	0.0057	NA	NA	NA	No TRV[13]
Cadmium															
Areawide 95UCL	Dose/High TRV	0.046	Regression	0.24	0.0109	0.0026	0.68	0.0018	0.024	0.41	0.00075	10.43	0.084	14.3	0.000052
	Dose/Low TRV	0.046	Regression	0.24	0.0109	0.0026	0.68	0.0018	0.024	0.41	0.00075	0.08	0.799	0.070	0.0107
Areawide Maximum	Dose/High TRV	0.046	Regression	0.71	0.0327	0.0026	7.00	0.0183	1	0.41	0.124	10.43	0.084	14.3	0.009
	Dose/Low TRV	0.046	Regression	0.71	0.0327	0.0026	7.00	0.0183	1	0.41	0.124	0.08	0.799	0.070	**1.77**
Chromium															
Areawide 95UCL	Dose/High TRV	0.046	0.030	2.95	0.14	0.0026	98.4	0.26	0.024	0.41	0.023	5.00	1.250	4.00	0.0058
	Dose/Low TRV	0.046	0.030	2.95	0.14	0.0026	98.4	0.26	0.024	0.41	0.023	1.00	1.250	0.80	0.029
Areawide Maximum	Dose/High TRV	0.046	0.030	8.82	0.40	0.0026	294	0.77	1	0.41	2.86	5.00	1.250	4.00	0.71
	Dose/Low TRV	0.046	0.030	8.82	0.40	0.0026	294	0.77	1	0.41	2.86	1.00	1.250	0.80	**3.57**
Cobalt															
Areawide 95UCL	Dose/High TRV	0.046	Regression	0.60	0.028	0.0026	20.6	0.054	0.024	0.41	0.0048	76.10	0.292	81.5	0.000059
	Dose/Low TRV	0.046	Regression	0.60	0.028	0.0026	20.6	0.054	0.024	0.41	0.0048	7.61	0.292	8.15	0.00059
Areawide Maximum	Dose/High TRV	0.046	Regression	1.19	0.055	0.0026	34.8	0.091	1	0.41	0.35	76.10	0.292	81.5	0.0043
	Dose/Low TRV	0.046	Regression	1.19	0.055	0.0026	34.8	0.091	1	0.41	0.35	7.61	0.292	8.15	0.043
Copper															
Areawide 95UCL	Dose/High TRV	0.046	0.15	14.21	0.65	0.0026	94.8	0.25	0.024	0.41	0.053	52.26	0.409	52.3	0.0010
	Dose/Low TRV	0.046	0.15	14.21	0.65	0.0026	94.8	0.25	0.024	0.41	0.053	2.30	0.639	2.11	0.025
Areawide Maximum	Dose/High TRV	0.046	0.15	48.6	2.23	0.0026	324	0.85	1	0.41	7.49	52.26	0.409	52.3	0.14
	Dose/Low TRV	0.046	0.15	48.6	2.23	0.0026	324	0.85	1	0.41	7.49	2.30	0.639	2.11	**3.56**
Lead															
Areawide 95UCL	Dose/High TRV	0.046	0.14	13.3	0.61	0.0026	95.3	0.25	0.024	0.41	0.051	8.75	0.800	7.66	0.0066
	Dose/Low TRV	0.046	0.14	13.3	0.61	0.0026	95.3	0.25	0.024	0.41	0.051	0.01	0.084	0.019	**2.64**
Areawide Maximum	Dose/High TRV	0.046	0.14	59.1	2.71	0.0026	422	1.10	1	0.41	9.29	8.75	0.800	7.66	**1.21**
	Dose/Low TRV	0.046	0.14	59.1	2.71	0.0026	422	1.10	1	0.41	9.29	0.01	0.084	0.019	**483**
Bioavailable Dose (95UCL)	Dose/High TRV	0.046	0.14	13.3	0.61	0.0026	6.00	0.016	0.024	0.41	0.037	8.75	0.800	7.66	0.0048
	Dose/Low TRV	0.046	0.14	13.3	0.61	0.0026	6.00	0.016	0.024	0.41	0.037	0.01	0.084	0.019	**1.93**

TABLE M1-4: NORTHERN HARRIER DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Mammal BAF[2] (unitless)	Mammal Concentration[3] (mg/kg)	Mammal Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Manganese															
Areawide 95UCL	Dose/High TRV	0.046	0.021	11.5	0.53	0.0026	560	1.47	0.024	0.41	0.12	776.00	0.197	899	0.00013
	Dose/Low TRV	0.046	0.021	11.5	0.53	0.0026	560	1.47	0.024	0.41	0.12	77.60	0.197	89.9	0.0013
Areawide Maximum	Dose/High TRV	0.046	0.021	35.9	1.65	0.0026	1,750	4.58	1	0.41	15.1	776.00	0.197	899	0.017
	Dose/Low TRV	0.046	0.021	35.9	1.65	0.0026	1,750	4.58	1	0.41	15.1	77.60	0.197	89.9	0.17
Mercury															
Areawide 95UCL	Dose/High TRV	0.046	0.054	0.032	0.0015	0.0026	0.59	0.0015	0.024	0.41	0.00018	0.18	1.000	0.15	0.0012
	Dose/Low TRV	0.046	0.054	0.032	0.0015	0.0026	0.59	0.0015	0.024	0.41	0.00018	0.00	1.000	0.0033	0.054
Areawide Maximum	Dose/High TRV	0.046	0.054	0.065	0.0030	0.0026	1.20	0.0031	1	0.41	0.015	0.18	1.000	0.15	0.099
	Dose/Low TRV	0.046	0.054	0.065	0.0030	0.0026	1.20	0.0031	1	0.41	0.015	0.00	1.000	0.0033	**4.57**
Molybdenum															
Areawide 95UCL	Dose/High TRV	0.046	NB	1.51	0.069	0.0026	1.51	0.0040	0.024	0.41	0.0043	35.30	1.500	27.2	0.00016
	Dose/Low TRV	0.046	NB	1.51	0.069	0.0026	1.51	0.0040	0.024	0.41	0.0043	3.50	1.500	2.70	0.0016
Areawide Maximum	Dose/High TRV	0.046	NB	3.8	0.17	0.0026	3.80	0.010	1	0.41	0.45	35.30	1.500	27.2	0.016
	Dose/Low TRV	0.046	NB	3.8	0.17	0.0026	3.80	0.010	1	0.41	0.45	3.50	1.500	2.70	0.17
Nickel															
Areawide 95UCL	Dose/High TRV	0.046	Regression	6.51	0.30	0.0026	94.5	0.25	0.024	0.41	0.032	55.26	0.580	51.6	0.0006
	Dose/Low TRV	0.046	Regression	6.51	0.30	0.0026	94.5	0.25	0.024	0.41	0.032	1.38	0.614	1.27	0.025
Areawide Maximum	Dose/High TRV	0.046	Regression	8.31	0.38	0.0026	160	0.42	1	0.41	1.95	55.26	0.580	51.6	0.04
	Dose/Low TRV	0.046	Regression	8.31	0.38	0.0026	160	0.42	1	0.41	1.95	1.38	0.614	1.27	**1.53**
Selenium															
Areawide 95UCL	Dose/High TRV	0.046	1.63	1.94	0.089	0.0026	1.19	0.0031	0.024	0.41	0.0054	0.93	1.108	0.76	0.0071
	Dose/Low TRV	0.046	1.63	1.94	0.089	0.0026	1.19	0.0031	0.024	0.41	0.0054	0.23	1.108	0.19	0.029
Areawide Maximum	Dose/High TRV	0.046	1.63	3.42	0.16	0.0026	2.10	0.0055	1	0.41	0.40	0.93	1.108	0.76	0.52
	Dose/Low TRV	0.046	1.63	3.42	0.16	0.0026	2.10	0.0055	1	0.41	0.40	0.23	1.108	0.19	**2.10**
Thallium															
Areawide 95UCL	Dose/High TRV	0.046	NB	0.66	0.030	0.0026	0.66	0.0017	0.024	0.41	0.0019	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	NB	0.66	0.030	0.0026	0.66	0.0017	0.024	0.41	0.0019	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.046	NB	1.30	0.060	0.0026	1.30	0.0034	1	0.41	0.15	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	NB	1.30	0.060	0.0026	1.30	0.0034	1	0.41	0.15	NA	NA	NA	No TRV[13]
Tin															
Areawide 95UCL	Dose/High TRV	0.046	NB	2.24	0.10	0.0026	2.24	0.0059	0.024	0.41	0.0064	16.9	0.150	20.7	0.00031
	Dose/Low TRV	0.046	NB	2.24	0.10	0.0026	2.24	0.0059	0.024	0.41	0.0064	6.80	0.150	8.32	0.00077
Areawide Maximum	Dose/High TRV	0.046	NB	5.00	0.23	0.0026	5.00	0.013	1	0.41	0.59	16.9	0.150	20.7	0.029
	Dose/Low TRV	0.046	NB	5.00	0.23	0.0026	5.00	0.013	1	0.41	0.59	6.80	0.150	8.32	0.071
Vanadium															
Areawide 95UCL	Dose/High TRV	0.046	0.13	12.4	0.57	0.0026	95.8	0.25	0.024	0.41	0.048	114.0	1.170	92.5	0.00052
	Dose/Low TRV	0.046	0.13	12.4	0.57	0.0026	95.8	0.25	0.024	0.41	0.048	11.40	1.170	9.25	0.0052
Areawide Maximum	Dose/High TRV	0.046	0.13	29.2	1.34	0.0026	226	0.59	1	0.41	4.70	114.0	1.170	92.5	0.051
	Dose/Low TRV	0.046	0.13	29.2	1.34	0.0026	226	0.59	1	0.41	4.70	11.40	1.170	9.25	0.51
Zinc															
Areawide 95UCL	Dose/High TRV	0.046	0.89	250	11.5	0.0026	280	0.73	0.024	0.41	0.72	172.0	0.955	145	0.0049
	Dose/Low TRV	0.046	0.89	250	11.5	0.0026	280	0.73	0.024	0.41	0.72	17.20	0.955	14.5	0.049
Areawide Maximum	Dose/High TRV	0.046	0.89	1647	75.6	0.0026	1,850	4.84	1	0.41	196	172.0	0.955	145	**1.35**
	Dose/Low TRV	0.046	0.89	1647	75.6	0.0026	1,850	4.84	1	0.41	196	17.20	0.955	14.5	**13.5**
Total DDTs															
Areawide 95UCL	Dose/High TRV	0.046	Regression	0.79	0.036	0.0026	0.019	0.000051	0.024	0.41	0.0022	1.50	1.0	1.26	0.0017
	Dose/Low TRV	0.046	Regression	0.79	0.036	0.0026	0.019	0.000051	0.024	0.41	0.0022	0.00	3.5	0.00059	**3.67**
Areawide Maximum	Dose/High TRV	0.046	Regression	1.68	0.077	0.0026	0.060	0.00016	1	0.41	0.19	1.50	1.0	1.26	0.15
	Dose/Low TRV	0.046	Regression	1.68	0.077	0.0026	0.060	0.00016	1	0.41	0.19	0.00	3.5	0.00059	**320**

TABLE M1-4: NORTHERN HARRIER DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Mammal BAF[2] (unitless)	Mammal Concentration[3] (mg/kg)	Mammal Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Dieldrin															
Areawide 95UCL	Dose/High TRV	0.046	3.35	0.0020	0.000092	0.0026	0.00060	0.0000016	0.024	0.41	0.0000055	0.77	0.47	0.75	0.0000074
	Dose/Low TRV	0.046	3.35	0.0020	0.000092	0.0026	0.00060	0.0000016	0.024	0.41	0.0000055	0.08	0.47	0.075	0.000074
Areawide Maximum	Dose/High TRV	0.046	3.35	0.0020	0.000092	0.0026	0.00060	0.0000016	1	0.41	0.00023	0.77	0.47	0.75	0.00030
	Dose/Low TRV	0.046	3.35	0.0020	0.000092	0.0026	0.00060	0.0000016	1	0.41	0.00023	0.08	0.47	0.075	0.0030
Methoxychlor															
Areawide 95UCL	Dose/High TRV	0.046	NB	0.0010	0.000046	0.0026	0.0010	0.0000026	0.024	0.41	0.0000029	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	NB	0.0010	0.000046	0.0026	0.0010	0.0000026	0.024	0.41	0.0000029	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.046	NB	0.0010	0.000046	0.0026	0.0010	0.0000026	1	0.41	0.00012	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	NB	0.0010	0.000046	0.0026	0.0010	0.0000026	1	0.41	0.00012	NA	NA	NA	No TRV[13]
Total Chlordane															
Areawide 95UCL	Dose/High TRV	0.046	NB	0.0040	0.00018	0.0026	0.0040	0.000010	0.024	0.41	0.000011	10.70	0.064	15.5	0.00000074
	Dose/Low TRV	0.046	NB	0.0040	0.00018	0.0026	0.0040	0.000010	0.024	0.41	0.000011	2.14	0.064	3.10	0.0000037
Areawide Maximum	Dose/High TRV	0.046	NB	0.0040	0.00018	0.0026	0.0040	0.000010	1	0.41	0.00047	10.70	0.064	15.5	0.000030
	Dose/Low TRV	0.046	NB	0.0040	0.00018	0.0026	0.0040	0.000010	1	0.41	0.00047	2.14	0.064	3.10	0.00015
Total PAHs															
Areawide 95UCL	Dose/High TRV	0.046	0	0.00	0.00	0.0026	2.00	0.0052	0.024	0.41	0.00031	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	0	0.00	0.00	0.0026	2.00	0.0052	0.024	0.41	0.00031	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.046	0	0.00	0.00	0.0026	2.00	0.0052	1	0.41	0.013	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	0	0.00	0.00	0.0026	2.00	0.0052	1	0.41	0.013	NA	NA	NA	No TRV[13]
Total PCBs															
Areawide 95UCL	Dose/High TRV	0.046	NB	0.28	0.013	0.0026	0.28	0.00074	0.024	0.41	0.00081	1.27	1.72	0.95	0.00085
	Dose/Low TRV	0.046	NB	0.28	0.013	0.0026	0.28	0.00074	0.024	0.41	0.00081	0.09	0.80	0.079	0.010
Areawide Maximum	Dose/High TRV	0.046	NB	0.60	0.028	0.0026	0.60	0.0016	1	0.41	0.071	1.27	1.72	0.95	0.074
	Dose/Low TRV	0.046	NB	0.60	0.028	0.0026	0.60	0.0016	1	0.41	0.071	0.09	0.80	0.079	0.90

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95th percent upper confidence limit on the arithmetic mean	kg/day	Kilogram per day
BAF	Bioaccumulation factor	LMW	Low molecular weight
BHC	Benzene hexachloride	mg/day	Milligram per day
COPEC	Chemical of potential ecological concern	mg/kg	Milligram per kilogram
DDE	Dichlorodiphenyldichloroethene	mg/kg/day	Milligram per kilogram per day
DDT	Dichlorodiphenyltrichloroethane	NA	Not applicable
EFA WEST	Naval Facilities Engineering Command, Engineering Field Activity West	NB	No BAF was available.
HMW	High molecular weight	PAH	Polycyclic aromatic hydrocarbon
HQ	Hazard quotient	SUF	Site use factor
kg	Kilogram	TRV	Toxicity reference value

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for all birds and the averaged food requirement conversion for insectivorous birds.

2 The 95UCL or habitat area maximum (see note 6) for all site-collected soil samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 1 mg/kg because no BAF was available.

3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).

4 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration.

5 Rate for the Bald Eagle in Pascoe and others (1996); 0.7 percent of prey ingestion rate.

6 For average doses, lesser of 95UCL or detected maximum of all site-collected soil samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected soil samples was used.

7 Soil daily dose was calculated by multiplying the soil ingestion rate by 95UCL or habitat area maximum (see note 6) soil concentration.

8 Average adult weight from Dunning (1993).

9 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + soil daily dose)*SUF)/receptor species body weight.

10 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.

11 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-1.2)}$.

12 The HQ was calculated using total daily dose/allometrically adjusted TRV.

13 Sufficient data are not available to derive a TRV. This chemical was evaluated qualitatively.

TABLE M1-5: NORTHERN HARRIER DOSE CALCULATIONS AND HAZARD QUOTIENTS, UPLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Mammal BAF[2] (unitless)	Mammal Concentration[3] (mg/kg)	Mammal Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration[6] (mg/kg)	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Aluminum															
Areawide 95UCL	Dose/High TRV	0.046	0.0073	185	8.51	0.0026	25,400	66.47	0.094	0.41	17.24	1,097	0.155	1,333	0.013
	Dose/Low TRV	0.046	0.0073	185	8.51	0.0026	25,400	66.47	0.094	0.41	17.24	110	0.155	133.3	0.13
Areawide Maximum	Dose/High TRV	0.046	0.0073	185	8.51	0.0026	25,400	66.47	1	0.41	182.4	1,097	0.155	1,333	0.14
	Dose/Low TRV	0.046	0.0073	185	8.51	0.0026	25,400	66.47	1	0.41	182.4	110	0.155	133.3	**1.37**
Antimony															
Areawide 95UCL	Dose/High TRV	0.046	1.27	6.86	0.31	0.0026	5.40	0.014	0.094	0.41	0.076	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	1.27	6.86	0.31	0.0026	5.40	0.014	0.094	0.41	0.076	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.046	1.27	6.86	0.31	0.0026	5.40	0.014	1	0.41	0.80	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	1.27	6.86	0.31	0.0026	5.40	0.014	1	0.41	0.80	NA	NA	NA	No TRV[13]
Barium															
Areawide 95UCL	Dose/High TRV	0.046	0.060	6.53	0.30	0.0026	109	0.28	0.094	0.41	0.13	41.7	0.12	53.3	0.0025
	Dose/Low TRV	0.046	0.060	6.53	0.30	0.0026	109	0.28	0.094	0.41	0.13	20.8	0.12	26.6	0.0051
Areawide Maximum	Dose/High TRV	0.046	0.060	28.4	1.31	0.0026	474	1.24	1	0.41	6.19	41.7	0.12	53.3	0.12
	Dose/Low TRV	0.046	0.060	28.4	1.31	0.0026	474	1.24	1	0.41	6.19	20.8	0.12	26.6	0.23
Beryllium															
Areawide 95UCL	Dose/High TRV	0.046	Regression	0.0026	0.00012	0.0026	0.21	0.0005	0.094	0.41	0.0002	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	Regression	0.0026	0.00012	0.0026	0.21	0.0005	0.094	0.41	0.0002	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.046	Regression	0.0038	0.00018	0.0026	1.60	0.0042	1	0.41	0.011	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	Regression	0.0038	0.00018	0.0026	1.60	0.0042	1	0.41	0.011	NA	NA	NA	No TRV[13]
Cadmium															
Areawide 95UCL	Dose/High TRV	0.046	Regression	0.53	0.025	0.0026	3.80	0.0099	0.094	0.41	0.0079	10.4	0.084	14.33	0.00055
	Dose/Low TRV	0.046	Regression	0.53	0.025	0.0026	3.80	0.0099	0.094	0.41	0.0079	0.080	0.799	0.070	0.11
Areawide Maximum	Dose/High TRV	0.046	Regression	0.53	0.025	0.0026	3.80	0.0099	1	0.41	0.084	10.4	0.084	14.33	0.0059
	Dose/Low TRV	0.046	Regression	0.53	0.025	0.0026	3.80	0.0099	1	0.41	0.084	0.080	0.799	0.070	**1.20**
Chromium															
Areawide 95UCL	Dose/High TRV	0.046	0.030	1.83	0.084	0.0026	60.9	0.16	0.094	0.41	0.056	5.00	1.250	4.00	0.014
	Dose/Low TRV	0.046	0.030	1.83	0.084	0.0026	60.9	0.16	0.094	0.41	0.056	1.00	1.250	0.80	0.070
Areawide Maximum	Dose/High TRV	0.046	0.030	13.2	0.61	0.0026	440	1.15	1	0.41	4.28	5.00	1.250	4.00	**1.07**
	Dose/Low TRV	0.046	0.030	13.2	0.61	0.0026	440	1.15	1	0.41	4.28	1.00	1.250	0.80	**5.34**
Copper															
Areawide 95UCL	Dose/High TRV	0.046	0.15	13.3	0.61	0.0026	88.4	0.23	0.094	0.41	0.19	52.3	0.409	52.3	0.0037
	Dose/Low TRV	0.046	0.15	13.3	0.61	0.0026	88.4	0.23	0.094	0.41	0.19	2.30	0.639	2.11	0.092
Areawide Maximum	Dose/High TRV	0.046	0.15	103	4.71	0.0026	684	1.79	1	0.41	15.8	52.3	0.409	52.3	0.30
	Dose/Low TRV	0.046	0.15	103	4.71	0.0026	684	1.79	1	0.41	15.8	2.30	0.639	2.11	**7.51**
Lead															
Areawide 95UCL	Dose/High TRV	0.046	0.14	16.4	0.75	0.0026	117	0.31	0.094	0.41	0.24	8.75	0.80	7.66	0.032
	Dose/Low TRV	0.046	0.14	16.4	0.75	0.0026	117	0.31	0.094	0.41	0.24	0.014	0.084	0.02	**12.6**
Areawide Maximum	Dose/High TRV	0.046	0.14	136	6.22	0.0026	968	2.53	1	0.41	21.3	8.75	0.80	7.66	**2.78**
	Dose/Low TRV	0.046	0.14	136	6.22	0.0026	968	2.53	1	0.41	21.3	0.014	0.084	0.02	**1,108**
Bioavailable Dose	Dose/High TRV	0.046	0.14	16.4	0.75	0.0026	11.4	0.030	0.094	0.41	0.18	8.75	0.80	7.7	0.023
(95UCL)	Dose/Low TRV	0.046	0.14	16.4	0.75	0.0026	11.4	0.030	0.094	0.41	0.18	0.01	0.084	0.02	**9.33**
Mercury															
Areawide 95UCL	Dose/High TRV	0.046	0.054	0.55	0.025	0.0026	10.2	0.027	0.094	0.41	0.012	0.18	1.000	0.15	0.080
	Dose/Low TRV	0.046	0.054	0.55	0.025	0.0026	10.2	0.027	0.094	0.41	0.012	0.004	1.000	0.0033	**3.67**
Areawide Maximum	Dose/High TRV	0.046	0.054	0.55	0.025	0.0026	10.2	0.027	1	0.41	0.13	0.18	1.000	0.15	0.84
	Dose/Low TRV	0.046	0.054	0.55	0.025	0.0026	10.2	0.027	1	0.41	0.13	0.004	1.000	0.0033	**38.8**
Bioavailable Dose	Dose/High TRV	0.046	0.054	0.55	0.025	0.0026	0.10	0.00027	0.094	0.41	0.0059	0.18	1.000	0.15	0.039
(95UCL)	Dose/Low TRV	0.046	0.054	0.55	0.025	0.0026	0.10	0.00027	0.094	0.41	0.0059	0.004	1.000	0.0033	**1.81**
Molybdenum															
Areawide 95UCL	Dose/High TRV	0.046	NB	0.50	0.023	0.0026	0.50	0.0013	0.094	0.41	0.0056	35.30	1.500	27.2	0.00020
	Dose/Low TRV	0.046	NB	0.50	0.023	0.0026	0.50	0.0013	0.094	0.41	0.0056	3.50	1.500	2.70	0.0021
Areawide Maximum	Dose/High TRV	0.046	NB	6.80	0.31	0.0026	6.80	0.018	1	0.41	0.803	35.30	1.500	27.2	0.029
	Dose/Low TRV	0.046	NB	6.80	0.31	0.0026	6.80	0.018	1	0.41	0.803	3.50	1.500	2.70	0.30

TABLE M1-5: NORTHERN HARRIER DOSE CALCULATIONS AND HAZARD QUOTIENTS, UPLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Mammal BAF[2] (unitless)	Mammal Concentration[3] (mg/kg)	Mammal Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration[6] (mg/kg)	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Selenium															
Areawide 95UCL	Dose/High TRV	0.046	1.63	0.98	0.045	0.0026	0.60	0.0016	0.094	0.41	0.011	0.93	1.108	0.76	0.014
	Dose/Low TRV	0.046	1.63	0.98	0.045	0.0026	0.60	0.0016	0.094	0.41	0.011	0.23	1.108	0.19	0.057
Areawide Maximum	Dose/High TRV	0.046	1.63	2.93	0.13	0.0026	1.80	0.0047	1	0.41	0.34	0.93	1.108	0.76	0.44
	Dose/Low TRV	0.046	1.63	2.93	0.13	0.0026	1.80	0.0047	1	0.41	0.34	0.23	1.108	0.19	**1.80**
Silver															
Areawide 95UCL	Dose/High TRV	0.046	0.0040	0.0019	0.000088	0.0026	0.48	0.0013	0.094	0.41	0.00031	20.20	0.662	18.4	0.000017
	Dose/Low TRV	0.046	0.0040	0.0019	0.000088	0.0026	0.48	0.0013	0.094	0.41	0.00031	2.02	0.662	1.84	0.00017
Areawide Maximum	Dose/High TRV	0.046	0.0040	0.023	0.0011	0.0026	5.80	0.015	1	0.41	0.040	20.20	0.662	18.4	0.0022
	Dose/Low TRV	0.046	0.0040	0.023	0.0011	0.0026	5.80	0.015	1	0.41	0.040	2.02	0.662	1.84	0.022
Thallium															
Areawide 95UCL	Dose/High TRV	0.046	NB	0.44	0.020	0.0026	0.44	0.0012	0.094	0.41	0.0049	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	NB	0.44	0.020	0.0026	0.44	0.0012	0.094	0.41	0.0049	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.046	NB	1.60	0.073	0.0026	1.60	0.0042	1	0.41	0.19	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	NB	1.60	0.073	0.0026	1.60	0.0042	1	0.41	0.19	NA	NA	NA	No TRV[13]
Tin															
Areawide 95UCL	Dose/High TRV	0.046	NB	28.4	1.30	0.0026	28.4	0.074	0.094	0.41	0.316	16.90	0.150	20.7	0.015
	Dose/Low TRV	0.046	NB	28.4	1.30	0.0026	28.4	0.074	0.094	0.41	0.316	6.80	0.150	8.32	0.038
Areawide Maximum	Dose/High TRV	0.046	NB	40.6	1.86	0.0026	40.6	0.106	1	0.41	4.793	16.90	0.150	20.7	0.23
	Dose/Low TRV	0.046	NB	40.6	1.86	0.0026	40.6	0.106	1	0.41	4.793	6.80	0.150	8.32	0.58
Vanadium															
Areawide 95UCL	Dose/High TRV	0.046	0.13	9.61	0.44	0.0026	74.5	0.19	0.094	0.41	0.146	114.0	1.170	92.5	0.0016
	Dose/Low TRV	0.046	0.13	9.61	0.44	0.0026	74.5	0.19	0.094	0.41	0.146	11.40	1.170	9.25	0.016
Areawide Maximum	Dose/High TRV	0.046	0.13	31.1	1.43	0.0026	241	0.63	1	0.41	5.01	114.0	1.170	92.5	0.054
	Dose/Low TRV	0.046	0.13	31.1	1.43	0.0026	241	0.63	1	0.41	5.01	11.40	1.170	9.25	0.54
Zinc															
Areawide 95UCL	Dose/High TRV	0.046	0.89	192	8.81	0.0026	216	0.56	0.094	0.41	2.15	172.0	0.955	145.3	0.015
	Dose/Low TRV	0.046	0.89	192	8.81	0.0026	216	0.56	0.094	0.41	2.15	17.20	0.955	14.53	0.15
Areawide Maximum	Dose/High TRV	0.046	0.89	1762	80.9	0.0026	1,980	5.18	1	0.41	209.4	172.0	0.955	145.3	**1.44**
	Dose/Low TRV	0.046	0.89	1762	80.9	0.0026	1,980	5.18	1	0.41	209.4	17.20	0.955	14.53	**14.4**
LMW PAH															
Areawide 95UCL	Dose/High TRV	0.046	0	0.00	0.00	0.0026	0.10	0.00027	0.094	0.41	0.00006	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	0	0.00	0.00	0.0026	0.10	0.00027	0.094	0.41	0.00006	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.046	0	0.00	0.00	0.0026	0.64	0.0017	1	0.41	0.0041	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	0	0.00	0.00	0.0026	0.64	0.0017	1	0.41	0.0041	NA	NA	NA	No TRV[13]
HMW PAH															
Areawide 95UCL	Dose/High TRV	0.046	0	0.00	0.00	0.0026	0.85	0.0022	0.094	0.41	0.00051	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	0	0.00	0.00	0.0026	0.85	0.0022	0.094	0.41	0.00051	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.046	0	0.00	0.00	0.0026	3.79	0.010	1	0.41	0.024	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	0	0.00	0.00	0.0026	3.79	0.010	1	0.41	0.024	NA	NA	NA	No TRV[13]
DDE															
Areawide 95UCL	Dose/High TRV	0.046	0.27	0.0011	0.000048	0.0026	0.0039	0.000010	0.094	0.41	0.000013	0.60	1.00	0.50	0.000027
	Dose/Low TRV	0.046	0.27	0.0011	0.000048	0.0026	0.0039	0.000010	0.094	0.41	0.000013	0.00090	3.50	0.00059	0.023
Areawide Maximum	Dose/High TRV	0.046	0.27	0.010	0.00046	0.0026	0.037	0.00010	1	0.41	0.0014	0.60	1.00	0.50	0.0027
	Dose/Low TRV	0.046	0.27	0.010	0.00046	0.0026	0.037	0.00010	1	0.41	0.0014	0.00090	3.50	0.00059	**2.30**
DDT															
Areawide 95UCL	Dose/High TRV	0.046	0.75	0.014	0.00064	0.0026	0.019	0.000048	0.094	0.41	0.00016	1.50	1.00	1.26	0.00013
	Dose/Low TRV	0.046	0.75	0.014	0.00064	0.0026	0.019	0.000048	0.094	0.41	0.00016	0.00090	3.50	0.00059	0.27
Areawide Maximum	Dose/High TRV	0.046	0.75	0.158	0.0072	0.0026	0.21	0.00055	1	0.41	0.019	1.50	1.00	1.26	0.015
	Dose/Low TRV	0.046	0.75	0.158	0.0072	0.0026	0.21	0.00055	1	0.41	0.019	0.00090	3.50	0.00059	**32.3**

TABLE M1-5: NORTHERN HARRIER DOSE CALCULATIONS AND HAZARD QUOTIENTS, UPLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Mammal BAF[2] (unitless)	Mammal Concentration[3] (mg/kg)	Mammal Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration[6] (mg/kg)	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Total DDTs															
Areawide 95UCL	Dose/High TRV	0.046	Regression	1.31	0.060	0.0026	0.041	0.00011	0.094	0.41	0.014	1.50	1.00	1.26	0.011
	Dose/Low TRV	0.046	Regression	1.31	0.060	0.0026	0.041	0.00011	0.094	0.41	0.014	0.00090	3.50	0.00	**23.6**
Areawide Maximum	Dose/High TRV	0.046	Regression	6.85	0.31	0.0026	0.50	0.0013	1	0.41	0.77	1.50	1.00	1.26	0.61
	Dose/Low TRV	0.046	Regression	6.85	0.31	0.0026	0.50	0.0013	1	0.41	0.77	0.00090	3.50	0.00	**1310**
Gamma-BHC															
Areawide 95UCL	Dose/High TRV	0.046	NB	0.0022	0.00010	0.0026	0.0022	0.000006	0.094	0.41	0.000025	20.0	1.00	16.74	0.0000015
	Dose/Low TRV	0.046	NB	0.0022	0.00010	0.0026	0.0022	0.000006	0.094	0.41	0.000025	2.00	1.00	1.67	0.000015
Areawide Maximum	Dose/High TRV	0.046	NB	0.014	0.00064	0.0026	0.014	0.000037	1	0.41	0.0017	20.0	1.00	16.74	0.000099
	Dose/Low TRV	0.046	NB	0.014	0.00064	0.0026	0.014	0.000037	1	0.41	0.0017	2.00	1.00	1.67	0.00099
Heptachlor															
Areawide 95UCL	Dose/High TRV	0.046	NB	0.00040	0.000018	0.0026	0.00040	0.0000010	0.094	0.41	0.0000045	10.7	0.064	15.52	0.00000029
	Dose/Low TRV	0.046	NB	0.00040	0.000018	0.0026	0.00040	0.0000010	0.094	0.41	0.0000045	2.14	0.064	3.10	0.0000014
Areawide Maximum	Dose/High TRV	0.046	NB	0.0050	0.00023	0.0026	0.0050	0.000013	1	0.41	0.00059	10.7	0.064	15.52	0.000038
	Dose/Low TRV	0.046	NB	0.0050	0.00023	0.0026	0.0050	0.000013	1	0.41	0.00059	2.14	0.064	3.10	0.00019
Methoxychlor															
Areawide 95UCL	Dose/High TRV	0.046	NB	0.010	0.00045	0.0026	0.0098	0.000026	0.094	0.41	0.00011	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	NB	0.010	0.00045	0.0026	0.0098	0.000026	0.094	0.41	0.00011	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.046	NB	0.020	0.00092	0.0026	0.020	0.000052	1	0.41	0.0024	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.046	NB	0.020	0.00092	0.0026	0.020	0.000052	1	0.41	0.0024	NA	NA	NA	No TRV[13]
Total Chlordane															
Areawide 95UCL	Dose/High TRV	0.046	NB	0.015	0.00070	0.0026	0.015	0.000040	0.094	0.41	0.00017	10.7	0.064	15.5	0.000011
	Dose/Low TRV	0.046	NB	0.015	0.00070	0.0026	0.015	0.000040	0.094	0.41	0.00017	2.14	0.064	3.10	0.000055
Areawide Maximum	Dose/High TRV	0.046	NB	0.070	0.00321	0.0026	0.070	0.00018	1	0.41	0.0083	10.7	0.064	15.5	0.00053
	Dose/Low TRV	0.046	NB	0.070	0.00321	0.0026	0.070	0.00018	1	0.41	0.0083	2.14	0.064	3.10	0.0027

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95th percent upper confidence limit on the arithmetic mean	kg/day	Kilogram per day
BAF	Bioaccumulation factor	LMW	Low molecular weight
BHC	Benzene hexachloride	mg/day	Milligram per day
COPEC	Chemical of potential ecological concern	mg/kg	Milligram per kilogram
DDE	Dichlorodiphenyldichloroethene	mg/kg/day	Milligram per kilogram per day
DDT	Dichlorodiphenyltrichloroethane	NA	Not applicable
EFA WEST	Naval Facilities Engineering Command, Engineering Field Activity West	NB	No BAF was available.
HMW	High molecular weight	PAH	Polycyclic aromatic hydrocarbon
HQ	Hazard quotient	SUF	Site use factor
kg	Kilogram	TRV	Toxicity reference value

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for all birds and the averaged food requirement conversion for insectivorous birds.

2 The 95UCL or habitat area maximum (see note 6) for all site-collected soil samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 1 mg/kg because no BAF was available.

3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).

4 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration.

5 Rate for the Bald Eagle in Pascoe and others (1996); 0.7 percent of prey ingestion rate.

6 For average doses, lesser of 95UCL or detected maximum of all site-collected soil samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected soil samples was used.

7 Soil daily dose was calculated by multiplying the soil ingestion rate by 95UCL or habitat area maximum (see note 6) soil concentration.

8 Average adult weight from Dunning (1993).

9 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + soil daily dose)*SUF)/receptor species body weight.

10 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.

11 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-1.2)}$.

12 The HQ was calculated using total daily dose/allometrically adjusted TRV.

13 Sufficient data are not available to derive a TRV. This chemical was evaluated qualitatively.

TABLE M1-6: GREAT BLUE HERON DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Mammal BAF[2] (unitless)	Mammal Concentration[3] (mg/kg)	Invertebrate BAF[2] (unitless)	Invertebrate Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Aluminum																	
Areawide 95UCL	Dose/High TRV	0.14	0.0073	208	0.043	1227	103	0.0047	28,545	135	0.73	2.30	75.6	1,097	0.155	1,881	0.040
	Dose/Low TRV	0.14	0.0073	208	0.043	1227	103	0.0047	28,545	135	0.73	2.30	75.6	110	0.155	188	0.40
Areawide Maximum	Dose/High TRV	0.14	0.0073	289	0.043	1703	143	0.0047	39,600	188	1	2.30	144	1,097	0.155	1,881	0.077
	Dose/Low TRV	0.14	0.0073	289	0.043	1703	143	0.0047	39,600	188	1	2.30	144	110	0.155	188	0.77
Antimony																	
Areawide 95UCL	Dose/High TRV	0.14	1.27	2.29	1	1.80	0.29	0.0047	1.80	0.0085	0.73	2.30	0.096	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.14	1.27	2.29	1	1.80	0.29	0.0047	1.80	0.0085	0.73	2.30	0.096	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.14	1.27	9.78	1	7.70	1.25	0.0047	7.70	0.036	1	2.30	0.56	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.14	1.27	9.78	1	7.70	1.25	0.0047	7.70	0.036	1	2.30	0.56	NA	NA	NA	No TRV[13]
Arsenic																	
Areawide 95UCL	Dose/High TRV	0.14	Regression	0.083	1.36	24.2	1.74	0.0047	17.8	0.084	0.73	2.30	0.58	22.0	1.172	25.2	0.023
	Dose/Low TRV	0.14	Regression	0.083	1.36	24.2	1.74	0.0047	17.8	0.084	0.73	2.30	0.58	5.50	1.172	6.29	0.092
Areawide Maximum	Dose/High TRV	0.14	Regression	0.20	1.36	69.5	5.00	0.0047	51.1	0.24	1	2.30	2.29	22.0	1.172	25.2	0.091
	Dose/Low TRV	0.14	Regression	0.20	1.36	69.5	5.00	0.0047	51.1	0.24	1	2.30	2.29	5.50	1.172	6.29	0.36
Barium																	
Areawide 95UCL	Dose/High TRV	0.14	0.060	4.57	0.091	6.93	0.83	0.0047	76.1	0.36	0.73	2.30	0.38	41.7	0.121	75.1	0.0050
	Dose/Low TRV	0.14	0.060	4.57	0.091	6.93	0.83	0.0047	76.1	0.36	0.73	2.30	0.38	20.8	0.121	37.5	0.010
Areawide Maximum	Dose/High TRV	0.14	0.060	9.06	0.091	13.74	1.64	0.0047	151	0.72	1	2.30	1.03	41.7	0.121	75.1	0.014
	Dose/Low TRV	0.14	0.060	9.06	0.091	13.74	1.64	0.0047	151	0.72	1	2.30	1.03	20.8	0.121	37.5	0.027
Beryllium																	
Areawide 95UCL	Dose/High TRV	0.14	Regression	0.0026	0.045	0.022	0.0018	0.0047	0.49	0.0023	0.73	2.30	0.0013	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.14	Regression	0.0026	0.045	0.022	0.0018	0.0047	0.49	0.0023	0.73	2.30	0.0013	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.14	Regression	0.0038	0.045	0.037	0.0030	0.0047	0.83	0.0039	1	2.30	0.0030	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.14	Regression	0.0038	0.045	0.037	0.0030	0.0047	0.83	0.0039	1	2.30	0.0030	NA	NA	NA	No TRV[13]
Cadmium																	
Areawide 95UCL	Dose/High TRV	0.14	Regression	0.237	NB	0.68	0.066	0.0047	0.68	0.0032	0.73	2.30	0.022	10.4	0.084	20.2	0.0011
	Dose/Low TRV	0.14	Regression	0.237	NB	0.68	0.066	0.0047	0.68	0.0032	0.73	2.30	0.022	0.08	0.80	0.10	0.22
Areawide Maximum	Dose/High TRV	0.14	Regression	0.71	NB	7.00	0.554	0.0047	7.00	0.0332	1	2.30	0.26	10.4	0.084	20.2	0.013
	Dose/Low TRV	0.14	Regression	0.71	NB	7.00	0.554	0.0047	7.00	0.0332	1	2.30	0.26	0.08	0.80	0.10	**2.59**
Chromium																	
Areawide 95UCL	Dose/High TRV	0.14	0.030	2.95	0.31	30.1	2.37	0.0047	98.4	0.47	0.73	2.30	0.90	5.00	1.250	5.65	0.16
	Dose/Low TRV	0.14	0.030	2.95	0.31	30.1	2.37	0.0047	98.4	0.47	0.73	2.30	0.90	1.00	1.250	1.13	0.80
Areawide Maximum	Dose/High TRV	0.14	0.030	8.82	0.31	90.0	7.09	0.0047	294	1.39	1	2.30	3.70	5.00	1.250	5.65	0.65
	Dose/Low TRV	0.14	0.030	8.82	0.31	90.0	7.09	0.0047	294	1.39	1	2.30	3.70	1.00	1.250	1.13	**3.27**
Cobalt																	
Areawide 95UCL	Dose/High TRV	0.14	Regression	0.599	0.12	2.51	0.22	0.0047	20.6	0.10	0.73	2.30	0.10	76.10	0.292	115	0.00089
	Dose/Low TRV	0.14	Regression	0.599	0.12	2.51	0.22	0.0047	20.6	0.10	0.73	2.30	0.10	7.61	0.292	11.5	0.0089
Areawide Maximum	Dose/High TRV	0.14	Regression	1.19	0.12	4.25	0.39	0.0047	34.8	0.16	1	2.30	0.24	76.10	0.292	115	0.0021
	Dose/Low TRV	0.14	Regression	1.19	0.12	4.25	0.39	0.0047	34.8	0.16	1	2.30	0.24	7.61	0.292	11.5	0.021
Copper																	
Areawide 95UCL	Dose/High TRV	0.14	0.15	14.2	0.98	92.9	7.69	0.0047	94.8	0.45	0.73	2.30	2.58	52.26	0.409	73.79	0.035
	Dose/Low TRV	0.14	0.15	14.2	0.98	92.9	7.69	0.0047	94.8	0.45	0.73	2.30	2.58	2.30	0.639	2.97	0.87
Areawide Maximum	Dose/High TRV	0.14	0.15	48.6	0.98	318	26.3	0.0047	324	1.54	1	2.30	12.1	52.26	0.409	73.79	0.16
	Dose/Low TRV	0.14	0.15	48.6	0.98	318	26.3	0.0047	324	1.54	1	2.30	12.1	2.30	0.639	2.97	**4.08**
Lead																	
Areawide 95UCL	Dose/High TRV	0.14	0.14	13.3	0.37	35.3	3.49	0.0047	95.3	0.45	0.73	2.30	1.25	8.75	0.800	10.8	0.12
	Dose/Low TRV	0.14	0.14	13.3	0.37	35.3	3.49	0.0047	95.3	0.45	0.73	2.30	1.25	0.01	0.084	0.027	**46.1**
Areawide Maximum	Dose/High TRV	0.14	0.14	59.1	0.37	156	15.5	0.0047	422	2.00	1	2.30	7.60	8.75	0.800	10.8	0.70
	Dose/Low TRV	0.14	0.14	59.1	0.37	156	15.5	0.0047	422	2.00	1	2.30	7.60	0.01	0.084	0.027	**280**
Bioavailable Dose	Dose/High TRV	0.14	0.14	13.3	0.37	35.3	3.49	0.0047	6.00	0.028	0.73	2.30	1.12	8.75	0.800	10.8	0.10
(95UCL)	Dose/Low TRV	0.14	0.14	13.3	0.37	35.3	3.49	0.0047	6.00	0.028	0.73	2.30	1.12	0.01	0.084	0.027	**41.1**
Manganese																	
Areawide 95UCL	Dose/High TRV	0.14	0.021	11.5	5.12	2868	207	0.0047	560	2.65	0.73	2.30	66.4	776.00	0.197	1,269	0.052
	Dose/Low TRV	0.14	0.021	11.5	5.12	2868	207	0.0047	560	2.65	0.73	2.30	66.4	77.60	0.197	127	0.52
Areawide Maximum	Dose/High TRV	0.14	0.021	35.9	5.12	8960	646	0.0047	1,750	8.29	1	2.30	285	776.00	0.197	1,269	0.22
	Dose/Low TRV	0.14	0.021	35.9	5.12	8960	646	0.0047	1,750	8.29	1	2.30	285	77.60	0.197	127	**2.25**

TABLE M1-6: GREAT BLUE HERON DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Mammal BAF[2] (unitless)	Mammal Concentration[3] (mg/kg)	Invertebrate BAF[2] (unitless)	Invertebrate Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Mercury																	
Areawide 95UCL	Dose/High TRV	0.14	0.054	0.032	1.69	1.00	0.074	0.0047	0.59	0.0028	0.73	2.30	0.024	0.18	1.000	0.21	0.11
	Dose/Low TRV	0.14	0.054	0.032	1.69	1.00	0.074	0.0047	0.59	0.0028	0.73	2.30	0.024	0.00	1.000	0.0046	**5.29**
Areawide Maximum	Dose/High TRV	0.14	0.054	0.065	1.69	2.03	0.15	0.0047	1.20	0.0057	1	2.30	0.068	0.18	1.000	0.21	0.32
	Dose/Low TRV	0.14	0.054	0.065	1.69	2.03	0.15	0.0047	1.20	0.0057	1	2.30	0.068	0.00	1.000	0.0046	**14.8**
Bioavailable Dose	Dose/High TRV	0.14	0.054	0.032	1.69	1.00	0.074	0.0047	0.01	0.000042	0.73	2.30	0.023	0.18	1.000	0.21	0.11
(95UCL)	Dose/Low TRV	0.14	0.054	0.032	1.69	1.00	0.074	0.0047	0.01	0.000042	0.73	2.30	0.023	0.00	1.000	0.0046	**5.10**
Molybdenum																	
Areawide 95UCL	Dose/High TRV	0.14	NB	1.51	NB	1.51	0.22	0.0047	1.51	0.0072	0.73	2.30	0.071	35.30	1.500	38.4	0.0018
	Dose/Low TRV	0.14	NB	1.51	NB	1.51	0.22	0.0047	1.51	0.0072	0.73	2.30	0.071	3.50	1.500	3.81	0.019
Areawide Maximum	Dose/High TRV	0.14	NB	3.8	NB	3.80	0.55	0.0047	3.80	0.018	1	2.30	0.25	35.30	1.500	38.4	0.0064
	Dose/Low TRV	0.14	NB	3.8	NB	3.80	0.55	0.0047	3.80	0.018	1	2.30	0.25	3.50	1.500	3.81	0.064
Nickel																	
Areawide 95UCL	Dose/High TRV	0.14	Regression	6.51	1.06	100	7.65	0.0047	94.5	0.45	0.73	2.30	2.57	55.26	0.580	72.8	0.035
	Dose/Low TRV	0.14	Regression	6.51	1.06	100	7.65	0.0047	94.5	0.45	0.73	2.30	2.57	1.38	0.614	1.80	**1.43**
Areawide Maximum	Dose/High TRV	0.14	Regression	8.31	1.06	169	12.8	0.0047	160	0.76	1	2.30	5.89	55.26	0.580	72.8	0.081
	Dose/Low TRV	0.14	Regression	8.31	1.06	169	12.8	0.0047	160	0.76	1	2.30	5.89	1.38	0.614	1.80	**3.28**
Bioavailable Dose	Dose/High TRV	0.14	Regression	6.51	1.06	100	7.65	0.0047	3.40	0.016	0.73	2.30	2.43	55.26	0.580	72.8	0.033
(95UCL)	Dose/Low TRV	0.14	Regression	6.51	1.06	100	7.65	0.0047	3.40	0.016	0.73	2.30	2.43	1.38	0.614	1.80	**1.35**
Selenium																	
Areawide 95UCL	Dose/High TRV	0.14	1.63	1.94	Regression	1.05	0.21	0.0047	1.19	0.0056	0.73	2.30	0.070	0.93	1.108	1.08	0.065
	Dose/Low TRV	0.14	1.63	1.94	Regression	1.05	0.21	0.0047	1.19	0.0056	0.73	2.30	0.070	0.23	1.108	0.27	0.26
Areawide Maximum	Dose/High TRV	0.14	1.63	3.42	Regression	1.60	0.36	0.0047	2.10	0.010	1	2.30	0.16	0.93	1.108	1.08	0.15
	Dose/Low TRV	0.14	1.63	3.42	Regression	1.60	0.36	0.0047	2.10	0.010	1	2.30	0.16	0.23	1.108	0.27	0.61
Thallium																	
Areawide 95UCL	Dose/High TRV	0.14	NB	0.66	NB	0.66	0.095	0.0047	0.66	0.0031	0.73	2.30	0.0311	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.14	NB	0.66	NB	0.66	0.095	0.0047	0.66	0.0031	0.73	2.30	0.0311	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.14	NB	1.30	NB	1.30	0.19	0.0047	1.30	0.0062	1	2.30	0.084	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.14	NB	1.30	NB	1.30	0.19	0.0047	1.30	0.0062	1	2.30	0.084	NA	NA	NA	No TRV[13]
Tin																	
Areawide 95UCL	Dose/High TRV	0.14	NB	2.24	NB	2.24	0.32	0.0047	2.24	0.011	0.73	2.30	0.11	16.90	0.150	29.2	0.0036
	Dose/Low TRV	0.14	NB	2.24	NB	2.24	0.32	0.0047	2.24	0.011	0.73	2.30	0.11	6.80	0.150	11.7	0.0090
Areawide Maximum	Dose/High TRV	0.14	NB	5.00	NB	5.00	0.72	0.0047	5.00	0.024	1	2.30	0.32	16.90	0.150	29.2	0.011
	Dose/Low TRV	0.14	NB	5.00	NB	5.00	0.72	0.0047	5.00	0.024	1	2.30	0.32	6.80	0.150	11.7	0.028
Vanadium																	
Areawide 95UCL	Dose/High TRV	0.14	0.13	12.4	NB	95.8	7.77	0.0047	95.8	0.45	0.73	2.30	2.61	114.00	1.170	130	0.020
	Dose/Low TRV	0.14	0.13	12.4	NB	95.8	7.77	0.0047	95.8	0.45	0.73	2.30	2.61	11.40	1.170	13.0	0.20
Areawide Maximum	Dose/High TRV	0.14	0.13	29.2	NB	226	18.3	0.0047	226	1.07	1	2.30	8.45	114.00	1.170	130	0.065
	Dose/Low TRV	0.14	0.13	29.2	NB	226	18.3	0.0047	226	1.07	1	2.30	8.45	11.40	1.170	13.0	0.65
Zinc																	
Areawide 95UCL	Dose/High TRV	0.14	0.89	250	1.43	401	46.7	0.0047	280	1.33	0.73	2.30	15.2	172.00	0.955	205	0.074
	Dose/Low TRV	0.14	0.89	250	1.43	401	46.7	0.0047	280	1.33	0.73	2.30	15.2	17.20	0.955	20.5	0.74
Areawide Maximum	Dose/High TRV	0.14	0.89	1647	1.43	2646	308	0.0047	1,850	8.77	1	2.30	138.1	172.00	0.955	205	0.67
	Dose/Low TRV	0.14	0.89	1647	1.43	2646	308	0.0047	1,850	8.77	1	2.30	138.1	17.20	0.955	20.5	**6.74**
Total DDTs																	
Areawide 95UCL	Dose/High TRV	0.14	Regression	0.79	Regression	0.29	0.078	0.0047	0.019	0.000092	0.73	2.30	0.025	1.50	1.000	1.77	0.014
	Dose/Low TRV	0.14	Regression	0.79	Regression	0.29	0.078	0.0047	0.019	0.000092	0.73	2.30	0.025	0.00090	3.500	0.00083	**29.8**
Areawide Maximum	Dose/High TRV	0.14	Regression	1.68	Regression	0.76	0.17	0.0047	0.060	0.00028	1	2.30	0.076	1.50	1.000	1.77	0.043
	Dose/Low TRV	0.14	Regression	1.68	Regression	0.76	0.17	0.0047	0.060	0.00028	1	2.30	0.076	0.00090	3.500	0.00083	**92.2**
Dieldrin																	
Areawide 95UCL	Dose/High TRV	0.14	3.35	0.0020	Regression	0.015	0.0012	0.0047	0.00060	0.0000028	0.73	2.30	0.00038	0.77	0.466	1.06	0.00036
	Dose/Low TRV	0.14	3.35	0.0020	Regression	0.015	0.0012	0.0047	0.00060	0.0000028	0.73	2.30	0.00038	0.08	0.466	0.11	0.0036
Areawide Maximum	Dose/High TRV	0.14	3.35	0.0020	Regression	0.015	0.0012	0.0047	0.00060	0.0000028	1	2.30	0.00052	0.77	0.466	1.06	0.00049
	Dose/Low TRV	0.14	3.35	0.0020	Regression	0.015	0.0012	0.0047	0.00060	0.0000028	1	2.30	0.00052	0.08	0.466	0.11	0.0049
Methoxychlor																	
Areawide 95UCL	Dose/High TRV	0.14	NB	0.0010	30.6	0.031	0.0023	0.0047	0.0010	0.0000047	0.73	2.30	0.00072	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.14	NB	0.0010	30.6	0.031	0.0023	0.0047	0.0010	0.0000047	0.73	2.30	0.00072	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.14	NB	0.0010	30.6	0.031	0.0023	0.0047	0.0010	0.0000047	1	2.30	0.00099	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.14	NB	0.0010	30.6	0.031	0.0023	0.0047	0.0010	0.0000047	1	2.30	0.00099	NA	NA	NA	No TRV[13]

TABLE M1-6: GREAT BLUE HERON DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Mammal BAF[2] (unitless)	Mammal Concentration[3] (mg/kg)	Invertebrate BAF[2] (unitless)	Invertebrate Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Total Chlordane																	
Areawide 95UCL	Dose/High TRV	0.14	NB	0.0040	32.0	0.13	0.0095	0.0047	0.0040	0.000019	0.73	2.30	0.0030	10.70	0.064	21.9	0.00014
	Dose/Low TRV	0.14	NB	0.0040	32.0	0.13	0.0095	0.0047	0.0040	0.000019	0.73	2.30	0.0030	2.14	0.064	4.38	0.00069
Areawide Maximum	Dose/High TRV	0.14	NB	0.0040	32.0	0.13	0.0095	0.0047	0.0040	0.000019	1	2.30	0.0041	10.70	0.064	21.9	0.00019
	Dose/Low TRV	0.14	NB	0.0040	32.0	0.13	0.0095	0.0047	0.0040	0.000019	1	2.30	0.0041	2.14	0.064	4.38	0.00095
Total PAHs																	
Areawide 95UCL	Dose/High TRV	0.14	0	0.00	1.33	2.66	0.19	0.0047	2.00	0.0095	0.73	2.30	0.064	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.14	0	0.00	1.33	2.66	0.19	0.0047	2.00	0.0095	0.73	2.30	0.064	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.14	0	0.00	1.33	2.66	0.19	0.0047	2.00	0.0095	1	2.30	0.087	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.14	0	0.00	1.33	2.66	0.19	0.0047	2.00	0.0095	1	2.30	0.087	NA	NA	NA	No TRV[13]
Total PCBs																	
Areawide 95UCL	Dose/High TRV	0.14	NB	0.28	Regression	0.28	0.041	0.0047	0.28	0.0013	0.73	2.30	0.013	1.27	1.715	1.35	0.010
	Dose/Low TRV	0.14	NB	0.28	Regression	0.28	0.041	0.0047	0.28	0.0013	0.73	2.30	0.013	0.09	0.800	0.11	0.12
Areawide Maximum	Dose/High TRV	0.14	NB	0.60	Regression	0.60	0.086	0.0047	0.60	0.0028	1	2.30	0.039	1.27	1.715	1.35	0.029
	Dose/Low TRV	0.14	NB	0.60	Regression	0.60	0.086	0.0047	0.60	0.0028	1	2.30	0.039	0.09	0.800	0.11	0.35

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95th percent upper confidence limit on the arithmetic mean	kg/day	Kilogram per day
BAF	Bioaccumulation factor	LMW	Low molecular weight
BHC	Benzene hexachloride	mg/day	Milligram per day
COPEC	Chemical of potential ecological concern	mg/kg	Milligram per kilogram
DDE	Dichlorodiphenyldichloroethene	mg/kg/day	Milligram per kilogram per day
DDT	Dichlorodiphenyltrichloroethane	NA	Not applicable
EFA WEST	Naval Facilities Engineering Command, Engineering Field Activity West	NB	No BAF was available.
HMW	High molecular weight	PAH	Polycyclic aromatic hydrocarbon
HQ	Hazard quotient	SUF	Site use factor
kg	Kilogram	TRV	Toxicity reference value

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for all birds and the averaged food requirement conversion for insectivorous birds.

2 The 95UCL or habitat area maximum (see note 6) for all site-collected soil samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 1 mg/kg because no BAF was available.

3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).

4 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration.

5 Rate for the Bald Eagle in Pascoe and others (1996); 0.7 percent of prey ingestion rate.

6 For average doses, lesser of 95UCL or detected maximum of all site-collected soil samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected soil samples was used.

7 Soil daily dose was calculated by multiplying the soil ingestion rate by 95UCL or habitat area maximum (see note 6) soil concentration.

8 Average adult weight from Dunning (1993).

9 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + soil daily dose)*SUF)/receptor species body weight.

10 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.

11 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-1/2)}$.

12 The HQ was calculated using total daily dose/allometrically adjusted TRV.

13 Sufficient data are not available to derive a TRV. This chemical was evaluated qualitatively.

TABLE M1-7: MALLARD (NON-BREEDING) DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Plant BAF[2] (unitless)	Plant Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Aluminum															
Areawide 95UCL	Dose/High TRV	0.080	0.00066	18.8	1.51	0.0026	28,545	75.6	0.0079	1.16	0.52	1,097	0.155	1,641	0.00032
	Dose/Low TRV	0.080	0.00066	18.8	1.51	0.0026	28,545	75.6	0.0079	1.16	0.52	110	0.155	164	0.0032
Areawide Maximum	Dose/High TRV	0.080	0.00066	26.1	2.10	0.0026	39,600	105	1	1.16	92.1	1,097	0.155	1,641	0.056
	Dose/Low TRV	0.080	0.00066	26.1	2.10	0.0026	39,600	105	1	1.16	92.1	110	0.155	164	0.56
Antimony															
Areawide 95UCL	Dose/High TRV	0.080	0.19	0.34	0.027	0.0026	1.80	0.0048	0.0079	1.16	0.00022	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	0.19	0.34	0.027	0.0026	1.80	0.0048	0.0079	1.16	0.00022	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.080	0.19	1.46	0.117	0.0026	7.70	0.020	1	1.16	0.12	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	0.19	1.46	0.117	0.0026	7.70	0.020	1	1.16	0.12	NA	NA	NA	No TRV[13]
Arsenic															
Areawide 95UCL	Dose/High TRV	0.080	0.064	1.14	0.091	0.0026	17.8	0.047	0.0079	1.16	0.00094	22.01	1.172	22.0	0.000043
	Dose/Low TRV	0.080	0.064	1.14	0.091	0.0026	17.8	0.047	0.0079	1.16	0.00094	5.50	1.172	5.49	0.00017
Areawide Maximum	Dose/High TRV	0.080	0.064	3.27	0.262	0.0026	51.1	0.14	1	1.16	0.34	22.01	1.172	22.0	0.016
	Dose/Low TRV	0.080	0.064	3.27	0.262	0.0026	51.1	0.14	1	1.16	0.34	5.50	1.172	5.49	0.062
Barium															
Areawide 95UCL	Dose/High TRV	0.080	0.057	4.34	0.348	0.0026	76.1	0.20	0.0079	1.16	0.0037	41.70	0.121	65.5	0.000057
	Dose/Low TRV	0.080	0.057	4.34	0.348	0.0026	76.1	0.20	0.0079	1.16	0.0037	20.80	0.121	32.7	0.00011
Areawide Maximum	Dose/High TRV	0.080	0.057	8.61	0.69	0.0026	151	0.40	1	1.16	0.94	41.70	0.121	65.5	0.014
	Dose/Low TRV	0.080	0.057	8.61	0.69	0.0026	151	0.40	1	1.16	0.94	20.80	0.121	32.7	0.029
Beryllium															
Areawide 95UCL	Dose/High TRV	0.080	Regression	0.35	0.028	0.0026	0.49	0.0013	0.0079	1.16	0.00020	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	Regression	0.35	0.028	0.0026	0.49	0.0013	0.0079	1.16	0.00020	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.080	Regression	0.51	0.041	0.0026	0.83	0.0022	1	1.16	0.037	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	Regression	0.51	0.041	0.0026	0.83	0.0022	1	1.16	0.037	NA	NA	NA	No TRV[13]
Cadmium															
Areawide 95UCL	Dose/High TRV	0.080	0.25	0.17	0.014	0.0026	0.68	0.0018	0.0079	1.16	0.00010	10.43	0.084	17.6	0.0000059
	Dose/Low TRV	0.080	0.25	0.17	0.014	0.0026	0.68	0.0018	0.0079	1.16	0.00010	0.08	0.799	0.086	0.0012
Areawide Maximum	Dose/High TRV	0.080	0.25	1.75	0.140	0.0026	7.00	0.019	1	1.16	0.14	10.43	0.084	17.6	0.0078
	Dose/Low TRV	0.080	0.25	1.75	0.140	0.0026	7.00	0.019	1	1.16	0.14	0.08	0.799	0.086	**1.59**
Chromium															
Areawide 95UCL	Dose/High TRV	0.080	0.024	2.36	0.19	0.0026	98.4	0.26	0.0079	1.16	0.0031	5.00	1.250	4.93	0.00062
	Dose/Low TRV	0.080	0.024	2.36	0.19	0.0026	98.4	0.26	0.0079	1.16	0.0031	1.00	1.250	0.99	0.0031
Areawide Maximum	Dose/High TRV	0.080	0.024	7.06	0.57	0.0026	294	0.78	1	1.16	1.16	5.00	1.250	4.93	0.23
	Dose/Low TRV	0.080	0.024	7.06	0.57	0.0026	294	0.78	1	1.16	1.16	1.00	1.250	0.99	**1.17**
Cobalt															
Areawide 95UCL	Dose/High TRV	0.080	0.0075	0.15	0.012	0.0026	20.6	0.055	0.0079	1.16	0.00045	76.10	0.292	100	0.0000045
	Dose/Low TRV	0.080	0.0075	0.15	0.012	0.0026	20.6	0.055	0.0079	1.16	0.00045	7.61	0.292	10.0	0.000045
Areawide Maximum	Dose/High TRV	0.080	0.0075	0.26	0.021	0.0026	34.8	0.092	1	1.16	0.10	76.10	0.292	100	0.0010
	Dose/Low TRV	0.080	0.0075	0.26	0.021	0.0026	34.8	0.092	1	1.16	0.10	7.61	0.292	10.0	0.010
Copper															
Areawide 95UCL	Dose/High TRV	0.080	0.044	4.17	0.33	0.0026	94.8	0.25	0.0079	1.16	0.0040	52.26	0.409	64.4	0.000062
	Dose/Low TRV	0.080	0.044	4.17	0.33	0.0026	94.8	0.25	0.0079	1.16	0.0040	2.30	0.639	2.59	0.0015
Areawide Maximum	Dose/High TRV	0.080	0.044	14.3	1.14	0.0026	324.0	0.86	1	1.16	1.72	52.26	0.409	64.4	0.027
	Dose/Low TRV	0.080	0.044	14.3	1.14	0.0026	324.0	0.86	1	1.16	1.72	2.30	0.639	2.59	0.67
Lead															
Areawide 95UCL	Dose/High TRV	0.080	0.0055	0.52	0.042	0.0026	95.3	0.25	0.0079	1.16	0.0020	8.75	0.800	9.43	0.00021
	Dose/Low TRV	0.080	0.0055	0.52	0.042	0.0026	95.3	0.25	0.0079	1.16	0.0020	0.01	0.084	0.024	0.084
Areawide Maximum	Dose/High TRV	0.080	0.0055	2.32	0.19	0.0026	422.0	1.12	1	1.16	1.12	8.75	0.800	9.43	0.12
	Dose/Low TRV	0.080	0.0055	2.32	0.19	0.0026	422.0	1.12	1	1.16	1.12	0.01	0.084	0.024	**47.4**

TABLE M1-7: MALLARD (NON-BREEDING) DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Plant BAF[2] (unitless)	Plant Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Manganese															
Areawide 95UCL	Dose/High TRV	0.080	0.026	14.6	1.17	0.0026	560.2	1.48	0.0079	1.16	0.018	776.00	0.197	1,107	0.000016
	Dose/Low TRV	0.080	0.026	14.6	1.17	0.0026	560.2	1.48	0.0079	1.16	0.018	77.60	0.197	111	0.00016
Areawide Maximum	Dose/High TRV	0.080	0.026	45.5	3.65	0.0026	1,750	4.63	1	1.16	7.133	776.00	0.197	1,107	0.0064
	Dose/Low TRV	0.080	0.026	45.5	3.65	0.0026	1,750	4.63	1	1.16	7.133	77.60	0.197	111	0.064
Mercury															
Areawide 95UCL	Dose/High TRV	0.080	0.61	0.36	0.029	0.0026	0.59	0.0016	0.0079	1.16	0.00021	0.18	1.000	0.19	0.0011
	Dose/Low TRV	0.080	0.61	0.36	0.029	0.0026	0.59	0.0016	0.0079	1.16	0.00021	0.00	1.000	0.0040	0.051
Areawide Maximum	Dose/High TRV	0.080	0.61	0.73	0.059	0.0026	1.20	0.0032	1	1.16	0.053	0.18	1.000	0.19	0.29
	Dose/Low TRV	0.080	0.61	0.73	0.059	0.0026	1.20	0.0032	1	1.16	0.053	0.00	1.000	0.0040	**13.3**
Molybdenum															
Areawide 95UCL	Dose/High TRV	0.080	NB	1.51	0.12	0.0026	1.51	0.0040	0.0079	1.16	0.00085	35.30	1.500	33.5	0.0000253
	Dose/Low TRV	0.080	NB	1.51	0.12	0.0026	1.51	0.0040	0.0079	1.16	0.00085	3.50	1.500	3.33	0.000255
Areawide Maximum	Dose/High TRV	0.080	NB	3.8	0.30	0.0026	3.80	0.010	1	1.16	0.271	35.30	1.500	33.5	0.0081
	Dose/Low TRV	0.080	NB	3.8	0.30	0.0026	3.80	0.010	1	1.16	0.271	3.50	1.500	3.33	0.082
Nickel															
Areawide 95UCL	Dose/High TRV	0.080	0.011	1.04	0.083	0.0026	94.5	0.25	0.0079	1.16	0.0023	55.26	0.580	63.5	0.000036
	Dose/Low TRV	0.080	0.011	1.04	0.083	0.0026	94.5	0.25	0.0079	1.16	0.0023	1.38	0.614	1.57	0.0014
Areawide Maximum	Dose/High TRV	0.080	0.011	1.76	0.14	0.0026	160	0.42	1	1.16	0.49	55.26	0.580	63.5	0.0077
	Dose/Low TRV	0.080	0.011	1.76	0.14	0.0026	160	0.42	1	1.16	0.49	1.38	0.614	1.57	0.31
Selenium															
Areawide 95UCL	Dose/High TRV	0.080	Regression	0.62	0.049	0.0026	1.19	0.0031	0.0079	1.16	0.00036	0.93	1.108	0.94	0.00038
	Dose/Low TRV	0.080	Regression	0.62	0.049	0.0026	1.19	0.0031	0.0079	1.16	0.00036	0.23	1.108	0.23	0.0015
Areawide Maximum	Dose/High TRV	0.080	Regression	1.15	0.092	0.0026	2.10	0.0056	1	1.16	0.084	0.93	1.108	0.94	0.090
	Dose/Low TRV	0.080	Regression	1.15	0.092	0.0026	2.10	0.0056	1	1.16	0.084	0.23	1.108	0.23	0.36
Thallium															
Areawide 95UCL	Dose/High TRV	0.080	NB	0.66	0.053	0.0026	0.66	0.0017	0.0079	1.16	0.00037	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	NB	0.66	0.053	0.0026	0.66	0.0017	0.0079	1.16	0.00037	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.080	NB	1.30	0.104	0.0026	1.30	0.0034	1	1.16	0.093	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	NB	1.30	0.104	0.0026	1.30	0.0034	1	1.16	0.093	NA	NA	NA	No TRV[13]
Tin															
Areawide 95UCL	Dose/High TRV	0.080	NB	2.24	0.18	0.0026	2.24	0.0059	0.0079	1.16	0.0013	16.90	0.150	25.4	0.000050
	Dose/Low TRV	0.080	NB	2.24	0.18	0.0026	2.24	0.0059	0.0079	1.16	0.0013	6.80	0.150	10.2	0.00012
Areawide Maximum	Dose/High TRV	0.080	NB	5.00	0.40	0.0026	5.00	0.013	1	1.16	0.36	16.90	0.150	25.4	0.014
	Dose/Low TRV	0.080	NB	5.00	0.40	0.0026	5.00	0.013	1	1.16	0.36	6.80	0.150	10.2	0.035
Vanadium															
Areawide 95UCL	Dose/High TRV	0.080	0.021	2.01	0.16	0.0026	95.8	0.25	0.0079	1.16	0.0028	114.00	1.170	114	0.000025
	Dose/Low TRV	0.080	0.021	2.01	0.16	0.0026	95.8	0.25	0.0079	1.16	0.0028	11.40	1.170	11.4	0.00025
Areawide Maximum	Dose/High TRV	0.080	0.021	4.75	0.38	0.0026	226	0.60	1	1.16	0.84	114.00	1.170	114	0.0074
	Dose/Low TRV	0.080	0.021	4.75	0.38	0.0026	226	0.60	1	1.16	0.84	11.40	1.170	11.4	0.074
Zinc															
Areawide 95UCL	Dose/High TRV	0.080	0.066	18.5	1.48	0.0026	280	0.74	0.0079	1.16	0.015	172.00	0.955	179	0.000085
	Dose/Low TRV	0.080	0.066	18.5	1.48	0.0026	280	0.74	0.0079	1.16	0.015	17.20	0.955	17.9	0.00085
Areawide Maximum	Dose/High TRV	0.080	0.066	122	9.79	0.0026	1,850	4.90	1	1.16	12.7	172.00	0.955	179	0.071
	Dose/Low TRV	0.080	0.066	122	9.79	0.0026	1,850	4.90	1	1.16	12.7	17.20	0.955	17.9	0.71
Total DDTs															
Areawide 95UCL	Dose/High TRV	0.080	Regression	0.0042	0.00034	0.0026	0.019	0.000051	0.0079	1.16	0.0000026	1.50	1.000	1.55	0.0000017
	Dose/Low TRV	0.080	Regression	0.0042	0.00034	0.0026	0.019	0.000051	0.0079	1.16	0.0000026	0.00	3.500	0.00072	0.0036
Areawide Maximum	Dose/High TRV	0.080	Regression	0.010	0.00078	0.0026	0.060	0.00016	1	1.16	0.00081	1.50	1.000	1.55	0.00053
	Dose/Low TRV	0.080	Regression	0.010	0.00078	0.0026	0.060	0.00016	1	1.16	0.00081	0.00	3.500	0.00072	**1.12**

TABLE M1-7: MALLARD (NON-BREEDING) DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Plant BAF[2] (unitless)	Plant Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Dieldrin															
Areawide 95UCL	Dose/High TRV	0.080	1.23	0.00074	0.000059	0.0026	0.00060	0.0000016	0.0079	1.16	0.00000041	0.77	0.466	0.92	0.00000045
	Dose/Low TRV	0.080	1.23	0.00074	0.000059	0.0026	0.00060	0.0000016	0.0079	1.16	0.00000041	0.08	0.466	0.092	0.0000045
Areawide Maximum	Dose/High TRV	0.080	1.23	0.00074	0.000059	0.0026	0.00060	0.0000016	1	1.16	0.000052	0.77	0.466	0.92	0.000057
	Dose/Low TRV	0.080	1.23	0.00074	0.000059	0.0026	0.00060	0.0000016	1	1.16	0.000052	0.08	0.466	0.092	0.00057
Methoxychlor															
Areawide 95UCL	Dose/High TRV	0.080	0.11	0.00011	0.0000088	0.0026	0.0010	0.0000026	0.0079	1.16	0.000000078	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	0.11	0.00011	0.0000088	0.0026	0.0010	0.0000026	0.0079	1.16	0.000000078	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.080	0.11	0.00011	0.0000088	0.0026	0.0010	0.0000026	1	1.16	0.000010	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	0.11	0.00011	0.0000088	0.0026	0.0010	0.0000026	1	1.16	0.000010	NA	NA	NA	No TRV[13]
Total Chlordane															
Areawide 95UCL	Dose/High TRV	0.080	0.025	0.00010	0.0000080	0.0026	0.0040	0.000011	0.0079	1.16	0.00000013	10.7	0.064	19.1	0.0000000066
	Dose/Low TRV	0.080	0.025	0.00010	0.0000080	0.0026	0.0040	0.000011	0.0079	1.16	0.00000013	2.14	0.064	3.82	0.000000033
Areawide Maximum	Dose/High TRV	0.080	0.025	0.00010	0.0000080	0.0026	0.0040	0.000011	1	1.16	0.000016	10.7	0.064	19.1	0.00000084
	Dose/Low TRV	0.080	0.025	0.00010	0.0000080	0.0026	0.0040	0.000011	1	1.16	0.000016	2.14	0.064	3.82	0.0000042
Total PAHs															
Areawide 95UCL	Dose/High TRV	0.080	Regression	1.34	0.11	0.0026	2.00	0.0053	0.0079	1.16	0.00077	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	Regression	1.34	0.11	0.0026	2.00	0.0053	0.0079	1.16	0.00077	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.080	Regression	1.34	0.11	0.0026	2.00	0.0053	1	1.16	0.097	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	Regression	1.34	0.11	0.0026	2.00	0.0053	1	1.16	0.097	NA	NA	NA	No TRV[13]
Total PCBs															
Areawide 95UCL	Dose/High TRV	0.080	0.013	0.0037	0.00029	0.0026	0.28	0.00075	0.0079	1.16	0.0000071	1.27	1.715	1.17	0.0000060
	Dose/Low TRV	0.080	0.013	0.0037	0.00029	0.0026	0.28	0.00075	0.0079	1.16	0.0000071	0.09	0.800	0.10	0.000073
Areawide Maximum	Dose/High TRV	0.080	0.013	0.0078	0.00063	0.0026	0.60	0.0016	1	1.16	0.0019	1.27	1.715	1.17	0.0016
	Dose/Low TRV	0.080	0.013	0.0078	0.00063	0.0026	0.60	0.0016	1	1.16	0.0019	0.09	0.800	0.10	0.020

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95th percent upper confidence limit on the arithmetic mean	kg/day	Kilogram per day
BAF	Bioaccumulation factor	LMW	Low molecular weight
BHC	Benzene hexachloride	mg/day	Milligram per day
COPEC	Chemical of potential ecological concern	mg/kg	Milligram per kilogram
DDE	Dichlorodiphenyldichloroethene	mg/kg/day	Milligram per kilogram per day
DDT	Dichlorodiphenyltrichloroethane	NA	Not applicable
EFA WEST	Naval Facilities Engineering Command, Engineering Field Activity West	NB	No BAF was available.
HMW	High molecular weight	PAH	Polycyclic aromatic hydrocarbon
HQ	Hazard quotient	SUF	Site use factor
kg	Kilogram	TRV	Toxicity reference value

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for rodents and the averaged food requirement conversion for herbivores.

2 The 95UCL or habitat area maximum (see note 6) for all site-collected soil samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 1 mg/kg because no BAF was available.

3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).

4 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration.

5 Rate for the Bald Eagle in Pascoe and others (1996); 0.7 percent of prey ingestion rate.

6 For average doses, lesser of 95UCL or detected maximum of all site-collected soil samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected soil samples was used.

7 Soil daily dose was calculated by multiplying the soil ingestion rate by 95UCL or habitat area maximum (see note 6) soil concentration.

8 Average adult weight from Dunning (1993).

9 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + soil daily dose)*SUF)/receptor species body weight.

10 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.

11 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-1.2)}$.

12 The HQ was calculated using total daily dose/allometrically adjusted TRV.

13 Sufficient data are not available to derive a TRV. This chemical was evaluated qualitatively.

TABLE M1-8: MALLARD (BREEDING) DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Plant BAF[2] (unitless)	Plant Concentration[3] (mg/kg)	Invertebrate BAF[2] (unitless)	Invertebrate Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Aluminum																	
Areawide 95UCL	Dose/High TRV	0.080	0.00066	18.8	0.043	1227	74.2	0.0026	28,545	75.6	0.0079	1.16	1.02	1,097	0.155	1,641	0.00062
	Dose/Low TRV	0.080	0.00066	18.8	0.043	1227	74.2	0.0026	28,545	75.6	0.0079	1.16	1.02	110	0.155	164	0.0062
Areawide Maximum	Dose/High TRV	0.080	0.00066	26.1	0.043	1703	103	0.0026	39,600	105	1	1.16	179	1,097	0.155	1,641	0.11
	Dose/Low TRV	0.080	0.00066	26.1	0.043	1703	103	0.0026	39,600	105	1	1.16	179	110	0.155	164	**1.09**
Antimony																	
Areawide 95UCL	Dose/High TRV	0.080	0.19	0.34	1	1.80	0.12	0.0026	1.80	0.0048	0.0079	1.16	0.00081	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	0.19	0.34	1	1.80	0.12	0.0026	1.80	0.0048	0.0079	1.16	0.00081	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.080	0.19	1.46	1	7.70	0.49	0.0026	7.70	0.020	1	1.16	0.44	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	0.19	1.46	1	7.70	0.49	0.0026	7.70	0.020	1	1.16	0.44	NA	NA	NA	No TRV[13]
Arsenic																	
Areawide 95UCL	Dose/High TRV	0.080	0.064	1.14	1.36	24.2	1.48	0.0026	17.8	0.047	0.0079	1.16	0.010	22.0	1.172	22.0	0.00047
	Dose/Low TRV	0.080	0.064	1.14	1.36	24.2	1.48	0.0026	17.8	0.047	0.0079	1.16	0.010	5.50	1.172	5.49	0.0019
Areawide Maximum	Dose/High TRV	0.080	0.064	3.27	1.36	69.5	4.25	0.0026	51.1	0.14	1	1.16	3.77	22.0	1.172	22.0	0.17
	Dose/Low TRV	0.080	0.064	3.27	1.36	69.5	4.25	0.0026	51.1	0.14	1	1.16	3.77	5.50	1.172	5.49	0.69
Barium																	
Areawide 95UCL	Dose/High TRV	0.080	0.057	4.34	0.091	6.93	0.50	0.0026	76.1	0.20	0.0079	1.16	0.0048	41.70	0.121	65.5	0.000073
	Dose/Low TRV	0.080	0.057	4.34	0.091	6.93	0.50	0.0026	76.1	0.20	0.0079	1.16	0.0048	20.80	0.121	32.7	0.00015
Areawide Maximum	Dose/High TRV	0.080	0.057	8.61	0.091	13.7	1.00	0.0026	151	0.40	1	1.16	1.20	41.70	0.121	65.5	0.018
	Dose/Low TRV	0.080	0.057	8.61	0.091	13.7	1.00	0.0026	151	0.40	1	1.16	1.20	20.80	0.121	32.7	0.037
Beryllium																	
Areawide 95UCL	Dose/High TRV	0.080	Regression	0.35	0.045	0.022	0.0083	0.0026	0.49	0.0013	0.0079	1.16	0.000065	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	Regression	0.35	0.045	0.022	0.0083	0.0026	0.49	0.0013	0.0079	1.16	0.000065	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.080	Regression	0.51	0.045	0.037	0.012	0.0026	0.83	0.0022	1	1.16	0.013	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	Regression	0.51	0.045	0.037	0.012	0.0026	0.83	0.0022	1	1.16	0.013	NA	NA	NA	No TRV[13]
Cadmium																	
Areawide 95UCL	Dose/High TRV	0.080	0.25	0.170	NB	0.68	0.044	0.0026	0.68	0.0018	0.0079	1.16	0.00031	10.43	0.084	17.64	0.000018
	Dose/Low TRV	0.080	0.25	0.170	NB	0.68	0.044	0.0026	0.68	0.0018	0.0079	1.16	0.00031	0.08	0.799	0.086	0.0036
Areawide Maximum	Dose/High TRV	0.080	0.25	1.75	NB	7.00	0.46	0.0026	7.00	0.019	1	1.16	0.41	10.43	0.084	17.64	0.023
	Dose/Low TRV	0.080	0.25	1.75	NB	7.00	0.46	0.0026	7.00	0.019	1	1.16	0.41	0.08	0.799	0.086	**4.74**
Chromium																	
Areawide 95UCL	Dose/High TRV	0.080	0.024	2.36	0.31	30.1	1.86	0.0026	98.4	0.26	0.0079	1.16	0.014	5.00	1.250	4.93	0.0029
	Dose/Low TRV	0.080	0.024	2.36	0.31	30.1	1.86	0.0026	98.4	0.26	0.0079	1.16	0.014	1.00	1.250	0.99	0.015
Areawide Maximum	Dose/High TRV	0.080	0.024	7.06	0.31	90.0	5.55	0.0026	294	0.78	1	1.16	5.45	5.00	1.250	4.93	**1.11**
	Dose/Low TRV	0.080	0.024	7.06	0.31	90.0	5.55	0.0026	294	0.78	1	1.16	5.45	1.00	1.250	0.99	**5.53**
Cobalt																	
Areawide 95UCL	Dose/High TRV	0.080	0.0075	0.15	0.12	2.51	0.15	0.0026	20.6	0.055	0.0079	1.16	0.0014	76.10	0.292	100.3	0.000014
	Dose/Low TRV	0.080	0.0075	0.15	0.12	2.51	0.15	0.0026	20.6	0.055	0.0079	1.16	0.0014	7.61	0.292	10.0	0.00014
Areawide Maximum	Dose/High TRV	0.080	0.0075	0.26	0.12	4.25	0.26	0.0026	34.8	0.092	1	1.16	0.30	76.10	0.292	100.3	0.0030
	Dose/Low TRV	0.080	0.0075	0.26	0.12	4.25	0.26	0.0026	34.8	0.092	1	1.16	0.30	7.61	0.292	10.0	0.030
Copper																	
Areawide 95UCL	Dose/High TRV	0.080	0.044	4.17	0.98	92.9	5.67	0.0026	94.8	0.25	0.0079	1.16	0.040	52.26	0.409	64.4	0.00062
	Dose/Low TRV	0.080	0.044	4.17	0.98	92.9	5.67	0.0026	94.8	0.25	0.0079	1.16	0.040	2.30	0.639	2.59	0.016
Areawide Maximum	Dose/High TRV	0.080	0.044	14.3	0.98	318	19.4	0.0026	324	0.86	1	1.16	17.4	52.26	0.409	64.4	0.27
	Dose/Low TRV	0.080	0.044	14.3	0.98	318	19.4	0.0026	324	0.86	1	1.16	17.4	2.30	0.639	2.59	**6.73**
Lead																	
Areawide 95UCL	Dose/High TRV	0.080	0.0055	0.5	0.37	35.3	2.13	0.0026	95.3	0.25	0.0079	1.16	0.016	8.75	0.800	9.43	0.0017
	Dose/Low TRV	0.080	0.0055	0.5	0.37	35.3	2.13	0.0026	95.3	0.25	0.0079	1.16	0.016	0.014	0.084	0.02	0.68
Areawide Maximum	Dose/High TRV	0.080	0.0055	2.3	0.37	156	9.44	0.0026	422	1.12	1	1.16	9.09	8.75	0.800	9.43	0.96
	Dose/Low TRV	0.080	0.0055	2.3	0.37	156	9.44	0.0026	422	1.12	1	1.16	9.09	0.014	0.084	0.02	**384**
Manganese																	
Areawide 95UCL	Dose/High TRV	0.080	0.026	14.6	5.12	2868	173	0.0026	560	1.48	0.0079	1.16	1.18	776.0	0.197	1,107	0.0011
	Dose/Low TRV	0.080	0.026	14.6	5.12	2868	173	0.0026	560	1.48	0.0079	1.16	1.18	77.6	0.197	111	0.011
Areawide Maximum	Dose/High TRV	0.080	0.026	45.5	5.12	8960	540	0.0026	1,750	4.63	1	1.16	469	776.0	0.197	1,107	0.42
	Dose/Low TRV	0.080	0.026	45.5	5.12	8960	540	0.0026	1,750	4.63	1	1.16	469	77.6	0.197	111	**4.24**
Mercury																	
Areawide 95UCL	Dose/High TRV	0.080	0.61	0.36	1.69	1.00	0.067	0.0026	0.59	0.0016	0.0079	1.16	0.00047	0.18	1.000	0.19	0.0025
	Dose/Low TRV	0.080	0.61	0.36	1.69	1.00	0.067	0.0026	0.59	0.0016	0.0079	1.16	0.00047	0.0039	1.000	0.00	0.12
Areawide Maximum	Dose/High TRV	0.080	0.61	0.73	1.69	2.03	0.14	0.0026	1.20	0.0032	1	1.16	0.12	0.18	1.000	0.19	0.65
	Dose/Low TRV	0.080	0.61	0.73	1.69	2.03	0.14	0.0026	1.20	0.0032	1	1.16	0.12	0.0039	1.000	0.00	**30.0**

TABLE M1-8: MALLARD (BREEDING) DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Plant BAF[2] (unitless)	Plant Concentration[3] (mg/kg)	Invertebrate BAF[2] (unitless)	Invertebrate Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Molybdenum																	
Areawide 95UCL	Dose/High TRV	0.080	NB	1.51	NB	1.51	0.12	0.0026	1.51	0.0040	0.0079	1.16	0.00085	35.3	1.500	33.5	0.000025
	Dose/Low TRV	0.080	NB	1.51	NB	1.51	0.12	0.0026	1.51	0.0040	0.0079	1.16	0.00085	3.50	1.500	3.33	0.00026
Areawide Maximum	Dose/High TRV	0.080	NB	3.80	NB	3.80	0.30	0.0026	3.80	0.010	1	1.16	0.27	35.3	1.500	33.5	0.0081
	Dose/Low TRV	0.080	NB	3.80	NB	3.80	0.30	0.0026	3.80	0.010	1	1.16	0.27	3.50	1.500	3.33	0.082
Nickel																	
Areawide 95UCL	Dose/High TRV	0.080	0.011	1.04	1.06	100	6.04	0.0026	94.5	0.25	0.0079	1.16	0.043	55.3	0.580	63.5	0.00067
	Dose/Low TRV	0.080	0.011	1.04	1.06	100	6.04	0.0026	94.5	0.25	0.0079	1.16	0.043	1.38	0.614	1.57	0.027
Areawide Maximum	Dose/High TRV	0.080	0.011	1.76	1.06	169	10.2	0.0026	160	0.42	1	1.16	9.17	55.3	0.580	63.5	0.14
	Dose/Low TRV	0.080	0.011	1.76	1.06	169	10.2	0.0026	160	0.42	1	1.16	9.17	1.38	0.614	1.57	**5.85**
Selenium																	
Areawide 95UCL	Dose/High TRV	0.080	Regression	0.62	Regression	1.05	0.076	0.0026	1.19	0.0031	0.0079	1.16	0.00054	0.93	1.108	0.94	0.00057
	Dose/Low TRV	0.080	Regression	0.62	Regression	1.05	0.076	0.0026	1.19	0.0031	0.0079	1.16	0.00054	0.23	1.108	0.23	0.0023
Areawide Maximum	Dose/High TRV	0.080	Regression	1.15	Regression	1.60	0.12	0.0026	2.10	0.0056	1	1.16	0.11	0.93	1.108	0.94	0.11
	Dose/Low TRV	0.080	Regression	1.15	Regression	1.60	0.12	0.0026	2.10	0.0056	1	1.16	0.11	0.23	1.108	0.23	0.46
Thallium																	
Areawide 95UCL	Dose/High TRV	0.080	NB	0.66	NB	0.66	0.053	0.0026	0.66	0.0017	0.0079	1.16	0.00037	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	NB	0.66	NB	0.66	0.053	0.0026	0.66	0.0017	0.0079	1.16	0.00037	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.080	NB	1.30	NB	1.30	0.10	0.0026	1.30	0.0034	1	1.16	0.093	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	NB	1.30	NB	1.30	0.10	0.0026	1.30	0.0034	1	1.16	0.093	NA	NA	NA	No TRV[13]
Tin																	
Areawide 95UCL	Dose/High TRV	0.080	NB	2.24	NB	2.24	0.18	0.0026	2.24	0.0059	0.0079	1.16	0.0013	16.9	0.150	25.4	0.000050
	Dose/Low TRV	0.080	NB	2.24	NB	2.24	0.18	0.0026	2.24	0.0059	0.0079	1.16	0.0013	6.80	0.150	10.2	0.00012
Areawide Maximum	Dose/High TRV	0.080	NB	5.00	NB	5.00	0.40	0.0026	5.00	0.013	1	1.16	0.36	16.9	0.150	25.4	0.014
	Dose/Low TRV	0.080	NB	5.00	NB	5.00	0.40	0.0026	5.00	0.013	1	1.16	0.36	6.80	0.150	10.2	0.035
Vanadium																	
Areawide 95UCL	Dose/High TRV	0.080	0.021	2.01	NB	95.8	5.81	0.0026	95.8	0.25	0.0079	1.16	0.0411	114	1.170	113.8	0.00036
	Dose/Low TRV	0.080	0.021	2.01	NB	95.8	5.81	0.0026	95.8	0.25	0.0079	1.16	0.0411	11.40	1.170	11.4	0.0036
Areawide Maximum	Dose/High TRV	0.080	0.021	4.75	NB	226	13.7	0.0026	226	0.60	1	1.16	12.3	114	1.170	113.8	0.11
	Dose/Low TRV	0.080	0.021	4.75	NB	226	13.7	0.0026	226	0.60	1	1.16	12.3	11.40	1.170	11.4	**1.08**
Zinc																	
Areawide 95UCL	Dose/High TRV	0.080	0.066	18.5	1.43	401	24.5	0.0026	280	0.74	0.0079	1.16	0.17	172	0.955	178.85	0.00096
	Dose/Low TRV	0.080	0.066	18.5	1.43	401	24.5	0.0026	280	0.74	0.0079	1.16	0.17	17.20	0.955	17.89	0.0096
Areawide Maximum	Dose/High TRV	0.080	0.066	122	1.43	2646	162	0.0026	1,850	4.90	1	1.16	143	172	0.955	178.85	0.80
	Dose/Low TRV	0.080	0.066	122	1.43	2646	162	0.0026	1,850	4.90	1	1.16	143	17.20	0.955	17.89	**8.02**
Total DDTs																	
Areawide 95UCL	Dose/High TRV	0.080	Regression	0.0042	Regression	0.29	0.017	0.0026	0.019	0.000051	0.0079	1.16	0.00012	1.50	1.00	1.55	0.000077
	Dose/Low TRV	0.080	Regression	0.0042	Regression	0.29	0.017	0.0026	0.019	0.000051	0.0079	1.16	0.00012	0.00090	3.50	0.00072	0.16
Areawide Maximum	Dose/High TRV	0.080	Regression	0.010	Regression	0.76	0.046	0.0026	0.060	0.00016	1	1.16	0.039	1.50	1.00	1.55	0.026
	Dose/Low TRV	0.080	Regression	0.010	Regression	0.76	0.046	0.0026	0.060	0.00016	1	1.16	0.039	0.00090	3.50	0.00072	**54.7**
Dieldrin																	
Areawide 95UCL	Dose/High TRV	0.080	1.23	0.00074	Regression	0.015	0.00090	0.0026	0.00060	0.0000016	0.0079	1.16	0.0000061	0.77	0.466	0.92	0.0000066
	Dose/Low TRV	0.080	1.23	0.00074	Regression	0.015	0.00090	0.0026	0.00060	0.0000016	0.0079	1.16	0.0000061	0.077	0.466	0.092	0.000066
Areawide Maximum	Dose/High TRV	0.080	1.23	0.00074	Regression	0.015	0.00090	0.0026	0.00060	0.0000016	1	1.16	0.00078	0.77	0.466	0.92	0.00084
	Dose/Low TRV	0.080	1.23	0.00074	Regression	0.015	0.00090	0.0026	0.00060	0.0000016	1	1.16	0.00078	0.077	0.466	0.092	0.0084
Methoxychlor																	
Areawide 95UCL	Dose/High TRV	0.080	0.11	0.00011	30.6	0.031	0.0018	0.0026	0.0010	0.0000026	0.0079	1.16	0.000013	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	0.11	0.00011	30.6	0.031	0.0018	0.0026	0.0010	0.0000026	0.0079	1.16	0.000013	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.080	0.11	0.00011	30.6	0.031	0.0018	0.0026	0.0010	0.0000026	1	1.16	0.0016	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	0.11	0.00011	30.6	0.031	0.0018	0.0026	0.0010	0.0000026	1	1.16	0.0016	NA	NA	NA	No TRV[13]
Total Chlordane																	
Areawide 95UCL	Dose/High TRV	0.080	0.025	0.00010	32.0	0.13	0.0077	0.0026	0.0040	0.000011	0.0079	1.16	0.000052	10.7	0.064	19.1	0.0000027
	Dose/Low TRV	0.080	0.025	0.00010	32.0	0.13	0.0077	0.0026	0.0040	0.000011	0.0079	1.16	0.000052	2.14	0.064	3.82	0.000014
Areawide Maximum	Dose/High TRV	0.080	0.025	0.00010	32.0	0.13	0.0077	0.0026	0.0040	0.000011	1	1.16	0.0066	10.7	0.064	19.1	0.00035
	Dose/Low TRV	0.080	0.025	0.00010	32.0	0.13	0.0077	0.0026	0.0040	0.000011	1	1.16	0.0066	2.14	0.064	3.82	0.0017
Total PAHs																	
Areawide 95UCL	Dose/High TRV	0.080	Regression	1.34	1.33	2.66	0.19	0.0026	2.00	0.0053	0.0079	1.16	0.0013	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	Regression	1.34	1.33	2.66	0.19	0.0026	2.00	0.0053	0.0079	1.16	0.0013	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.080	Regression	1.34	1.33	2.66	0.19	0.0026	2.00	0.0053	1	1.16	0.17	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.080	Regression	1.34	1.33	2.66	0.19	0.0026	2.00	0.0053	1	1.16	0.17	NA	NA	NA	No TRV[13]

TABLE M1-8: MALLARD (BREEDING) DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Plant BAF[2] (unitless)	Plant Concentration[3] (mg/kg)	Invertebrate BAF[2] (unitless)	Invertebrate Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Total PCBs																	
Areawide 95UCL	Dose/High TRV	0.080	0.013	0.0037	Regression	0.28	0.017	0.0026	0.28	0.00075	0.0079	1.16	0.00012	1.27	1.715	1.17	0.00010
	Dose/Low TRV	0.080	0.013	0.0037	Regression	0.28	0.017	0.0026	0.28	0.00075	0.0079	1.16	0.00012	0.090	0.800	0.10	0.0012
Areawide Maximum	Dose/High TRV	0.080	0.013	0.0078	Regression	0.60	0.036	0.0026	0.60	0.0016	1	1.16	0.033	1.27	1.715	1.17	0.028
	Dose/Low TRV	0.080	0.013	0.0078	Regression	0.60	0.036	0.0026	0.60	0.0016	1	1.16	0.033	0.090	0.800	0.10	0.34

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95th percent upper confidence limit on the arithmetic mean	kg/day	Kilogram per day
BAF	Bioaccumulation factor	LMW	Low molecular weight
BHC	Benzene hexachloride	mg/day	Milligram per day
COPEC	Chemical of potential ecological concern	mg/kg	Milligram per kilogram
DDE	Dichlorodiphenyldichloroethene	mg/kg/day	Milligram per kilogram per day
DDT	Dichlorodiphenyltrichloroethane	NA	Not applicable
EFA WEST	Naval Facilities Engineering Command, Engineering Field Activity West	NB	No BAF was available.
HMW	High molecular weight	PAH	Polycyclic aromatic hydrocarbon
HQ	Hazard quotient	SUF	Site use factor
kg	Kilogram	TRV	Toxicity reference value

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for all birds and the averaged food requirement conversion for insectivorous birds.
2 The 95UCL or habitat area maximum (see note 6) for all site-collected soil samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 1 mg/kg because no BAF was available.
3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).
4 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration.
5 Rate for the Bald Eagle in Pascoe and others (1996); 0.7 percent of prey ingestion rate.
6 For average doses, lesser of 95UCL or detected maximum of all site-collected soil samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected soil samples was used.
7 Soil daily dose was calculated by multiplying the soil ingestion rate by 95UCL or habitat area maximum (see note 6) soil concentration.
8 Average adult weight from Dunning (1993).
9 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + soil daily dose)*SUF)/receptor species body weight.
10 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.
11 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-1/2)}$.
12 The HQ was calculated using total daily dose/allometrically adjusted TRV.
13 Sufficient data are not available to derive a TRV. This chemical was evaluated qualitatively.

TABLE M1-9: CALIFORNIA BLACK RAIL DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Plant BAF[2] (unitless)	Plant Concentration[3] (mg/kg)	Invertebrate BAF[2] (unitless)	Invertebrate Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Aluminum																	
Areawide 95UCL	Dose/High TRV	0.0064	0.00066	18.8	0.043	1227	6.31	0.0012	28,545	32.9	1	0.029	1,353	1,097	0.155	785	**1.72**
	Dose/Low TRV	0.0064	0.00066	18.8	0.043	1227	6.31	0.0012	28,545	32.9	1	0.029	1,353	110	0.155	78.5	**17.2**
Areawide Maximum	Dose/High TRV	0.0064	0.00066	26.1	0.043	1703	8.76	0.0012	39,600	45.7	1	0.029	1,877	1,097	0.155	785	**2.39**
	Dose/Low TRV	0.0064	0.00066	26.1	0.043	1703	8.76	0.0012	39,600	45.7	1	0.029	1,877	110	0.155	78.5	**23.9**
Antimony																	
Areawide 95UCL	Dose/High TRV	0.0064	0.19	0.34	1	1.80	0.0097	0.0012	1.80	0.0021	1	0.029	0.40	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.0064	0.19	0.34	1	1.80	0.0097	0.0012	1.80	0.0021	1	0.029	0.40	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.0064	0.19	1.46	1	7.70	0.041	0.0012	7.70	0.0089	1	0.029	1.73	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.0064	0.19	1.46	1	7.70	0.041	0.0012	7.70	0.0089	1	0.029	1.73	NA	NA	NA	No TRV[13]
Arsenic																	
Areawide 95UCL	Dose/High TRV	0.0064	0.064	1.14	1.36	24.2	0.13	0.0012	17.8	0.021	1	0.029	5.04	22.0	1.172	10.50	0.48
	Dose/Low TRV	0.0064	0.064	1.14	1.36	24.2	0.13	0.0012	17.8	0.021	1	0.029	5.04	5.50	1.172	2.62	**1.92**
Areawide Maximum	Dose/High TRV	0.0064	0.064	3.27	1.36	69.5	0.36	0.0012	51.1	0.059	1	0.029	14.5	22.0	1.172	10.50	**1.38**
	Dose/Low TRV	0.0064	0.064	3.27	1.36	69.5	0.36	0.0012	51.1	0.059	1	0.029	14.5	5.50	1.172	2.62	**5.51**
Barium																	
Areawide 95UCL	Dose/High TRV	0.0064	0.057	4.34	0.091	6.93	0.041	0.0012	76.1	0.088	1	0.029	4.44	41.7	0.121	31.34	0.14
	Dose/Low TRV	0.0064	0.057	4.34	0.091	6.93	0.041	0.0012	76.1	0.088	1	0.029	4.44	20.8	0.121	15.63	0.28
Areawide Maximum	Dose/High TRV	0.0064	0.057	8.61	0.091	13.74	0.081	0.0012	151	0.17	1	0.029	8.81	41.7	0.121	31.34	0.28
	Dose/Low TRV	0.0064	0.057	8.61	0.091	13.74	0.081	0.0012	151	0.17	1	0.029	8.81	20.8	0.121	15.63	0.56
Beryllium																	
Areawide 95UCL	Dose/High TRV	0.0064	Regression	0.35	0.045	0.022	0.00056	0.0012	0.49	0.00056	1	0.029	0.039	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.0064	Regression	0.35	0.045	0.022	0.00056	0.0012	0.49	0.00056	1	0.029	0.039	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.0064	Regression	0.51	0.045	0.037	0.00085	0.0012	0.83	0.00096	1	0.029	0.062	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.0064	Regression	0.51	0.045	0.037	0.00085	0.0012	0.83	0.00096	1	0.029	0.062	NA	NA	NA	No TRV[13]
Cadmium																	
Areawide 95UCL	Dose/High TRV	0.0064	0.25	0.17	NB	0.68	0.0037	0.0012	0.68	0.00078	1	0.029	0.15	10.4	0.084	8.43	0.018
	Dose/Low TRV	0.0064	0.25	0.17	NB	0.68	0.0037	0.0012	0.68	0.00078	1	0.029	0.15	0.080	0.80	0.041	**3.75**
Areawide Maximum	Dose/High TRV	0.0064	0.25	1.75	NB	7.00	0.038	0.0012	7.00	0.00807	1	0.029	1.59	10.4	0.084	8.43	0.19
	Dose/Low TRV	0.0064	0.25	1.75	NB	7.00	0.038	0.0012	7.00	0.00807	1	0.029	1.59	0.080	0.80	0.041	**38.6**
Chromium																	
Areawide 95UCL	Dose/High TRV	0.0064	0.024	2.36	0.31	30.1	0.16	0.0012	98.4	0.11	1	0.029	9.33	5.00	1.25	2.36	**3.96**
	Dose/Low TRV	0.0064	0.024	2.36	0.31	30.1	0.16	0.0012	98.4	0.11	1	0.029	9.33	1.00	1.25	0.47	**19.8**
Areawide Maximum	Dose/High TRV	0.0064	0.024	7.06	0.31	90.0	0.47	0.0012	294	0.34	1	0.029	27.9	5.00	1.25	2.36	**11.8**
	Dose/Low TRV	0.0064	0.024	7.06	0.31	90.0	0.47	0.0012	294	0.34	1	0.029	27.9	1.00	1.25	0.47	**59.2**
Bioavailable Dose	Dose/High TRV	0.0064	0.024	2.36	0.31	30.1	0.16	0.0012	2.07	0.0024	1	0.029	5.51	5.00	1.25	2.36	**2.34**
(95UCL)	Dose/Low TRV	0.0064	0.024	2.36	0.31	30.1	0.16	0.0012	2.07	0.0024	1	0.029	5.51	1.00	1.25	0.47	**11.7**
Cobalt																	
Areawide 95UCL	Dose/High TRV	0.0064	0.0075	0.15	0.12	2.51	0.013	0.0012	20.6	0.024	1	0.029	1.27	76.1	0.292	47.95	0.026
	Dose/Low TRV	0.0064	0.0075	0.15	0.12	2.51	0.013	0.0012	20.6	0.024	1	0.029	1.27	7.61	0.292	4.79	0.26
Areawide Maximum	Dose/High TRV	0.0064	0.0075	0.26	0.12	4.25	0.022	0.0012	34.8	0.040	1	0.029	2.15	76.1	0.292	47.95	0.045
	Dose/Low TRV	0.0064	0.0075	0.26	0.12	4.25	0.022	0.0012	34.8	0.040	1	0.029	2.15	7.61	0.292	4.79	0.45
Copper																	
Areawide 95UCL	Dose/High TRV	0.0064	0.044	4.17	0.98	92.86	0.48	0.0012	94.8	0.11	1	0.029	20.4	52.3	0.409	30.78	0.66
	Dose/Low TRV	0.0064	0.044	4.17	0.98	92.86	0.48	0.0012	94.8	0.11	1	0.029	20.4	2.30	0.639	1.24	**16.4**
Areawide Maximum	Dose/High TRV	0.0064	0.044	14.3	0.98	317.5	1.65	0.0012	324	0.37	1	0.029	69.6	52.3	0.409	30.78	**2.26**
	Dose/Low TRV	0.0064	0.044	14.3	0.98	317.5	1.65	0.0012	324	0.37	1	0.029	69.6	2.30	0.639	1.24	**56.2**
Bioavailable Dose	Dose/High TRV	0.0064	0.044	4.17	0.98	92.9	0.31	0.0001	4.74	0.00055	1	0.029	10.7	52.3	0.41	30.78	0.35
(95UCL)	Dose/Low TRV	0.0064	0.044	4.17	0.98	92.9	0.31	0.0001	4.74	0.00055	1	0.029	10.7	2.30	0.64	1.24	**8.7**
Lead																	
Areawide 95UCL	Dose/High TRV	0.0064	0.0055	0.52	0.37	35.3	0.18	0.0012	95.3	0.11	1	0.029	10.0	8.75	0.800	4.51	**2.23**
	Dose/Low TRV	0.0064	0.0055	0.52	0.37	35.3	0.18	0.0012	95.3	0.11	1	0.029	10.0	0.014	0.084	0.01	**887**
Areawide Maximum	Dose/High TRV	0.0064	0.0055	2.32	0.37	156.1	0.80	0.0012	422	0.49	1	0.029	44.5	8.75	0.800	4.51	**9.87**
	Dose/Low TRV	0.0064	0.0055	2.32	0.37	156.1	0.80	0.0012	422	0.49	1	0.029	44.5	0.014	0.084	0.01	**3,929**
Bioavailable Dose	Dose/High TRV	0.0064	0.0055	0.52	0.37	35.3	0.18	0.0012	6.00	0.0069	1	0.029	6.49	8.75	0.80	4.51	**1.44**
(95UCL)	Dose/Low TRV	0.0064	0.0055	0.52	0.37	35.3	0.18	0.0012	6.00	0.0069	1	0.029	6.49	0.014	0.08	0.011	**574**
Manganese																	
Areawide 95UCL	Dose/High TRV	0.0064	0.026	14.6	5.12	2868	14.7	0.0012	560	0.65	1	0.029	530	776	0.197	529.3	**1.00**
	Dose/Low TRV	0.0064	0.026	14.6	5.12	2868	14.7	0.0012	560	0.65	1	0.029	530	77.6	0.197	52.9	**10.0**
Areawide Maximum	Dose/High TRV	0.0064	0.026	45.5	5.12	8960	46.0	0.0012	1,750	2.02	1	0.029	1,655	776	0.197	529.3	**3.13**
	Dose/Low TRV	0.0064	0.026	45.5	5.12	8960	46.0	0.0012	1,750	2.02	1	0.029	1,655	77.6	0.197	52.9	**31.3**

TABLE M1-9: CALIFORNIA BLACK RAIL DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Plant BAF[2] (unitless)	Plant Concentration[3] (mg/kg)	Invertebrate BAF[2] (unitless)	Invertebrate Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Mercury																	
Areawide 95UCL	Dose/High TRV	0.0064	0.61	0.36	1.69	1.00	0.0056	0.0012	0.59	0.00068	1	0.029	0.22	0.18	1.00	0.09	**2.43**
	Dose/Low TRV	0.0064	0.61	0.36	1.69	1.00	0.0056	0.0012	0.59	0.00068	1	0.029	0.22	0.0039	1.00	0.0019	**112**
Areawide Maximum	Dose/High TRV	0.0064	0.61	0.73	1.69	2.03	0.011	0.0012	1.20	0.0014	1	0.029	0.44	0.18	1.00	0.09	**4.95**
	Dose/Low TRV	0.0064	0.61	0.73	1.69	2.03	0.011	0.0012	1.20	0.0014	1	0.029	0.44	0.0039	1.00	0.0019	**229**
Bioavailable Dose	Dose/High TRV	0.0064	0.61	0.36	1.69	1.00	0.0056	0.0012	0.01	0.000010	1	0.029	0.19	0.18	1.00	0.09	**2.17**
(95UCL)	Dose/Low TRV	0.0064	0.61	0.36	1.69	1.00	0.0056	0.0012	0.01	0.000010	1	0.029	0.19	0.0039	1.00	0.0019	**100**
Molybdenum																	
Areawide 95UCL	Dose/High TRV	0.0064	NB	1.51	NB	1.51	0.0097	0.0012	1.51	0.0017	1	0.029	0.39	35.3	1.500	16.03	0.025
	Dose/Low TRV	0.0064	NB	1.51	NB	1.51	0.0097	0.0012	1.51	0.0017	1	0.029	0.39	3.50	1.500	1.59	0.25
Areawide Maximum	Dose/High TRV	0.0064	NB	3.80	NB	3.8	0.024	0.0012	3.80	0.0044	1	0.029	0.99	35.3	1.500	16.03	0.062
	Dose/Low TRV	0.0064	NB	3.80	NB	3.8	0.024	0.0012	3.80	0.0044	1	0.029	0.99	3.50	1.500	1.59	0.62
Nickel																	
Areawide 95UCL	Dose/High TRV	0.0064	0.011	1.04	1.06	100	0.51	0.0012	94.5	0.11	1	0.029	21.5	55.3	0.58	30.35	0.71
	Dose/Low TRV	0.0064	0.011	1.04	1.06	100	0.51	0.0012	94.5	0.11	1	0.029	21.5	1.38	0.61	0.75	**28.7**
Areawide Maximum	Dose/High TRV	0.0064	0.011	1.76	1.06	169	0.87	0.0012	160	0.18	1	0.029	36.4	55.3	0.58	30.35	**1.20**
	Dose/Low TRV	0.0064	0.011	1.76	1.06	169	0.87	0.0012	160	0.18	1	0.029	36.4	1.38	0.61	0.75	**48.5**
Bioavailable Dose	Dose/High TRV	0.0064	0.011	1.04	1.06	100	0.32	0.0001	3.40	0.00039	1	0.029	11.2	55.3	0.58	30.35	0.37
(95UCL)	Dose/Low TRV	0.0064	0.011	1.04	1.06	100	0.32	0.0001	3.40	0.00039	1	0.029	11.2	1.38	0.61	0.75	**14.9**
Selenium																	
Areawide 95UCL	Dose/High TRV	0.0064	Regression	0.62	Regression	1.05	0.0062	0.0012	1.19	0.0014	1	0.029	0.26	0.93	1.108	0.45	0.58
	Dose/Low TRV	0.0064	Regression	0.62	Regression	1.05	0.0062	0.0012	1.19	0.0014	1	0.029	0.26	0.23	1.108	0.11	**2.35**
Areawide Maximum	Dose/High TRV	0.0064	Regression	1.15	Regression	1.60	0.0097	0.0012	2.10	0.0024	1	0.029	0.42	0.93	1.108	0.45	0.93
	Dose/Low TRV	0.0064	Regression	1.15	Regression	1.60	0.0097	0.0012	2.10	0.0024	1	0.029	0.42	0.23	1.108	0.11	**3.76**
Thallium																	
Areawide 95UCL	Dose/High TRV	0.0064	NB	0.66	NB	0.66	0.0042	0.0012	0.66	0.00076	1	0.029	0.17	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.0064	NB	0.66	NB	0.66	0.0042	0.0012	0.66	0.00076	1	0.029	0.17	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.0064	NB	1.30	NB	1.30	0.0083	0.0012	1.30	0.0015	1	0.029	0.34	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.0064	NB	1.30	NB	1.30	0.0083	0.0012	1.30	0.0015	1	0.029	0.34	NA	NA	NA	No TRV[13]
Tin																	
Areawide 95UCL	Dose/High TRV	0.0064	NB	2.24	NB	2.24	0.014	0.0012	2.24	0.0026	1	0.029	0.58	16.9	0.150	12.17	0.048
	Dose/Low TRV	0.0064	NB	2.24	NB	2.24	0.014	0.0012	2.24	0.0026	1	0.029	0.58	6.80	0.150	4.90	0.12
Areawide Maximum	Dose/High TRV	0.0064	NB	5.00	NB	5.00	0.032	0.0012	5.00	0.0058	1	0.029	1.30	16.9	0.150	12.17	0.11
	Dose/Low TRV	0.0064	NB	5.00	NB	5.00	0.032	0.0012	5.00	0.0058	1	0.029	1.30	6.80	0.150	4.90	0.27
Vanadium																	
Areawide 95UCL	Dose/High TRV	0.0064	0.021	2.01	NB	95.8	0.49	0.0012	95.8	0.11	1	0.029	20.8	114	1.170	54.42	0.38
	Dose/Low TRV	0.0064	0.021	2.01	NB	95.8	0.49	0.0012	95.8	0.11	1	0.029	20.8	11.4	1.170	5.44	**3.83**
Areawide Maximum	Dose/High TRV	0.0064	0.021	4.75	NB	226	1.16	0.0012	226	0.26	1	0.029	49.1	114	1.170	54.42	0.90
	Dose/Low TRV	0.0064	0.021	4.75	NB	226	1.16	0.0012	226	0.26	1	0.029	49.1	11.4	1.170	5.44	**9.03**
Zinc																	
Areawide 95UCL	Dose/High TRV	0.0064	0.066	18.5	1.43	401	2.08	0.0012	280	0.32	1	0.029	82.8	172	0.96	85.51	0.97
	Dose/Low TRV	0.0064	0.066	18.5	1.43	401	2.08	0.0012	280	0.32	1	0.029	82.8	17.2	0.96	8.55	**9.68**
Areawide Maximum	Dose/High TRV	0.0064	0.066	122.1	1.43	2646	13.7	0.0012	1,850	2.13	1	0.029	546	172	0.96	85.51	**6.39**
	Dose/Low TRV	0.0064	0.066	122.1	1.43	2646	13.7	0.0012	1,850	2.13	1	0.029	546	17.2	0.96	8.55	**63.9**
Bioavailable Dose	Dose/High TRV	0.0064	0.066	18.5	1.43	401	2.08	0.0012	13.2	0.015	1	0.029	72.2	172	0.96	85.51	0.84
(95UCL)	Dose/Low TRV	0.0064	0.066	18.5	1.43	401	2.08	0.0012	13.2	0.015	1	0.029	72.2	17.2	0.96	8.55	**8.44**
Total DDTs																	
Areawide 95UCL	Dose/High TRV	0.0064	Regression	0.0042	Regression	0.29	0.0015	0.0012	0.019	0.000022	1	0.029	0.052	1.50	1.00	0.74	0.07
	Dose/Low TRV	0.0064	Regression	0.0042	Regression	0.29	0.0015	0.0012	0.019	0.000022	1	0.029	0.052	0.00090	3.50	0.00035	**150**
Areawide Maximum	Dose/High TRV	0.0064	Regression	0.010	Regression	0.76	0.0039	0.0012	0.060	0.000069	1	0.029	0.14	1.50	1.00	0.74	0.18
	Dose/Low TRV	0.0064	Regression	0.010	Regression	0.76	0.0039	0.0012	0.060	0.000069	1	0.029	0.14	0.00090	3.50	0.00035	**395**
Dieldrin																	
Areawide 95UCL	Dose/High TRV	0.0064	1.23	0.00074	Regression	0.015	0.000076	0.0012	0.00060	0.00000069	1	0.029	0.0027	0.77	0.466	0.44	0.0060
	Dose/Low TRV	0.0064	1.23	0.00074	Regression	0.015	0.000076	0.0012	0.00060	0.00000069	1	0.029	0.0027	0.077	0.466	0.044	0.060
Areawide Maximum	Dose/High TRV	0.0064	1.23	0.00074	Regression	0.015	0.000076	0.0012	0.00060	0.00000069	1	0.029	0.0027	0.77	0.466	0.44	0.0060
	Dose/Low TRV	0.0064	1.23	0.00074	Regression	0.015	0.000076	0.0012	0.00060	0.00000069	1	0.029	0.0027	0.077	0.466	0.044	0.060
Methoxychlor																	
Areawide 95UCL	Dose/High TRV	0.0064	0.11	0.00011	30.6	0.031	0.00016	0.0012	0.0010	0.0000012	1	0.029	0.0055	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.0064	0.11	0.00011	30.6	0.031	0.00016	0.0012	0.0010	0.0000012	1	0.029	0.0055	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.0064	0.11	0.00011	30.6	0.031	0.00016	0.0012	0.0010	0.0000012	1	0.029	0.0055	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.0064	0.11	0.00011	30.6	0.031	0.00016	0.0012	0.0010	0.0000012	1	0.029	0.0055	NA	NA	NA	No TRV[13]

TABLE M1-9: CALIFORNIA BLACK RAIL DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Plant BAF[2] (unitless)	Plant Concentration[3] (mg/kg)	Invertebrate BAF[2] (unitless)	Invertebrate Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Total Chlordane																	
Areawide 95UCL	Dose/High TRV	0.0064	0.025	0.00010	32.0	0.13	0.00066	0.0012	0.0040	0.0000046	1	0.029	0.023	10.7	0.064	9.13	0.0025
	Dose/Low TRV	0.0064	0.025	0.00010	32.0	0.13	0.00066	0.0012	0.0040	0.0000046	1	0.029	0.023	2.14	0.064	1.83	0.012
Areawide Maximum	Dose/High TRV	0.0064	0.025	0.00010	32.0	0.13	0.00066	0.0012	0.0040	0.0000046	1	0.029	0.023	10.7	0.064	9.13	0.0025
	Dose/Low TRV	0.0064	0.025	0.00010	32.0	0.13	0.00066	0.0012	0.0040	0.0000046	1	0.029	0.023	2.14	0.064	1.83	0.012
Total PAHs																	
Areawide 95UCL	Dose/High TRV	0.0064	Regression	1.34	1.33	2.66	0.015	0.0012	2.00	0.0023	1	0.029	0.61	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.0064	Regression	1.34	1.33	2.66	0.015	0.0012	2.00	0.0023	1	0.029	0.61	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.0064	Regression	1.34	1.33	2.66	0.015	0.0012	2.00	0.0023	1	0.029	0.61	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.0064	Regression	1.34	1.33	2.66	0.015	0.0012	2.00	0.0023	1	0.029	0.61	NA	NA	NA	No TRV[13]
Total PCBs																	
Areawide 95UCL	Dose/High TRV	0.0064	0.013	0.0037	Regression	0.28	0.0015	0.0012	0.28	0.00033	1	0.029	0.06	1.27	1.715	0.56	0.11
	Dose/Low TRV	0.0064	0.013	0.0037	Regression	0.28	0.0015	0.0012	0.28	0.00033	1	0.029	0.06	0.090	0.800	0.046	**1.32**
Areawide Maximum	Dose/High TRV	0.0064	0.013	0.0078	Regression	0.60	0.0031	0.0012	0.60	0.00069	1	0.029	0.13	1.27	1.715	0.56	0.23
	Dose/Low TRV	0.0064	0.013	0.0078	Regression	0.60	0.0031	0.0012	0.60	0.00069	1	0.029	0.13	0.090	0.800	0.046	**2.81**

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95th percent upper confidence limit on the arithmetic mean	kg/day	Kilogram per day
BAF	Bioaccumulation factor	LMW	Low molecular weight
BHC	Benzene hexachloride	mg/day	Milligram per day
COPEC	Chemical of potential ecological concern	mg/kg	Milligram per kilogram
DDE	Dichlorodiphenyldichloroethene	mg/kg/day	Milligram per kilogram per day
DDT	Dichlorodiphenyltrichloroethane	NA	Not applicable
EFA WEST	Naval Facilities Engineering Command, Engineering Field Activity West	NB	No BAF was available.
HMW	High molecular weight	PAH	Polycyclic aromatic hydrocarbon
HQ	Hazard quotient	SUF	Site use factor
kg	Kilogram	TRV	Toxicity reference value

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for all birds and the averaged food requirement conversion for insectivorous birds.

2 The 95UCL or habitat area maximum (see note 6) for all site-collected soil samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 1 mg/kg because no BAF was available.

3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).

4 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration.

5 Rate for the Bald Eagle in Pascoe and others (1996); 0.7 percent of prey ingestion rate.

6 For average doses, lesser of 95UCL or detected maximum of all site-collected soil samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected soil samples was used.

7 Soil daily dose was calculated by multiplying the soil ingestion rate by 95UCL or habitat area maximum (see note 6) soil concentration.

8 Average adult weight from Dunning (1993).

9 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + soil daily dose)*SUF)/receptor species body weight.

10 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.

11 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-1/2)}$.

12 The HQ was calculated using total daily dose/allometrically adjusted TRV.

13 Sufficient data are not available to derive a TRV. This chemical was evaluated qualitatively.

TABLE M1-10: CALIFORNIA CLAPPER RAIL DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Invertebrate BAF[2] (unitless)	Invertebrate Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Aluminum															
Areawide 95UCL	Dose/High TRV	0.030	0.043	1,227	37.1	0.0054	28,545	155	1	0.28	689	1,097	0.155	1,234	0.56
	Dose/Low TRV	0.030	0.043	1,227	37.1	0.0054	28,545	155	1	0.28	689	110	0.155	123	**5.58**
Areawide Maximum	Dose/High TRV	0.030	0.043	1,703	51.5	0.0054	39,600	216	1	0.28	955	1,097	0.155	1,234	0.77
	Dose/Low TRV	0.030	0.043	1,703	51.5	0.0054	39,600	216	1	0.28	955	110	0.155	123	**7.74**
Antimony															
Areawide 95UCL	Dose/High TRV	0.030	1	1.80	0.054	0.0054	1.80	0.010	1	0.28	0.23	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.030	1	1.80	0.054	0.0054	1.80	0.010	1	0.28	0.23	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.030	1	7.70	0.233	0.0054	7.70	0.042	1	0.28	0.98	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.030	1	7.70	0.233	0.0054	7.70	0.042	1	0.28	0.98	NA	NA	NA	No TRV[13]
Arsenic															
Areawide 95UCL	Dose/High TRV	0.030	1.36	24.2	0.73	0.0054	17.8	0.10	1	0.28	2.97	22.0	1.172	16.53	0.18
	Dose/Low TRV	0.030	1.36	24.2	0.73	0.0054	17.8	0.10	1	0.28	2.97	5.50	1.172	4.13	0.72
Areawide Maximum	Dose/High TRV	0.030	1.36	69.5	2.10	0.0054	51.1	0.28	1	0.28	8.51	22.0	1.172	16.53	0.52
	Dose/Low TRV	0.030	1.36	69.5	2.10	0.0054	51.1	0.28	1	0.28	8.51	5.50	1.172	4.13	**2.06**
Barium															
Areawide 95UCL	Dose/High TRV	0.030	0.091	6.93	0.21	0.0054	76.1	0.41	1	0.28	2.23	41.7	0.121	49.3	0.045
	Dose/Low TRV	0.030	0.091	6.93	0.21	0.0054	76.1	0.41	1	0.28	2.23	20.8	0.121	24.6	0.091
Areawide Maximum	Dose/High TRV	0.030	0.091	13.74	0.42	0.0054	151	0.82	1	0.28	4.43	41.7	0.121	49.3	0.090
	Dose/Low TRV	0.030	0.091	13.74	0.42	0.0054	151	0.82	1	0.28	4.43	20.8	0.121	24.6	0.18
Beryllium															
Areawide 95UCL	Dose/High TRV	0.030	0.045	0.022	0.00067	0.0054	0.49	0.0027	1	0.28	0.012	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.030	0.045	0.022	0.00067	0.0054	0.49	0.0027	1	0.28	0.012	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.030	0.045	0.037	0.0011	0.0054	0.83	0.0045	1	0.28	0.020	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.030	0.045	0.037	0.0011	0.0054	0.83	0.0045	1	0.28	0.020	NA	NA	NA	No TRV[13]
Cadmium															
Areawide 95UCL	Dose/High TRV	0.030	NB	0.68	0.021	0.0054	0.68	0.0037	1	0.28	0.087	10.4	0.084	13.27	0.0065
	Dose/Low TRV	0.030	NB	0.68	0.021	0.0054	0.68	0.0037	1	0.28	0.087	0.08	0.799	0.065	**1.34**
Areawide Maximum	Dose/High TRV	0.030	NB	7.00	0.21	0.0054	7.00	0.0381	1	0.28	0.89	10.4	0.084	13.27	0.067
	Dose/Low TRV	0.030	NB	7.00	0.21	0.0054	7.00	0.0381	1	0.28	0.89	0.08	0.799	0.065	**13.8**
Chromium															
Areawide 95UCL	Dose/High TRV	0.030	0.31	30.1	0.91	0.0054	98.4	0.54	1	0.28	5.17	5.00	1.250	3.71	**1.40**
	Dose/Low TRV	0.030	0.31	30.1	0.91	0.0054	98.4	0.54	1	0.28	5.17	1.00	1.250	0.74	**6.98**
Areawide Maximum	Dose/High TRV	0.030	0.31	90.0	2.72	0.0054	294	1.60	1	0.28	15.5	5.00	1.250	3.71	**4.17**
	Dose/Low TRV	0.030	0.31	90.0	2.72	0.0054	294	1.60	1	0.28	15.5	1.00	1.250	0.74	**20.9**
Bioavailable Dose (95UCL)	Dose/High TRV	0.030	0.31	30.1	0.91	0.0054	2.1	0.011	1	0.28	3.30	5.00	1.250	3.71	0.89
	Dose/Low TRV	0.030	0.31	30.1	0.91	0.0054	2.1	0.011	1	0.28	3.30	1.00	1.250	0.74	**4.45**
Cobalt															
Areawide 95UCL	Dose/High TRV	0.030	0.12	2.51	0.076	0.0054	20.6	0.11	1	0.28	0.67	76.1	0.292	75.45	0.0089
	Dose/Low TRV	0.030	0.12	2.51	0.076	0.0054	20.6	0.11	1	0.28	0.67	7.61	0.292	7.54	0.089
Areawide Maximum	Dose/High TRV	0.030	0.12	4.25	0.13	0.0054	34.8	0.19	1	0.28	1.14	76.1	0.292	75.45	0.015
	Dose/Low TRV	0.030	0.12	4.25	0.13	0.0054	34.8	0.19	1	0.28	1.14	7.61	0.292	7.54	0.15
Copper															
Areawide 95UCL	Dose/High TRV	0.030	0.98	92.9	2.81	0.0054	94.8	0.52	1	0.28	11.9	52.3	0.409	48.44	0.25
	Dose/Low TRV	0.030	0.98	92.9	2.81	0.0054	94.8	0.52	1	0.28	11.9	2.30	0.639	1.95	**6.10**
Areawide Maximum	Dose/High TRV	0.030	0.98	318	9.61	0.0054	324	1.76	1	0.28	40.7	52.3	0.409	48.44	0.84
	Dose/Low TRV	0.030	0.98	318	9.61	0.0054	324	1.76	1	0.28	40.7	2.30	0.639	1.95	**20.9**
Bioavailable Dose (95UCL)	Dose/High TRV	0.030	0.98	92.9	2.81	0.0054	4.7	0.026	1	0.28	10.1	52.3	0.409	48.44	0.21
	Dose/Low TRV	0.030	0.98	92.9	2.81	0.0054	4.7	0.026	1	0.28	10.1	2.30	0.639	1.95	**5.20**
Lead															
Areawide 95UCL	Dose/High TRV	0.030	0.37	35.3	1.067	0.0054	95.3	0.52	1	0.28	5.67	8.75	0.800	7.09	0.80
	Dose/Low TRV	0.030	0.37	35.3	1.067	0.0054	95.3	0.52	1	0.28	5.67	0.014	0.084	0.018	**318**
Areawide Maximum	Dose/High TRV	0.030	0.37	156.1	4.724	0.0054	422	2.30	1	0.28	25.1	8.75	0.800	7.09	**3.54**
	Dose/Low TRV	0.030	0.37	156.1	4.724	0.0054	422	2.30	1	0.28	25.1	0.014	0.084	0.018	**1,410**

TABLE M1-10: CALIFORNIA CLAPPER RAIL DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Invertebrate BAF[2] (unitless)	Invertebrate Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Manganese															
Areawide 95UCL	Dose/High TRV	0.030	5.12	2,868	86.8	0.0054	560	3.05	1	0.28	321	776	0.197	832.8	0.39
	Dose/Low TRV	0.030	5.12	2,868	86.8	0.0054	560	3.05	1	0.28	321	77.6	0.197	83.28	**3.86**
Areawide Maximum	Dose/High TRV	0.030	5.12	8,960	271.1	0.0054	1,750	9.53	1	0.28	1003	776	0.197	832.8	**1.20**
	Dose/Low TRV	0.030	5.12	8,960	271.1	0.0054	1,750	9.53	1	0.28	1003	77.6	0.197	83.28	**12.0**
Mercury															
Areawide 95UCL	Dose/High TRV	0.030	1.69	1.00	0.030	0.0054	0.59	0.0032	1	0.28	0.12	0.18	1.000	0.14	0.86
	Dose/Low TRV	0.030	1.69	1.00	0.030	0.0054	0.59	0.0032	1	0.28	0.12	0.0039	1.000	0.0030	**39.5**
Areawide Maximum	Dose/High TRV	0.030	1.69	2.03	0.061	0.0054	1.20	0.0065	1	0.28	0.24	0.18	1.000	0.14	**1.74**
	Dose/Low TRV	0.030	1.69	2.03	0.061	0.0054	1.20	0.0065	1	0.28	0.24	0.0039	1.000	0.0030	**80.4**
Molybdenum															
Areawide 95UCL	Dose/High TRV	0.030	NB	1.51	0.046	0.0054	1.51	0.0082	1	0.28	0.19	35.3	1.500	25.23	0.0076
	Dose/Low TRV	0.030	NB	1.51	0.046	0.0054	1.51	0.0082	1	0.28	0.19	3.50	1.500	2.50	0.077
Areawide Maximum	Dose/High TRV	0.030	NB	3.80	0.11	0.0054	3.80	0.021	1	0.28	0.49	35.3	1.500	25.23	0.019
	Dose/Low TRV	0.030	NB	3.80	0.11	0.0054	3.80	0.021	1	0.28	0.49	3.50	1.500	2.50	0.19
Nickel															
Areawide 95UCL	Dose/High TRV	0.030	1.06	100	3.03	0.0054	94.5	0.51	1	0.28	12.7	55.3	0.580	47.76	0.27
	Dose/Low TRV	0.030	1.06	100	3.03	0.0054	94.5	0.51	1	0.28	12.7	1.38	0.614	1.18	**10.7**
Areawide Maximum	Dose/High TRV	0.030	1.06	169	5.13	0.0054	160	0.87	1	0.28	21.4	55.3	0.580	47.76	0.45
	Dose/Low TRV	0.030	1.06	169	5.13	0.0054	160	0.87	1	0.28	21.4	1.38	0.614	1.18	**18.2**
Bioavailable Dose (95UCL)	Dose/High TRV	0.030	1.06	100	3.03	0.0054	3.40	0.019	1	0.28	10.9	55.3	0.580	47.76	0.23
	Dose/Low TRV	0.030	1.06	100	3.03	0.0054	3.40	0.019	1	0.28	10.9	1.38	0.614	1.18	**9.24**
Selenium															
Areawide 95UCL	Dose/High TRV	0.030	Regression	1.05	0.032	0.0054	1.19	0.0065	1	0.28	0.14	0.93	1.108	0.71	0.19
	Dose/Low TRV	0.030	Regression	1.05	0.032	0.0054	1.19	0.0065	1	0.28	0.14	0.23	1.108	0.17	0.79
Areawide Maximum	Dose/High TRV	0.030	Regression	1.60	0.048	0.0054	2.10	0.0114	1	0.28	0.21	0.93	1.108	0.71	0.30
	Dose/Low TRV	0.030	Regression	1.60	0.048	0.0054	2.10	0.0114	1	0.28	0.21	0.23	1.108	0.17	**1.22**
Thallium															
Areawide 95UCL	Dose/High TRV	0.030	NB	0.66	0.020	0.0054	0.66	0.0036	1	0.28	0.084	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.030	NB	0.66	0.020	0.0054	0.66	0.0036	1	0.28	0.084	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.030	NB	1.30	0.039	0.0054	1.30	0.0071	1	0.28	0.17	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.030	NB	1.30	0.039	0.0054	1.30	0.0071	1	0.28	0.17	NA	NA	NA	No TRV[13]
Tin															
Areawide 95UCL	Dose/High TRV	0.030	NB	2.24	0.068	0.0054	2.24	0.012	1	0.28	0.29	16.9	0.150	19.14	0.015
	Dose/Low TRV	0.030	NB	2.24	0.068	0.0054	2.24	0.012	1	0.28	0.29	6.80	0.150	7.70	0.037
Areawide Maximum	Dose/High TRV	0.030	NB	5.00	0.15	0.0054	5.00	0.027	1	0.28	0.64	16.9	0.150	19.14	0.033
	Dose/Low TRV	0.030	NB	5.00	0.15	0.0054	5.00	0.027	1	0.28	0.64	6.80	0.150	7.70	0.083
Vanadium															
Areawide 95UCL	Dose/High TRV	0.030	NB	95.8	2.90	0.0054	95.8	0.52	1	0.28	12.2	114	1.170	85.6	0.143
	Dose/Low TRV	0.030	NB	95.8	2.90	0.0054	95.8	0.52	1	0.28	12.2	11.4	1.170	8.56	**1.43**
Areawide Maximum	Dose/High TRV	0.030	NB	226	6.84	0.0054	226	1.23	1	0.28	28.8	114	1.170	85.6	0.34
	Dose/Low TRV	0.030	NB	226	6.84	0.0054	226	1.23	1	0.28	28.8	11.4	1.170	8.56	**3.37**
Zinc															
Areawide 95UCL	Dose/High TRV	0.030	1.43	401	12.1	0.0054	280	1.53	1	0.28	48.8	172	0.955	134.5	0.36
	Dose/Low TRV	0.030	1.43	401	12.1	0.0054	280	1.53	1	0.28	48.8	17.2	0.955	13.45	**3.63**
Areawide Maximum	Dose/High TRV	0.030	1.43	2,646	80.0	0.0054	1,850	10.1	1	0.28	322	172	0.955	134.5	**2.39**
	Dose/Low TRV	0.030	1.43	2,646	80.0	0.0054	1,850	10.1	1	0.28	322	17.2	0.955	13.45	**23.9**
Bioavailable Dose (95UCL)	Dose/High TRV	0.030	1.43	401	12.1	0.0054	13.2	0.072	1	0.28	43.6	172	0.955	134.5	0.32
	Dose/Low TRV	0.030	1.43	401	12.1	0.0054	13.2	0.072	1	0.28	43.6	17.2	0.955	13.45	**3.24**
Total DDTs															
Areawide 95UCL	Dose/High TRV	0.030	Regression	0.29	0.0087	0.0054	0.019	0.00011	1	0.28	0.031	1.50	1.00	1.16	0.027
	Dose/Low TRV	0.030	Regression	0.29	0.0087	0.0054	0.019	0.00011	1	0.28	0.031	0.00090	3.50	0.00054	**58.0**
Areawide Maximum	Dose/High TRV	0.030	Regression	0.76	0.023	0.0054	0.060	0.00033	1	0.28	0.083	1.50	1.00	1.16	0.071
	Dose/Low TRV	0.030	Regression	0.76	0.023	0.0054	0.060	0.00033	1	0.28	0.083	0.00090	3.50	0.00054	**153**

TABLE M1-10: CALIFORNIA CLAPPER RAIL DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Invertebrate BAF[2] (unitless)	Invertebrate Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Dieldrin															
Areawide 95UCL	Dose/High TRV	0.030	Regression	0.015	0.00044	0.0054	0.00060	0.0000033	1	0.28	0.0016	0.77	0.466	0.70	0.0023
	Dose/Low TRV	0.030	Regression	0.015	0.00044	0.0054	0.00060	0.0000033	1	0.28	0.0016	0.077	0.466	0.070	0.023
Areawide Maximum	Dose/High TRV	0.030	Regression	0.015	0.00044	0.0054	0.00060	0.0000033	1	0.28	0.0016	0.77	0.466	0.70	0.0023
	Dose/Low TRV	0.030	Regression	0.015	0.00044	0.0054	0.00060	0.0000033	1	0.28	0.0016	0.077	0.466	0.070	0.023
Methoxychlor															
Areawide 95UCL	Dose/High TRV	0.030	30.6	0.031	0.00093	0.0054	0.0010	0.0000054	1	0.28	0.0033	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.030	30.6	0.031	0.00093	0.0054	0.0010	0.0000054	1	0.28	0.0033	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.030	30.6	0.031	0.00093	0.0054	0.0010	0.0000054	1	0.28	0.0033	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.030	30.6	0.031	0.00093	0.0054	0.0010	0.0000054	1	0.28	0.0033	NA	NA	NA	No TRV[13]
Total Chlordane															
Areawide 95UCL	Dose/High TRV	0.030	32.0	0.13	0.0039	0.0054	0.0040	0.000022	1	0.28	0.014	10.7	0.064	14.4	0.00097
	Dose/Low TRV	0.030	32.0	0.13	0.0039	0.0054	0.0040	0.000022	1	0.28	0.014	2.14	0.064	2.87	0.0048
Areawide Maximum	Dose/High TRV	0.030	32.0	0.13	0.0039	0.0054	0.0040	0.000022	1	0.28	0.014	10.7	0.064	14.4	0.00097
	Dose/Low TRV	0.030	32.0	0.13	0.0039	0.0054	0.0040	0.000022	1	0.28	0.014	2.14	0.064	2.87	0.0048
Total PAHs															
Areawide 95UCL	Dose/High TRV	0.030	1.33	2.66	0.080	0.0054	2.00	0.011	1	0.28	0.327	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.030	1.33	2.66	0.080	0.0054	2.00	0.011	1	0.28	0.327	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.030	1.33	2.66	0.080	0.0054	2.00	0.011	1	0.28	0.327	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.030	1.33	2.66	0.080	0.0054	2.00	0.011	1	0.28	0.327	NA	NA	NA	No TRV[13]
Total PCBs															
Areawide 95UCL	Dose/High TRV	0.030	Regression	0.28	0.0086	0.0054	0.28	0.0015	1	0.28	0.036	1.27	1.715	0.88	0.041
	Dose/Low TRV	0.030	Regression	0.28	0.0086	0.0054	0.28	0.0015	1	0.28	0.036	0.090	0.800	0.073	0.50
Areawide Maximum	Dose/High TRV	0.030	Regression	0.60	0.018	0.0054	0.60	0.0033	1	0.28	0.077	1.27	1.715	0.88	0.087
	Dose/Low TRV	0.030	Regression	0.60	0.018	0.0054	0.60	0.0033	1	0.28	0.077	0.090	0.800	0.073	**1.05**

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95th percent upper confidence limit on the arithmetic mean	kg/day	Kilogram per day
BAF	Bioaccumulation factor	LMW	Low molecular weight
BHC	Benzene hexachloride	mg/day	Milligram per day
COPEC	Chemical of potential ecological concern	mg/kg	Milligram per kilogram
DDE	Dichlorodiphenyldichloroethene	mg/kg/day	Milligram per kilogram per day
DDT	Dichlorodiphenyltrichloroethane	NA	Not applicable
EFA WEST	Naval Facilities Engineering Command, Engineering Field Activity West	NB	No BAF was available.
HMW	High molecular weight	PAH	Polycyclic aromatic hydrocarbon
HQ	Hazard quotient	SUF	Site use factor
kg	Kilogram	TRV	Toxicity reference value

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for all birds and the averaged food requirement conversion for insectivorous birds.

2 The 95UCL or habitat area maximum (see note 6) for all site-collected soil samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 1 mg/kg because no BAF was available.

3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).

4 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration.

5 Rate for the Bald Eagle in Pascoe and others (1996); 0.7 percent of prey ingestion rate.

6 For average doses, lesser of 95UCL or detected maximum of all site-collected soil samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected soil samples was used.

7 Soil daily dose was calculated by multiplying the soil ingestion rate by 95UCL or habitat area maximum (see note 6) soil concentration.

8 Average adult weight from Dunning (1993).

9 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + soil daily dose)*SUF)/receptor species body weight.

10 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.

11 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-1.2)}$.

12 The HQ was calculated using total daily dose/allometrically adjusted TRV.

13 Sufficient data are not available to derive a TRV. This chemical was evaluated qualitatively.

TABLE M1-11: KILLDEER DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Invertebrate BAF[2] (unitless)	Invertebrate Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Aluminum															
Areawide 95UCL	Dose/High TRV	0.018	0.043	1,227	21.53	0.0013	28,545	36.56	0.0050	0.10	3.00	1,097	0.155	998.0	0.0030
	Dose/Low TRV	0.018	0.043	1,227	21.53	0.0013	28,545	36.56	0.0050	0.10	3.00	110	0.155	99.80	0.030
Areawide Maximum	Dose/High TRV	0.018	0.043	1,703	29.9	0.0013	39,600	50.71	1	0.10	834.2	1,097	0.155	998.0	0.84
	Dose/Low TRV	0.018	0.043	1,703	29.9	0.0013	39,600	50.71	1	0.10	834.2	110	0.155	99.80	**8.36**
Antimony															
Areawide 95UCL	Dose/High TRV	0.018	1	1.80	0.032	0.0013	1.80	0.002	0.0050	0.10	0.00175	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.018	1	1.80	0.032	0.0013	1.80	0.002	0.0050	0.10	0.00175	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.018	1	7.70	0.135	0.0013	7.70	0.010	1	0.10	1.500	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.018	1	7.70	0.135	0.0013	7.70	0.010	1	0.10	1.500	NA	NA	NA	No TRV[13]
Arsenic															
Areawide 95UCL	Dose/High TRV	0.018	1.36	24.2	0.42	0.0013	17.8	0.023	0.0050	0.10	0.02	22.01	1.172	13.36	0.0017
	Dose/Low TRV	0.018	1.36	24.2	0.42	0.0013	17.8	0.023	0.0050	0.10	0.02	5.50	1.172	3.34	0.0069
Areawide Maximum	Dose/High TRV	0.018	1.36	69.5	1.22	0.0013	51.1	0.065	1	0.10	13.30	22.01	1.172	13.36	1.00
	Dose/Low TRV	0.018	1.36	69.5	1.22	0.0013	51.1	0.065	1	0.10	13.30	5.50	1.172	3.34	**3.98**
Barium															
Areawide 95UCL	Dose/High TRV	0.018	0.091	6.93	0.122	0.0013	76.1	0.10	0.0050	0.10	0.011	41.70	0.121	39.9	0.00028
	Dose/Low TRV	0.018	0.091	6.93	0.122	0.0013	76.1	0.10	0.0050	0.10	0.011	20.80	0.121	19.9	0.00057
Areawide Maximum	Dose/High TRV	0.018	0.091	13.74	0.24	0.0013	151	0.19	1	0.10	4.50	41.70	0.121	39.9	0.11
	Dose/Low TRV	0.018	0.091	13.74	0.24	0.0013	151	0.19	1	0.10	4.50	20.80	0.121	19.9	0.23
Beryllium															
Areawide 95UCL	Dose/High TRV	0.018	0.045	0.022	0.00039	0.0013	0.49	0.0006	0.0050	0.10	0.00005	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.018	0.045	0.022	0.00039	0.0013	0.49	0.0006	0.0050	0.10	0.00005	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.018	0.045	0.037	0.00066	0.0013	0.83	0.0011	1	0.10	0.018	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.018	0.045	0.037	0.00066	0.0013	0.83	0.0011	1	0.10	0.018	NA	NA	NA	No TRV[13]
Cadmium															
Areawide 95UCL	Dose/High TRV	0.018	NB	0.68	0.012	0.0013	0.68	0.0009	0.0050	0.10	0.0007	10.43	0.084	10.73	0.000062
	Dose/Low TRV	0.018	NB	0.68	0.012	0.0013	0.68	0.0009	0.0050	0.10	0.0007	0.08	0.799	0.052	0.013
Areawide Maximum	Dose/High TRV	0.018	NB	7.00	0.123	0.0013	7.00	0.0090	1	0.10	1.364	10.43	0.084	10.73	0.13
	Dose/Low TRV	0.018	NB	7.00	0.123	0.0013	7.00	0.0090	1	0.10	1.364	0.08	0.799	0.052	**26.0**
Chromium															
Areawide 95UCL	Dose/High TRV	0.018	0.31	30.1	0.53	0.0013	98.4	0.13	0.0050	0.10	0.034	5.00	1.250	3.00	0.011
	Dose/Low TRV	0.018	0.31	30.1	0.53	0.0013	98.4	0.13	0.0050	0.10	0.034	1.00	1.250	0.60	0.056
Areawide Maximum	Dose/High TRV	0.018	0.31	90.0	1.58	0.0013	294	0.38	1	0.10	20.24	5.00	1.250	3.00	**6.75**
	Dose/Low TRV	0.018	0.31	90.0	1.58	0.0013	294	0.38	1	0.10	20.24	1.00	1.250	0.60	**33.8**
Cobalt															
Areawide 95UCL	Dose/High TRV	0.018	0.12	2.51	0.044	0.0013	20.6	0.026	0.0050	0.10	0.0036	76.10	0.292	61.0	0.000060
	Dose/Low TRV	0.018	0.12	2.51	0.044	0.0013	20.6	0.026	0.0050	0.10	0.0036	7.61	0.292	6.10	0.00060
Areawide Maximum	Dose/High TRV	0.018	0.12	4.25	0.074	0.0013	34.8	0.045	1	0.10	1.23	76.10	0.292	61.0	0.020
	Dose/Low TRV	0.018	0.12	4.25	0.074	0.0013	34.8	0.045	1	0.10	1.23	7.61	0.292	6.10	0.20
Copper															
Areawide 95UCL	Dose/High TRV	0.018	0.98	92.86	1.629	0.0013	94.8	0.12	0.0050	0.10	0.09	52.26	0.409	39.16	0.0023
	Dose/Low TRV	0.018	0.98	92.86	1.629	0.0013	94.8	0.12	0.0050	0.10	0.09	2.30	0.639	1.58	0.057
Areawide Maximum	Dose/High TRV	0.018	0.98	317.5	5.57	0.0013	324	0.41	1	0.10	61.96	52.26	0.409	39.16	**1.58**
	Dose/Low TRV	0.018	0.98	317.5	5.57	0.0013	324	0.41	1	0.10	61.96	2.30	0.639	1.58	**39.3**
Lead															
Areawide 95UCL	Dose/High TRV	0.018	0.37	35.3	0.619	0.0013	95.3	0.12	0.0050	0.10	0.04	8.75	0.80	5.73	0.0067
	Dose/Low TRV	0.018	0.37	35.3	0.619	0.0013	95.3	0.12	0.0050	0.10	0.04	0.014	0.084	0.014	**2.65**
Areawide Maximum	Dose/High TRV	0.018	0.37	156.1	2.74	0.0013	422	0.54	1	0.10	33.95	8.75	0.80	5.73	**5.92**
	Dose/Low TRV	0.018	0.37	156.1	2.74	0.0013	422	0.54	1	0.10	33.95	0.014	0.084	0.014	**2,358**
Bioavailable Dose (95UCL)	Dose/High TRV	0.018	0.37	35.3	0.62	0.0013	6.0	0.0077	0.0050	0.10	0.032	8.75	0.80	5.73	0.0056
	Dose/Low TRV	0.018	0.37	35.3	0.62	0.0013	6.0	0.0077	0.0050	0.10	0.032	0.01	0.084	0.014	**2.24**

TABLE M1-11: KILLDEER DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Invertebrate BAF[2] (unitless)	Invertebrate Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Manganese															
Areawide 95UCL	Dose/High TRV	0.018	5.12	2,868	50.3	0.0013	560	0.717	0.0050	0.10	2.633	776.00	0.197	673.3	0.0039
	Dose/Low TRV	0.018	5.12	2,868	50.3	0.0013	560	0.717	0.0050	0.10	2.633	77.60	0.197	67.3	0.039
Areawide Maximum	Dose/High TRV	0.018	5.12	8,960	157	0.0013	1,750	2.241	1	0.10	1,650	776.00	0.197	673.3	**2.45**
	Dose/Low TRV	0.018	5.12	8,960	157	0.0013	1,750	2.241	1	0.10	1,650	77.60	0.197	67.3	**24.5**
Mercury															
Areawide 95UCL	Dose/High TRV	0.018	1.69	1.00	0.018	0.0013	0.59	0.0008	0.0050	0.10	0.00094	0.18	1.000	0.11	0.0084
	Dose/Low TRV	0.018	1.69	1.00	0.018	0.0013	0.59	0.0008	0.0050	0.10	0.00094	0.0039	1.000	0.0024	0.39
Areawide Maximum	Dose/High TRV	0.018	1.69	2.03	0.036	0.0013	1.20	0.0015	1	0.10	0.385	0.18	1.000	0.11	**3.41**
	Dose/Low TRV	0.018	1.69	2.03	0.036	0.0013	1.20	0.0015	1	0.10	0.385	0.0039	1.000	0.0024	**157**
Molybdenum															
Areawide 95UCL	Dose/High TRV	0.018	NB	1.51	0.026	0.0013	1.51	0.0019	0.0050	0.10	0.0015	35.30	1.500	20.4	0.000072
	Dose/Low TRV	0.018	NB	1.51	0.026	0.0013	1.51	0.0019	0.0050	0.10	0.0015	3.50	1.500	2.02	0.00073
Areawide Maximum	Dose/High TRV	0.018	NB	3.8	0.067	0.0013	3.80	0.005	1	0.10	0.740	35.30	1.500	20.4	0.036
	Dose/Low TRV	0.018	NB	3.8	0.067	0.0013	3.80	0.005	1	0.10	0.740	3.50	1.500	2.02	0.37
Nickel															
Areawide 95UCL	Dose/High TRV	0.018	1.06	100	1.76	0.0013	94.5	0.12	0.0050	0.10	0.097	55.26	0.580	38.6	0.00251
	Dose/Low TRV	0.018	1.06	100	1.76	0.0013	94.5	0.12	0.0050	0.10	0.097	1.38	0.614	0.95	0.102
Areawide Maximum	Dose/High TRV	0.018	1.06	169	2.97	0.0013	160	0.20	1	0.10	32.89	55.26	0.580	38.6	0.85
	Dose/Low TRV	0.018	1.06	169	2.97	0.0013	160	0.20	1	0.10	32.89	1.38	0.614	0.95	**34.5**
Selenium															
Areawide 95UCL	Dose/High TRV	0.018	Regression	1.05	0.018	0.0013	1.19	0.0015	0.0050	0.10	0.00	0.93	1.108	0.57	0.0018
	Dose/Low TRV	0.018	Regression	1.05	0.018	0.0013	1.19	0.0015	0.0050	0.10	0.00	0.23	1.108	0.14	0.0073
Areawide Maximum	Dose/High TRV	0.018	Regression	1.60	0.028	0.0013	2.10	0.0027	1	0.10	0.32	0.93	1.108	0.57	0.56
	Dose/Low TRV	0.018	Regression	1.60	0.028	0.0013	2.10	0.0027	1	0.10	0.32	0.23	1.108	0.14	**2.25**
Thallium															
Areawide 95UCL	Dose/High TRV	0.018	NB	0.66	0.012	0.0013	0.66	0.00085	0.0050	0.10	0.000641	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.018	NB	0.66	0.012	0.0013	0.66	0.00085	0.0050	0.10	0.000641	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.018	NB	1.30	0.023	0.0013	1.30	0.0017	1	0.10	0.253	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.018	NB	1.30	0.023	0.0013	1.30	0.0017	1	0.10	0.253	NA	NA	NA	No TRV[13]
Tin															
Areawide 95UCL	Dose/High TRV	0.018	NB	2.24	0.039	0.0013	2.24	0.0029	0.0050	0.10	0.00218	16.90	0.150	15.5	0.00014
	Dose/Low TRV	0.018	NB	2.24	0.039	0.0013	2.24	0.0029	0.0050	0.10	0.00218	6.80	0.150	6.23	0.00035
Areawide Maximum	Dose/High TRV	0.018	NB	5.00	0.088	0.0013	5.00	0.0064	1	0.10	0.974	16.90	0.150	15.5	0.063
	Dose/Low TRV	0.018	NB	5.00	0.088	0.0013	5.00	0.0064	1	0.10	0.974	6.80	0.150	6.23	0.16
Vanadium															
Areawide 95UCL	Dose/High TRV	0.018	NB	95.8	1.68	0.0013	95.8	0.12	0.0050	0.10	0.093	114.00	1.170	69.2	0.0013
	Dose/Low TRV	0.018	NB	95.8	1.68	0.0013	95.8	0.12	0.0050	0.10	0.093	11.40	1.170	6.92	0.013
Areawide Maximum	Dose/High TRV	0.018	NB	226	3.96	0.0013	226	0.29	1	0.10	44.04	114.00	1.170	69.2	0.64
	Dose/Low TRV	0.018	NB	226	3.96	0.0013	226	0.29	1	0.10	44.04	11.40	1.170	6.92	**6.36**
Zinc															
Areawide 95UCL	Dose/High TRV	0.018	1.43	401	7.03	0.0013	280	0.36	0.0050	0.10	0.38	172.00	0.955	108.8	0.0035
	Dose/Low TRV	0.018	1.43	401	7.03	0.0013	280	0.36	0.0050	0.10	0.38	17.20	0.955	10.88	0.035
Areawide Maximum	Dose/High TRV	0.018	1.43	2,646	46.4	0.0013	1,850	2.37	1	0.10	505	172.00	0.955	108.8	**4.64**
	Dose/Low TRV	0.018	1.43	2,646	46.4	0.0013	1,850	2.37	1	0.10	505	17.20	0.955	10.88	**46.4**
Total DDTs															
Areawide 95UCL	Dose/High TRV	0.018	Regression	0.29	0.0050	0.0013	0.019	0.000025	0.0050	0.10	0.00026	1.50	1.000	0.94	0.00028
	Dose/Low TRV	0.018	Regression	0.29	0.0050	0.0013	0.019	0.000025	0.0050	0.10	0.00026	0.00090	3.500	0.00044	0.60
Areawide Maximum	Dose/High TRV	0.018	Regression	0.76	0.013	0.0013	0.060	0.000077	1	0.10	0.14	1.50	1.000	0.94	0.15
	Dose/Low TRV	0.018	Regression	0.76	0.013	0.0013	0.060	0.000077	1	0.10	0.14	0.00090	3.500	0.00044	**315**

TABLE M1-11: KILLDEER DOSE CALCULATIONS AND HAZARD QUOTIENTS, WETLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Invertebrate BAF[2] (unitless)	Invertebrate Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Sediment Ingestion Rate[5] (kg/day)	Sediment Concentration[6] (mg/kg)	Sediment Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Dieldrin															
Areawide 95UCL	Dose/High TRV	0.018	Regression	0.015	0.00026	0.0013	0.00060	0.00000077	0.0050	0.10	0.000013	0.77	0.466	0.56	0.000024
	Dose/Low TRV	0.018	Regression	0.015	0.00026	0.0013	0.00060	0.00000077	0.0050	0.10	0.000013	0.08	0.466	0.056	0.00024
Areawide Maximum	Dose/High TRV	0.018	Regression	0.015	0.00026	0.0013	0.00060	0.00000077	1	0.10	0.0027	0.77	0.466	0.56	0.0048
	Dose/Low TRV	0.018	Regression	0.015	0.00026	0.0013	0.00060	0.00000077	1	0.10	0.0027	0.08	0.466	0.056	0.048
Methoxychlor															
Areawide 95UCL	Dose/High TRV	0.018	30.6	0.031	0.00054	0.0013	0.0010	0.0000013	0.0050	0.10	0.000028	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.018	30.6	0.031	0.00054	0.0013	0.0010	0.0000013	0.0050	0.10	0.000028	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.018	30.6	0.031	0.00054	0.0013	0.0010	0.0000013	1	0.10	0.0056	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.018	30.6	0.031	0.00054	0.0013	0.0010	0.0000013	1	0.10	0.0056	NA	NA	NA	No TRV[13]
Total Chlordane															
Areawide 95UCL	Dose/High TRV	0.018	32.0	0.13	0.0022	0.0013	0.0040	0.0000051	0.0050	0.10	0.00012	10.70	0.064	11.62	0.000010
	Dose/Low TRV	0.018	32.0	0.13	0.0022	0.0013	0.0040	0.0000051	0.0050	0.10	0.00012	2.14	0.064	2.32	0.000050
Areawide Maximum	Dose/High TRV	0.018	32.0	0.13	0.0022	0.0013	0.0040	0.0000051	1	0.10	0.023	10.70	0.064	11.62	0.0020
	Dose/Low TRV	0.018	32.0	0.13	0.0022	0.0013	0.0040	0.0000051	1	0.10	0.023	2.14	0.064	2.32	0.010
Total PAHs															
Areawide 95UCL	Dose/High TRV	0.018	1.33	2.66	0.047	0.0013	2.00	0.0026	0.0050	0.10	0.0025	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.018	1.33	2.66	0.047	0.0013	2.00	0.0026	0.0050	0.10	0.0025	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.018	1.33	2.66	0.047	0.0013	2.00	0.0026	1	0.10	0.51	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.018	1.33	2.66	0.047	0.0013	2.00	0.0026	1	0.10	0.51	NA	NA	NA	No TRV[13]
Total PCBs															
Areawide 95UCL	Dose/High TRV	0.018	Regression	0.28	0.0050	0.0013	0.28	0.00036	0.0050	0.10	0.00027	1.27	1.72	0.71	0.00038
	Dose/Low TRV	0.018	Regression	0.28	0.0050	0.0013	0.28	0.00036	0.0050	0.10	0.00027	0.090	0.80	0.059	0.0047
Areawide Maximum	Dose/High TRV	0.018	Regression	0.60	0.011	0.0013	0.60	0.00077	1	0.10	0.117	1.27	1.72	0.71	0.16
	Dose/Low TRV	0.018	Regression	0.60	0.011	0.0013	0.60	0.00077	1	0.10	0.117	0.090	0.80	0.059	**1.98**

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95th percent upper confidence limit on the arithmetic mean	kg/day	Kilogram per day
BAF	Bioaccumulation factor	LMW	Low molecular weight
BHC	Benzene hexachloride	mg/day	Milligram per day
COPEC	Chemical of potential ecological concern	mg/kg	Milligram per kilogram
DDE	Dichlorodiphenyldichloroethene	mg/kg/day	Milligram per kilogram per day
DDT	Dichlorodiphenyltrichloroethane	NA	Not applicable
EFA WEST	Naval Facilities Engineering Command, Engineering Field Activity West	NB	No BAF was available.
HMW	High molecular weight	PAH	Polycyclic aromatic hydrocarbon
HQ	Hazard quotient	SUF	Site use factor
kg	Kilogram	TRV	Toxicity reference value

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for all birds and the averaged food requirement conversion for insectivorous birds.

2 The 95UCL or habitat area maximum (see note 6) for all site-collected soil samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 1 mg/kg because no BAF was available.

3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).

4 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration.

5 Rate for the Bald Eagle in Pascoe and others (1996); 0.7 percent of prey ingestion rate.

6 For average doses, lesser of 95UCL or detected maximum of all site-collected soil samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected soil samples was used.

7 Soil daily dose was calculated by multiplying the soil ingestion rate by 95UCL or habitat area maximum (see note 6) soil concentration.

8 Average adult weight from Dunning (1993).

9 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + soil daily dose)*SUF)/receptor species body weight.

10 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.

11 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-1.2)}$.

12 The HQ was calculated using total daily dose/allometrically adjusted TRV.

13 Sufficient data are not available to derive a TRV. This chemical was evaluated qualitatively.

TABLE M1-12: CALIFORNIA VOLE DOSE CALCULATIONS AND HAZARD QUOTIENTS, UPLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Plant BAF[2] (unitless)	Plant Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration[6] (mg/kg)	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Aluminum															
Areawide 95UCL	Dose/High TRV	0.0040	0.00066	16.8	0.068	0.00010	25,400	2.46	1	0.025	100.2	19.30	0.030	19.5	**5.14**
	Dose/Low TRV	0.0040	0.00066	16.8	0.068	0.00010	25,400	2.46	1	0.025	100.2	1.93	0.030	1.95	**51.4**
Areawide Maximum	Dose/High TRV	0.0040	0.00066	16.8	0.068	0.00010	25,400	2.46	1	0.025	100.2	19.30	0.030	19.5	**5.14**
	Dose/Low TRV	0.0040	0.00066	16.8	0.068	0.00010	25,400	2.46	1	0.025	100.2	1.93	0.030	1.95	**51.4**
Antimony															
Areawide 95UCL	Dose/High TRV	0.0040	0.19	1.03	0.0041	0.00010	5.40	0.00052	1	0.025	0.1849	1.25	0.030	1.26	0.15
	Dose/Low TRV	0.0040	0.19	1.03	0.0041	0.00010	5.40	0.00052	1	0.025	0.1849	0.13	0.030	0.13	**1.46**
Areawide Maximum	Dose/High TRV	0.0040	0.19	1.03	0.0041	0.00010	5.40	0.00052	1	0.025	0.185	1.25	0.030	1.26	0.15
	Dose/Low TRV	0.0040	0.19	1.03	0.0041	0.00010	5.40	0.00052	1	0.025	0.185	0.13	0.030	0.13	**1.46**
Cadmium															
Areawide 95UCL	Dose/High TRV	0.0040	0.25	0.95	0.0038	0.00010	3.80	0.00037	1	0.025	0.17	2.64	0.031	2.67	0.062
	Dose/Low TRV	0.0040	0.25	0.95	0.0038	0.00010	3.80	0.00037	1	0.025	0.17	0.06	0.032	0.061	**2.74**
Areawide Maximum	Dose/High TRV	0.0040	0.25	0.95	0.0038	0.00010	3.80	0.00037	1	0.025	0.17	2.64	0.031	2.67	0.062
	Dose/Low TRV	0.0040	0.25	0.95	0.0038	0.00010	3.80	0.00037	1	0.025	0.17	0.06	0.032	0.061	**2.74**
Chromium															
Areawide 95UCL	Dose/High TRV	0.0040	0.024	1.46	0.0059	0.00010	60.9	0.006	1	0.025	0.47	27,370.00	0.350	32,047	0.000015
	Dose/Low TRV	0.0040	0.024	1.46	0.0059	0.00010	60.9	0.006	1	0.025	0.47	2,737.00	0.350	3,205	0.00015
Areawide Maximum	Dose/High TRV	0.0040	0.024	10.56	0.043	0.00010	440	0.043	1	0.025	3.38	27,370.00	0.350	32,047	0.00011
	Dose/Low TRV	0.0040	0.024	10.56	0.043	0.00010	440	0.043	1	0.025	3.38	2,737.00	0.350	3,205	0.0011
Copper															
Areawide 95UCL	Dose/High TRV	0.0040	0.044	3.89	0.016	0.00010	88.4	0.009	1	0.025	0.96	631.58	0.025	631	0.0015
	Dose/Low TRV	0.0040	0.044	3.89	0.016	0.00010	88.4	0.009	1	0.025	0.96	2.67	0.030	2.70	0.36
Areawide Maximum	Dose/High TRV	0.0040	0.044	30.10	0.12	0.00010	684	0.066	1	0.025	7.44	631.58	0.025	631	0.012
	Dose/Low TRV	0.0040	0.044	30.10	0.12	0.00010	684	0.066	1	0.025	7.44	2.67	0.030	2.70	**2.76**
Lead															
Areawide 95UCL	Dose/High TRV	0.0040	0.0055	0.64	0.0026	0.00010	117	0.011	1	0.025	0.55	240.64	0.019	236	0.0023
	Dose/Low TRV	0.0040	0.0055	0.64	0.0026	0.00010	117	0.011	1	0.025	0.55	1.00	0.208	1.13	0.49
Areawide Maximum	Dose/High TRV	0.0040	0.0055	5.32	0.022	0.00010	968	0.094	1	0.025	4.57	240.64	0.019	236	0.019
	Dose/Low TRV	0.0040	0.0055	5.32	0.022	0.00010	968	0.094	1	0.025	4.57	1.00	0.208	1.13	**4.03**
Mercury															
Areawide 95UCL	Dose/High TRV	0.0040	0.61	6.22	0.025	0.00010	10.2	0.00099	1	0.025	1.03	4.00	0.428	4.74	0.22
	Dose/Low TRV	0.0040	0.61	6.22	0.025	0.00010	10.2	0.00099	1	0.025	1.03	0.25	0.188	0.28	**3.67**
Areawide Maximum	Dose/High TRV	0.0040	0.61	6.22	0.025	0.00010	10.2	0.00099	1	0.025	1.03	4.00	0.428	4.74	0.22
	Dose/Low TRV	0.0040	0.61	6.22	0.025	0.00010	10.2	0.00099	1	0.025	1.03	0.25	0.188	0.28	**3.67**
Molybdenum															
Areawide 95UCL	Dose/High TRV	0.0040	NB	0.50	0.0020	0.00010	0.50	0.000048	1	0.025	0.082	2.60	0.030	2.63	0.031
	Dose/Low TRV	0.0040	NB	0.50	0.0020	0.00010	0.50	0.000048	1	0.025	0.082	0.26	0.030	0.26	0.31
Areawide Maximum	Dose/High TRV	0.0040	NB	6.80	0.027	0.00010	6.80	0.00066	1	0.025	1.11	2.60	0.030	2.63	0.42
	Dose/Low TRV	0.0040	NB	6.80	0.027	0.00010	6.80	0.00066	1	0.025	1.11	0.26	0.030	0.26	**4.2**
Nickel															
Areawide 95UCL	Dose/High TRV	0.0040	0.011	0.41	0.0017	0.00010	37.4	0.00	1	0.025	0.21	31.60	0.249	36.25	0.0058
	Dose/Low TRV	0.0040	0.011	0.41	0.0017	0.00010	37.4	0.00	1	0.025	0.21	0.13	0.249	0.15	**1.37**
Areawide Maximum	Dose/High TRV	0.0040	0.011	1.86	0.0075	0.00010	169	0.02	1	0.025	0.95	31.60	0.249	36.25	0.026
	Dose/Low TRV	0.0040	0.011	1.86	0.0075	0.00010	169	0.02	1	0.025	0.95	0.13	0.249	0.15	**6.20**
Selenium															
Areawide 95UCL	Dose/High TRV	0.0040	Regression	0.29	0.0012	0.00010	0.60	0.000058	1	0.025	0.049	1.21	0.025	1.21	0.040
	Dose/Low TRV	0.0040	Regression	0.29	0.0012	0.00010	0.60	0.000058	1	0.025	0.049	0.05	0.187	0.056	0.86
Areawide Maximum	Dose/High TRV	0.0040	Regression	0.97	0.0039	0.00010	1.80	0.00017	1	0.025	0.16	1.21	0.025	1.21	0.13
	Dose/Low TRV	0.0040	Regression	0.97	0.0039	0.00010	1.80	0.00017	1	0.025	0.16	0.05	0.187	0.056	**2.88**

TABLE M1-12: CALIFORNIA VOLE DOSE CALCULATIONS AND HAZARD QUOTIENTS, UPLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Plant BAF[2] (unitless)	Plant Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration[6] (mg/kg)	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Thallium															
Areawide 95UCL	Dose/High TRV	0.0040	NB	0.44	0.0018	0.00010	0.44	0.000043	1	0.025	0.072	1.43	0.065	1.51	0.048
	Dose/Low TRV	0.0040	NB	0.44	0.0018	0.00010	0.44	0.000043	1	0.025	0.072	0.48	0.065	0.51	0.14
Areawide Maximum	Dose/High TRV	0.0040	NB	1.60	0.0065	0.00010	1.60	0.00016	1	0.025	0.262	1.43	0.065	1.51	0.17
	Dose/Low TRV	0.0040	NB	1.60	0.0065	0.00010	1.60	0.00016	1	0.025	0.262	0.48	0.065	0.51	0.52
Tin															
Areawide 95UCL	Dose/High TRV	0.0040	NB	28.4	0.11	0.00010	28.4	0.0027	1	0.025	4.65	35.00	0.030	35.4	0.13
	Dose/Low TRV	0.0040	NB	28.4	0.11	0.00010	28.4	0.0027	1	0.025	4.65	23.40	0.030	23.6	0.20
Areawide Maximum	Dose/High TRV	0.0040	NB	40.6	0.16	0.00010	40.6	0.0039	1	0.025	6.65	35.00	0.030	35.4	0.19
	Dose/Low TRV	0.0040	NB	40.6	0.16	0.00010	40.6	0.0039	1	0.025	6.65	23.40	0.030	23.6	0.28
Zinc															
Areawide 95UCL	Dose/High TRV	0.0040	0.066	14.2	0.057	0.00010	216	0.021	1	0.025	3.10	411.43	0.175	462.1	0.0067
	Dose/Low TRV	0.0040	0.066	14.2	0.057	0.00010	216	0.021	1	0.025	3.10	9.60	0.026	9.61	0.32
Areawide Maximum	Dose/High TRV	0.0040	0.066	131	0.53	0.00010	1,980	0.19	1	0.025	28.52	411.43	0.175	462.1	0.062
	Dose/Low TRV	0.0040	0.066	131	0.53	0.00010	1,980	0.19	1	0.025	28.52	9.60	0.026	9.61	**2.97**
LMW PAH															
Areawide 95UCL	Dose/High TRV	0.0040	12.2	1.26	0.0051	0.00010	0.10	0.000010	1	0.025	0.2015	150.00	0.270	172.9	0.0012
	Dose/Low TRV	0.0040	12.2	1.26	0.0051	0.00010	0.10	0.000010	1	0.025	0.2015	50.50	0.277	58.3	0.0035
Areawide Maximum	Dose/High TRV	0.0040	12.2	7.81	0.032	0.00010	0.64	0.000062	1	0.025	1.2520	150.00	0.270	172.9	0.0072
	Dose/Low TRV	0.0040	12.2	7.81	0.032	0.00010	0.64	0.000062	1	0.025	1.2520	50.50	0.277	58.3	0.021
HMW PAH															
Areawide 95UCL	Dose/High TRV	0.0040	1.67	1.42	0.0057	0.00010	0.85	0.000083	1	0.025	0.231	32.79	0.031	33.2	0.0070
	Dose/Low TRV	0.0040	1.67	1.42	0.0057	0.00010	0.85	0.000083	1	0.025	0.231	1.31	0.031	1.32	0.17
Areawide Maximum	Dose/High TRV	0.0040	1.67	6.33	0.026	0.00010	3.79	0.000367	1	0.025	1.027	32.79	0.031	33.2	0.031
	Dose/Low TRV	0.0040	1.67	6.33	0.026	0.00010	3.79	0.000367	1	0.025	1.027	1.31	0.031	1.32	0.78
Total DDTs															
Areawide 95UCL	Dose/High TRV	0.0040	Regression	0.0074	0.000030	0.00010	0.041	0.000004	1	0.025	0.001	16.00	0.320	18.6	0.000072
	Dose/Low TRV	0.0040	Regression	0.0074	0.000030	0.00010	0.041	0.000004	1	0.025	0.001	0.80	0.320	0.93	0.0014
Areawide Maximum	Dose/High TRV	0.0040	Regression	0.048	0.00019	0.00010	0.50	0.000048	1	0.025	0.010	16.00	0.320	18.6	0.00052
	Dose/Low TRV	0.0040	Regression	0.048	0.00019	0.00010	0.50	0.000048	1	0.025	0.010	0.80	0.320	0.93	0.010
gamma-BHC															
Areawide 95UCL	Dose/High TRV	0.0040	0.27	0.00059	0.0000024	0.00010	0.0022	0.0000002	1	0.025	0.000104	3.75	3.750	5.06	0.000020
	Dose/Low TRV	0.0040	0.27	0.00059	0.0000024	0.00010	0.0022	0.0000002	1	0.025	0.000104	0.05	0.050	0.05	0.0020
Areawide Maximum	Dose/High TRV	0.0040	0.27	0.0038	0.000015	0.00010	0.014	0.0000014	1	0.025	0.00066	3.75	3.750	5.06	0.00013
	Dose/Low TRV	0.0040	0.27	0.0038	0.000015	0.00010	0.014	0.0000014	1	0.025	0.00066	0.05	0.050	0.05	0.013
Heptachlor															
Areawide 95UCL	Dose/High TRV	0.0040	0.12	0.000048	0.00000019	0.00010	0.00040	0.000000039	1	0.025	0.000009	6.80	0.204	7.71	0.0000012
	Dose/Low TRV	0.0040	0.12	0.000048	0.00000019	0.00010	0.00040	0.000000039	1	0.025	0.000009	0.13	0.100	0.14	0.000065
Areawide Maximum	Dose/High TRV	0.0040	0.12	0.00060	0.0000024	0.00010	0.0050	0.00000048	1	0.025	0.000115	6.80	0.204	7.71	0.000015
	Dose/Low TRV	0.0040	0.12	0.00060	0.0000024	0.00010	0.0050	0.00000048	1	0.025	0.000115	0.13	0.100	0.14	0.00082
Methoxychlor															
Areawide 95UCL	Dose/High TRV	0.0040	0.11	0.0011	0.0000044	0.00010	0.010	0.0000010	1	0.025	0.0002	50.00	0.332	58.36	0.0000036
	Dose/Low TRV	0.0040	0.11	0.0011	0.0000044	0.00010	0.010	0.0000010	1	0.025	0.0002	2.50	0.332	2.92	0.000072
Areawide Maximum	Dose/High TRV	0.0040	0.11	0.0022	0.0000089	0.00010	0.020	0.0000019	1	0.025	0.0004	50.00	0.332	58.36	0.0000073
	Dose/Low TRV	0.0040	0.11	0.0022	0.0000089	0.00010	0.020	0.0000019	1	0.025	0.0004	2.50	0.332	2.92	0.00015
Total Chlordane															
Areawide 95UCL	Dose/High TRV	0.0040	0.025	0.00038	0.0000015	0.00010	0.015	0.0000015	1	0.025	0.0001	9.20	0.030	9.30	0.000013
	Dose/Low TRV	0.0040	0.025	0.00038	0.0000015	0.00010	0.015	0.0000015	1	0.025	0.0001	4.60	0.030	4.65	0.000026
Areawide Maximum	Dose/High TRV	0.0040	0.025	0.0018	0.0000071	0.00010	0.070	0.0000068	1	0.025	0.001	9.20	0.030	9.30	0.000059
	Dose/Low TRV	0.0040	0.025	0.0018	0.0000071	0.00010	0.070	0.0000068	1	0.025	0.001	4.60	0.030	4.65	0.00012

TABLE M1-12: CALIFORNIA VOLE DOSE CALCULATIONS AND HAZARD QUOTIENTS, UPLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC	Total Prey Ingestion Rate[1] (kg/day)	Plant BAF[2] (unitless)	Plant Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration[6] (mg/kg)	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95 percent upper confidence limit on the arithmetic mean	kg/day	Kilogram per day
BAF	Bioaccumulation factor	LMW	Low molecular weight
BHC	Benzene hexachloride	mg/day	Milligram per day
COPEC	Chemical of potential ecological concern	mg/kg	Milligram per kilogram
DDT	Dichlorodiphenyltrichloroethane	mg/kg/day	Milligram per kilogram per day
EFA WEST	Naval Facilities Engineering Command, Engineering Field Activity West	NA	Not applicable
EPA	U.S. Environmental Protection Agency	NB	No BAF was available.
HMW	High molecular weight	PAH	Polycyclic aromatic hydrocarbon
HQ	Hazard quotient	SUF	Site use factor
kg	Kilogram	TRV	Toxicity reference value

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for eutherian mammals and the averaged food requirement conversion for omnivores.

2 The 95UCL or habitat area maximum (see note 6) for all site-collected soil samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 1 mg/kg because no BAF was available.

3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).

4 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration.

5 Rate for the red fox in Beyer and others (1994); 2.8 percent of prey ingestion rate.

6 For average doses, lesser of 95UCL or detected maximum of all site-collected soil samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected soil samples was used.

7 Soil daily dose was calculated by multiplying the soil ingestion rate by 95UCL or habitat area maximum (see note 6) soil concentration.

8 Average adult weight from Silva and Downing (1995).

9 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + soil daily dose)*SUF)/receptor species body weight.

10 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.

11 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-0.94)}$.

12 The HQ was calculated using total daily dose/allometrically adjusted TRV.

13 Sufficient data are not available to derive a TRV. This chemical was evaluated qualitatively.

TABLE M1-13: ORNATE SHREW DOSE CALCULATIONS AND HAZARD QUOTIENTS, UPLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Invertebrate BAF[2] (unitless)	Invertebrate Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration[6] (mg/kg)	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Aluminum															
Areawide 95UCL	Dose/High TRV	0.0013	0.043	1,092	1.42	0.000039	25,400	0.99	1	0.0053	454	19.3	0.030	21.4	**21.2**
	Dose/Low TRV	0.0013	0.043	1,092	1.42	0.000039	25,400	0.99	1	0.0053	454	1.93	0.030	2.14	**212**
Areawide Maximum	Dose/High TRV	0.0013	0.043	1,092	1.42	0.000039	25,400	0.99	1	0.0053	454	19.3	0.030	21.4	**21.2**
	Dose/Low TRV	0.0013	0.043	1,092	1.42	0.000039	25,400	0.99	1	0.0053	454	1.93	0.030	2.14	**212**
Antimony															
Areawide 95UCL	Dose/High TRV	0.0013	1	5.40	0.0070	0.000039	5.40	0.00021	1	0.0053	1.36	1.25	0.030	1.39	0.983
	Dose/Low TRV	0.0013	1	5.40	0.0070	0.000039	5.40	0.00021	1	0.0053	1.36	0.13	0.030	0.14	**9.83**
Areawide Maximum	Dose/High TRV	0.0013	1	5.40	0.0070	0.000039	5.40	0.00021	1	0.0053	1.36	1.25	0.030	1.39	0.983
	Dose/Low TRV	0.0013	1	5.40	0.0070	0.000039	5.40	0.00021	1	0.0053	1.36	0.13	0.030	0.14	**9.83**
Cadmium															
Areawide 95UCL	Dose/High TRV	0.0013	NB	3.80	0.0049	0.000039	3.80	0.00015	1	0.0053	0.96	2.64	0.031	2.94	0.33
	Dose/Low TRV	0.0013	NB	3.80	0.0049	0.000039	3.80	0.00015	1	0.0053	0.96	0.06	0.032	0.07	**14.3**
Areawide Maximum	Dose/High TRV	0.0013	NB	3.80	0.0049	0.000039	3.80	0.00015	1	0.0053	0.96	2.64	0.031	2.94	0.33
	Dose/Low TRV	0.0013	NB	3.80	0.0049	0.000039	3.80	0.00015	1	0.0053	0.96	0.06	0.032	0.07	**14.3**
Chromium															
Areawide 95UCL	Dose/High TRV	0.0013	0.31	18.6	0.024	0.000039	60.9	0.0024	1	0.0053	5.02	27,370	0.350	35,193	0.00014
	Dose/Low TRV	0.0013	0.31	18.6	0.024	0.000039	60.9	0.0024	1	0.0053	5.02	2,737	0.350	3,519	0.0014
Areawide Maximum	Dose/High TRV	0.0013	0.31	135	0.17	0.000039	440	0.017	1	0.0053	36.2	27,370	0.350	35,193	0.0010
	Dose/Low TRV	0.0013	0.31	135	0.17	0.000039	440	0.017	1	0.0053	36.2	2,737	0.350	3,519	0.010
Copper															
Areawide 95UCL	Dose/High TRV	0.0013	0.980	86.7	0.11	0.000039	88.4	0.0034	1	0.0053	21.9	632	0.025	693	0.032
	Dose/Low TRV	0.0013	0.980	86.7	0.11	0.000039	88.4	0.0034	1	0.0053	21.9	2.67	0.030	2.96	**7.39**
Areawide Maximum	Dose/High TRV	0.0013	0.980	670	0.87	0.000039	684	0.027	1	0.0053	169	632	0.025	693	0.244
	Dose/Low TRV	0.0013	0.980	670	0.87	0.000039	684	0.027	1	0.0053	169	2.67	0.030	2.96	**57.2**
Lead															
Areawide 95UCL	Dose/High TRV	0.0013	0.37	43.2	0.056	0.000039	117	0.0046	1	0.0053	11.4	241	0.019	260	0.044
	Dose/Low TRV	0.0013	0.37	43.2	0.056	0.000039	117	0.0046	1	0.0053	11.4	1.00	0.208	1.25	**9.19**
Areawide Maximum	Dose/High TRV	0.0013	0.37	358	0.47	0.000039	968	0.038	1	0.0053	94.9	241	0.019	260	0.37
	Dose/Low TRV	0.0013	0.37	358	0.47	0.000039	968	0.038	1	0.0053	94.9	1.00	0.208	1.25	**76.1**
Mercury															
Areawide 95UCL	Dose/High TRV	0.0013	1.69	17.3	0.022	0.000039	10.2	0.00040	1	0.0053	4.31	4.00	0.428	5.21	0.83
	Dose/Low TRV	0.0013	1.69	17.3	0.022	0.000039	10.2	0.00040	1	0.0053	4.31	0.25	0.188	0.31	**13.9**
Areawide Maximum	Dose/High TRV	0.0013	1.69	17.3	0.022	0.000039	10.2	0.00040	1	0.0053	4.31	4.00	0.428	5.21	0.83
	Dose/Low TRV	0.0013	1.69	17.3	0.022	0.000039	10.2	0.00040	1	0.0053	4.31	0.25	0.188	0.31	**13.9**
Molybdenum															
Areawide 95UCL	Dose/High TRV	0.0013	NB	0.50	0.00065	0.000039	0.50	0.000019	1	0.0053	0.13	2.60	0.030	2.88	0.044
	Dose/Low TRV	0.0013	NB	0.50	0.00065	0.000039	0.50	0.000019	1	0.0053	0.13	0.26	0.030	0.29	0.44
Areawide Maximum	Dose/High TRV	0.0013	NB	6.80	0.0088	0.000039	6.80	0.00026	1	0.0053	1.72	2.60	0.030	2.88	0.60
	Dose/Low TRV	0.0013	NB	6.80	0.0088	0.000039	6.80	0.00026	1	0.0053	1.72	0.26	0.030	0.29	**5.95**
Nickel															
Areawide 95UCL	Dose/High TRV	0.0013	1.06	39.6	0.051	0.000039	37.4	0.0015	1	0.0053	9.99	31.60	0.249	39.8	0.25
	Dose/Low TRV	0.0013	1.06	39.6	0.051	0.000039	37.4	0.0015	1	0.0053	9.99	0.13	0.249	0.17	**59.6**
Areawide Maximum	Dose/High TRV	0.0013	1.06	179	0.23	0.000039	169	0.0066	1	0.0053	45.1	31.60	0.249	39.8	**1.13**
	Dose/Low TRV	0.0013	1.06	179	0.23	0.000039	169	0.0066	1	0.0053	45.1	0.13	0.249	0.17	**269**
Selenium															
Areawide 95UCL	Dose/High TRV	0.0013	Regression	0.64	0.00083	0.000039	0.60	0.000023	1	0.0053	0.16	1.21	0.025	1.33	0.12
	Dose/Low TRV	0.0013	Regression	0.64	0.00083	0.000039	0.60	0.000023	1	0.0053	0.16	0.050	0.187	0.062	**2.60**
Areawide Maximum	Dose/High TRV	0.0013	Regression	1.43	0.0019	0.000039	1.80	0.000070	1	0.0053	0.36	1.21	0.025	1.33	0.27
	Dose/Low TRV	0.0013	Regression	1.43	0.0019	0.000039	1.80	0.000070	1	0.0053	0.36	0.050	0.187	0.062	**5.86**

TABLE M1-13: ORNATE SHREW DOSE CALCULATIONS AND HAZARD QUOTIENTS, UPLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Invertebrate BAF[2] (unitless)	Invertebrate Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration[6] (mg/kg)	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Thallium															
Areawide 95UCL	Dose/High TRV	0.0013	NB	0.44	0.00057	0.000039	0.44	0.000017	1	0.0053	0.11	1.43	0.065	1.66	0.067
	Dose/Low TRV	0.0013	NB	0.44	0.00057	0.000039	0.44	0.000017	1	0.0053	0.11	0.48	0.065	0.56	0.20
Areawide Maximum	Dose/High TRV	0.0013	NB	1.60	0.0021	0.000039	1.60	0.000062	1	0.0053	0.40	1.43	0.065	1.66	0.24
	Dose/Low TRV	0.0013	NB	1.60	0.0021	0.000039	1.60	0.000062	1	0.0053	0.40	0.48	0.065	0.56	0.72
Tin															
Areawide 95UCL	Dose/High TRV	0.0013	NB	28.4	0.037	0.000039	28.4	0.0011	1	0.0053	7.16	35.0	0.030	38.8	0.18
	Dose/Low TRV	0.0013	NB	28.4	0.037	0.000039	28.4	0.0011	1	0.0053	7.16	23.4	0.030	26.0	0.28
Areawide Maximum	Dose/High TRV	0.0013	NB	40.6	0.053	0.000039	40.6	0.0016	1	0.0053	10.2	35.0	0.030	38.8	0.26
	Dose/Low TRV	0.0013	NB	40.6	0.053	0.000039	40.6	0.0016	1	0.0053	10.2	23.4	0.030	26.0	0.39
Zinc															
Areawide 95UCL	Dose/High TRV	0.0013	1.43	308	0.40	0.000039	216	0.0084	1	0.0053	77.1	411.43	0.175	507	0.15
	Dose/Low TRV	0.0013	1.43	308	0.40	0.000039	216	0.0084	1	0.0053	77.1	9.60	0.026	10.5	**7.31**
Areawide Maximum	Dose/High TRV	0.0013	1.43	2,831	3.68	0.000039	1,980	0.077	1	0.0053	709	411.43	0.175	507	**1.40**
	Dose/Low TRV	0.0013	1.43	2,831	3.68	0.000039	1,980	0.077	1	0.0053	709	9.60	0.026	10.5	**67.2**
LMW PAH															
Areawide 95UCL	Dose/High TRV	0.0013	4.40	0.45	0.00059	0.000039	0.10	0.0000040	1	0.0053	0.112	150.0	0.270	190	0.00059
	Dose/Low TRV	0.0013	4.40	0.45	0.00059	0.000039	0.10	0.0000040	1	0.0053	0.112	50.5	0.277	64.0	0.0017
Areawide Maximum	Dose/High TRV	0.0013	4.40	2.82	0.0037	0.000039	0.64	0.000025	1	0.0053	0.695	150.0	0.270	190	0.0037
	Dose/Low TRV	0.0013	4.40	2.82	0.0037	0.000039	0.64	0.000025	1	0.0053	0.695	50.5	0.277	64.0	0.011
HMW PAH															
Areawide 95UCL	Dose/High TRV	0.0013	1.33	1.13	0.0015	0.000039	0.85	0.000033	1	0.0053	0.28	32.8	0.031	36.4	0.0078
	Dose/Low TRV	0.0013	1.33	1.13	0.0015	0.000039	0.85	0.000033	1	0.0053	0.28	1.31	0.031	1.46	0.19
Areawide Maximum	Dose/High TRV	0.0013	1.33	5.04	0.0065	0.000039	3.79	0.00015	1	0.0053	1.26	32.8	0.031	36.4	0.035
	Dose/Low TRV	0.0013	1.33	5.04	0.0065	0.000039	3.79	0.00015	1	0.0053	1.26	1.31	0.031	1.46	0.87
Total DDTs															
Areawide 95UCL	Dose/High TRV	0.0013	Regression	0.55	0.00071	0.000039	0.041	0.00000161	1	0.0053	0.135	16.0	0.320	20.5	0.0066
	Dose/Low TRV	0.0013	Regression	0.55	0.00071	0.000039	0.041	0.00000161	1	0.0053	0.135	0.80	0.320	1.02	0.13
Areawide Maximum	Dose/High TRV	0.0013	Regression	4.64	0.0060	0.000039	0.50	0.0000195	1	0.0053	1.14	16.0	0.320	20.5	0.056
	Dose/Low TRV	0.0013	Regression	4.64	0.0060	0.000039	0.50	0.0000195	1	0.0053	1.14	0.80	0.320	1.02	**1.12**
gamma-BHC															
Areawide 95UCL	Dose/High TRV	0.0013	29.5	0.065	0.000084	0.000039	0.0022	0.000000086	1	0.0053	0.016	3.75	3.750	5.56	0.0029
	Dose/Low TRV	0.0013	29.5	0.065	0.000084	0.000039	0.0022	0.000000086	1	0.0053	0.016	0.050	0.050	0.057	0.28
Areawide Maximum	Dose/High TRV	0.0013	29.5	0.41	0.00054	0.000039	0.014	0.00000055	1	0.0053	0.10	3.75	3.750	5.56	0.018
	Dose/Low TRV	0.0013	29.5	0.41	0.00054	0.000039	0.014	0.00000055	1	0.0053	0.10	0.050	0.050	0.057	**1.77**
Heptachlor															
Areawide 95UCL	Dose/High TRV	0.0013	31.9	0.013	0.000017	0.000039	0.00040	0.000000016	1	0.0053	0.0031	6.80	0.204	8.47	0.00037
	Dose/Low TRV	0.0013	31.9	0.013	0.000017	0.000039	0.00040	0.000000016	1	0.0053	0.0031	0.13	0.100	0.16	0.020
Areawide Maximum	Dose/High TRV	0.0013	31.9	0.16	0.00021	0.000039	0.0050	0.00000019	1	0.0053	0.039	6.80	0.204	8.47	0.0046
	Dose/Low TRV	0.0013	31.9	0.16	0.00021	0.000039	0.0050	0.00000019	1	0.0053	0.039	0.13	0.100	0.16	0.25
Methoxychlor															
Areawide 95UCL	Dose/High TRV	0.0013	30.6	0.30	0.00039	0.000039	0.010	0.00000038	1	0.0053	0.074	50.0	0.332	64.1	0.0011
	Dose/Low TRV	0.0013	30.6	0.30	0.00039	0.000039	0.010	0.00000038	1	0.0053	0.074	2.50	0.332	3.20	0.023
Areawide Maximum	Dose/High TRV	0.0013	30.6	0.61	0.00080	0.000039	0.020	0.00000078	1	0.0053	0.15	50.0	0.332	64.1	0.0023
	Dose/Low TRV	0.0013	30.6	0.61	0.00080	0.000039	0.020	0.00000078	1	0.0053	0.15	2.50	0.332	3.20	0.047
Total Chlordane															
Areawide 95UCL	Dose/High TRV	0.0013	32.0	0.49	0.00063	0.000039	0.015	0.00000059	1	0.0053	0.12	9.20	0.030	10.2	0.012
	Dose/Low TRV	0.0013	32.0	0.49	0.00063	0.000039	0.015	0.00000059	1	0.0053	0.12	4.60	0.030	5.10	0.023
Areawide Maximum	Dose/High TRV	0.0013	32.0	2.24	0.0029	0.000039	0.070	0.0000027	1	0.0053	0.55	9.20	0.030	10.2	0.054
	Dose/Low TRV	0.0013	32.0	2.24	0.0029	0.000039	0.070	0.0000027	1	0.0053	0.55	4.60	0.030	5.10	0.11

TABLE M1-13: ORNATE SHREW DOSE CALCULATIONS AND HAZARD QUOTIENTS, UPLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC	Total Prey Ingestion Rate[1] (kg/day)	Invertebrate BAF[2] (unitless)	Invertebrate Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration[6] (mg/kg)	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL	95 percent upper confidence limit on the arithmetic mean	kg/day	Kilogram per day
BAF	Bioaccumulation factor	LMW	Low molecular weight
BHC	Benzene hexachloride	mg/day	Milligram per day
COPEC	Chemical of potential ecological concern	mg/kg	Milligram per kilogram
DDT	Dichlorodiphenyltrichloroethane	mg/kg/day	Milligram per kilogram per day
EFA WEST	Naval Facilities Engineering Command, Engineering Field Activity West	NA	Not applicable
EPA	U.S. Environmental Protection Agency	NB	No BAF was available.
HMW	High molecular weight	PAH	Polycyclic aromatic hydrocarbon
HQ	Hazard quotient	SUF	Site use factor
kg	Kilogram	TRV	Toxicity reference value

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for eutherian mammals and the averaged food requirement conversion for omnivores.

2 The 95UCL or habitat area maximum (see note 6) for all site-collected soil samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 1 mg/kg because no BAF was available.

3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).

4 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration.

5 Rate for the red fox in Beyer and others (1994); 2.8 percent of prey ingestion rate.

6 For average doses, lesser of 95UCL or detected maximum of all site-collected soil samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected soil samples was used.

7 Soil daily dose was calculated by multiplying the soil ingestion rate by 95UCL or habitat area maximum (see note 6) soil concentration.

8 Average adult weight from Silva and Downing (1995).

9 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + soil daily dose)*SUF)/receptor species body weight.

10 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.

11 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-0.94)}$.

12 The HQ was calculated using total daily dose/allometrically adjusted TRV.

13 Sufficient data are not available to derive a TRV. This chemical was evaluated qualitatively.

TABLE M1-14: WESTERN MEADOWLARK DOSE CALCULATIONS AND HAZARD QUOTIENTS, UPLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Plant BAF[2] (unitless)	Plant Concentration[3] (mg/kg)	Earthworm BAF[2] (unitless)	Earthworm Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration[6] (mg/kg)	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Aluminum																	
Areawide 95UCL	Dose/High TRV	0.015	0.00066	16.8	0.043	1,092	10.6	0.0012	25,400	31.1	1	0.11	368	1,097	0.155	1,031	0.36
	Dose/Low TRV	0.015	0.00066	16.8	0.043	1,092	10.6	0.0012	25,400	31.1	1	0.11	368	110	0.155	103	**3.57**
Areawide Maximum	Dose/High TRV	0.015	0.00066	16.8	0.043	1,092	10.6	0.0012	25,400	31.1	1	0.11	368	1,097	0.155	1,031	0.36
	Dose/Low TRV	0.015	0.00066	16.8	0.043	1,092	10.6	0.0012	25,400	31.1	1	0.11	368	110	0.155	103	**3.57**
Antimony																	
Areawide 95UCL	Dose/High TRV	0.015	0.19	1.03	1	5.40	0.058	0.0012	5.40	0.0066	1	0.11	0.57	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.015	0.19	1.03	1	5.40	0.058	0.0012	5.40	0.0066	1	0.11	0.57	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.015	0.19	1.03	1	5.40	0.058	0.0012	5.40	0.0066	1	0.11	0.57	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.015	0.19	1.03	1	5.40	0.058	0.0012	5.40	0.0066	1	0.11	0.57	NA	NA	NA	No TRV[13]
Barium																	
Areawide 95UCL	Dose/High TRV	0.015	0.057	6.21	0.091	9.9	0.131	0.0012	109	0.13	1	0.11	2.33	41.7	0.121	41.2	0.057
	Dose/Low TRV	0.015	0.057	6.21	0.091	9.9	0.131	0.0012	109	0.13	1	0.11	2.33	20.8	0.121	20.5	0.11
Areawide Maximum	Dose/High TRV	0.015	0.057	27.0	0.091	43.1	0.57	0.0012	474	0.58	1	0.11	10.1	41.7	0.121	41.2	0.25
	Dose/Low TRV	0.015	0.057	27.0	0.091	43.1	0.57	0.0012	474	0.58	1	0.11	10.1	20.8	0.121	20.5	0.49
Beryllium																	
Areawide 95UCL	Dose/High TRV	0.015	Regression	0.19	0.045	0.009	0.0011	0.0012	0.21	0.00026	1	0.11	0.012	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.015	Regression	0.19	0.045	0.009	0.0011	0.0012	0.21	0.00026	1	0.11	0.012	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.015	Regression	0.83	0.045	0.072	0.0054	0.0012	1.60	0.0020	1	0.11	0.065	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.015	Regression	0.83	0.045	0.072	0.0054	0.0012	1.60	0.0020	1	0.11	0.065	NA	NA	NA	No TRV[13]
Cadmium																	
Areawide 95UCL	Dose/High TRV	0.015	0.25	0.95	2.38	9.04	0.093	0.0012	3.80	0.0047	1	0.11	0.86	10.4	0.084	11.1	0.078
	Dose/Low TRV	0.015	0.25	0.95	2.38	9.04	0.093	0.0012	3.80	0.0047	1	0.11	0.86	0.08	0.799	0.054	**15.9**
Areawide Maximum	Dose/High TRV	0.015	0.25	0.95	2.38	9.04	0.093	0.0012	3.80	0.0047	1	0.11	0.86	10.4	0.084	11.1	0.078
	Dose/Low TRV	0.015	0.25	0.95	2.38	9.04	0.093	0.0012	3.80	0.0047	1	0.11	0.86	0.08	0.799	0.054	**15.9**
Chromium																	
Areawide 95UCL	Dose/High TRV	0.015	0.024	1.46	0.31	18.6	0.19	0.0012	60.9	0.075	1	0.11	2.32	5.00	1.250	3.09	0.75
	Dose/Low TRV	0.015	0.024	1.46	0.31	18.6	0.19	0.0012	60.9	0.075	1	0.11	2.32	1.00	1.250	0.62	**3.75**
Areawide Maximum	Dose/High TRV	0.015	0.024	10.6	0.31	135	1.36	0.0012	440	0.54	1	0.11	16.7	5.00	1.250	3.09	**5.41**
	Dose/Low TRV	0.015	0.024	10.6	0.31	135	1.36	0.0012	440	0.54	1	0.11	16.7	1.00	1.250	0.62	**27.1**
Copper																	
Areawide 95UCL	Dose/High TRV	0.015	0.044	3.89	0.31	27.4	0.29	0.0012	88.4	0.11	1	0.11	3.48	52.26	0.409	40.4	0.086
	Dose/Low TRV	0.015	0.044	3.89	0.31	27.4	0.29	0.0012	88.4	0.11	1	0.11	3.48	2.30	0.639	1.63	**2.14**
Areawide Maximum	Dose/High TRV	0.015	0.044	30.1	0.31	212	2.22	0.0012	684	0.84	1	0.11	26.9	52.26	0.409	40.4	0.67
	Dose/Low TRV	0.015	0.044	30.1	0.31	212	2.22	0.0012	684	0.84	1	0.11	26.9	2.30	0.639	1.63	**16.6**
Lead																	
Areawide 95UCL	Dose/High TRV	0.015	0.006	0.64	0.14	16.4	0.16	0.0012	117	0.14	1	0.11	2.69	8.75	0.800	5.92	0.45
	Dose/Low TRV	0.015	0.006	0.64	0.14	16.4	0.16	0.0012	117	0.14	1	0.11	2.69	0.01	0.084	0.015	**181**
Areawide Maximum	Dose/High TRV	0.015	0.006	5.32	0.14	136	1.34	0.0012	968	1.19	1	0.11	22.3	8.75	0.800	5.92	**3.76**
	Dose/Low TRV	0.015	0.006	5.32	0.14	136	1.34	0.0012	968	1.19	1	0.11	22.3	0.01	0.084	0.015	**1,498**
Bioavailable Dose	Dose/High TRV	0.015	0.006	0.64	0.14	16.4	0.16	0.0012	11.4	0.014	1	0.11	1.55	8.75	0.800	5.92	0.26
(95UCL)	Dose/Low TRV	0.015	0.006	0.64	0.14	16.4	0.16	0.0012	11.4	0.014	1	0.11	1.55	0.01	0.084	0.015	**104**
Mercury																	
Areawide 95UCL	Dose/High TRV	0.015	0.61	6.22	1.69	17.3	0.20	0.0012	10.2	0.013	1	0.11	1.89	0.18	1.000	0.12	**16.2**
	Dose/Low TRV	0.015	0.61	6.22	1.69	17.3	0.20	0.0012	10.2	0.013	1	0.11	1.89	0.004	1.000	0.0025	**750**
Areawide Maximum	Dose/High TRV	0.015	0.61	6.22	1.69	17.3	0.20	0.0012	10.2	0.013	1	0.11	1.89	0.18	1.000	0.12	**16.2**
	Dose/Low TRV	0.015	0.61	6.22	1.69	17.3	0.20	0.0012	10.2	0.013	1	0.11	1.89	0.004	1.000	0.0025	**750**
Bioavailable Dose	Dose/High TRV	0.015	0.61	6.22	1.69	17	0.2	0.0012	0.10	0.0001	1	0.11	1.78	0.18	1.000	0.12	**15.3**
(95UCL)	Dose/Low TRV	0.015	0.61	6.22	1.69	17	0.2	0.0012	0.10	0.0001	1	0.11	1.78	0.004	1.000	0.0025	**706**
Molybdenum																	
Areawide 95UCL	Dose/High TRV	0.015	NB	0.50	NB	0.50	0.0077	0.0012	0.50	0.00061	1	0.11	0.073	35.3	1.500	21.1	0.0035
	Dose/Low TRV	0.015	NB	0.50	NB	0.50	0.0077	0.0012	0.50	0.00061	1	0.11	0.073	3.50	1.500	2.09	0.035
Areawide Maximum	Dose/High TRV	0.015	NB	6.80	NB	6.80	0.104	0.0012	6.80	0.0083	1	0.11	0.99	35.3	1.500	21.1	0.047
	Dose/Low TRV	0.015	NB	6.80	NB	6.80	0.104	0.0012	6.80	0.0083	1	0.11	0.99	3.50	1.500	2.09	0.48
Selenium																	
Areawide 95UCL	Dose/High TRV	0.015	Regression	0.29	Regression	0.64	0.0078	0.0012	0.60	0.00074	1	0.11	0.075	0.93	1.108	0.59	0.13
	Dose/Low TRV	0.015	Regression	0.29	Regression	0.64	0.0078	0.0012	0.60	0.00074	1	0.11	0.075	0.23	1.108	0.15	0.52
Areawide Maximum	Dose/High TRV	0.015	Regression	0.97	Regression	1.43	0.019	0.0012	1.80	0.0022	1	0.11	0.19	0.93	1.108	0.59	0.32
	Dose/Low TRV	0.015	Regression	0.97	Regression	1.43	0.019	0.0012	1.80	0.0022	1	0.11	0.19	0.23	1.108	0.15	**1.30**

TABLE M1-14: WESTERN MEADOWLARK DOSE CALCULATIONS AND HAZARD QUOTIENTS, UPLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Plant BAF[2] (unitless)	Plant Concentration[3] (mg/kg)	Earthworm BAF[2] (unitless)	Earthworm Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration[6] (mg/kg)	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Silver																	
Areawide 95UCL	Dose/High TRV	0.015	0.014	0.007	2.05	0.98	0.010	0.0012	0.48	0.00059	1	0.11	0.089	20.2	0.662	14.2	0.0063
	Dose/Low TRV	0.015	0.014	0.007	2.05	0.98	0.010	0.0012	0.48	0.00059	1	0.11	0.089	2.02	0.662	1.42	0.063
Areawide Maximum	Dose/High TRV	0.015	0.014	0.081	2.05	11.861	0.11	0.0012	5.80	0.0071	1	0.11	1.08	20.2	0.662	14.2	0.076
	Dose/Low TRV	0.015	0.014	0.081	2.05	11.861	0.11	0.0012	5.80	0.0071	1	0.11	1.08	2.02	0.662	1.42	0.76
Thallium																	
Areawide 95UCL	Dose/High TRV	0.015	NB	0.44	NB	0.44	0.0067	0.0012	0.44	0.00054	1	0.11	0.064	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.015	NB	0.44	NB	0.44	0.0067	0.0012	0.44	0.00054	1	0.11	0.064	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.015	NB	1.6	NB	1.60	0.025	0.0012	1.60	0.0020	1	0.11	0.23	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.015	NB	1.6	NB	1.60	0.025	0.0012	1.60	0.0020	1	0.11	0.23	NA	NA	NA	No TRV[13]
Tin																	
Areawide 95UCL	Dose/High TRV	0.015	NB	28.4	NB	28.4	0.43	0.0012	28.4	0.035	1	0.11	4.14	16.9	0.150	16.0	0.26
	Dose/Low TRV	0.015	NB	28.4	NB	28.4	0.43	0.0012	28.4	0.035	1	0.11	4.14	6.80	0.150	6.43	0.64
Areawide Maximum	Dose/High TRV	0.015	NB	40.6	NB	40.6	0.62	0.0012	40.6	0.050	1	0.11	5.92	16.9	0.150	16.0	0.37
	Dose/Low TRV	0.015	NB	40.6	NB	40.6	0.62	0.0012	40.6	0.050	1	0.11	5.92	6.80	0.150	6.43	0.92
Vanadium																	
Areawide 95UCL	Dose/High TRV	0.015	0.021	1.56	NB	74.5	0.73	0.0012	74.5	0.091	1	0.11	7.23	114.0	1.170	71.5	0.10
	Dose/Low TRV	0.015	0.021	1.56	NB	74.5	0.73	0.0012	74.5	0.091	1	0.11	7.23	11.40	1.170	7.15	**1.01**
Areawide Maximum	Dose/High TRV	0.015	0.021	5.06	NB	241	2.36	0.0012	241	0.30	1	0.11	23.4	114.0	1.170	71.5	0.33
	Dose/Low TRV	0.015	0.021	5.06	NB	241	2.36	0.0012	241	0.30	1	0.11	23.4	11.40	1.170	7.15	**3.27**
Zinc																	
Areawide 95UCL	Dose/High TRV	0.015	0.066	14.2	0.60	129.3	1.33	0.0012	216	0.26	1	0.11	14.05	172.0	0.955	112	0.13
	Dose/Low TRV	0.015	0.066	14.2	0.60	129.3	1.33	0.0012	216	0.26	1	0.11	14.05	17.20	0.955	11.23	**1.25**
Areawide Maximum	Dose/High TRV	0.015	0.066	131	0.60	1188.0	12.2	0.0012	1,980	2.43	1	0.11	129.1	172.0	0.955	112	**1.15**
	Dose/Low TRV	0.015	0.066	131	0.60	1188.0	12.2	0.0012	1,980	2.43	1	0.11	129.1	17.20	0.955	11.23	**11.5**
LMW PAH																	
Areawide 95UCL	Dose/High TRV	0.015	12.2	1.26	4.40	0.45	0.011	0.0012	0.10	0.00013	1	0.11	0.1025	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.015	12.2	1.26	4.40	0.45	0.011	0.0012	0.10	0.00013	1	0.11	0.1025	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.015	12.2	7.81	4.40	2.82	0.071	0.0012	0.64	0.00078	1	0.11	0.637	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.015	12.2	7.81	4.40	2.82	0.071	0.0012	0.64	0.00078	1	0.11	0.637	NA	NA	NA	No TRV[13]
HMW PAH																	
Areawide 95UCL	Dose/High TRV	0.015	1.67	1.42	1.33	1.13	0.019	0.0012	0.85	0.0010	1	0.11	0.18	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.015	1.67	1.42	1.33	1.13	0.019	0.0012	0.85	0.0010	1	0.11	0.18	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.015	1.67	6.33	1.33	5.04	0.084	0.0012	3.79	0.0046	1	0.11	0.79	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.015	1.67	6.33	1.33	5.04	0.084	0.0012	3.79	0.0046	1	0.11	0.79	NA	NA	NA	No TRV[13]
DDE																	
Areawide 95UCL	Dose/High TRV	0.015	6.38	0.025	Regression	0.090	0.0010	0.0012	0.0039	0.000005	1	0.11	0.0090	0.60	1.000	0.39	0.023
	Dose/Low TRV	0.015	6.38	0.025	Regression	0.090	0.0010	0.0012	0.0039	0.000005	1	0.11	0.0090	0.00	3.500	0.00045	**19.8**
Areawide Maximum	Dose/High TRV	0.015	6.38	0.24	Regression	0.65	0.0076	0.0012	0.037	0.00005	1	0.11	0.068	0.60	1.000	0.39	0.17
	Dose/Low TRV	0.015	6.38	0.24	Regression	0.65	0.0076	0.0012	0.037	0.00005	1	0.11	0.068	0.00	3.500	0.00045	**150**
DDT																	
Areawide 95UCL	Dose/High TRV	0.015	9.66	0.18	0.42	0.0078	0.0011	0.0012	0.019	0.000023	1	0.11	0.0098	1.50	1.000	0.97	0.010
	Dose/Low TRV	0.015	9.66	0.18	0.42	0.0078	0.0011	0.0012	0.019	0.000023	1	0.11	0.0098	0.00	3.500	0.00045	**21.6**
Areawide Maximum	Dose/High TRV	0.015	9.66	2.03	0.42	0.0882	0.012	0.0012	0.21	0.00026	1	0.11	0.11	1.50	1.000	0.97	0.11
	Dose/Low TRV	0.015	9.66	2.03	0.42	0.0882	0.012	0.0012	0.21	0.00026	1	0.11	0.11	0.00	3.500	0.00045	**245**
Total DDTs																	
Areawide 95UCL	Dose/High TRV	0.015	Regression	0.0074	Regression	0.55	0.0053	0.0012	0.041	0.000051	1	0.11	0.0476	1.50	1.000	0.97	0.049
	Dose/Low TRV	0.015	Regression	0.0074	Regression	0.55	0.0053	0.0012	0.041	0.000051	1	0.11	0.0476	0.00	3.500	0.00045	**105**
Areawide Maximum	Dose/High TRV	0.015	Regression	0.048	Regression	4.64	0.045	0.0012	0.50	0.00061	1	0.11	0.403	1.50	1.000	0.97	0.42
	Dose/Low TRV	0.015	Regression	0.048	Regression	4.64	0.045	0.0012	0.50	0.00061	1	0.11	0.403	0.00	3.500	0.00045	**889**
Gamma-BHC																	
Areawide 95UCL	Dose/High TRV	0.015	0.27	0.00059	29.5	0.0649	0.00063	0.0012	0.0022	0.0000027	1	0.11	0.00558	20.00	1.000	12.9	0.00043
	Dose/Low TRV	0.015	0.27	0.00059	29.5	0.0649	0.00063	0.0012	0.0022	0.0000027	1	0.11	0.00558	2.00	1.000	1.29	0.0043
Areawide Maximum	Dose/High TRV	0.015	0.27	0.0038	29.5	0.4133	0.0040	0.0012	0.014	0.000017	1	0.11	0.03552	20.00	1.000	12.9	0.0027
	Dose/Low TRV	0.015	0.27	0.0038	29.5	0.4133	0.0040	0.0012	0.014	0.000017	1	0.11	0.03552	2.00	1.000	1.29	0.027
Heptachlor																	
Areawide 95UCL	Dose/High TRV	0.015	0.12	0.000048	31.9	0.013	0.00012	0.0012	0.00040	0.00000049	1	0.11	0.0011	10.7	0.064	12.0	0.000091
	Dose/Low TRV	0.015	0.12	0.000048	31.9	0.013	0.00012	0.0012	0.00040	0.00000049	1	0.11	0.0011	2.14	0.064	2.40	0.00046
Areawide Maximum	Dose/High TRV	0.015	0.12	0.00060	31.9	0.16	0.0015	0.0012	0.0050	0.0000061	1	0.11	0.014	10.7	0.064	12.0	0.0011
	Dose/Low TRV	0.015	0.12	0.00060	31.9	0.16	0.0015	0.0012	0.0050	0.0000061	1	0.11	0.014	2.14	0.064	2.40	0.0057

TABLE M1-14: WESTERN MEADOWLARK DOSE CALCULATIONS AND HAZARD QUOTIENTS, UPLAND

Revised Final Remedial Investigation Report for Investigation Area A2 Former North Building Ways Area, Mare Island Naval Shipyard, Vallejo, California

COPEC		Total Prey Ingestion Rate[1] (kg/day)	Plant BAF[2] (unitless)	Plant Concentration[3] (mg/kg)	Earthworm BAF[2] (unitless)	Earthworm Concentration[3] (mg/kg)	Prey Daily Dose[4] (mg/day)	Soil Ingestion Rate[5] (kg/day)	Soil Concentration[6] (mg/kg)	Soil Daily Dose[7] (mg/day)	SUF	Body Weight[8] (kg)	Total Daily Dose[9] (mg/kg/day)	TRV[10] (mg/kg/day)	Test Species Body Weight[10] (kg)	Allometrically Adjusted TRV[11] (mg/kg/day)	HQ[12] (based on adjusted TRV)
Methoxychlor																	
Areawide 95UCL	Dose/High TRV	0.015	0.11	0.0011	30.6	0.30	0.0029	0.0012	0.010	0.000012	1	0.11	0.0257	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.015	0.11	0.0011	30.6	0.30	0.0029	0.0012	0.010	0.000012	1	0.11	0.0257	NA	NA	NA	No TRV[13]
Areawide Maximum	Dose/High TRV	0.015	0.11	0.0022	30.6	0.61	0.0059	0.0012	0.020	0.000025	1	0.11	0.0525	NA	NA	NA	No TRV[13]
	Dose/Low TRV	0.015	0.11	0.0022	30.6	0.61	0.0059	0.0012	0.020	0.000025	1	0.11	0.0525	NA	NA	NA	No TRV[13]
Total Chlordane																	
Areawide 95UCL	Dose/High TRV	0.015	0.025	0.00038	32.0	0.49	0.0047	0.0012	0.015	0.000019	1	0.11	0.0416	10.7000	0.064	12.0	0.0035
	Dose/Low TRV	0.015	0.025	0.00038	32.0	0.49	0.0047	0.0012	0.015	0.000019	1	0.11	0.0416	2.1400	0.064	2.40	0.017
Areawide Maximum	Dose/High TRV	0.015	0.025	0.0018	32.0	2.24	0.022	0.0012	0.070	0.000086	1	0.11	0.1917	10.7000	0.064	12.0	0.016
	Dose/Low TRV	0.015	0.025	0.0018	32.0	2.24	0.022	0.0012	0.070	0.000086	1	0.11	0.1917	2.1400	0.064	2.40	0.080

Notes: Highlighted cells indicate HQs greater than 1.0.

95UCL 95th percent upper confidence limit on the arithmetic mean
BAF Bioaccumulation factor
BHC Benzene hexachloride
COPEC Chemical of potential ecological concern
DDE Dichlorodiphenyldichloroethene
DDT Dichlorodiphenyltrichloroethane
EFA WEST Naval Facilities Engineering Command, Engineering Field Activity West
HMW High molecular weight
HQ Hazard quotient
kg Kilogram
kg/day Kilogram per day
LMW Low molecular weight
mg/day Milligram per day
mg/kg Milligram per kilogram
mg/kg/day Milligram per kilogram per day
NA Not applicable
NB No BAF was available.
PAH Polycyclic aromatic hydrocarbon
SUF Site use factor
TRV Toxicity reference value

1 Ingestion rate was calculated with body weight using the Nagy and others (1999) metabolic rate equation for all birds and the averaged food requirement conversion for insectivorous birds.
2 The 95UCL or habitat area maximum (see note 6) for all site-collected soil samples was converted to tissue concentrations using BAFs calculated from site-collected, collocated sample results. Prey concentrations labeled "NB" were estimated as 1 mg/kg because no BAF was available.
3 BAFs are converted to dry weight using the formula: dry weight concentration = (wet weight concentration)(1-proportion moisture in media). Percent moisture for mammals equals 68 percent in EPA (1993).
4 Prey daily dose was calculated by multiplying prey ingestion rate by prey concentration.
5 Rate for the Bald Eagle in Pascoe and others (1996); 0.7 percent of prey ingestion rate.
6 For average doses, lesser of 95UCL or detected maximum of all site-collected soil samples; maximum was used where 95UCL could not be calculated (two or fewer detected concentrations). For maximum doses, maximum of all site-collected soil samples was used.
7 Soil daily dose was calculated by multiplying the soil ingestion rate by 95UCL or habitat area maximum (see note 6) soil concentration.
8 Average adult weight from Dunning (1993).
9 Total daily dose is calculated using the following equation: total daily dose = ((prey daily dose + soil daily dose)*SUF)/receptor species body weight.
10 The derivation of TRVs is described in EFA WEST (1998). These TRVs are adjusted to incorporate uncertainty factors.
11 Allometrically adjusted TRVs were calculated using the following equation: test species TRV = (receptor species TRV) x (test species body weight/receptor species body weight)$^{(1-1/2)}$.
12 The HQ was calculated using total daily dose/allometrically adjusted TRV.
13 Sufficient data are not available to derive a TRV. This chemical was evaluated qualitatively.

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
57	Risk to birds	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix M, Section M4.3.4. Tetra Tech EM Inc. September 22, 2008.

risk-based decisions are made for IA A2. Some information about these chemicals is provided from the literature in Attachment M2. According to the amount of information available, the chemical's properties, its fate and transport in the environment and, in some cases, its toxicity to birds and mammals, as applicable, may be described.

M4.3.4 Summary of Risk to Birds

Based on the refined assessment, no chemicals are retained as COPECs for wetland or upland birds.

Although antimony was measured at concentrations below background in the upland soils, no background screen was conducted for the wetland sediments. No criteria are available to evaluate risk of TPH (the primary contaminant in soil at IA A2) to birds. As described in Section 3.6.3 of the RI, it is unlikely that TPH poses an unacceptable risk to birds at IA A2 because analysis indicates it is highly weathered and a result of asphalt present at the site; therefore, TPH is not considered a risk driver for birds.

M4.4 Refinement of Mammal COPECs

The FCM Step 3a calculations and HQs are found in Attachment M1. A focused, refined assessment of the ecological risk to mammals for each COPEC evaluated in the Step 3a FCM is presented below for wetland and upland mammals. The complete lists of Step 3a HQs for wetland and upland mammals are found in Tables M-21 and M-22.

All COPECs without mammal TRVs or where the HQ based on the low TRV was greater than 1.0 for any receptor is discussed in the refined assessment sections below.

M4.4.1 Refined Assessment for Wetland Mammals

Aluminum. Aluminum was identified as a COPEC in the SLERA for both mammalian receptors because the $HQs_{(max\ dose/low\ TRV)}$ exceeded 1.0. The refined $HQs_{(refined\ dose/high\ TRV)}$ for the salt marsh harvest mouse was 12.6 and the gray fox was 0.075 based on the 95 UCL. The $HQ_{(refined\ dose/low\ TRV)}$ for the salt marsh harvest mouse was 126 and for the gray fox was 0.75. Aluminum is considered toxic to ecological receptors only if the pH is less than 5.5, which is not the case at this site. Based on the refined analysis, aluminum does not pose an unacceptable risk to wetland mammals.

Antimony. Antimony was identified as a COPEC in the SLERA for both mammalian receptors because the $HQs_{(max\ dose/low\ TRV)}$ exceeded 1.0. The refined $HQs_{(refined\ dose/high\ TRV)}$ for the mammals were under 1.0 based on the 95 UCL. Only the $HQ_{(refined\ dose/low\ TRV)}$ for the salt marsh harvest mouse of 8.32 exceeded 1.0. No San Francisco Bay ambient sediment concentration exists for antimony (Water Board 1998). The 95 UCL concentration (1.8 mg/kg) for antimony in wetland

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
58	Risk to mammals	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix M, Section M4.4.4. Tetra Tech EM Inc. September 22, 2008.

M4.4.4 Summary of Risk to Mammals

Based on the refined assessment, no chemicals are retained as COPECs for wetland or upland mammals.

No criteria are available to evaluate the risk of TPH (the primary contaminant in soils at IA A2) to mammals; however, PAHs, which are the more toxicological fraction of TPH, were evaluated and did not pose unacceptable risk. As described in Section 3.6.3 of the RI, it is unlikely that TPH poses an unacceptable risk to mammals at IA A2 because analysis indicates it is highly weathered and a result of asphalt present at the site; therefore, TPH is eliminated as a COPEC.

M4.5 Summary of Chemicals of Ecological Concern

Based on the Step 3a risk refinement, no chemicals pose an unacceptable risk to birds or mammals in the wetland or upland habitats at IA A2.

Potential risk drivers in the wetland habitat for mammals were limited to aluminum based on the HQ for the salt marsh harvest mouse. Aluminum does not pose an unacceptable risk to mammals because aluminum is considered toxic to ecological receptors only if the pH of the soil or sediment is less than 5.5. Potential risk drivers in the wetland habitat for birds were limited to aluminum, chromium, lead, manganese, and mercury. Aluminum is considered toxic to ecological receptors only if the pH is less than 5.5, which is not the case at this site. The 95 UCL concentrations of chromium and manganese were below Bay Area background sediment concentrations, indicating these chemicals do not pose an unacceptable risk to birds. Concentrations of lead and mercury posed an unacceptable risk to birds based on the HQs for the California black rail. Although the black rail was added as a receptor for this supplemental evaluation, the presence of the rail has not been documented at IA A2; however, recent surveys have not been conducted. Distributions of lead and mercury in the wetland do not indicate a release of lead or mercury has occurred that resulted in a hot spot; rather, concentrations appear to be distributed throughout the wetland. The 95 UCL concentrations of lead (95.29 mg/kg) and mercury (0.59 mg/kg) are similar to San Francisco Bay Ambient sediment concentrations of 43.2 mg/kg and 0.43 mg/kg. Additionally, doses to the California black rail modeled using the ambient concentrations also exceeded the high TRV. Mercury and lead are not considered to pose an unacceptable risk to wetland birds because the black rail doses were similar to the ambient doses.

Potential risk drivers in the upland habitat were limited to mercury based on the HQ for the meadowlark. Mercury was detected at 59 of 71 sample locations at IA A2; however, only two locations exceeded the 95th percentile ambient fill concentration of 2.0 mg/kg (PRC 1995). A 95 UCL was not calculated for mercury, but average concentrations were well below the ambient concentration. Based on the refined analysis, mercury does not pose an unacceptable risk to

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
58	Risk to mammals	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix M, Section M4.4.4. Tetra Tech EM Inc. September 22, 2008.

M4.4.4 Summary of Risk to Mammals

Based on the refined assessment, no chemicals are retained as COPECs for wetland or upland mammals.

No criteria are available to evaluate the risk of TPH (the primary contaminant in soils at IA A2) to mammals; however, PAHs, which are the more toxicological fraction of TPH, were evaluated and did not pose unacceptable risk. As described in Section 3.6.3 of the RI, it is unlikely that TPH poses an unacceptable risk to mammals at IA A2 because analysis indicates it is highly weathered and a result of asphalt present at the site; therefore, TPH is eliminated as a COPEC.

M4.5 Summary of Chemicals of Ecological Concern

Based on the Step 3a risk refinement, no chemicals pose an unacceptable risk to birds or mammals in the wetland or upland habitats at IA A2.

Potential risk drivers in the wetland habitat for mammals were limited to aluminum based on the HQ for the salt marsh harvest mouse. Aluminum does not pose an unacceptable risk to mammals because aluminum is considered toxic to ecological receptors only if the pH of the soil or sediment is less than 5.5. Potential risk drivers in the wetland habitat for birds were limited to aluminum, chromium, lead, manganese, and mercury. Aluminum is considered toxic to ecological receptors only if the pH is less than 5.5, which is not the case at this site. The 95 UCL concentrations of chromium and manganese were below Bay Area background sediment concentrations, indicating these chemicals do not pose an unacceptable risk to birds. Concentrations of lead and mercury posed an unacceptable risk to birds based on the HQs for the California black rail. Although the black rail was added as a receptor for this supplemental evaluation, the presence of the rail has not been documented at IA A2; however, recent surveys have not been conducted. Distributions of lead and mercury in the wetland do not indicate a release of lead or mercury has occurred that resulted in a hot spot; rather, concentrations appear to be distributed throughout the wetland. The 95 UCL concentrations of lead (95.29 mg/kg) and mercury (0.59 mg/kg) are similar to San Francisco Bay Ambient sediment concentrations of 43.2 mg/kg and 0.43 mg/kg. Additionally, doses to the California black rail modeled using the ambient concentrations also exceeded the high TRV. Mercury and lead are not considered to pose an unacceptable risk to wetland birds because the black rail doses were similar to the ambient doses.

Potential risk drivers in the upland habitat were limited to mercury based on the HQ for the meadowlark. Mercury was detected at 59 of 71 sample locations at IA A2; however, only two locations exceeded the 95th percentile ambient fill concentration of 2.0 mg/kg (PRC 1995). A 95 UCL was not calculated for mercury, but average concentrations were well below the ambient concentration. Based on the refined analysis, mercury does not pose an unacceptable risk to

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
59	No further BERA evaluation or action	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Appendix M, Section M4.5. Tetra Tech EM Inc. September 22, 2008.

M4.4.4 Summary of Risk to Mammals

Based on the refined assessment, no chemicals are retained as COPECs for wetland or upland mammals.

No criteria are available to evaluate the risk of TPH (the primary contaminant in soils at IA A2) to mammals; however, PAHs, which are the more toxicological fraction of TPH, were evaluated and did not pose unacceptable risk. As described in Section 3.6.3 of the RI, it is unlikely that TPH poses an unacceptable risk to mammals at IA A2 because analysis indicates it is highly weathered and a result of asphalt present at the site; therefore, TPH is eliminated as a COPEC.

M4.5 Summary of Chemicals of Ecological Concern

Based on the Step 3a risk refinement, no chemicals pose an unacceptable risk to birds or mammals in the wetland or upland habitats at IA A2.

Potential risk drivers in the wetland habitat for mammals were limited to aluminum based on the HQ for the salt marsh harvest mouse. Aluminum does not pose an unacceptable risk to mammals because aluminum is considered toxic to ecological receptors only if the pH of the soil or sediment is less than 5.5. Potential risk drivers in the wetland habitat for birds were limited to aluminum, chromium, lead, manganese, and mercury. Aluminum is considered toxic to ecological receptors only if the pH is less than 5.5, which is not the case at this site. The 95 UCL concentrations of chromium and manganese were below Bay Area background sediment concentrations, indicating these chemicals do not pose an unacceptable risk to birds. Concentrations of lead and mercury posed an unacceptable risk to birds based on the HQs for the California black rail. Although the black rail was added as a receptor for this supplemental evaluation, the presence of the rail has not been documented at IA A2; however, recent surveys have not been conducted. Distributions of lead and mercury in the wetland do not indicate a release of lead or mercury has occurred that resulted in a hot spot; rather, concentrations appear to be distributed throughout the wetland. The 95 UCL concentrations of lead (95.29 mg/kg) and mercury (0.59 mg/kg) are similar to San Francisco Bay Ambient sediment concentrations of 43.2 mg/kg and 0.43 mg/kg. Additionally, doses to the California black rail modeled using the ambient concentrations also exceeded the high TRV. Mercury and lead are not considered to pose an unacceptable risk to wetland birds because the black rail doses were similar to the ambient doses.

Potential risk drivers in the upland habitat were limited to mercury based on the HQ for the meadowlark. Mercury was detected at 59 of 71 sample locations at IA A2; however, only two locations exceeded the 95th percentile ambient fill concentration of 2.0 mg/kg (PRC 1995). A 95 UCL was not calculated for mercury, but average concentrations were well below the ambient concentration. Based on the refined analysis, mercury does not pose an unacceptable risk to

upland birds because the meadowlark would be exposed to an area larger than the two locations where concentrations exceed ambient.

The bioavailability of metals was evaluated in the onshore ERA using a modified waste extraction test. These results indicated that only a fraction of the metal concentrations appear to be bioavailable. Although the results of this evaluation were used to adjust the concentration for the incidental ingestion of soil or sediment in the dose calculation, no adjustments were applied to the tissue concentrations, as was previously done in the onshore ERA. The tissue concentrations are, therefore, likely to overestimate the actual doses for birds and mammals at IA A2. This issue was discussed with the regulatory agencies after the draft onshore ERA was prepared. As a result, no further BERA evaluation or action is recommended to address ecological risk in the onshore areas of IA A2.

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
60	Fate and transport of chemicals	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Section 3.6.3. Tetra Tech EM Inc. September 22, 2008.

In summary, based on an evaluation of chemical concentrations and bioassay data in the weight-of-evidence approach, the lines of evidence presented for invertebrates in the risk characterization summary of the offshore ERA do not indicate unacceptable risk to populations of benthic invertebrates. The magnitude and frequency of effects observed in bioassays conducted using offshore sediments was generally small, with no adverse effects observed in sediments collected from Mare Island Strait adjacent to IA A2. Sediment chemistry results indicated that most concentrations were similar to or below either the ER-L or San Francisco Bay ambient concentrations. The sampling strategy was biased toward sampling in potential source areas such as outfalls and, although some chemical concentrations may be elevated near the outfall areas, concentrations away from the outfall areas are not elevated, indicating that the outfalls are not providing a pathway for chemicals to enter offshore sediments. Therefore, based on an evaluation of chemical concentrations and bioassay data in the weight-of-evidence approach, risk to populations of benthic invertebrate receptors from exposure to Mare Island offshore sediments adjacent to IA A2 was considered minimal.

Food-chain modeling was used to generate HQs that were the primary method for assessing risk to vertebrates in offshore habitats. HQs calculated using the high TRV were below 1.0 for all mammalian and avian receptors modeled; as a result, no unacceptable risk exists to representative receptors (river otter, Eastern Pacific harbor seal, Double-crested Cormorant, and Surf Scoter) from exposure to offshore sediments adjacent to IA A2. In general, chemical concentrations do not suggest a risk to higher trophic-level receptors from either ingestion of contaminated prey or incidental ingestion of sediment. Based on the results of the food-chain modeling, no unacceptable risk to representative bird and mammal receptors exposed to offshore sediment adjacent to IA A2 is expected.

Additional sediment and tissue samples will be collected from the offshore areas (including locations adjacent to IA A2) during fall 2008 as part of the IA K RI. As part of the investigation, additional bioassays and bioaccumulation tests will be performed to address uncertainties in the offshore areas ERA. The results of this investigation will be used to present an updated BERA for IA K and will be presented in the IA K RI.

3.6.3 Fate and Transport of Chemicals from Onshore to Offshore Areas

Because of the presence of wetlands at the site, samples collected at IA A2 were used to evaluate whether chemicals were migrating from the uplands to the adjacent wetlands. Although samples were analyzed for a suite of chemicals, during meetings with the Navy, DTSC, EPA, USFWS, CDFG, and Water Board, it was agreed that PAHs and TPH were of significant concern with respect to chemical transport and migration (Tetra Tech 1999c) and therefore they are the focus of the following discussion.

Boxplots presented in the draft final onshore ERA showed similar distributions of PAHs for onshore soils and offshore sediments (Tetra Tech 2002a). A qualitative spatial analysis of the

concentrations that exceeded toxicity benchmarks did not show a clear pattern in either sediment or soil samples, and no pattern was noted in the spatial distribution of outlier values. Therefore, concentrations of PAHs in sediment in the wetlands are comparable and consistent with offshore concentrations. Concentrations of PAHs did not correlate well with TPH concentrations at the site and were generally below the ambient concentration indicating that the PAHs largely represent background conditions at Mare Island. In addition, PAHs are typically adsorbed strongly to soil and soil organic matter and are expected to remain adsorbed to soil at the site where they will likely be naturally attenuated and degraded.

Potential risk posed by the migration of TPH detected in upland soil samples to the intertidal wetlands at IA A2 was also assessed. Surface water was considered an insignificant pathway for TPH for two reasons. First, no evidence exists, such as canalization and erosion, that surface water flows into the wetland. Second, TPH-mr is not mobile and no existing surface water pathway exists. TPH-mr was the only TPH fraction present at detectable concentrations in samples of surface sediments (0.0 to 0.5 foot bgs). The median concentration reported for TPH-mr in surface sediments was 250 mg/kg; the maximum was 510 mg/kg. All three TPH fractions were found at detectable concentrations in sediment samples collected from the 1.0- to 1.5-foot-bgs interval. The median concentration reported for TPH-mr from this depth interval was 41.2 mg/kg, and only two samples exhibited concentrations that exceeded 500 mg/kg. These concentrations are relatively low and the available toxicological literature suggests that they would not be toxic to birds or mammals through ingestion provided the effects of TPH-mr on these receptors would be comparable with the observed effects of crude oil (Eisler and others 1977; Hartung 1995; Peakall and others 1983). All three fractions of TPH were reported at detectable concentrations in soil samples collected from the 0.0- to 0.5-foot-bgs interval. Only TPH-mr was reported at concentrations that may pose risk to ecological receptors. Eight of the 86 samples exhibited concentrations of TPH-mr above 1,000 mg/kg. The median concentration was 380 mg/kg; the maximum concentration was 6,600 mg/kg. Groundwater samples were also collected as part of the RI report for IA A2, and TPH was detected at very low levels (Section 3.3.5). Because the upland area at IA A2 will be regraded and paved for light industrial use and concentrations of TPH in groundwater samples are very low, the likelihood that any TPH in soil would migrate to the wetland is low. In addition, TPH in soil is generally immobile and therefore does not pose a risk to ecological receptors in the wetlands area.

An additional concern raised by the agencies is the potential migration of PCBs between the onshore and offshore areas of Mare Island. Only two onshore samples in IA A2 had concentrations of PCBs exceeding the ER-L or ER-M. One sample was from the 0.0 to 0.5-foot depth interval while the other was from the 1.0- to 1.5-foot interval at a different sampling location. The sediments near the pier were sampled as part of the offshore areas ERA, and no concentrations of PCBs above comparison criteria were detected. The Navy conducted additional sampling for PCBs within the vault at Building 643 as part of a separate basewide PCB program. The possibility that PCBs are present within the concrete vault requires further investigation of the residue, water, and concrete within the vaults. The Navy will perform the additional sampling and abatement activities under the separate PCB program. Residue (sludge) samples from within the cableway leading from the Building 643 vault to Mare Island Strait were also collected under the basewide PCB program. None of the residue samples contained

PCBs indicating it is unlikely that PCBs are leaking from the vault or former transformer locations into the water and sediments of Mare Island Strait.

3.6.4 Results of Supplemental Ecological Evaluation

Regulatory agency comments on the final IA A2 RI (Appendix K) identified several requests for revisions to the SLERA for IA A2. One request from the regulatory agencies was to include additional receptors in the evaluations of both the upland and wetland habitats. The Navy agreed to add the Western meadowlark (*Sturnella neglecta*), California vole (*Microtus californicus*), and ornate shrew (*Sorex ornatus*) to the receptor list for the upland evaluation. The Navy further agreed to add the killdeer (*Charadrius vociferous*), mallard (breeding and non-breeding) (*Anas platyrhynchos*), great blue heron (*Ardea herodias*), California black rail (*Laterallus jamaicensis coturniculus*), and California clapper rail (*Rallus longirostris obsoletus*) for the wetland evaluation. The presence of the California black rail and California clapper rail have been documented at Mare Island on the southern end of IA J (Tetra Tech 2002a); however, neither rail has been reported at IA A2. Both rails were added to the wetland evaluation because no formal rail surveys have been conducted recently at IA A2. As requested by the regulatory agencies, updated HQ tables based on high and low TRVs are presented in Appendix M. These tables include TRV from the BTAG (Navy 1998) where available, and from additional sources (including Sample and others 1996, Navy 1998, and EPA 2008) for the chemicals that lack BTAG TRVs.

This supplemental ecological evaluation includes components of the SLERA and Step 3a of the BERA risk refinement to characterize current and potential threats to the environment that may be posed by COPECs in soils and sediments at IA A2. The chemical data for soil and sediment used in the evaluation were presented in the onshore ERA and were taken directly from that document for this supplemental evaluation. Additionally, median BAFs calculated in the onshore ERA were used in this assessment without modification.

Several methodologies were updated for this evaluation, in addition to the changes requested by the regulatory agencies. In accordance with Navy guidance (Navy 2004), the background screen for chemicals was conducted after the SLERA as part of Step 3a of the BERA rather than at the start of the SLERA. As a first step of the SLERA, the initial COPEC screen was completed by using vertebrate ecological soil screening levels (Eco-SSLs) (EPA 2008) for soils. No COPEC screen was conducted for sediments. All detected chemicals in sediments were evaluated for vertebrates rather than using a screen against ER-Ls (Long and others 1995) as was previously done in the onshore ERA.

3.6.4.1 SLERA Conclusions

The SLERA results indicate that maximum concentrations at IA A2 pose unacceptable risk from inorganic and organic chemicals to avian and mammalian receptors in the wetland and upland habitats based on the conservative assumptions of the SLERA. All chemicals that remained as COPECs after the SLERA were evaluated further in the BERA Step 3a risk refinement. The

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
61	Offshore ERA	Section 2.5.2	Final (Revision 1) Remedial Investigation, Investigation Area A2, Former North Building Ways Area, Former Mare Island Naval Shipyard, Vallejo, California. Section 3.6.2 through 3.6.2.2. Tetra Tech EM Inc. September 22, 2008.

and are addressed in this RI report rather than the onshore ERA. Chemicals that exceed ambient fill or ER-L values at the site have been identified as COPECs. Although the draft onshore ERA recommended a baseline risk assessment, based on the results of additional data evaluations, the Navy and regulatory agencies agreed that no ecological sampling was necessary to address potential ecological risk (Tetra Tech 1999c). Ecological risks appear low. Food-chain models indicate that the salt marsh harvest mouse, gray fox, and Northern Harrier are not at an immediate or significant risk from any COPEC modeled in IA A2. In addition, assumptions used in the food-chain model are conservative and are expected to overestimate actual field exposures. Ecological receptors in the wetland at the FNBW Area are not likely to be at risk from concentrations of TPH in upland soil, intertidal sediments, or offshore sediments (Section 3.6.3). The results of the screening-level ERA for IA A2 indicate the site does not pose unacceptable risk to ecological receptors and, therefore, no action is recommended to address ecological risk.

As discussed in Section 3.6, a supplemental ecological evaluation updating the information presented in the onshore ERA was prepared as part of this revised final RI. The supplemental ecological evaluation is presented in Appendix M and a summary is provided in Section 3.6.4.

3.6.2 Offshore Ecological Risk Assessment Summary

The offshore area along Mare Island Strait from the Fleet Reserve Piers to Dikes 12 and 14 in the south shore area (referred to as IA K) were evaluated in the offshore areas ERA (Tetra Tech 2002b). Two sites were identified in IA K adjacent to IA A2: the Fleet Reserve Piers and the FNBW Area, both of which comprise cells 1 to 16. Discussions of the offshore areas ERA below are limited to these two sites adjacent to IA A2. These adjacent offshore areas in Mare Island Strait are composed of intertidal mudflats and open water. Risk to offshore receptors from exposure to sediments in Mare Island Strait will be evaluated further in the BERA for IA K.

The ERA was conducted to evaluate risk to ecological receptors from site-specific chemical stressors in Mare Island offshore areas. To evaluate risk to receptors several types of data were evaluated during the ERA including (1) analytical chemistry data for sediment, pore water, and sediment elutriates and comparison with toxicity benchmarks; (2) bioassays using amphipods, bivalves, echinoderms, and mussels; (3) bioaccumulation tests using bivalves exposed to site sediment; (4) food-chain modeling to assess risk to higher trophic-level organisms; and (5) literature reviews and other data such as factors affecting chemical bioavailability. In 1997, Tetra Tech collected sediment samples at the surface (0.0 to 0.5 foot bgs) and subsurface (0.0 to 5.0 and 5.0 to 10.0 feet bgs). The samples were analyzed for metals, low-level SVOCs, low-level PCBs and pesticides, organotins, explosives, petroleum indicators, acid volatile sulfides, TOC, ammonia, sulfide, simultaneously extractable hydrocarbons, and sediment oxygen demand. Offshore sampling locations are shown on Figure 2-3.

3.6.2.1 Exposure and Effects Assessment

In the initial evaluation, sediment chemical concentrations were compared to toxicity benchmarks, which resulted in a list of COPECs. Next, COPECs were evaluated in conjunction with bioassays and the bioaccumulation test to evaluate possible correlations between COPECs and sample toxicity or bioaccumulation potential. These evaluations identified chemicals of ecological concern (COEC) or chemicals that had concentrations exceeding the appropriate benchmark and were present in bioassays showing adverse effects or tests demonstrating bioaccumulation. These COECs were then evaluated in terms of ecological risk to benthic invertebrate receptors using a weight-of evidence approach. An HQ approach based on food-chain modeling was used to identify chemicals that may pose the greatest risk to vertebrate receptors. Risk to mammalian and avian assessment endpoints in the offshore areas was evaluated by comparing ingestion doses to TRVs. Site-specific doses were calculated from bioaccumulation test results and used to generate HQs for the four species selected as vertebrate assessment endpoints. As an additional line of evidence to assess risk to vertebrates, a qualitative evaluation was conducted to determine whether available data indicate that chemicals present in sediment from the offshore area pose an unacceptable risk to fishes (Tetra Tech 2002b). The final evaluation was included in the final offshore areas ERA (Tetra Tech 2002b).

To evaluate risk to benthic invertebrate populations, the three primary lines of evidence were (1) results of bulk sediment and pore water bioassays, (2) calculation of bioaccumulation factors (BAF) and biota-sediment accumulation factors (BSAF) to assess bioaccumulative potential of chemicals, and (3) comparison of bulk chemistry results with sediment toxicity benchmarks. Bulk sediment bioassay results indicated no adverse effects in the offshore areas in the vicinity of IA A2, and few adverse effects overall in the offshore areas of Mare Island; however, there was some uncertainty with the test results because of confounding factors. Bioaccumulative potential was low for inorganic chemicals because all inorganic BAFs and BSAFs were below the threshold of concern. BAFs and BSAFs were elevated for certain organic compounds but were primarily associated with storm water outfalls and intertidal areas. While a number of chemical concentrations in sediment exceeded ER-Ls in offshore sediments nearby IA A2, only zinc was detected at concentrations exceeding the effects range-median (ER-M). Available data suggested a relatively low risk associated with anthropogenic chemicals due to the lack of co-occurrence of chemical concentrations exceeding a toxicity benchmark and observation of adverse effects in the bioassays.

To assess risk to higher trophic-level receptors, such as birds and mammals, an evaluation of food-chain modeling results was conducted. All HQs calculated using the high TRV were below 1.0 for all mammalian and avian receptors modeled, indicating that no unacceptable risk exists to representative receptors (river otter, Eastern Pacific harbor seal, Double-crested Cormorant, and Surf Scoter) from exposure to offshore sediments at Mare Island. Some HQ values based on the low TRV were greater than 1.0, indicating potential risk. Evaluation of HQs for these chemicals, however, revealed minimal risk to receptors given the conservative assumptions of the model and the spatial and temporal variations associated with exposure in the field. In general, chemical concentrations do not suggest a risk to higher trophic-level receptors from either ingestion of contaminated prey or incidental ingestion of sediment offshore of IA A2.

3.6.2.2 Conclusions of the Offshore Areas Ecological Risk Assessment

In summary, based on an evaluation of chemical concentrations and bioassay data in the weight-of-evidence approach, the lines of evidence presented for invertebrates in the risk characterization summary of the offshore ERA do not indicate unacceptable risk to populations of benthic invertebrates. The magnitude and frequency of effects observed in bioassays conducted using offshore sediments was generally small, with no adverse effects observed in sediments collected from Mare Island Strait adjacent to IA A2. Sediment chemistry results indicated that most concentrations were similar to or below either the ER-L or San Francisco Bay ambient concentrations. The sampling strategy was biased toward sampling in potential source areas such as outfalls and, although some chemical concentrations may be elevated near the outfall areas, concentrations away from the outfall areas are not elevated, indicating that the outfalls are not providing a pathway for chemicals to enter offshore sediments. Therefore, based on an evaluation of chemical concentrations and bioassay data in the weight-of-evidence approach, risk to populations of benthic invertebrate receptors from exposure to Mare Island offshore sediments adjacent to IA A2 was considered minimal.

Food-chain modeling was used to generate HQs that were the primary method for assessing risk to vertebrates in offshore habitats. HQs calculated using the high TRV were below 1.0 for all mammalian and avian receptors modeled; as a result, no unacceptable risk exists to representative receptors (river otter, Eastern Pacific harbor seal, Double-crested Cormorant, and Surf Scoter) from exposure to offshore sediments adjacent to IA A2. In general, chemical concentrations do not suggest a risk to higher trophic-level receptors from either ingestion of contaminated prey or incidental ingestion of sediment. Based on the results of the food-chain modeling, no unacceptable risk to representative bird and mammal receptors exposed to offshore sediment adjacent to IA A2 is expected.

Additional sediment and tissue samples will be collected from the offshore areas (including locations adjacent to IA A2) during fall 2008 as part of the IA K RI. As part of the investigation, additional bioassays and bioaccumulation tests will be performed to address uncertainties in the offshore areas ERA. The results of this investigation will be used to present an updated BERA for IA K and will be presented in the IA K RI.

3.6.3 Fate and Transport of Chemicals from Onshore to Offshore Areas

Because of the presence of wetlands at the site, samples collected at IA A2 were used to evaluate whether chemicals were migrating from the uplands to the adjacent wetlands. Although samples were analyzed for a suite of chemicals, during meetings with the Navy, DTSC, EPA, USFWS, CDFG, and Water Board, it was agreed that PAHs and TPH were of significant concern with respect to chemical transport and migration (Tetra Tech 1999c) and therefore they are the focus of the following discussion.

Boxplots presented in the draft final onshore ERA showed similar distributions of PAHs for onshore soils and offshore sediments (Tetra Tech 2002a). A qualitative spatial analysis of the

Item	Reference or Phrase in ROD/RAP	Location in ROD/RAP	Identification of Referenced Document Available in the Administration Record[1]
62	Community Relations Plan	Section 2.6	Final Community Relations Plan, Mare Island, Vallejo, California. ES-1 and ES-2. Tetra Tech EM Inc. August 23, 2001.

EXECUTIVE SUMMARY

This Community Relations Plan (CRP) has been prepared in support of the Installation Restoration (IR) Program being conducted at the former Mare Island (MI) Naval Shipyard in Vallejo, California.

The Department of Defense (DoD) developed the IR Program in 1981 to investigate and clean up problems posed by past hazardous waste disposal at military facilities. This CRP identifies community concerns about MI and outlines community relations activities to be conducted during the investigation and cleanup of contaminated soil and groundwater at MI. This document is an update to the original CRP for MI issued in 1994.

Naval Facilities Engineering Command, Southwest Division, is managing the IR Program at MI. Regulatory oversight is provided by the California Environmental Protection Agency (Cal-EPA), Department of Toxic Substances Control (DTSC), U.S. Environmental Protection Agency (EPA), and the Cal-EPA Regional Water Quality Control Board (RWQCB).

Purpose of this CRP

The purpose of this plan is to ensure that the local community has input into decisions about cleanup actions and with this information, the Navy can institute more timely and comprehensive methods of communicating information about the project to the local community. Specific steps that the Navy will take to reach out to the affected community are:

- Provide information to the public about environmental restoration at MI
- Communicate with the public
- Enhance Navy and regulatory agency understanding of community views regarding environmental restoration at MI
- Consider community perspective and acceptance in remedy selection
- Meet all regulatory requirements concerning the MI environmental cleanup

The Navy will update this plan, as appropriate, throughout the investigation and cleanup process.

Summary of Interviews

The CRP was developed mainly from information obtained during interviews with community residents, elected officials, City of Vallejo staff, and other community representatives. Additional information was obtained from the 2000 Census, City of Vallejo planning documents, and clippings from local newspapers.

The majority of citizens interviewed have confidence in the Navy's ability to clean up contamination at MI, as well as in the ability of federal, state, and local regulatory agencies to oversee the cleanup process. Most interviewees stated that the community is concerned with the

timeliness of the Navy's cleanup and how limited budget and staff at the regulatory agencies may affect cleanup. Major concerns are as follows:

- There is a low to moderate level of interest in the environmental cleanup at MI, with attention focused mainly on property reuse issues. The community is interested in receiving information on the IR Program and the environmental cleanup and reuse schedules for MI.
- Fact sheets, newspaper articles, and presentations to local organizations are the preferred methods for communicating with the public.

Components of the CRP

Based on information obtained during interviews, the community relations program for MI includes the following components:

- Maintaining the Restoration Advisory Board (RAB) through the Navy's cleanup process
- Posting public notices in local newspapers to announce meeting dates, the availability of documents for public review, and events
- Maintaining the MI mailing list to distribute information on the IR Program
- Maintaining the established Information Repository, which contains fact sheets on the IR Program, investigation and cleanup plans, and other information for review by the public
- Preparing and distributing fact sheets and project-specific fliers that provide information on the IR Program
- Periodically providing site tours, public workshops, and presentations to local community organizations
- Preparing press releases and newspaper articles that provide updates on the status of the IR Program

ATTACHMENT C
PUBLIC MEETING TRANSCRIPT

MARE ISLAND NAVAL SHIPYARD
FORMER NORTH BUILDING WAYS AREA,
INVESTIGATION AREA A2

PROPOSED PLAN/DRAFT REMEDIAL ACTION PLAN
PUBLIC MEETING

SEPTEMBER 23, 2009

REPORTER'S TRANSCRIPT OF MEETING

Mare Island Conference Center
375 G Street
Vallejo, California

Reported by Christine M. Niccoli, RPR, C.S.R. No. 4569

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A T T E N D E E S

CONSULTANTS, REGULATORS, U.S. NAVY:

JESSICA BECK — ChaduxTt

MICHAEL BLOOM — U.S. Navy BRAC Environmental Coordinator

JANET NAITO — Department of Toxic Substances Control

RICHARD PERRY — Department of Toxic Substances Control

TOMMIE JEAN VALMASSY — ChaduxTt

DINA WALTON — U.S. Navy

——oOo——

PUBLIC PRESENT:

LARRY ASERA

STAN GOLOVICH — Green Tech Power Group

LINDA HOLLINGSWORTH

MYRNA HAYES — Mare Island Restoration Advisory Board

SUSAN NICHOLS

FRED OUSEY — Enviro—Tech Services

CHRIS RASMUSSEN — Mare Island Restoration Advisory Board

JESSICA YORK

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MARE ISLAND, VALLEJO, CALIFORNIA

WEDNESDAY, SEPTEMBER 23, 2009, 7:08 P.M.

——oOo——

MR. PERRY: Well, I think we'll get started. It's a little after 7:00. I want to thank you all for coming in. If you have not yet signed in, please do. We would like to be able to send you any response to comments that come out of tonight's meeting.

This is a public meeting on Proposed Plan/Draft Remedial Action Plan for IA2, isn't it? A2. Tonight will be a presentation by Jessica Beck. Michael Bloom will speak after me, setting the tone. And then we'll have a public comment period for any questions, comments, or concerns that you all might have.

I ask if you have questions that you hold them until the end of the presentation. You may find that your question is answered by the presentation. And if not, we will then take your questions and try to respond at the end.

We do present —— or we do produce a document called Response to Comments. And if we aren't able to answer your question tonight —— and we will certainly do whatever we can to do so —— we will certainly respond to it in a Response to Comments document when we go back and we have the ability to sit down and work with the

entire team in formulating a response to you.

So this meeting is a —— on —— it's on the record. You see a court reporter is up here. If you need a microphone, there's one available back there. I ask that when you come forward to make a comment or ask a question, that you give your name, your address; and if you represent an organization, if you would give us that too so that we have an understanding of who was here tonight.

So I will turn this over to Michael Bloom right now and then shortly afterwards Jessica Black —— Beck.

You're not Black.

MS. BECK: No. Jessica Beck.

MR. BLOOM: Thanks, Richard.

Welcome, everybody. I just wanted to welcome everybody. I am with the Navy. I'm the BRAC environmental coordinator for Mare Island and based in San Diego.

I just want to kind of introduce the Navy team that's here tonight, which is myself and one other person, Dina Walton.

Dina, raise your hand.

She's a project manager on the team with Mare Island.

And Jessica Beck from —— is one of our

consultants with Tetra Tech, and she will be giving the presentation for the area we're going to be talking about tonight, which is directly to my right ——

MS. BECK: Across the street.

MR. BLOOM: —— across the street, which is Investigation Area A2.

With that I'm going to turn it over to Jessica to kind of get into the presentation, and we'll take it from there.

MS. BECK: Can everybody hear me? Do I need to use the microphone?

ATTENDEE: Hm—mm.

MS. BECK: Okay.

As Michael said, this is the presentation for our Proposed Plan/Draft Remedial Action Plan for the Former North Building Ways area at Investigation A2, Area A2.

The purpose —— well, this is an overview of the presentation. We're going to talk about the purpose of Proposed Plan/Draft Remedial Action Plan, the site description, kind of the CERCLA process overview and where we are in the CERCLA process, any previous investigations relevant to our investigation of the site in general, our no—further—action recommendation for the site, other activities that are non—CERCLA related and

are related to compliance —— we'll go over what those are —— the next steps for the site, the schedule under CERCLA, and then I'll —— then we'll open it up for public comment.

The purpose of the Proposed Plan/Draft Remedial Action Plan is to present the Navy's preferred cleanup alternative to the public. We mailed this out to the community mailing list of about 950 people. We published a notice in the paper, the Vallejo Times Herald, that there was a proposed plan available to review.

The purpose is to obtain public comment on the Navy's preferred alternative for the site. And the Navy responds to public comments in a responsiveness summary, and that is reco— —— is included in the Record of Decision.

The state has a set of regulations that they follow, and they do a Remedial Action Plan per the California Health and Safety Code. It's required for sites that are not on the National Priority List, such as Mare Island. It's to meet the requirements of California Health and Safety Code Section 25356.1. The draft Remedial Action Plan is presented with the proposed plan, and the final Remedial Action Plan is included in the ROD.

So Investigation Area A2 is 60 acres and includes the Former North Building Ways area, which is a CERCLA site. It includes tidal wetlands and includes the fleet reserve pier that you see out here in the causeway. The Former North Building Ways area is the only CERCLA site within Area A2, and it comprises about 40 acres.

This area up here, the Former North Building Ways area, was built between 1941 and 1944 and was used by the Navy to assemble destroyers and landing ships during World War II. And after the World War II, the Navy phased out all the ship—assembling activities and removed other major features like the big warehouses and the former wharf that was out there.

This here is a picture of Investigation Area 2 —— A2, which is this green outline. You actually have this figure at the back of your packet if you want a closer view.

Within Investigation Area A2, there's a smaller boundary here, this one blue, and that's the Former North Building Ways area, which is where they perform their ship—building activities.

Okay. So the CERCLA process begins with a preliminary assessment/site inspection, which is just a review of existing information to determine if a

previously rel— —— a previous release or activity may require additional investigation.

From there if there's —— you move into the remedial investigation, and that's the assessment of any nature and extent of contamination, and it also provides a risk assessment to human health and the environment to determine if remedial action is warranted for the site.

If no risk is identified, you're able to move on to the Proposed Plan/Draft Remedial Action Plan stage and skip over the feasibility study. The feasibility study is developed to evaluate remedial alternatives if a risk is identified to help clean up any problems at the site.

So we are within the proposed plan. We already released the Proposed Plan/Draft Remedial Action Plan, and that just presents a brief history of the site and explains what the proposed and preferred cleanup alternative is.

Right now we are within the 30—day comment period for the proposed plan and —— and the Navy's recommendation for no further action for the site. After —— The public can submit comments during this 30—day comment period, and then the Navy will prepare written responses to those comments.

After the Navy's decided a remedial alternative

or a no—further—action alternative, then you move into the Record of Decision, which is an official document that documents how the site will be cleaned up, if necessary, or it presents the official no—further—action determination that the site is fine as it is.

This is a summary of previous investigations at the site. We've been looking at the site since 1992. Starting with the site inspection, Building 593 was identified during a radiological study as having passed radiological uses. So in 1996 there was a report that summarized all the activities they had done to clean up that, and I'll talk about that later.

'97 they sampled for the remedial investigation taking soil and sediment and groundwater samples. And we've done PCB sampling at the site. We've done ecological risk assessments, other step—out sampling based on previous sampling results. So we've been looking at the site for a number of years.

Okay. The remedial investigation is our largest investigation at the site, and we collected most of the samples between '97 and '98. We looked at 165 soil samples, 18 groundwater samples, and 40 sediment samples.

We looked for everything: inorganics, TPH, PCBs, and PAHs were things that were detected at the

site in our samples. But we looked for other things, such as volatile organic compounds and semi—volatile organic compounds and pesticides; and they were not detected at our site. So we focused more on the other things that were detected, such as petroleum hydrocarbons and the PCBs. Okay.

Throughout the sampling and in the RI, we identified the —— total petroleum hydrocarbons, polycyclic aromatic hydrocarbons, iron, and lead were detected above comparison criteria in the remedial investigation.

The soil impacts were primarily nonpoint sources. There were no i— —— no identified source areas of concern, and all the detections were primarily in the top 3 feet of soil. The human health risk assessment and onshore ecological risk assessment concluded there were no health risks to human health or the environment from site—related concentrations.

Based on the sampling in the RI, we identified some areas where iron, lead, and motor oil were detected above screening criteria.

In 2003 the Navy conducted some step—out sampling. Iron and lead were detected below the comparison criteria. However, the motor oil was shown to still exceed the screening criteria. And then those

17 impacted areas were identified for removal later in a petroleum corrective action plan, which I'll cover later in the presentation.

The RI was finalized in 2002, and the agencies had a few additional comments in '06 and '08.

Based on our comments, we have provided another supplemental ecological screening risk assessment —— ecological risk assessment —— sorry —— to supplement the previous onshore risk assessment, and that was conducted to add additional receptors and update past toxicity values and just refresh the risk assessments that had been so long since it had been previously conducted. And the results of that new risk assessment were that there was no concerns for —— to the environment. So we gave the same conclusions as the previous risk assessment.

Because we did not identify any human health or ecological risk assessment results that were unacceptable, the recommendation for the site is no further action under CERCLA, and that's because we couldn't identify any point sources and there were just no health concerns.

DTSC, Water Board, and EPA have been working with the Navy to determine the path forward for the site, and they agree with this non —— no—further—action

recommendation.

Other programs, such as radiological compliance, petroleum and PCB regulations, they are addressed by the Navy under separate programs, separate from CERCLA. So that is why under CERCLA Navy would like to go no further action.

So under the non—CERCLA compliance actions, the Navy did a radiological investigation previous to 1996; and like I said previously, Building 593 was the only area at A2 with historical radiological use.

By 1996 they had removed all soil and concrete impacted by any radioactive materials, and —— they removed and disposed of them off site, and there was a no—further—action concurrence received by the DTSC, EPA, and state Department of Health for the radiological investigation.

Under the petroleum program, we conducted step—out sampling in 2003 based on the RI. As I said before, we identified 17 areas that were of a concern. Just in April 2009, the Navy excavated 17 areas of concern to 5 feet below the ground surface, and there was approximately 3,378 cubic yards of soil. The completion report for that removal was submitted to the agencies for review just last month.

In addition, there's another compliance program

that the Navy is conducting at the site, and it's the polychlorinated biphenyl program, known as PCBs.

We have sampled the site a number of times in '97 and 2004 and again in 2006. Sites were identified if the PCBs in the soil exceeded a TSCA, Toxic Substances Control Act, screening criterion of 1 part per million. Thirteen sites have been identified at A2. Three of those sites are recommended for closure. The step—out sampling show that the PCB concentrations were lower than 1 part per million.

Ten additional sites are undergoing further sampling and abatement, and the closure plan and abatement sampling plan have been put into closure reports and submitted to agencies for review.

All of the PCB actions required to remove soil as necessary or to do additional sampling will be completed by the final ROD/RAP date. That ROD/RAP will be documented in the no—further—action recommendation under CERCLA. So the Navy plans to complete all these actions and removals in time for the final decision document for the site.

The next steps for the Navy is to prepare a responsiveness summary for any comments received tonight on the record or any comments received written or —— through the comment period, which ends on October 21st,

2009.

The Record of Decision will be prepared to document the no—further—action alternative. That's the next document to be prepared for this site, and it will include the responsiveness summary that's generated based on the public comments received during this comment period.

So as I said before, the Proposed Plan/Draft Remedial Action Plan was mailed to the community on September 18th. The 30—day public comment period started yesterday, September 22, and will extend through October 21st.

Tonight is our public meeting, and then we're going to be working on the draft Record of Decision/Remedial Action Plan with the draft out to the agencies and the public for review in December 2009, and from there we're looking to finalize the ROD in April 2010.

So that is the end of my presentation and welcoming —— oh, is it Richard instead?

MR. PERRY: Go ahead.

MS. BECK: I was going to introduce Janet 'cause ——

MR. PERRY: So was I. That's Janet [indicating].

MS. NAITO: Hi. I'm Janet.

MR. PERRY: She is the project manager for the Department of Toxic Substances Control on this site.

MS. NAITO: The —— California has a statute called the California Environmental Quality Act which requires that all state agencies evaluate potential environmental impacts of their decision. The Department is part of the Proposed Plan/Draft RAP. It's proposing to approve a proposed cleanup for this investigation area.

As such, as we have heard today, the recommendation from the Proposed Plan/Draft Remedial Action Plan is no further action. So therefore, there's not a lot of environmental impacts associated with implementation of a no—further—action recommendation. So we're proposing to issue a notice of exemption for our decision.

Again, you're welcome to comment on this, on our proposal to do this, as part of the public comment period.

That's it.

MR. PERRY: And the com— —— the public comment period began today and will run until October 23rd. So you have ——

MS. BECK: 21st.

MR. PERRY: Oh, okay. You still have about a month.

Gregorian calendars are strange to me.

Thanks.

We're going to open it up for public comment. So if you have any questions, comments, or concerns, now is a good time to get them on the public record and perhaps even get a response.

So as I said, when you address Jessica or Michael or Janet, if you would give your name and say what organization you represent if you do represent an organization. If you're a resident, I would like to have that information too.

So with that, if there are any questions, please, let's address them now.

Yes, sir.

COMMENT

BY MR. GOLOVICH:

My name's Stan Golovich. I'm with Green Tech Power Group, Mare Island business tenant. And I do not see any address of MEC on —— on this report. So is there is separate mechanism that addresses the MEC survey?

MS. BECK: There —— The —— There was a preliminary assessment/site investigation conducted for

the site back in 1992 or so. I can give you an exact date for you later.

During that investigation, they looked for areas that were potential MEC areas, and the Former North Building Ways Area A2 was not —— the onshore portions of this site were not identified as MEC areas. So it wasn't examined further, I guess. They wrote off early.

MR. GOLOVICH: Thank you.

MR. BLOOM: I can say also, when we did our most recent field work out in —— for the petroleum work that was done in ——

Ap— —?

MS. BECK: April.

MR. BLOOM: —— April this year, nothing —— I mean, as we were digging in the soil, nothing was recovered or discovered.

MR. PERRY: Yes, sir.

COMMENT

BY MR. OUSEY:

Yeah, Fred Ousey, the owner of Enviro—Tech Services, Martinez, California, also a geologist.

I drove this site yesterday, and I just have some general questions.

After you have a no further action, is it then

turned over to the City of Vallejo or Lennar?

MR. BLOOM: Yes. It will be transferred to the City ——

MR. OUSEY: Okay.

MR. BLOOM: —— of Vallejo.

MR. OUSEY: Well, if you drive the site, you can see a lot of buildings and naval debris out there. Like, there's four 55–gallon drums. There's a few buildings. Will these be torn down?

MR. BLOOM: I —— To answer that, I would say right now I don't know what they plan to do with the buildings currently.

MR. OUSEY: Okay. Well, I guess the concern is, it's a wetlands environment. Will there be any attempt to restore it?

MS. BECK: The —— You're saying there's wetlands, like, inland from the shoreline? There's wetlands along the shoreline.

MR. OUSEY: Well, two areas in the wetlands you also have a pipe that's coming out from ——

MS. BECK: —— an outfall?

MR. OUSEY: —— Building 5 —— 655.

Will that pipe be taken out?

MS. BECK: I guess I —— the Navy's not sure what the site specific ——

MR. OUSEY: You know, it's just a question ——

MS. BECK: —— plan is exactly.

MR. OUSEY: —— because I feel ——

MR. BLOOM: Yeah, and I don't know, actually.

MR. OUSEY: —— some consideration should be made to restoring it to its former condition.

MR. BLOOM: (Nodding)

MR. OUSEY: And also the drums. You see those four drums out there?

MR. BLOOM: Actually, I'm not ——

MR. OUSEY: What's the s– —— what's the story on that?

MR. BLOOM: Yeah, I'm not sure about the four drums.

MS. BECK: Dina, do you know if there are drums left over from the soil excavation events or anything like that that maybe just haven't been picked up yet? I guess ——

MS. WALTON: I mean, we were out there today, and we didn't see any drums. So it could have been from the —— left over from the petroleum excavations. That's a very likely ——

MS. BECK: I guess ——

MR. BLOOM: Let me put it this way. If they're —— if they're Navy's drums, they will be taken

away. That's a for—sure guarantee.

Like I said, we did have our total petroleum hydrocarbons, TPH, removal action that we did in April. If there —— I didn't drive by that site —— by A2 today, so I don't know. But if they are Navy drums, we will take them away.

MR. OUSEY: Okay. Well, you know, there are drums out there.

MR. BLOOM: Okay.

MR. OUSEY: They are also filled with cement. Maybe it's part of that radiological survey?

MR. BLOOM: No.

MR. OUSEY: I don't know. There's —— They're right out there.

MS. NAITO: Could you give me a sense on the map where they're located so I ——?

MR. OUSEY: Right here.

MS. NAITO: Okay. "X" marks the spot. We'll go take a look.

MR. BLOOM: Yeah.

MS. NAITO: We'll be back out there tomorrow.

MR. BLOOM: You said the drums actually have cement in them?

MR. OUSEY: Yeah.

MR. BLOOM: Okay. I don't know ——

MS. HAYES: They were intended for somebody in this room; I'm sure.

MR. PERRY: Are these the wetlands that you're —— that you mentioned?

MR. OUSEY: Right there where it says "investigation," you can see that pipe where the "I" is.

MS. BECK: Yeah, there's —— that's a outfall there, yeah.

MR. OUSEY: I'm just curious how you're going to deal with that.

MS. HAYES: It's a —— When you say "outfall," you mean it's a storm outfall?

MS. BECK: Yeah, storm water outfall.

MS. HAYES: It's just ——

MR. OUSEY: See —— Go ahead, Myrna.

MS. HAYES: Well, I'm not going to answer necessarily for them, but a storm water outfall doesn't have any —— doesn't get treated. It just goes directly to the river.

MR. OUSEY: And that's the thing; I didn't know what it was.

MS. HAYES: Yeah.

MR. OUSEY: So that's why I asked.

MR. BLOOM: Okay. Okay.

MS. BECK: Yeah, at low tide you can definitely

see it.

MR. OUSEY: The other question I have is, on the map, you can see where the old service station was? Right there.

MS. BECK: (Indicating)

MR. OUSEY: Now, I don't know if there's any underground leaking storage tank problems associated with that or not. But I would guess if the groundwater gradient would flow into the A2 area; and if there is any associated leakage with that area, that would be a concern.

MS. BECK: I'm not aware of any. I know that we have investigated USTs at that location in the past, and I believe we have gotten closure at most of them.

Right? 993?

MR. BLOOM: Are you talking about 990 ——?

MS. BECK: 993?

MR. OUSEY: Right.

MR. BLOOM: We're actually doing work there right now.

MR. OUSEY: Okay.

MR. BLOOM: Yeah, so . . .

MR. OUSEY: Well, I'm just thinking, you know, if you do have a release, it —— the gradient is probably going to go underneath your A2 area, and that's going to

be a concern.

MS. BECK: Okay.

MR. BLOOM: Okay.

MR. OUSEY: So maybe you might want to do some sampling on the perimeter of that.

MS. BECK: I know there's been samples taken there.

MR. BLOOM: Yeah, we have ——

MS. BECK: I guess I'm not ——

MR. OUSEY: —— right next to that site.

MS. BECK: —— too familiar with that.

MR. OUSEY: Yeah, okay.

MR. BLOOM: 993.

MR. OUSEY: I know 18 groundwater samples were done, but I don't know ——

MS. BECK: Yeah, it ——

MR. OUSEY: —— where they were done.

MS. BECK: They are all within the site boundary here, this blue boundary.

MR. OUSEY: Okay.

MS. BECK: I know samples have been collected here to research those USTs and determine if any impacts to the soil or groundwater have been any releases, but I don't know for sure what —— where that stands.

MR. BLOOM: We are actually ——

MS. BECK: We're ——

MR. BLOOM: —— doing work there ——

MS. BECK: Yeah.

MR. BLOOM: —— today, as a matter of fact.

MR. OUSEY: I saw some drums there.

MR. BLOOM: So there's work going on.

MS. HAYES: Generally, the —— from my memory, the groundwater flows north, slight —— slightly north. So with any luck, if there is a plume hopefully from —— from that gas station, it's hopefully sort of bypassing ——

MS. BECK: North is this way, yeah.

MS. HAYES: —— them, I mean that you'll capture it before it gets, you know, say, beyond Building 655 there.

MR. OUSEY: Okay. That's —— that's pretty much is my concern is to clean up the mess before you turn it over.

MR. BLOOM: Thank you.

MS. HAYES: I have some questions.

THE COURT REPORTER: Excuse me. Would you please identify yourself.

MS. HAYES: Oh, I'm sorry. Yeah. I'm Myrna Hayes, M–y–r–n–a, Hayes, H–a–y–e–s; and I do —— am a resident of Vallejo.

I assume that's what residency you're referring to, Richard?

MR. PERRY: Yes, ma'am.

COMMENT

BY MS. HAYES:

I guess my questions, my concerns, are two, without any particular priority on those. One is the PCB program.

And I was interested to see that while it is not —— I guess DTSC must have lost the war over who oversees whether PCBs come under CERCLA or not, because I see that PCBs are categorized in this presentation under a separate program.

MS. NAITO: I'm not sure that there was an actual war.

MS. HAYES: Yeah, there was.

MS. NAITO: Oh, okay.

MS. HAYES: I would call it more than a skirmish.

MS. NAITO: Our goal is to ensure that the site when we sign off on the final Remedial Action Plan is appropriate for no further action. And so whether that's addressed through TSCA or the Navy's PCB program or through the CERCLA program, that's our goal.

And so we're trying to make sure that it does

get addressed, and that's why the Navy has pushed forward or accelerated their cleanup of the PCB areas within this investigation area so that they can be completed prior to signing of the ROD or approval of the final RAP.

MS. HAYES: Okay. Well, that's helpful because I —— I have quite a bit of heartburn over the Navy's past actions with one site, and I can see us going down this road again.

MS. NAITO: Okay.

MS. HAYES: And that is that it quitclaimed —— it sold the property at the very entrance of the south end of the island now owned by the City of Vallejo in a quitclaim and Island Energy in a —— in a —— a facilities transfer with PCBs on the site.

And the Navy has never come back to clean that PCB contamination up. And so it sits in that tra— —— transformer enclosure with the City of Vallejo owning the PCBs and Island Energy owning the PCBs that were left behind by the Navy. And even though it's been brought up dozens and thousands of time, the Navy hasn't taken any action on that.

So our experience, while limited, is glaring. Every time I drive by that —— and I do that quite a few times even a week —— that the Navy didn't keep its word,

you know, didn't follow through. And TSCA apparently —— Whoever the regulators are for TSCA —— and I guess that's the U.S. EPA —— has also fallen down on the job because the contamination remains in place.

So I'm particularly concerned, and I have a pet —— you know, this is a favorite spot of ours because it actually is transferring a good portion of it to the Cal– —— State of California. After the City receives it, it will become encumbered with —— in perpetuity with a public trust claim. And so it will become property of the people of California and then granted to the City for public trust uses; a portion of it will.

So I'm particularly keen on ensuring that those PCB sites have been investigated and are fully remediated prior to any transfer taking place ——

MS. NAITO: You betcha.

MS. HAYES: —— for a double reason, one, because I want it cleaned up —— three reasons, one because I want the City of Vallejo to not receive contaminated property; and three, because I don't want the people of California to receive contaminated property. So it's just got to be on the record.

Also, the Navy took the leadership role on those piece —— PCB sites. This was one of the sites that a group of us, including Navy representation, EPA,

and myself as a RAB co—chair, were —— hosted the Vietnam EPA, and their water —— water boa— —— their water department and a whole, you know, group of them were here for the entire day.

And so we got to see firsthand those sites. We got to talk with them about what the Navy was, you know, or wasn't going to do with those sites.

And there was a commitment even in that —— in that —— with that group of people to, you know, make sure they were all cleaned up; and we had a lot of conversation about them. And we did look at all of those sites that had been identified, and some of them were actually out on the pier.

MR. BLOOM: Correct.

MS. NAITO: Right.

MS. HAYES: And they included the ——

MS. NAITO: The little ——

MS. HAYES: —— some vaults ——

MS. NAITO: —— you see there.

MS. HAYES: —— that were actually in the —— get water, that water —— either the tide comes up or rainwater comes in, and they probably leaked.

And they were talking with us about this because that's a similar problem they have throughout Vietnam ——

MS. NAITO: Okay.

MS. HAYES: —— that the PCBs are under water in electrical vaults on piers.

And so it was troubling to them because they don't have a budget to clean it up. But I would expect that the Navy does and that the Navy will.

So one thing that I —— I would like to offer and —— and also hope for is that you will give a presentation on your PCB program through the Restoration Advisory Board and that the people who are here tonight if they are interested could be notified of when that meeting is.

The —— But I am happy to see that you are attempting to tie the Record of Decision and the —— and the Remedial Action Plan no further action with having completed these programs. I'm optimistic, since it's been about —— what? Ten years? And they have been sitting there that whole time, you know. And the ——

MS. NAITO: There's nothing like wanting to transfer property to accelerate cleanup.

MS. HAYES: Yeah, yeah. Yeah, yeah.

I guess the other thing, following up on Stan's question about munitions and explosives of concern, the Navy's term, MEC, we have seen the —— this paint waste site at —— up at the north end of the island just across

the road and then also, oh, another site I was thinking about, 4S, the outfall there.

Neither one of those was directly associated with a dredge pond, per se. They were something other than that, like a —— you know, some kind of a free—flowing dredge material before —— you know, before they piped it maybe when they were —— they just free—flowed it in ditches or something like that.

And I want to know whether —— And so since there is this one just across the way —— well, just almost straight across from this property that the Navy's working on cleaning up right now, I want to know following up on what Stan said, have you looked at old maps?

Do you know there aren't any one of these what —— I don't know for a better —— better term ditches or accumulations that weren't associated with a dredge pond? Do —— do you know that for a fact?

Have you looked at those historical maps?

MR. BLOOM: I know that historical maps were looked at.

MS. HAYES: Yeah.

MR. BLOOM: I can answer that.

MS. HAYES: 'Cause I'm starting to get worried about that. I would just hate to see —— What happened

at the paint waste site was that the Fish and Wildlife Service was supposed to be receiving that property. They stumbled across something in the mowing and then it's turned out to be a pretty significant site with radiological con— —— contamination as well as —— as MEC, and I don't have to tell the Navy about that.

But I'm just worried that —— that will transfer the property and —— and because we didn't think about that, didn't have a lesson learned from that site so close by with a similar kind of land configuration that —— that we might end up having to have you come back under FUDS, and FUDS doesn't have any money 'cause it's all going off to —— to other —— other military causes right now, skirmishes and wars and things like that.

So what —— what do you think? I mean, I'm going on the record with that —— with that concern. I don't need —— I don't know that you have an answer tonight, but I am going on the record with that concern.

MR. RASMUSSEN: Is action related to MEC done under CERCLA, or is that a ——?

MR. BLOOM: Yes.

MR. RASMUSSEN: That's done under CERCLA.

MR. BLOOM: It's done under —— It follows the CERCLA process.

MS. NAITO: It follows the CERCLA process, and it falls under their munitions response program.

MR. OUSEY: You know, I would second that.

THE COURT REPORTER: I'm sorry, your name again.

MR. OUSEY: Fred Ousey, Enviro—Tech.

I mean, if —— you're talking about 60 acres here; and if you haven't done an aerial historical survey, you should probably do it.

MS. BECK: That was certainly done back in the preliminary assessment/site investigation and remedial investigation. Right? I don't have those aerials or have looked at them ——

MS. HAYES: But that was ——

MS. BECK: —— recently.

MS. HAYES: That was for diff— —— looking for different things, not expecting that MEC would actually or radiological would possibly be anyplace other than dredge ponds. And ——

MS. NAITO: Well, they also ——

MS. HAYES: I think there was something about 3E one time too, the northern ponds, how there was something that was in some kind of a structure other than where a outfall was expected.

So I'm just —— I'm also expressing this issue

to DTSC. And those are my comments. Sorry.

MR. BLOOM: Thank you, Myrna.

MS. HAYES: I'm not praying. I'm actually done.

MR. PERRY: Are there any other questions?

Fred, tomorrow tonight is the Rest— —— Restoration Advisory Board meeting in the same place here from 7 to 9 o'clock, and that might be a place to ask some of the questions you had on land use and on whether the buildings are going to remain, because there will be members from city staff here that can probably better answer that than —— than the Navy or the department.

MR. OUSEY: Okay.

MS. HAYES: It's prob— —— just if you want a answer informally from me, for whatever that's worth —— and that's true, the city staffer will be here, Gil Hollingsworth, tomorrow night. But if you have a better —— a better game in town that night, what the City typically does is it —— for the northern 191 acres —— and maybe that RFP is even larger, and you might have in your folder there, Larry, but they have a request for proposal out right now for the northern acreage.

MR. ASERA: That's been killed.

MS. HAYES: The RFP has?

MR. ASERA: That's what I heard.

MS. HAYES: They've had many RFPs out for the northern end of the island since I got involved. About five developers have come and gone. And so what they do is they wait until the developer that comes on and actually consummates their —— their development plan decides what they want —— what would be best for their development.

They will probably leave those structures unless they pose some type of a —— a hazard or get burned down or —— you know, you see how —— where they have left everything on the north island. It just —— It doesn't have a developer. It doesn't have anybody on the hook like —— like Lennar is.

And so if the fire department uses the barracks for practice like they did, then they just leave it there, 'cause the City doesn't have any money to —— to tear it down. And if another building gets graffitied, well, they don't go paint the graffiti unless, you know, some good neighbors want to.

MR. OUSEY: Well, why doesn't the Navy just clean it up?

MS. HAYES: The Navy doesn't have to. Only have to clean up the environmental —— well, you could

a– —— they could answer that question. I don't have to.

MR. OUSEY: That's what I thought. We were only talking about the constituents in the ground.

MR. BLOOM: Right, right.

MS. HAYES: Yeah ——

MR. BLOOM: Right. Exactly.

MS. HAYES: —— 'cause the Navy doesn't —— isn't —— isn't tasked in the environmental cleanup with clean —— clear–cutting the property. There might be some use for prop —— properties.

And so they —— the City —— the Navy follows the lead of the City in what are its priorities for environmental cleanup; what site do they want cleaned up first and then next and next.

And to the Navy's credit, maybe one of the reasons they weren't really motivated to clean up this property until recently was that the City really didn't have a viable use, but then they got Touro to come —— came forward with a pretty ambitious plan, and they really did expect that they —— they were going to, you know, swoop in and put about 1.2 billion, some people say over and other again, into this property on the north island.

So then the Navy said, Okay, you want —— you rearrange your environmental cleanup priorities, then

we'll go to work on this property. And then that deal fell through. So that's how —— how it works in kind of lay terms and not to speak for —— for the regulators ——

MS. NAITO: You do a great job.

MS. HAYES: —— or the Navy.

MR. OUSEY: Thank you. Explains it well.

MR. PERRY: Are there any other questions, comments, or concerns?

Okay. Well, this is 30–day comment period. It will run to the 21st of October. You will have opportunities to speak before the RAB if you wish to come to that meeting. And I encourage you to because you can then speak to a larger swap of people.

We will be putting together a response to your comments in the next 30 days or so. And so it's important that we have your address and contact information so that we can respond to you and get that to you when it's completed.

If there are no other questions, then I will close the official part of this meeting. Thank you.

(Off record at 7:49 p.m., 9/23/09.)

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1 CERTIFICATE OF REPORTER

2

3 I, CHRISTINE M. NICCOLI, Certified Shorthand
4 Reporter of the State of California, do hereby certify
5 that the foregoing meeting was reported by me
6 stenographically to the best of my ability at the time
7 and place aforementioned.
8 IN WITNESS WHEREOF, I have hereunto set my hand
9 this 2nd day of October, 2009.
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12 Christine M. Niccoli
CHRISTINE M. NICCOLI, C.S.R. NO. 4569
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ATTACHMENT D
RESPONSIVENESS SUMMARY

RESPONSE TO PUBLIC COMMENTS ON THE PROPOSED PLAN/DRAFT REMEDIAL ACTION PLAN FOR THE FORMER NORTH BUILDING WAYS AREA, INVESTIGATION AREA A2, FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CALIFORNIA

This document presents the Department of the Navy's (Navy) responses to public comments received on the "Proposed Plan/Draft Remedial Action Plan (PP/Draft RAP) for the Former North Building Ways (FNBW) Area, Investigation Area (IA) A2, Former Mare Island (Mare Island) Naval Shipyard, Vallejo, California," dated September 2009. The comment period began on September 22, 2009, and ended on October 21, 2009. A public meeting was held on September 23, 2009, to present the PP/Draft RAP. The following responsiveness summary presents the views of the public and documents the consideration of public comments on the PP/Draft RAP.

The Navy received both verbal and written comments during the public comment period. Verbal comments presented below are summarized based on the transcript of the public meeting held on September 23, 2009. The transcript of the public meeting is included as Attachment C of the record of decision/remedial action plan (ROD/RAP). Verbal comments were received from Mr. Stan Golovich, Green Tech Power Group; Mr. Fred Ousey, geologist and owner of Enviro-Tech Services Company; and Ms. Myrna Hayes, Community Co-Chair of the Restoration Advisory Board (RAB). Written comments are presented verbatim from the following: Mr. Bob O'Brien, Weston Solutions, dated September 23, 2009; and Mr. Ousey, dated September 30, October 20, and November 3, 2009. The comments and responses are provided below.

VERBAL COMMENT FROM MR. STAN GOLOVICH, GREEN TECH POWER GROUP, DATED SEPTEMBER 23, 2009

1. Comment: I do not see any address of MEC on this report. Is there a separate mechanism that addressed the MEC?

Response: Yes. All of Mare Island was investigated for munitions and explosives of concern (MEC) during the Preliminary Assessment, Final Summary Report, Ordnance Sites report (PRC Environmental Management, Inc. [PRC] 1995a). MEC was not identified as a potential concern for IA A2; thus, the site was not investigated further under the Navy's Military Munitions Response Program. Please also see the response to Ms. Hayes' verbal comment #2 (dated September 23, 2009).

VERBAL COMMENTS FROM MR. FRED OUSEY, ENVIRO-TECH SERVICES COMPANY, DATED SEPTEMBER 23, 2009

1. Comment: After you have a no further action, is it then turned over to the City of Vallejo or Lennar?

Response: The Navy currently plans to transfer the IA A2 property to the City of Vallejo, which in turn plans to identify a third party that will develop the land per the planned land use presented in the final reuse plan (City of Vallejo 1994).

2. **Comment:** **If you drive the site, you can see a lot of buildings and naval debris. Like, there is four 55-gallon drums. There's a few buildings. Will these be torn down?**

Response: No. The Navy does not have plans to demolish any buildings prior to land transfer. Existing laws, regulations, and policies applicable to the Navy Base Realignment and Closure (BRAC) program expressly prohibit the Navy from undertaking improvements to excess or surplus property set to be transferred out of federal possession, unless such improvements are necessary to protect human health, the environment, or public safety. The term "improvements" is broadly defined to include activities such as demolition, infrastructure removal, or site clearing. In response to this and other comments it has received, the Navy has surveyed the entire IA A2 site and has addressed those issues that it has determined could pose a risk to human health, the environment, or public safety. In addition, for so long as the Navy controls the property, the Navy will continue to monitor for and address any such issues as part of its routine caretaker activities at Mare Island. Otherwise, the property will be transferred to the City as-is, consistent with Navy policy.

Regarding the specific issue raised in this comment: the drums were not Navy property; nor were they related to Navy activities at the site. The drums were illegally left at the site. However, the Navy removed these drums from within the IA A2 property and disposed of them appropriately offsite. The Navy has not identified any other features at IA A2 that pose a risk to human health, the environment, or public safety. More generally and based on the future redevelopment plans for the site, the City and a future property developer will decide whether remaining buildings or site infrastructure will be removed, restored, or replaced; whether onsite debris will be cleared; and whether any other site improvements will occur.

3. **Comment:** **The concern is that this is a wetland environment. Will there be any attempt to restore it?**

Response: The Navy plans to transfer the tidal wetland area, without further modification, to the City of Vallejo. The wetland area will be subject to a conservation easement, which will be held by the U.S. Fish and Wildlife Service.

4. **Comment:** **Two areas of the wetlands you also have a pipe coming out from Building 655. Will that pipe be taken out? Some consideration should be made to restore it to it's former condition.**

Response: The pipe leading from the vicinity of Building 655 is the aboveground portion of the dredge pipeline #4. The Navy will not be removing the pipeline. Please see above response to Mr. Ousey's verbal comment #2 (dated September 23, 2009).

5. **Comment:** **There are four 55-gallon drums at the site; what is the story on that? They are also filled with cement. Maybe it is part of that radiological survey?**

Response: The four drums were purposefully filled with cement. The drums were not associated with past Navy investigations at the site and were presumably illegally placed on the property. The Navy does not believe they were part of a radiological survey. The Navy removed these drums from within the IA A2 property and disposed of them appropriately offsite.

6. **Comment:** **How is the Navy going to deal with that pipe?**

Response: *[Note: The location of Outfall 2 and dredge pipeline #4 was pointed out during the public meeting.]* The aboveground pipe in the identified area is dredge pipeline #4, which was historically used to transfer dredge spoils from Mare Island Strait directly to dredge pond 3E at the northwest end of Mare Island. The other pipe located in that area is Outfall 2, which is submerged during high tides and is a component of the stormwater drainage system maintained by Vallejo Sanitation and Flood Control District (VSFCD). The Navy will not be removing the dredge pipeline or stormwater outfall prior to property transfer. Please see above response to Mr. Ousey's verbal comment #2 (dated September 23, 2009).

7. **Comment:** **I don't know if there is underground leaking storage tank problems associated with an old service station. If the groundwater gradient would flow to the A2 area, and if there is any associated leakage with that area, that would be a concern. If you do have a release, the gradient is probably going to go underneath your A2 site, and that's going to be a concern. You might want to do some sampling on the perimeter of that area.**

Response: *[Note: The location of Building 993 was pointed out during the public meeting.]* Three 12,000-gallon gasoline underground storage tanks (UST) (993-1, 993-2, and 993-3) were removed from the Building 993 area in 1996; the San Francisco Bay Regional Water Quality Control Board (Water Board) issued closure letters for these three USTs in January 1999. The Navy is currently conducting an UST investigation at Building 993 for purposes of obtaining Water Board closure for former UST 993-4, which was a 500-gallon waste oil tank removed in July 1990. Groundwater was sampled from four permanent monitoring wells located near Building 993 in September 2009 for total petroleum hydrocarbon-

diesel (TPH-d), TPH-motor oil (TPH-mo), and volatile organic compounds (VOC) (Insight Environmental, Engineering and Construction, Inc. [Insight] 2010). Chemicals in groundwater were detected below residential and industrial screening levels developed for groundwater at Mare Island (CH2M Hill 2009). In addition, the recent groundwater sampling indicated the groundwater flow direction in the vicinity of Building 993 was to the southwest with a relatively flat hydraulic gradient (Insight 2010). Therefore, results of the recent sampling and the direction of groundwater flow to the southwest indicate that the former naval gas station is not impacting the property at IA A2.

8. Comment: My concern is to clean up the mess before the Navy turns it over.

Response: Comment noted. Until the property is transferred, the Navy is obligated to maintain it in a condition that does not pose a threat to human health, the environment, or public safety. Please see above response to Mr. Ousey's verbal comment #2 (dated September 23, 2009).

9. Comment: You are talking about 60 acres here, and if you haven't done an aerial historical survey, you should probably do it.

Response: The Navy agrees that surveying historical aerial photographs can help identify previous activities at the site. Aerial photographs were reviewed during the Remedial Investigation (RI) phase of the investigation and were used in development of the conceptual site model.

VERBAL COMMENTS FROM MS. MYRNA HAYES, COMMUNITY CO-CHAIR OF THE RESTORATION ADVISORY BOARD, DATED SEPTEMBER 23, 2009

1. Comment: I want to ensure the Navy investigates the PCB sites and are fully remediated prior to any transfer taking place. For three reasons: (1) I want it cleaned up, (2) I want the City of Vallejo to not receive contaminated property, and (3) because I don't want the people of California to receive contaminated property.

Response: The Navy conducted investigation, abatement, and closure activities for all 13 polychlorinated biphenyl (PCB) sites at IA A2 under the Navy's PCB compliance program. The Navy subsequently received closure concurrence from the U.S. Environmental Protection Agency (EPA) for all 13 PCB sites.

2. Comment: One other concern, following up on Mr. Golovich's question about munitions and explosives of concern. Has the Navy reviewed old maps? Do you know there aren't any dredge ditches or accumulations that weren't associated with a dredge pond? Do you know that for a fact? Have you looked at those historical maps?

Response: According to the RI (Tetra Tech EM Inc. [Tetra Tech] 2008), the land for FNBW Area was filled with a combination of dredge spoils and fill material. The fill material reportedly had been taken from Hunters Hill, located east of Vallejo, and the golf course hill on Mare Island (Lemmon and Wichels 1977). The area was filled between the years 1935 and 1938. The Navy reviewed historic dredge and property conditions maps from 1929 through 1942 (Navy 1929, 1931, 1935, 1938, 1939, 1940, and 1942) to determine the location of any former dredge ponds or piping related to dredging in the northern area of Mare Island. Dredge ditches were temporary and used to distribute hydraulic fill within the dredge ponds. The ditches were eventually covered over with successive layers of hydraulic fill as the ponds were filled. Though dredge spoils were reportedly used as fill prior to site activities at the FNBW Area, dredge ditches and dredge outfalls were not identified within FNBW and IA A2. The only dredge pipeline identified at the site is dredge pipeline #4, which traverses IA A2 aboveground and does not terminate within the IA A2 property. Dredge pipeline #4 was used to transfer dredge spoils from Mare Island Strait directly to dredge pond 3E at the northwest end of Mare Island.

Based on previous MEC investigations within historic dredge ponds, MEC has been observed and found at the mouths of almost all dredge outfalls in the former dredge ponds. Because the MEC was much denser than the sediment slurry, the MEC would settle and collect near the dredge pipe outfall areas along with scrap metals and other heavier debris. Most of the MEC removals at Mare Island involved items dated to the post-World War II era. Over 140 locations were drilled and sampled at the FNBW Area during the sampling investigation to support the RI, and no MEC items were observed in any boring (Tetra Tech 2008). Moreover, no MEC items were observed in 17 excavation areas during the TPH removal action (TN & Associates, Inc. [TN&A] 2009).

Because (1) the Preliminary Assessment, Final Summary Report, Ordnance Sites (PRC 1995a) did not identify MEC as a concern at IA A2: (2) the property was filled and developed prior to World War II, whereas most MEC at Mare Island is associated with post-war activities; (3) dredge outfalls and ditches have not been identified in historical maps or site observations; and (4) MEC has never been observed during subsurface investigations or removal activities, no evidence suggests that MEC is or was present at IA A2.

WRITTEN COMMENT FROM MR. BOB O'BRIEN, WESTON SOLUTIONS, DATED SEPTEMBER 23, 2009

1. Comment: **The information report published September 2009 regarding the proposed plan for the North Building Ways is not completely correct regarding the radiological investigations conducted in that area.**

The report sates "The only area within IA A2 identified as having a historical radiological use was Building 593." Actually Building 589 (just north of Building 593) was also radiologically investigated.

As you probably know, when the shipyard was closed, two separate radiological survey programs were conducted. One was for the G-RAM program and one was for the Naval Nuclear Propulsion Program (NNPP).

Building 589 was initially investigated as part of the G-RAM program and was found to contain no G-RAM radioactivity. However, during the G-RAM investigation, some Cobalt-60 was detected. As a consequence, the investigation of this building was turned over to the NNPP for further investigation. The G-RAM program documentation is attached.

The NNPP report of the investigation of Building 589 (15 pages) is contained in Naval Nuclear Propulsion Program (NNPP) RADIOLOGICAL FINAL REPORT For the Decommissioning of MARE ISLAND NAVAL SHIPYARD, Volume II, Book 6 of 8. The report states that 13 of 184 solid samples contained detectable Cobalt-60 to a maximum of 0.333 pCi/g. These 13 areas were remediated and re-sampled with results less than MDA (minimum detectable activity).

Response: The Navy also identified Building 643 as having been investigated under the Naval Nuclear Propulsion Program (NNPP) (Navy 1996a). The Navy revised the ROD/RAP to summarize the radiological survey with inclusion of relevant information from the General Radioactive Material (G-RAM) (Navy 1996b) and NNPP (Navy 1996a) programs for Buildings 589, 593, and 643. The ROD/RAP was revised to further indicate that in 1996, the following agencies concurred with the finding of no further action for Buildings 589, 593, and 643 within IA A2: California Environmental Protection Agency's Department of Toxic Substances Control (DTSC), San Francisco Bay Regional Water Quality Control Board, State of California Department of Health, and EPA.

WRITTEN COMMENTS FROM MR. FRED OUSEY, ENVIRO-TECH SERVICES COMPANY, DATED SEPTEMBER 30, 2009

1. **Comment:** **The area adjacent and due north of the former Fire station has one rusted and sealed 55-gallon drum of unknown content. I cataloged approximately 35 piles of soil and asphalt in this area and one pile of road tar. I expect the origin of the piles is noted under my concern 8. My suggestion would be to remove the drum, tar pile, all asphalt and soil piles, and debris from the site.**

   Response: The drum in this area was filled with concrete, similar to the other four drums found near Building 589. Although the drums were not associated with past Navy activities, the Navy removed these drums from the IA A2 property and disposed of them appropriately offsite. The piles are remnants of maintenance activities by the Navy Public Works Department when the shipyard was an active base. They do not present a human health, environmental, or public safety concern or hazard, and therefore the Navy will not be removing them. More generally, please see response to Mr. Ousey's verbal comment #2 (dated September 23, 2009).

2. **Comment:** **At this and other locations on site there are unused and abandoned railroad tracks embedded in the ground from prior naval operations. I suggest these be removed at this location and at all locations on the site.**

   Response: The railroad tracks do not pose a risk to the environment, human health, or public safety, and the Navy will transfer the property with the railroad tracks in-place. Please see response to Mr. Ousey's verbal comment #2 (dated September 23, 2009).

3. **Comment:** **The radiological building 593 is of particular concern based on the preliminary non CIRCLA [sic] remedial action being conducted at the site by the Navy. From the information received, this area was used to decontaminate radiologic and other instruments deriving primarily radiological and mercury waste streams. As clearly shown by the photographs this building is abandoned, open to the public and currently used for paintballing activity. Inside Bldg. 593 are several 3-foot diameter open manholes that drop about 10-feet into a discharge channel or conduit system underneath the building. The basement channels hold about 18" of standing water with assorted piles of trash and Naval debris such as electrical wiring, ladders, and grease buckets. From the building, these channel(s) appear to run a distance of 600-feet due north and ending just short of Building 589. The building is a public heath liability if anyone falls into these open manholes and I suggest the Building be demolished. The second concern raises the question of, "what is the use for these channels in conjunction with this building once being used to decontaminate**

equipment?" I expect these issues will be addressed in the Navy non-CIRCLA [sic] RI conducted at the site in 1992, however, under any circumstance, I suggest this channel system be further investigated, if needed, and completely removed prior to transfer of the property. There could be some additional concern over an RI study conducted over 17 years ago regarding the observations noted in # 4 below with the possibility of more recent contamination.

Response: The RI was conducted beginning in 1998 under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The Navy has re-secured Building 593 to prevent further unauthorized use and entry. To the extent conditions at the building pose a threat to human health, the environment, or public safety, the Navy has addressed those conditions. The spray paint observed in Building 593 was not the result of recreational paintball use. The interior walls, ceiling, and flooring of Building 593 were marked with a spray painted sampling grid that was used during the G-RAM radiological survey prior to 1996 (Navy 1996b). Samples of building materials, such as concrete and wood, were collected and analyzed during the survey.

Buildings 589, 591, and 593 were originally used as electrical substations that provided power in the FNBW Area prior to utilization for radiological uses. The manholes inside the buildings were access ways to the utility corridor system that ran between the three former substations (Buildings 589, 591, and 593) (Tetra Tech 2008). Samples were collected from the utility corridor for analysis, and no areas requiring remediation were identified. The Navy has no plans to demolish any buildings currently located at the site. Please see the response to Mr. Ousey's verbal comment #2 (dated September 23, 2009).

4. Comment: **The channel is clearly defined as a cement structure, about 7 feet wide, running to from Bldg 593 to Bldg 589. About 20 feet short of Bldg 589 the channel appears to end where another open manhole (no cover) is evident and adjacent to four old rusted 55-gallon drums filled with cement. I raised concerns about this at the RAB meeting and was surprised no one knew about them since they are clearly visible. In fact, this non awareness by all the parties encouraged me to conduct this detailed investigation. I suggest that if these drums are not part of an ongoing remedial action plan, some investigation has to be made to determine their origin, any possible contamination and then the drums need to be removed.**

Response: As noted in the above response to Mr. Ousey's written comment #3 (dated September 30, 2009), a utility corridor spans between former electrical substation Buildings 589, 591, and 593. The Navy has since covered the open manholes that had been used to access the corridor. Samples were collected during the RI (Tetra Tech 2008) from the utility corridor for

analysis ─ no areas requiring remediation were identified. The four drums were purposefully filled with cement. Although the drums were not associated with past Navy activities, the Navy removed these drums from within the IA A2 property and disposed of them appropriately offsite. Please also see response to Mr. Ousey's verbal comment #2 (dated September 23, 2009).

5. **Comment:** **This channel runs along the upland habitat of the wetlands at the edge of the tidal wetlands area. At this point I stood on one of the cement blocks and was able to take a panoramic series of photographs of the wetlands, north to south. At this location the upper habitat area is defined by a five foot drop to the true tidal wetlands environment. At some points trash has been dumped here. A small twenty foot circular lagoon fronts the raised channel area. This lagoon is filled with debris and has rusted pipes along its southern bank. Of concern is a rusted pipe that protrudes from the lagoon bank and appears to originate from the channel area then discharging into the lagoon area, I suggest this discharge origination point be investigated and the entire channel structure be demolished and removed.**

Response: The described area was at one time a timber construction wharf and building way area. The observed pipe is not a discharge pipe. The pipe was likely a water supply or sewer pipe that extended along the wharf and pier. When the wharf and pier were removed, the supply was cut where it emerged from underground. The Navy will not be removing infrastructure from the property prior to transfer. The disposition of existing infrastructure, such as pipelines, will be determined by the future property owner. Please see response to Mr. Ousey's verbal comment #2 (dated September 23, 2009).

6. **Comment:** **I walked a small trail through the wetlands and encountered what appeared to be former building foundations with about 100 standing wood pilings with rebar sticking about 2-3 feet straight up in the center of each piling. These former support posts are a public health and liability hazard and I suggest they be removed.**

Response: As described in Mr. Ousey's written comment #5 above, this area was a timber construction wharf and building way area. The wood pilings are remnants of those former structures. The Navy has conducted a survey of the property to identify and address conditions that it determines to pose a risk to human health, the environment, or public safety. The Navy does not believe the pilings pose a risk to human health, the environment, or public safety; therefore, the Navy will not remove the pilings. Please see response to Mr. Ousey's verbal comment #2 (dated September 23, 2009).

7. **Comment:** **At this area there exists a series of former dry docks or sloping ship ramps that rise from the Straits. The sides of each ramp include a**

wavy shaped steel side barrier extending about 75-feet and consisting of rusted curved steel that rises about 10 feet from the marsh. The remaining area going out to the straits is a cement structure with mooring hooks and Naval ropes still attached. The area is littered with debris, both Naval and other. The steel is heavily rusted and peeling into the tidal wetlands. I suggest this area be investigated as to its 1) historical significance and 2) possibility of leaching elevated levels of constituents above background levels into the tidal wetlands and dealt with accordingly. At a minimum the debris should be removed.

Response: The corrugated steel sheet piling noted in the comment is a remnant from the former wharf that supported cranes used to build ships over 40 years ago. Sediment sampling adjacent to the sheet piles during the RI (Tetra Tech 2008) resulted in detections of iron and zinc associated with sheet piling below background levels; thus, these metals were not considered to be contaminants of concern in the wetland. The former wharf structures do not present a human health, environmental, or public safety concern or hazard; therefore, the Navy will not remove them prior to property transfer. Please see response to Mr. Ousey's verbal comment #2 (dated September 23, 2009).

8. Comment: **Located 15 feet West of Buildings 593 and 589 running nearly north and south underneath the center of the drivable roadway is a sewer system. Using the PID, I received elevated readings ranging from 40 ppm to 800 ppm along this sewer route starting from the Radiological Building to the about 300-feet north of Bldg 589. A total distance of 900 feet. At one point north and West of Bldg 589 I encountered steady readings of 700-800 ppm. All sewer readings were consistent and taken from the outlet port of the sewer monument. The highest readings were adjacent to the area of scrapings that appeared to be part of some remedial action project, I'm guessing the non-CIRCLA [sic] Petroleum Program. At this point it occurred to me that the 35 piles observed near the former fire station could have originated from the scrapings at this location. I concluded this due to the asphalt and soil similarities between the pilings and this area. I suggest that some investigation be conducted to determine the source of the elevated readings in the sewer. The source would not likely be methane from sewage because the PID does not measure methane with an 10.6 electron lamp. I further suggest the origin of the piles be determined and if they are part of a remedial action project here, they need to be dealt with accordingly and removed. At this location, I attempted to track the elevated sewer readings to Railroad Avenue, but was unsuccessful.**

Response: The utility noted is a storm water system that services most of the site and is currently maintained by the VSFCD. During the RI (Tetra Tech 2008),

sampling of soil, sediment, and groundwater near the storm water system did not detect VOCs above screening criteria. Photoionization detector (PID) readings can be affected by high humidity, if collected from a closed storm water system that is often inundated by the tide.

The area west of Building 589 was used as a temporary construction staging area by Navy Public Works Department when the shipyard was an active base. The piles are remnants of maintenance activities conducted when the shipyard was an active base. They do not present a human health, environmental, or public safety concern or hazard, and therefore the Navy will not be removing them.

9. Comment: The area surrounding Bldg 589 for several hundred feet had a high concentration of Naval debris such as old steel covers, and rusted artifacts of a various nature. These need to be removed.

Response: The debris materials described in the comment are not hazardous materials or hazardous wastes, and do not present a human health, environmental, or public safety concern or hazard; therefore, the materials will not be removed by the Navy. Please see response to Mr. Ousey's verbal comment #2 (dated September 23, 2009).

10. Comment: Moving away from this area to the northern wetlands area there is an old discharge pipe about 2 feet in diameter that discharges into the Straits. As I mentioned in the RAB meeting this pipe is rusted and has a questionable use. The outlet area is scattered with old Naval pipes, telephone poles lying down, chains, and rusted parts. I suggest this discharge pipe and outlet be evaluated for its usefulness and, if not used, then it should be completely removed. At this location, I noticed many large piles of scrap and metal shacks on the docks of the Northern Pier structure.

Response: The pipe referenced in this comment is former dredge pipeline #4. This dredge pipeline was used to transport dredge spoils from Mare Island Strait directly to dredge pond 3E at the northwest end of Mare Island. The most recent known use of this pipeline occurred in 1982 (Dames and Moore 1987). Items discarded in the vicinity of the dredge pipeline #4 are from trespasser vandalism or usage of the site during fishing or other activities. The items observed on Fleet Reserve Pier include buildings and dredging floats used during former activities by the Navy. The floating platforms were used to support the pipeline from the point of dredging to the dredge pipeline connections at the shore. The floating platforms are currently stored on the deck of the pier by the City of Vallejo. The Navy has determined that the described items do not pose a threat to human health, the environment, or public safety, and that the property will be transferred by the Navy in its present condition. Please see response to Mr. Ousey's verbal comment #2 (dated September 23, 2009).

11. Comment: **The Northern Pier of Area A2 could not be investigated since the entranced gates are locked. I can attest they have always been locked and this pier structure may be one of the few areas of Mare Island that has not been heavily pilfered, outside of the former Ammunitions Depot. My concern is that under the Public Draft Proposal, if no one can access this area how can the public respond to concerns that may arise on the pier? I would like to access this area. Furthermore, this area was heavily used in the 1960's and 70's for offloading highly sensitive radiological and all other equipment from naval vessels for disposal or otherwise prior to decommissioning. At a minimum, this area should be investigated for priority pollutants (PCB's in electrical housing) and other constituents before it is transferred. The large scrap piles on the deck piers should also be removed as they are unsightly, and could pose health liability or public safety risk.**

Response: Through exclusion by fencing, the Navy does not allow public access to the pier areas due to safety and liability concerns. The Navy has completed evaluation, abatement, and closure activities at eight sites on the pier under the Navy's PCB compliance program. However, the sediment adjacent to and beneath the pier is being addressed in a separate, current RI of the offshore area (IA K). The Navy worked with the BRAC Cleanup Team (BCT), which consists of the DTSC, Water Board, and EPA, to finalize the PCB abatement and closure activities for those sites. The floating platforms located on the pier are part of the dredging system and are currently stored on the pier by the City of Vallejo. More generally, please see response to Mr. Ousey's verbal comment #2 (dated September 23, 2009).

The Navy has conducted numerous radiological surveys at Mare Island to support the Navy's nuclear license under G-RAM and the NNPP, and to obtain radiological release of the base from the regulatory agencies prior to base closure. Because radiological concerns were addressed at IA A2 prior to base closure, and concurrence had been obtained from the regulatory agencies, sampling for radioactivity was not necessary during the RI phase of investigation.

12. Comment: **At the RAB meeting I mentioned the location of the former gas station along Railroad Avenue as being adjacent to and, "most likely" up gradient from the Area 2 investigation area. If this site has any Leaking Underground Storage Tanks (LUST) then there remains a possibility of a contaminated groundwater plume extending under the Area 2 [sic] location on the West Side. I surveyed the former gas station area and observed three 55 gallon purge water drums in a secured fenced area which is consistent with information from the DTSC that the area is currently under investigation for LUST'S. However, also located in the area is an old sealed and filled 55 gallon drum with unknown content located outside the secured area. All the**

sewers in the area showed elevated levels in the 40 ppm range from the PID. I suggest, as I did in the RAB meeting, that this area be investigated to assure no plume is moving down gradient into the Area 2 [sic] investigation area.

Response: As indicated in response to Mr. Ousey's verbal comment #7, the Navy is currently conducting an UST investigation at Building 993 for purposes of obtaining Water Board closure for former UST 993-4. Groundwater was sampled from four permanent monitoring wells located near Building 993 in September 2009 and analyzed for TPH-d and TPH-mo and VOCs (Insight 2010). Chemicals in groundwater were detected below residential and industrial screening levels developed for groundwater at Mare Island (CH2M Hill 2009). In addition, recent groundwater sampling indicated the groundwater flow direction in the vicinity of Building 993 was to the southwest with a relatively flat hydraulic gradient (Insight 2010). Based on the results of the recent sampling and the direction of groundwater flow to the southwest, there is no indication the former Navy gas station is impacting property at IA A2.

Two of the three drums observed within the fenced containment area near Building 993 were filled with water and soil related to the recent sampling activities at Building 993. The two drums were picked up and hauled offsite for disposal in early November 2009. The observed drum located outside of the Navy's fenced containment area is not the Navy's property; it was illegally placed on the property by a trespasser. However, the Navy moved the drum to within the fenced containment area, sampled the contents of the drum, and disposed of it appropriately offsite in May 2010.

As noted in the response to Mr. Ousey's written comment #8 (dated September 30, 2009), PID readings can be affected by high humidity, if collected from a closed storm water system that is often inundated by the tide.

13. Comment: **These are my main points of concern. While I understand a few of these concerns may exceed the scope of work normally addressed under the State DTSC, CIRCLA [sic] and non CIRCLA [sic] Navy Programs works currently being implemented and they may not present a constituent level of risk (at this time); I feel it is imperative to realize that if the Navy does not provide proper closure and transfer of this property in a clean and acceptable state of repair, then it is not acting in an environmentally responsible manner. Simply put, it is the right thing to do.**

Response: The Navy thanks the commenter for providing comments. The Navy is committed to meeting its obligation to transfer Mare Island property in a condition that does not pose a threat to human health or the environment.

PHOTO CAPTION COMMENTS

Note: The following are captions provided with photographs attached to the written comments submitted by Mr. Ousey on September 30, 2009. The captions below are numbered according to the page numbers of the respective photographs – these numbers are alphanumeric for pages that contained more than one caption. The Navy's responses to the photo captions are provided below. To the extent the photo and/or its caption deal with onsite infrastructure, buildings, or general site debris, the reader is directed to the Navy's response to Verbal Comment #2 from Mr. Fred Ousey (dated September 23, 2009), in addition to the specific responses below.

1a. Comment: **Directly north of former fire station is a rusted 55 gallon drum with unknown contents. Numerous piles (about 35) of asphalt and soil dot the landscape.**

Response: The drum was filled with concrete, as were four other drums located near Building 589. Although the drums were not associated with past Navy activities, the Navy removed the drums from the IA A2 property and disposed of them appropriately offsite. The area where this single drum was observed had been used as a temporary construction staging area. The piles are remnants of previous construction activities at Mare Island and will be left in place. They do not present a human health, environmental, or public safety concern or hazard, and therefore the Navy will not be removing them.

1b. Comment: **The soil contrast is more reddish and freshly deposited. This is consistent with the Navy Petroleum Cleanup Program west of Bldg 589. Therefore, the scraping at that site could have been transported and deposited at this location. Otherwise the origin is unknown.**

Response: The reddish-colored soil identified in the photograph is one of 17 areas excavated during the petroleum corrective action at the FNBW. The backfill material was brought onsite from a clean construction site in Berkeley, California (TN&A 2009). The borrow material was approved as clean backfill for use at the site by the BCT. The Water Board concurred with the Navy's petroleum corrective action plan (PCAP), removal action, and summary report requesting no further action on October 29, 2009 (Water Board 2009).

2a. Comment: **North of the drum are several piles of asphalt and soil. Barely shown with "X' is a pile of road tar.**

Response: See the above response to Mr. Ousey's photo caption comment 1a (dated September 30, 2009).

2b. Comment: **The area adjacent to the drum has a variety of waste concrete structures and naval debris as shown.**

Response: These items do not pose an environmental risk. The Navy does not plan to remove these items prior to property transfer.

3a. Comment: **Note Bldg 593. The "+"shown on this manhole lid shows the route of an underground sewer in the center of the roadway going due north for nearly 100 feet. Elevated levels of constituents were detected from numerous porthole along this subsurface sewer route. At this location the PID had a reading of 40 ppm.**

Response: See the response to Mr. Ousey's written comment #8 (dated September 30, 2009).

3b. Comment: **Bldg 593 is open to the public as shown. Inside it vacant but shows a cross pattern of paint, indicative of paintball usage.**

Response: See the response to Mr. Ousey's written comment #3 (dated September 30, 2009).

4. Comment: **Inside Bldg 593 on the two corners are open and uncovered manholes dropping down 10 feet into standing water. Note the interior design shows unauthorized usage. Not shown is Naval waste at base of manhole in standing water such as ladders, wiring, and grease buckets. There appears to be a complex network of channels underneath the building.**

Response: See the response to Mr. Ousey's written comment #3 (dated September 30, 2009).

5. Comment: **The tidal wetlands is impressive. Here is one barrier of rusted steel and a cement mooring structure leading out to the Mare Island straits. There are at least five of these. On closer inspection the steel is rusted and peeling into the wetlands. Also considerable naval trash litters the area. Note this area is clearly visible from the causeway for people entering Mare Island.**

Response: These items do not pose an environmental risk. The Navy will not be removing these items prior to property transfer.

6a. Comment: **600 feet north of Bldg 593 is Bldg 589 as shown. Here the channeling from bldg ends with four rusted and cement filled 55-gallon drums next to an open manhole. The liability hazards are obvious. In this area. At the RAB Meeting no one was aware of these drums yet they are in plain site from roadway.**

Response: See the response to Mr. Ousey's written comment #4 (dated September 30, 2009).

6b. Comment: **The manhole is about 8 feet above the level of the lagoon. The picture shows a circle around a hidden discharge pipe from the channel system. See next page for more detail.**

Response: See the response to Mr. Ousey's written comment #5 (dated September 30, 2009).

7. Comment: **Lagoon with rising pilings and rebar spikes sticking into the air. At the bottom is a white marker showing the location of a piping system which has a circle around it. The function or purpose of piping is unknown.**

Response: No historical source can be referenced to identify all of the piping that may exist in the vicinity of the former wooden wharf structures. The disposition of existing infrastructure, such as pipelines, will be determined by the future property owner.

8. ***Note: The Navy did not receive a page numbered "Page 8" with the written comments.***

9. Comment: **The pilings appear to be foundation pilings with rebar sticking up. I counted 100 pilings in the area. The rebar is a health and liability hazard and it looks imposing and dangerous.**

Response: The Navy has conducted a survey of the property to identify and address conditions that it determines to pose a risk to human health, the environment, or public safety. The Navy does not believe the pilings pose a risk to human health, the environment, or public safety; therefore, the Navy will not remove the pilings prior to transfer.

10a. Comment: **On the roadway near BLDG 589 is one manhole. The PID shown detected a high level of readings pegged out around 700-800 ppm. A slight odor could be detected. The temperature was about 95 degrees. I came back in the evening and detected a zero PID recording with temperatures near 60 degrees at sunset.**

Response: See the response to Mr. Ousey's written comment #8 (dated September 30, 2009).

10b. Comment: **This picture shows some of the random Naval waste at the area.**

Response: The property will be transferred by the Navy in its present condition.

11a. Comment: **The bldg 589 had a higher percentage of construction waste than most areas.**

Response: Comment noted. Items found at the site were discarded by trespassers at the site, but do not represent a human health, environmental, or public

safety hazard. The property will be transferred by the Navy in its present condition.

11b. Comment: **Due North of bldg was this manhole exhibiting a reading of about 500 pm on the PID. The label on the manhole read the initials VSFOD. The sewer appeared to end at this northern location.**

Response: See the response to Mr. Ousey's written comment #8 (dated September 30, 2009).

12. Comment: **Along the tidal wetlands shoreline in the north area is a discharge pipe and the supports are heavily deteriorated. Considerable construction wastes such as pilings, telephone poles, rusted fasteners and pilings are present in this area. Barely shown is a considerable amount of scrap metals on the pier, also a part of this area, but not accessible.**

Response: See the response to Mr. Ousey's written comment #10 (dated September 30, 2009).

13a. Comment: **Across the road and west of Area A2 is the former Mare Island Gas station. One area is caged off and secured with three purge water drums (?) are shown.**

Response: See the response to Mr. Ousey's written comment #12 (dated September 30, 2009).

13b. Comment: **A lone drum is shown. This drum was filled with an unknown substance. It was rusted and greasy. All the sewer within the area tested with high readings from the PID. The range was around 40 ppm.**

Response: See the response to Mr. Ousey's written comment #12 (dated September 30, 2009).

14. Comment: **From the causeway the Investigative Area 2 is shown here. This Area is the first scenic vantage point a person sees when visiting Mare Island. From a public relations standpoint, it would be wise to restore this tidal wetlands to its former state and maybe noticeable improvements, such as a park. In addition, it could be converted as a point of interest to show off the shipbuilding (?) docks & part of the historical core of Mare Island. A lot could be done here to make an impressive viewpoint to anyone visiting the island with hopes of moving or setting up a business. Now is the time to convert this wetlands and make it part of Mare Island's history.**

Response: The Navy plans to transfer the tidal wetland area, without further modification, to the City of Vallejo. The wetland area will be subject to a

conservation easement, which will be held by the U.S. Fish and Wildlife Service at the time of transfer of the underlying fee parcel. The reuse plan indicates the tidal wetlands area will continue as open space, with the rest of the area as mixed-use office/research and development use, such as light industrial, commercial, office research and development, or warehousing. Following transfer of the property, the Navy will have no control over, or involvement with, future uses of the site.

WRITTEN COMMENTS FROM MR. FRED OUSEY, ENVIRO-TECH SERVICES COMPANY, DATED OCTOBER 20, 2009

1. Comment: **From my last comments, I indicated I would do a review of the RI reports which I have been conducting. This is has lead to a further review of the lithologic logs and grab groundwater sampling conducted by Tetra Tech in 1998 as outlined in their RI report of that date. To further define if that logging and sampling process was done correctly, I am getting a second opinion from a UC Professor more skilled in log interpretation than I am. I am still waiting for his formal reply. This is important because I feel, from my review of the logs and procedures, that the site characterization for groundwater and vertical lithology was all wrong in incomplete, thereby effecting the chemistry of the groundwater samples. I also noted that Tetra tech did not follow the sampling plan protocols and this concerns me.**

Response: The Navy conducted the remedial investigation at IA A2 under the guidelines set forth in the CERCLA and in coordination with the Mare Island BCT. Though the comment does not identify any specific concerns, the Navy must note that all sampling investigations are conducted according to an approved, site-specific sampling and analysis plan (field sampling plan/quality assurance project plan) with which the Navy, its contractors, and the regulatory agencies agree. The results of each phase of the investigation, including any deviations from the sampling plan, were presented to and discussed with representatives from the regulatory agencies, who validated the consistency of these with project objectives.

2. Comment: **I also have uncovered a report stating that a Naval "Crossroads" operation from WW II was conducted in Area 2 [sic], whereby several ships were washed down for radiation after being exposed during the Bikini Island denotation. I could not find this account in the GRAM, or any other RI report, and I fear the sampling plan did not incorporate analysis for this event.**

Response: According to the Historical Radiological Assessment for Mare Island (Radiological Control Office 1996a, 1996b), seven ships were brought to Mare Island for mooring and decontamination following Operation

CROSSROADS. The ships were reportedly moored at the north piers (which would include the Fleet Reserve Pier) prior to decontamination in dry dock. Though the report does not specify the dry docks used for the decontamination work, the FNBW Area would not have been the location of that work because dry docks were not present there. Decontamination activities included flushing sea water piping in ships with acid and scraping the hulls prior to sandblasting (Radiological Control Office 1996b). The generated waste was controlled and managed prior to disposal.

As noted in the response to Mr. Ousey's written comment #11 (dated September 30, 2009), the Navy conducted environmental monitoring to comply with the terms of its nuclear license. The results of the frequent radiological monitoring indicated no increase of radioactivity above normal background levels. Thus, the Navy does not believe decontamination or mooring activities associated with Operation CROSSROADS have contributed to a significant increase in radioactivity in Mare Island Strait or at IA A2, because dry dock facilities were not present at IA A2. Because radiological concerns associated with Mare Island Strait and IA A2 had been addressed prior to base closure, sampling for radioactivity was not necessary during the RI phase of investigation.

WRITTEN COMMENTS FROM MR. FRED OUSEY, ENVIRO-TECH SERVICES COMPANY, DATED NOVEMBER 3, 2009

GENERAL COMMENTS

1. Comment: **<u>Purpose and Introduction:</u> The purpose of this report is to assure that specified lands occupied by Mare Island Naval Shipyard are transferred to the City of Vallejo and are free of contamination and debris. This report is being prepared as a written response for the public comment period for the proposed Navy's "No Further Action Plan" regarding 62 acres of wetlands and upland habitat located at the northern portion of Mare Island, referred to as Investigation Area A2. This report is the third series of comments submitted during the comment period. It comprises historical photography and a review of the remedial action (RI) sampling plan and lithologic logs generated during field work in 1998 and an opinion from CSU, Fresno, Professor W. Richard Laton, Ph.D., and R.G., regarding those logs and how the grab groundwater sampling and analysis is subject to compromise. It also suggests that the Radiological investigation of the site is incomplete and further work may need to be conducted to address a new PCB waste stream, recently identified on Mare Island. Finally, it outlines a concern that the A2 site was not properly characterized from a hydro geologic perspective. All the concerns**

mentioned during, and slightly after the 30 day public comment period, are compiled at the back of this report and in Appendix F.

Response: The Navy intends to transfer property at Mare Island in a condition that does not pose a threat to human health or the environment, and it will maintain the property so as to reduce threats to public safety. Responses to Professor Richard Laton's comments are provided below, under Appendix A Comments. As noted in Mr. Ousey's written comment #11 (dated September 30, 2009) and written comment #2 (dated October 20, 2009), previous environmental sampling for purposes of radiological monitoring was conducted by the Navy. Radiological concerns at IA A2 had been addressed prior to base closure in 1996 and sampling for radioactivity was not necessary during the RI phase of investigation. The Navy investigated whether cable insulation was a significant source of PCB contamination during PCB closure activities at the site. Samples collected from the cable insulation did not exceed the Toxic Substances Control Act (TSCA) limit of 50 mg/kg for PCB bulk waste. The electrical cabling was removed from the site prior to closure, with exception to two sites where the Navy capped the cable inside of the conduit.

2. Comment: **<u>Summary:</u> It is important to clarify the facts. The numerous reports generated to date for site Area A2 state that it is contaminated as a result of the historical shipbuilding activity that took place at Mare Island. The subsurface material over most of the site is comprised of heterogeneous imported fill material which is saturated with groundwater to just below the surface. Most of the grab groundwater samples collected (17 of 18) had elevated levels of constituents and the source have yet to be adequately identified. It appears, that prior reports generated by several consultants and the Navy failed to fully characterize the site from a hydrogeologic perspective and to accurately characterize the fill material vertically. The reports did not adequately deal with the underlying fill material and groundwater contamination issue using conventional methods as described in their sampling and analysis plan. The work plan submitted for sampling was not adhered to for collecting groundwater samples and characterizing the site.**

The Area A2 comprises of 62 acres of which samples for most priority pollutants were taken over only half of that area in the 32 acre North Building Ways Area only, thereby, leaving the remaining 30 acres (mostly wetland habitat) UN sampled and apparently not investigated. Since conventional methods were not taken to characterize the site, and the sampling plan was significantly deviated from, the analysis for all grab groundwater samples is subject to critical review. Additionally, an internet search referenced a Department of Toxic Substances and Control (DTSC) document detailing the Naval

operation "CROSSROADS" where vessels were decontaminated, presumably at Area A2, after exposure to the Bikini Island detonation in 1944. This was not addressed in any of the RI reports I referenced nor the GRAM Radiological binders I researched and it therefore becomes an item of concern.

Finally, from a recent RAB meeting, a Polychlorinated Biphenyl (PCB) Program Update, presented by Marie Dreyer with the Navy, a new waste stream was identified for PCB's consisting of the rubber coating around cabling for electrical conduits. Considering the Area A2 had several electrical stations and a complex underground conduit system of electrical wiring, it is reasonable to assume that any actions taken to remediate this new waste stream should be applied to the Area A2 site.

By all that, I recommended the entire site be re-characterized utilizing historical and aerial photography and accurate historical reports of the Operation CROSSROADS, to accurately decipher the pre-World War II activity on site Area A2, thereby recommending a detailed sampling and analysis plan to adequately characterize the fill material and groundwater gradient and chemistry for priority pollutants.

Response: The Navy disagrees that the entire site needs to be re-characterized. The Navy has reviewed historical maps and aerial photography and conducted extensive sampling and subsurface characterization as part of the RI (Tetra Tech 2008). The Navy has not identified detectable levels of CERCLA contaminants above levels requiring additional action. All radioactive material concerns have previously been addressed, and past radiological monitoring within Mare Island Strait has demonstrated that radioactive levels are consistent with background. All remaining PCB concerns were addressed by the Navy and EPA concurred with the closure of those sites.

The Navy identified the FNBW Area as an area of potential contamination based on historical uses of the property for assembling ships. After conducting numerous rounds of sampling, the RI report (Tetra Tech 2008) concluded that contaminants at the site were not detected at levels warranting additional cleanup. The human health and ecological risk assessment results, which are used to determine whether a remedial action is necessary, indicated that chemicals were not present at levels that pose a threat to human health or the environment. In addition, the grid-based approach to sampling the site allowed for sample collection across the site, and the locations were unbiased. During the RI (Tetra Tech 2008), none of the sample results indicated sources or hot-spots of contamination.

The Navy used conventional methods to collect groundwater samples at the site. The methods were presented in a sampling plan subsequently approved by the regulatory agencies. Deviations from the sampling plan that occurred in the field were discussed with the regulatory agencies and

are discussed in the RI report (Tetra Tech 2008). Temporary wells were installed at a later date, within 3 feet of the original soil borings. Grab groundwater samples were collected from the temporary well using a peristaltic pump, which is an industry-standard method for collection of such samples. Because the purpose of the temporary well was to collect a grab groundwater sample, no soil cores were collected. All boring logs created during the RI investigation were presented in the RI report (Tetra Tech 2008). Collection of the groundwater samples was also conducted in accordance with the sampling plan, and because of this, the results are considered valid and definitive.

Although the RI report (Tetra Tech 2008) focused on the CERCLA site (FNBW Area), it also included and discussed the PCB contamination identified on the Fleet Reserve Pier. The boundary of the FNBW Area CERCLA site was identified based on the activities at the former ship assembly area, and no evidence indicates that wetland areas north of the FNBW Area have been used for industrial purposes.

See the response to Mr. Ousey's written comment #2 (dated October 20, 2009), regarding the Operation CROSSROADS concern. The Navy does not believe decontamination or mooring activities associated with Operation CROSSROADS have contributed to a significant increase in radioactivity in Mare Island Strait or at IA A2, because dry dock facilities were not present at IA A2. Because radiological concerns associated with Mare Island Strait and IA A2 had been addressed prior to base closure, sampling for radioactivity was not necessary during the RI phase of investigation.

The Navy investigated whether cable insulation was a significant source of PCB contamination during PCB closure activities at the site. Samples collected from the cable insulation did not exceed the TSCA limit of 50 mg/kg for PCB bulk waste. The electrical cabling was removed from the site prior to closure, with exception to two sites where the Navy capped the cable inside of the conduit.

3. Comment: **<u>1. Document Review and Onsite Sampling Conducted October, 2009:</u> This report will disclose a number of findings discovered during the comment period is not enough time to adequately address all the concerns over this site so I've selected specific areas of concern hinging on groundwater contamination and site characterization. I also wish to thank Mr. Michael Bloom with the Navy BRAC for allowing me a few days past the 30-day comment period to submit this report. When researching at JFK library, myself and the local librarians experienced problems with accessing some of the documents referenced for this site due to the confusing indexing system. To alleviate this, I suggest creating an additional index book whereby the documents are indexed alphabetically by the Company or Agency which generated them, cross referenced to date. I fully**

acknowledge some of the concerns herein may be addressed in another document which could not be located. For example, it appears the entire wetlands area seemingly has only one grab groundwater sample taken. Perhaps in the GRAM Radiological Study, or other studies conducted at the site, a more comprehensive sampling and analysis plan was untaken, in which case these findings can be adjusted. The first document reviewed was the Revised Remedial Action Plan for the most critical 32 acre area known as the Former North Building Ways Area Remedial Investigation, dated September 8, 2008, and written by Tetra Tech for the Navy BRAC department. This document appeared to reflect, almost verbatim, the work done in a number of previous documents, specifically the Draft Former North Building Ways Area Remedial Investigation completed November 12, 1999 by Tetra Tech and Uribe Associates. These are the main documents I utilized for this research.

Response: The Navy appreciates your suggestion regarding the information repository filing system. The documents are filed within the library according to the Navy's record number. The library currently uses a system of three binders to cross-reference the documents according to the record date, record type (correspondence, public notice, minutes, etc.), and Navy record number. The revised document noted in the comment as dated September 8, 2008, is actually the Final Revision 1 RI report dated September 22, 2008 (Tetra Tech 2008), and is not a remedial action plan. The Final Revision 1 RI report originated as a draft on November 12, 1999 (Tetra Tech 1999). The RI report was finalized in 2002 (Tetra Tech 2002) and subsequently revised in 2008 to address regulatory agency comments and additional sampling results, and to update the onshore ecological risk assessment.

IA A2 was investigated under the Group II/III field sampling and analysis plan (FSAP) (Tetra Tech 1998). Development of the Group II and III sites came from a number of previous reports that documented conditions at Mare Island. Group II sites were identified based on the following: the Resource Conservation and Recovery Act (RCRA) facility assessment (A.T. Kearny, Inc. 1987), preliminary assessment (PA)/site inspection (SI) for nonradiological sites (PRC 1995b), PA for ordnance sites (PRC 1995a), and a SI covering five additional sites (PRC 1995c). Group III sites were targeted by the Navy, regulatory agencies, the environmental baseline survey (Supervisor of Shipbuilding, Conversion, and Repair, Portsmouth, Virginia, Environmental Detachment, Vallejo [SSPORTS] 1994), and the RAB as uninvestigated areas of possible contamination. The FNBW Area was identified as a Group III site, whereas the wetland area north of the FNBW Area within IA A2 was not identified as an area of historical activities warranting further investigation. For this reason, only one grab groundwater sample was collected in the wetland area north of the FNBW Area.

4. Comment: **<u>2.0 Mare Island History and Naval Landfills</u>: The history of Area A2 reveals that, at one time, this entire area was a wetland mudflat area up until the early 1930's. To support this, on the front cover and enlarged under Figure 4, is a photograph of the Area A2 in 1934. In the late 1930's, the Navy built up the land to construct the North Building Ways Area for building destroyers and landing craft. The RI report states this construction activity began with the formation of a levee system and the land was built up by importing fill material composed of dredging materials which are now defined in the boring logs and cross sections as "heterogeneous unconsolidated material". If the Remedial Action reports for Mare Island in the past ten years have taught us anything, i.e. Weston's recent work along Dump Road, then we have to acknowledge the Navy's version of heterogeneous fill material would likely include a broad range of shipbuilding industrial wastes along with unconsolidated dredging material. In which case, it could be expected that the Area 2A site would include contamination hot spot locations whereby industrial waste may have been deposited randomly at the site. To support this possibility, I refer you to the photographs in Figure 1 of the current excavation along Dump Road, and the incredible amount of industrial debris and waste that has been removed.**

Response: The Navy does not agree that the contamination and debris found along Dump Road is indicative of contamination that would be found at IA A2. The work currently conducted along Dump Road is related to the removal action at the Defense Reutilization and Marketing Office (DRMO) site to remove petroleum-impacted soil and debris, which resulted from historical operations at the DRMO site. The DRMO site was essentially a scrapyard at which transformers, metal scrap, and batteries were stored, and petroleum and waste oils were handled. The site also included a demilitarization storage area and scrap storage bins. After numerous investigations at the site were completed, it was determined that a layer of bulk metal debris was present at the site, and petroleum and other hazardous contaminants had migrated within the debris layer over time. These historical site activities are not related to IA A2, and IA A2 was not used previously for depositing debris or other hazardous materials as was done at the DRMO. None of the investigations, studies, or removal activities conducted to date at IA A2 suggests the presence of subsurface conditions analogous to those at the DRMO site.

The RI report (Tetra Tech 2008) explains that IA A2 was built up using a combination of dredge material and imported fill. The RI report based identification of the heterogeneous soil or unconsolidated dredge material on data from geologic logging of the boreholes. Shipbuilding or industrial waste has not been observed in boreholes or in the recent larger TPH excavations.

5. **Comment:** **<u>2.1 The Stated Problem and Need for Further Investigation</u>: As quoted in Section 2.4.2.1 of the Draft Remedial Investigation Report for the Former North Building Ways Area, "the site may have been contaminated as a result of past activities at the sit". As a result, the Navy, RAB, and regulators identified the site for further investigation. This confirms Area A2 site is contaminated. How it is contaminated is the next question. The RI report proposed the area is contaminated by various streams of waste originating from the past shipbuilding works conducted at the North Building Ways area, however certain waste sources (i.e.: VOC's in groundwater) should be clearly defined as a result of that activity. To further understand where these other sources originated, a more comprehensive study of the Area needs to be conducted. To accomplish this, a more detailed hydro-geologic investigation should be conducted.**

Response: The Navy does not agree that a possibly contaminated site equates to a contaminated site, and does not agree with the conclusion that "this confirms Area A2 is contaminated." The FNBW Area was identified for further characterization during the Group II/III investigations based on a review of historical site operations. The CERCLA process proceeds step by step to help determine whether a remedial action is necessary for a site based on risk to human health or the environment. After determining that the site required further investigation under CERCLA, the Navy conducted a RI in accordance with CERCLA requirements set forth in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (Title 40 *Code of Federal Regulations* [CFR] Section 300.430). The purpose of the RI was to characterize the nature and extent of any risk posed by hazardous substances. Human health and ecological risk assessments were conducted as part of the RI. The RI did not identify specific release areas or a threat to human health or ecological receptors (Tetra Tech 2008). The Navy also conducted a hydrogeologic investigation with the intent to characterize groundwater quality in support of an evaluation of potential threats to human health and the environment. The Navy collected 17 groundwater samples from the site, which provided the basis for this evaluation. No threat to human health or ecological receptors from groundwater was identified.

6. **Comment:** **<u>2.2 Why Past Studies did not define the Extent of Contamination:</u> It is not my intention to discredit the work of Professionals hired to investigate this area, however, in my opinion, there are problems. Unless referenced in some report I could not locate (such as the earlier 1992 investigation report conducted by PRC), there appears to be no comprehensive hydro-geological study conducted at this site. Any site with fill materials and suspected contamination in a saturated condition would need a detailed hydro-geologic assessment conducted, and that should probably include an historical photographic analysis done to delineate areas of concern. This starting point will enable the**

consultant to compile a detailed history of naval activities to better locate areas of where material, other than dredge composite, were deposited to best design a sampling and analysis plan. One main problem, in my opinion, is how the current sampling and analysis plan was designed. According to the RI Report, the sampling and analysis plan was developed from a conceptual model of the site after discussions of the operations in the area from residents, Sue Lemmon and Ed Wichels. The conceptual mode from the 2008 RI report, as copied here, is shown as Figure 2 is a generalized figure. When compared to an actual historical photograph of activities and buildings at Area 2A, as shown enlarged on Figure 3, it is clear to see why aerial photography is a far better tool for designing a sampling and analysis plan than personal interviews. Had this been implemented, the sampling plan could have targeted areas of obvious concern. In fact, if you look at this aerial photograph in detail, it raises questions about the white fill material (dredge composite?) being placed at locations over the wetlands. These could more accurately define areas for sampling. I have highlighted some areas of interest on the photograph. Other problems with the sampling plan at this site are the scant number of sample locations for defining groundwater contamination. I feel 18 groundwater samples over a 62 acre area formerly used by the Navy for landfill deposition and shipbuilding spanning 20 years is completely inadequate. Only one grab groundwater sample was taken in the most sensitive wetlands area. No groundwater samples were taken in the northern 30 acre wetlands or headland habitat area of the site. Again, I find this as inadequate to define the contamination in this total 62 acre area.

Another problem with the previous reports is that I have not been able to locate a detailed groundwater gradient map, a key component in any site investigation. Certainly, the results of the sampling plan conducted in 1998 did not yield that. At the September RAB meeting, I raised a concern that if we assumed an easterly flow, or gradient, toward the straits, then the Area could be impacted from any leaking underground storage tanks (UST) located west of site A2 at the former naval gas station. Subsequent discussion suggested the flow was to the northeast, however, nobody really knew. If you look at the enlarged aerial photograph of the area in 1934 Figure 4, there clearly shows what appears to be a slough or channel trending southeast crisscrossing the site. This is would immediately suggest a high probability that a groundwater flow underlying the fill could be toward the southeast and any constituents from a leaking UST site would migrate southeast across Area A2. The point is, we should not be guessing about groundwater flow direction. A detailed groundwater gradient map should be part of an investigative hydro-geologic report and (unless I'm missing something) this has not yet been conducted for Area A2.

Response: The Navy conducted a hydrogeologic investigation to characterize the groundwater quality in support of an evaluation of potential threats to human health and the environment. Grab groundwater samples were collected from locations where detections of chemicals in subsurface soil had exceeded applicable screening levels. Based on the detections in soil, the Navy collected 17 groundwater samples from across the FNBW Area. These groundwater samples provided the basis for the hydrogeologic evaluation. Groundwater data did not indicate a release to groundwater; therefore, permanent monitoring wells were not installed and hydraulic modeling of chemicals at IA A2 was not determined necessary. As noted in the response to Mr. Ousey's verbal comment #7, the direction of groundwater flow in the vicinity of Building 993, as of September 2009, was to the southwest away from IA A2, with a relatively flat hydraulic gradient (Insight 2010).

IA A2 was investigated under the Group II/III FSAP (Tetra Tech 1998). Development of the Group II and III sites came from a number of previous reports that documented conditions at Mare Island. Group II sites were identified based on the following: the RCRA facility assessment (A.T. Kearny, Inc. 1987), a PA/SI for nonradiological sites (PRC 1995b), a PA for ordnance sites (PRC 1995a), and a SI covering five additional sites (PRC 1995c). Group III sites were targeted by the Navy, regulatory agencies, the environmental baseline survey (SSPORTS 1994), and the RAB as uninvestigated areas of possible contamination. The FNBW Area was identified as a Group III site, whereas the area north of the FNBW Area within IA A2 was not identified as an area of historical activities warranting further investigation.

As described and presented in the FSAP, an accurate and complete IA A2 conceptual site model (CSM) was developed by a thorough review of Mare Island microfiche files along with information presented in the 1992 site inspection report (PRC 1992). These microfiche files contained aerial photos, facility maps, and detailed building and infrastructure plans related to IA A2. Therefore, it is not accurate to state that one piece of information correctly attributed to Ms. Lemmons and Mr. Wichels forms the entire basis of the IA A2 CSM. Over time, the CSM developed in 1998 was refined and currently presents an accurate depiction of potential source areas and pathways present at IA A2.

It is not accurate to equate placement of fill to landfill disposal at Mare Island. From at least 1909 (when a solid waste disposal area was first referenced on historical maps) until 1978, solid wastes generated at the shipyard were disposed of on Mare Island in IAs H2, B, and H1 along "A" Street and Dump Road. No landfill disposal areas were identified within IA A2.

The 1998 FSAP proposed sample locations based upon the CSM. Initial surface soil sampling was followed by deeper soil sampling at locations where surface samples exceeded the screening criteria. Initial sampling at IA A2 did not indicate CERCLA contaminants at significant levels and did not identify specific spill areas. Without a specific soil source, the impact to groundwater was expected to be minimal, and therefore a limited number of groundwater samples were required to sufficiently evaluate soil areas with some elevated constituents. The 1998 FSAP used this iterative approach to sampling at all Group II/III sites, and the FSAP was reviewed and approved by the regulatory agencies. Additionally, throughout the sampling, the Navy and the regulatory agencies met regularly to review results and agree on adequate characterization of each site. As with the other Group II/III sites, the Navy and regulatory agencies came to agreement on the adequate characterization of IA A2, sampling was concluded, and the Navy proceeded to document site characterization and risk assessment in the RI report for IA A2 (Tetra Tech 2008).

7. Comment: **<u>3.0 Concern over the Field Operations Conducted in 1998:</u> Having said this report focuses on site characterization and defining the imported fill material, I felt the best way to check if the fill composition was accurately described and groundwater sampling was conducted properly, was to review the sampling and analysis plan and lithologic logs (logs) from the field operations. The revised RI report did not have the CD that was in the appendices to hold the logs, but I was able to find them in the Tetra Tech 1999 RI report. Again, my intent is not to criticize the consultants doing their work. In that spirit, I noted a number of errors that basically raised questions about the integrity of the groundwater grab samples and overall description of the imported fill material. Since this was a critical component, and my experience in logging was well over 20 years ago, I referred my concerns to an accomplished Lithologic Log professional, Professor W. Richard Laton at California State University, Fresno. He was sent the sampling plan and logs shown in Appendix B, and he responded with his own comments as shown in Appendix A. His credentials are attached to his letter and he recently spoke at SF Branch Groundwater Resources Association's dinner on this very subject of Lithologic Logs. I have chosen one log as a representative sample on the next page. The overall analysis of the logs referenced 5 points summarized as follows:**

1...The boring logs are incomplete.
2...Exact groundwater sampling location is not noted on logs.
3...No vertical profiling was done.
4...No explanation is given as to how groundwater samples were collected.
5...Logs do not adequately delineate fill material.

Professor Laton's summary is quoted as:

"Based on the above questions, it appears that the site has not been characterized in a manner sufficient to make any assessment of vertical or lateral extent of possible contamination. The above questions further throw into question the validity of the groundwater and soil analysis collected on-site. In order to effectively assess any project, proper protocols and proper sample collection needs to be followed. This appears to not have been the case in this project".

Therefore, my concerns, supported by Dr. Laton is that the Area A2 site has not been adequately characterized vertically, sampling was not consistent with the work plan and is not sufficient to support transfer of the property without further action.

Response: The sampling protocol followed by the Navy is consistent with standard industry practice. It was approved by the regulators, and was complete and appropriate for purposes of site characterization.

Groundwater samples were collected from temporary wells installed 5 months after, and within 3 feet of, the original soil borings. The bottom of the screen interval for the temporary well was noted on the soil boring log. Due to the shallow depth to water, the screen interval was 5 feet in length. The groundwater sample depth represents an integrated sample across the wetted screen interval. The grab groundwater samples were collected from the temporary well using a peristaltic pump, which is an industry-standard method for collection of such samples. In many of the borelogs, soil lithology is not identified for some depths because the direct-push core was completed without collecting the soil for logging. The methods used to collect the groundwater samples from the boreholes were presented in Appendix D of the RI Report (Tetra Tech 2008).

The Navy disagrees that the RI was conducted in a way that would not support the transfer of property. Field methods for collecting quality soil and groundwater samples during the RI are valid and appropriate. Field deviations during the RI, related to sample grid and locations, had been previously approved by the regulatory agencies. A decision to undertake further action depends on analytical results of quality samples and human health and ecological risk assessment results based on these data. The RI concluded that no source areas are present at the site, and no threat is posed to human health and the environment (Tetra Tech 2008).

8. Comment: **<u>4.0 Radiological Analysis at Area A2:</u> The revised and Tetra Tech RI reports did not characterize the Radiological concerns but referred the matter to the GRAM Radiological investigation conducted by the Navy for the entire Mare Island. A quick review of the many GRAM binders failed to account for any sampling that would address priority**

pollutants of a radiological nature in the conduit system underlying the building 593, used for decontaminating radiological dials and mercury containing equipment during, and after, the late 1960's. I had mentioned in my prior comments that this was an area deserving some attention because the use for the conduit system is a mystery and not mentioned anywhere, plus the conduits are now filled with water.

From that, I was randomly searching the internet for an explanation and I came across an interesting report by DTSC on what was termed operation "CROSSROADS". As described under Section 4-3 of the internet report, contained under Appendix C, the following account is quoted under Section 4.3 as follows:

"Another early activity which involved unregulated G-Ram was the decontamination of vessels, mainly submarines, brought in MlNS from the immediate areas of the atomic bomb testing known as operation CROSSROADS. Operation CROSROADS was a two-detonation atmospheric test conducted during July 1946 at Bikini Atoll in the South Pacific. Some CROSSROADS vessels (approximately seven) were moored at the north piers of MlNS prior to decontamination in dry-dock. Decontamination at MlNS consisted of flushing ships' seawater piping with acids and hull scraping followed by sandblasting. The waste generated was monitored and ... ..." See Appendix C, page 4-4 for more detail.

My concern here is that this was never mentioned in any documents I could locate, especially the RI reports. By that, further investigation needs to target if sampling was done to locate radiation contamination in those areas where vessels were decontaminated.

Response: A utility corridor spans between Buildings 589, 591, and 593, which were originally used as electrical substations. After the FNBW Area was no longer used to assemble ships, Building 593 was used to decontaminate radium dials/markers, and later as a storage and processing facility for radioactive material. Building 589 was identified as a potential accumulation or storage area for radioactive material. Water and sediment have intruded into the utility corridor through open manholes or stuffing tubes cut off at the surface. Sampling within the utility corridor was conducted inside these buildings in the GRAM (Navy 1996b) and NNPP (Navy 1996a) surveys. All issues at IA A2 identified during those surveys were resolved, and closure was granted by the overseeing regulatory agencies.

See the response to Mr. Ousey's written comment #2 (dated October 20, 2009) regarding Operation CROSSROADS. The Navy does not believe decontamination or mooring activities associated with Operation CROSSROADS have contributed to a significant increase in radioactivity

in Mare Island Strait or at IA A2, because dry dock facilities were not present at IA A2. Because radiological concerns associated with Mare Island Strait and IA A2 were addressed prior to base closure, sampling for radioactivity was not necessary during the RI phase of investigation.

9. Comment: **<u>5.0 PCB Contamination in Area A2 and New Waste Stream Identification:</u> During the latest RAB meeting on October 29, 2009, the Navy's presentation addressed concerns over PCB's and highlighted that a new waste stream was being acknowledged as the rubber insulation that coated electrical cabling. Enclosed under Appendix D is a page showing the cabling concern. The current plan as to how to address this waste stream has yet to be determined by the Navy. Since the Area A2 was used for assembly of destroyers and landing craft, and houses several electrical generating buildings and a former electrical power plant, of course any cabling under the conduits that currently run across the site would be of interest in light of this new information. I will leave it as that and say, whatever decisions are leveraged against this new waste stream should equally be reflected on the Area A2 site.**

Response: The Navy investigated whether cable insulation was a significant source of PCB contamination during PCB closure activities at the site. Samples collected from the cable insulation did not exceed the TSCA limit of 50 mg/kg for PCB bulk waste. The electrical cabling was removed from the site prior to closure, with the exception of two sites where the Navy capped the cable inside of the conduit.

10. Comment: **<u>6.0 Compilation of Concerns for the Area A2:</u> As mentioned previously, this report is part of three phases of response to the public comments relating to the Investigative Area A2, "No Further Action Plan". I have compiled all the concerns (numbered 1 through 18) made since September, 2009 into one set outlined on the pages following this report and in Appendix F.**

Response: Comment noted. *[Note: The compilation of 18 comments referred to in the comment above is addressed in the section below.]*

11. Comment: **<u>Conclusion and a Look Forward:</u> In conclusion, I have made several comments as a matter of public record. My intention is to assure this wetland and upper wetland habitat is transferred to the City of Vallejo and/or the public in a state that is contaminant free and also free of former military debris which could pose a threat to public safety and health.**

I recommended the entire site be re-characterized utilizing historical and aerial photography and accurate historical reports of the Operation CROSSROADS, to accurately decipher the pre-World

War II activity on site Area A2, thereby recommending a detailed hydro-geologic study and sampling and analysis plan to adequately characterize the fill material and groundwater gradient and chemistry for priority pollutants.

Looking forward, I feel all the parties should evaluate the practical use of this land when considering how to remediate it. Some degree of consideration should be directed at the fact that, unless a levee is constructed in 10 or 20 years, the rising sea level will inundate this entire 62 acres of wetland and upland habitat, and probably the majority of the North Mare Island will be completely under water.

Response: The Navy intends to meet its obligation to transfer the properties of Mare Island in a condition that does not pose a threat to human health or the environment. The Navy disagrees that the entire site needs to be re-characterized. The Navy has reviewed historical maps and aerial photography, and has conducted extensive sampling and subsurface characterization as part of the RI (Tetra Tech 2008). The Navy has not identified CERCLA contaminants above levels requiring additional action. All radioactive material concerns have been addressed, and past radiological monitoring within Mare Island Strait and IA A2 has determined that radioactive levels are not above background. All remaining PCB concerns have been addressed by the Navy. Any remedies considered for this site will be based on existing site conditions. If site conditions change, the changes may be addressed by a revised ROD/RAP.

COMPILATION OF CONCERNS FOR THE INVESTIGATIVE AREA A2

Note: Comments 1 through 12 of Mr. Ousey's compilation of concerns dated November 3, 2009, are identical to Comments 1 through 12 of Mr. Ousey's written comments dated September 30, 2009. Thus, Comments 1 through 12 are not repeated in this section.

13. Comment: **Based on the research done, the site has not been characterized accurately from a hydro geologic perspective and is incomplete with respect to defining the extent of groundwater contamination. Consideration should be given to a complete hydro geologic [sic] study of the area to delineate the fill material and groundwater gradient and chemistry.**

Response: The Navy conducted a hydrogeologic investigation with the objective of characterizing groundwater quality in support of an evaluation of potential threats to human health and the environment. The Navy collected 17 groundwater samples from the site, which provided the basis for this evaluation. Groundwater data did not indicate a release to groundwater; therefore, permanent monitoring wells were not installed, and hydraulic modeling of chemicals at IA A2 was not determined necessary.

14. Comment: The sampling and analysis plan was drawn from a conceptual model, not aerial photography, and was significantly deviated from when conducting actual field operations when collecting groundwater samples. The grab groundwater sampling operation was not fully explained and is subject to further review. Without further explanation, a possibility exists the data acquired was incomplete or compromised, or not representative of the groundwater chemistry.

Response: The CSM was based on a review of site operations and historical aerial photography, which then provided the basis of the CSM and the sampling and analysis plan. Field deviations identified during the RI were not significant. All samples were collected following specific quality assurance plans and were validated for use in the RI. The methods planned and implemented for collecting grab groundwater samples were also shared with site regulators, and are described in Appendix D of the RI (Tetra Tech 2008).

15. Comment: The entire wetlands area has not been adequately sampled to define the extent of groundwater contamination.

Response: The approach for selecting locations for sampling groundwater in the tidal wetland area was similar to that used in the upland areas. In areas where subsurface soil or subsurface sediment exceeded screening criteria, a grab groundwater sample was collected to determine any impacts to groundwater at that location. For the wetland area, the results of the sediment sampling did not indicate a potential source of groundwater contamination. Moreover, given the absence of any evidence of groundwater contamination in this area, the Navy would have questioned the appropriateness of conducting extensive, unnecessary sampling in a potentially sensitive ecological area.

16. Comment: The Area A2 site may have been the location area for decontamination of vessels related to operation CROSSROADS in 1944. This should be investigated to assure that sampling was done to eliminate any concern for radiologic contamination.

Response: See the response to Mr. Ousey's written comment #2 (dated October 20, 2009). The Navy does not believe decontamination or mooring activities associated with Operation CROSSROADS have contributed to a significant increase in radioactivity in Mare Island Strait or at IA A2, because dry dock facilities were not present at IA A2. Because radiological concerns associated with Mare Island Strait and IA A2 were addressed prior to base closure, sampling for radioactivity was not necessary during the RI phase of investigation. Furthermore, the Navy has already obtained concurrence from the regulators regarding radiological materials at IA A2.

17. **Comment:** **The new waste stream concerns expressed by the Navy at the recent RAB meeting, October 29, 2009 for PCB's in rubber coated wiring should be extended to cover the Area A2 site.**

Response: The Navy investigated whether cable insulation was a significant source of PCB contamination during PCB closure activities at the site. Samples collected from the cable insulation did not exceed the TSCA limit of 50 mg/kg for PCB bulk waste. The electrical cabling was removed from the site prior to closure, with the exception of two sites where the Navy capped the cable inside of the conduit.

18. **Comment:** **Whatever is done within this area from a remedial standpoint, some consideration should be given to the ultimate use of the land since it will likely be underwater in 10 or 20 years as a result of the rising sea level.**

Response: Comment noted. Any remedies considered for this site will be based on existing site conditions. If site conditions change, the changes may be addressed by a revised ROD/RAP.

FIGURE COMMENTS

1. **Comment:** **<u>Figure 1 A and B:</u> Below grade "hot spots" of likely industrial or shipbuilding contaminated waste.**

Response: The photographs shown in this figure are pictures of the removal action currently being conducted by the Navy along Dump Road adjacent to the DRMO site, in order to remove petroleum-impacted soil and debris. The DRMO site is located 0.4 mile south of the IA A2 site. The DRMO site was historically used as a scrapyard and storage area, and is not related to historical activities at IA A2. The contamination observed at the DRMO site is not present, and has not been observed, at IA A2.

2. **Comment:** **<u>Figure 3:</u> This photograph was observed at Ken Zadwick's Historical Naval Museum near Alden Park, Mare Island. The picture was taken with a digital camera and enlarged at Wall Mart [sic]. Note areas where material is being placed over wetlands. Is this dredging material or waste disposal? Ideal sampling location. Question – Is there really no activity in the North wetland 30 acre area? Aerial interpretation would address this concern.**

Response: The Navy agrees that aerial photograph review is helpful in determining the past events at a site. Aerial photographs were used in the RI (Tetra Tech 2008) to help define the CSMs for past and current activities at the site. Because the area north of the current causeway originated as a tidal mudflat and wetland area, the Navy had to backfill the area to use the property. It would not have been uncommon for the Navy to continue to expand the property in an effort to maximize use of the site, including

areas along the tidal wetland. Scrapings shown in the referenced aerial photograph appear to be areas that were cleared and were not used for dumping. There are no records of additional placement of dredge material at the site after the property had been filled for use as the FNBW Area. Other aerial photographs show the northern portion of IA A2 as it currently stands, which is mostly a wetland area with a few dirt roads. Some historical photographs show a few dirt paths used occasionally by vehicles. There were no identified areas of storage or other buildings in the IA A2 area north of the FNBW Area. The FNBW Area was investigated under CERCLA during the Group II/III FSAP, which investigated sites that had been identified in previous reports. Group II sites were identified based on the following: the RCRA facility assessment (A.T. Kearny, Inc. 1987), a PA/SI for nonradiological sites (PRC 1995b), a PA for ordnance sites (PRC 1995a), and a SI covering five additional sites (PRC 1995c). Group III sites were targeted by the Navy, regulatory agencies, the environmental baseline survey (SSPORTS 1994), and the RAB as uninvestigated areas of possible contamination. The FNBW Area was identified as a Group III site, whereas the area north of the FNBW Area within IA A2 was not identified as an area of historical activities warranting further investigation.

3. Comment: **<u>Figure 4:</u> This photograph was observed at Ken Zadwick's Historical Naval Museum near Alden Park, Mare Island. The picture was taken with a digital camera and enlarged at Wall Mart [sic]. Note interesting channel or slough trending southeast directly across what appears to be Area A2 site. This could possibly be used for hydrogeologic interpretation for discerning groundwater gradient flow and direction. This demonstrates how historical photograph interpretation can benefit site investigative process and assist in creating a plausible sampling and analysis plan.**

Response: The Navy agrees that aerial photograph review is helpful in determining the past events of a site. Maps drawn of the area in the early 1900s also show this large channel on the map, along with countless other sloughs and channels. That was a typical landscape of Mare Island before the northern area was backfilled for use by the Navy.

APPENDIX A COMMENTS

Note: Comments provided in Appendix A were provided by W. Richard Laton, Ph.D., PG, CPG, Associate Professor of Hydrogeology, California State University, Fullerton, whose opinion was requested by Mr. Ousey.

1. Comment: The logs are less than complete.

a) No groundwater levels were presented on the logs. Therefore, no assessment of water levels can be made.

b) Missing lithologic information. On numerous logs there is missing information on lithology at depth. Therefore, no assessment of geology can be made.

c) Questionable groundwater sampling technique. As there is less than sufficient information to determine exact depth of groundwater samples and no information on sample interval, there is less than sufficient information to assess the groundwater data.

d) Questionable sample interval. As the boring logs presented only suggest that all groundwater samples were collected somewhere near the bottom of the boring, yet in each log a fine grained unit was encountered; the question of how was the groundwater sample collected and was it done in a reasonable manner still remains.

Response: a) Water level data from direct-push borings, while approximate, were noted when observed. Water levels are usually not obtainable because of the low hydraulic conductivity and the slow recharge rate of the fine-grained soils.

b) The temporary monitoring wells were installed using direct-push technology. Because the only purpose of the direct-push groundwater boring was to obtain a grab groundwater sample, no soil cores were collected for lithologic identification, and thus no information was logged.

c) Groundwater samples were collected from temporary wells installed within 3 feet of the original soil borings. The bottom of the screen interval for the temporary well was noted on the soil boring log. Due to the shallow depth to water, the screen interval was 5 feet in length. The groundwater sample depth represents an integrated sample across the wetted screen interval. The grab groundwater samples were collected from the temporary well using a peristaltic pump, which is an industry-standard method for collection of such samples. The methods used to collect the groundwater samples from the boreholes appear in Appendix D of the RI Report (Tetra Tech 2008).

d) Appendix D of the RI report (Tetra Tech 2008) presents the methods used to collect the groundwater samples:

"After removing the direct-push sampling rods from the boring, but prior to sampling the groundwater, casing was placed in the boring. Screened casing, which was 0.010-slotted, 1-inch-diameter, schedule 40 polyvinyl chloride (PVC) casing, was placed within the shallow water-bearing zone to keep the formation open during sampling and to filter out large particles; the portion of PVC casing above the water table was either screened or blank.

Groundwater samples were collected by extracting the water from the boring (through the casing) using a peristaltic pump and polyethylene, silicone, or Tygon tubing; the grab groundwater sample was pumped in laboratory-prepared bottles. However, if excessive sediment was suspended in the groundwater, the boring was purged prior to sampling. Bottled groundwater samples were labeled, and placed in a cooler containing blue ice."

2. Comment: Exact groundwater sampling location is not noted on the logs. Therefore, no reasonable assessment can be made as to level of contamination.

Response: Groundwater samples were collected from temporary wells installed 5 months after, and within 3 feet of, the original soil borings. The bottom of the screen interval for the temporary well was noted on the soil boring log. Due to the shallow depth to water, the screen interval was 5 feet in length. The groundwater sample depth represents an integrated sample across the wetted screen interval; thus, an exact depth cannot be noted for a grab groundwater sample.

3. Comment: All borings were shallow in nature, this leave [sic] the possibility of vertical contamination at depths below the bottom of the borings. Typically, both vertical and lateral sampling is required to completely characterize a site.

a) The fact that present assessments are being made on data collected over a decade ago is questionable. Sampling techniques and analytical protocols have changed and been enhanced since this time period. As no vertical profiling was done, it would be reasonable to request such data in order to provide adequate information to make any informed decisions on potential contamination.

Response: The Navy conducted soil sampling iteratively, meaning that sample results from shallow samples were used to determine the need for deeper samples. If chemicals were not detected in shallow samples, deeper samples were not collected. Where chemicals were detected at depth exceeding screening criteria, a grab groundwater sample was collected to determine the potential for chemical migration to groundwater. The bottoms of the

deeper borings were completed in groundwater, below the water table, completely documenting the potential for vertical migration of chemicals. Sampling results were also used to determine the need for lateral step out sampling.

4. Comment: **Questions arise in the manner that groundwater samples were collected. As the boring were drilled in April or May of 1998 and extended (?) in September of 1998 for groundwater sampling. This would not be proper protocol for groundwater sampling under any conditions. This needs to be clarified in order to make any reasonable assessment of the data validity.**

Response: The prior borings were not used for the groundwater monitoring sampling. Groundwater samples were collected from temporary wells installed in separate, direct-push borings within 3 feet of the original soil borings. Thus any issues with an open borehole affecting the groundwater geochemistry were avoided.

5. Comment: **As the site is known to have been back filled with dredge materials, it should have been noted on the logs as to both what is native material and what is fill material. Further the logs distinguish between organic and inorganic clays, however do not mention that if this was done in the field or laboratory. In my experience it is next to impossible to distinguish between these in the field and only in a laboratory can such an assessment can be made properly.**

Response: Because the soil characteristics of the fill material are similar to the underlying native material, a definitive distinction between the two could not be made and was therefore not noted on the logs. The soil descriptions recorded in the logs include clay with organic material (such as plant fragments, rootlets, and plant material), which was field identified based on texture and color; this is only a field-based description.

6. Comment: **Based on the above questions, it appears that the site has not been characterized in a manner sufficient to make any assessment of vertical or lateral extent of possible contamination. The above questions further through [sic] into question the validity of the groundwater and soil analysis collected on-site. In order to affectively assess any project, proper protocols and proper sample collection needs to be followed. This appears to not have been the case in this project.**

Response: The Navy, under the oversight of regulatory agencies, followed industry-standard protocols in the design and execution of the sampling plan.

The Navy conducted soil sampling iteratively, meaning that sample results from shallow samples were used to determine the need for deeper samples.

If chemicals were not detected in shallow samples, deeper samples were not collected. Where chemicals were detected at depth exceeding screening criteria, a grab groundwater sample was collected to determine the potential for chemical migration to groundwater. Bottoms of deeper borings were completed in groundwater, below the water table, completely documenting the potential for vertical migration of chemicals. Sample results were also used to determine the need for lateral step out sampling. The methods used to collect the soil samples appear in Appendix D of the RI Report (Tetra Tech 2008).

Groundwater samples were collected from temporary wells installed in separate direct-push borings within 3 feet of the original soil borings. The temporary monitoring wells were installed using direct-push technology. Because the only purpose of the direct-push groundwater boring was to obtain a grab groundwater sample, no soil cores were collected for lithologic identification, and no information was logged. The bottom of the screen interval for the temporary well was noted on the soil boring log. Due to the shallow depth to water, the screen interval was 5 feet in length. The groundwater sample depth represents an integrated sample across the wetted screen interval. The grab groundwater samples were collected from the temporary well using a peristaltic pump, which is an industry-standard method for collection of such samples. The methods used to collect the groundwater samples from the boreholes appear in Appendix D of the RI Report (Tetra Tech 2008).

SPECIFIC BORELOG QUESTIONS OF CONCERN

Note: Questions of concern provided below by Mr. Ousey were shown on an example borelog for sample location FNBWGB011.

1. Comment: Where is the lithologic data from 14' to 16' if casing was installed?

Response: The temporary monitoring wells were installed using direct-push technology. Because the only purpose of the direct-push groundwater boring was to obtain a grab groundwater sample, no soil cores were collected for lithologic identification, and thus no information was logged.

2. Comment: Why was the grab groundwater sample taken 5 months later?

Response: The groundwater samples were collected after the results of the soil data were completed, so that areas could be efficiently targeted for groundwater sampling. The temporary casings were installed within 3 feet of the original soil borings.

3. Comment: Was PVC casing and screen installed and left for 5 months?

Response: No. Temporary PVC casing and screen were installed in separate groundwater sample borings five months after initial soil sampling. The PVC casing and screen were installed in groundwater sample borings within 3 feet of the original soil borings.

4. Comment: How was the GW sample representative?

Response: The sample was collected in accordance with the sampling protocol, which included use of decontaminated drilling tools and equipment, purging of the groundwater before a sample was collected, and preservation of the sample prior to and during shipment to the laboratory. Groundwater was purged from the borehole prior to collecting a sample for analysis.

5. Comment: Why are there no notes to explain why Sampling Plan was altered?

Response: Deviations from the original sampling plan were associated with changes in sampling locations rather than procedural changes at a specific location. The results of each phase of investigation, including any deviations from the sampling plan, were presented to and discussed with representatives from the regulatory agencies, who validated the consistency of these with project objectives. Deviations are detailed in the RI Report (Tetra Tech 2008).

6. Comment: Why was the GW sample ID number omitted on all the logs?

Response: Groundwater sample numbers and required analyses were not added to the soil boring logs because the temporary wells were installed and groundwater samples were collected 5 months after completion of the initial soil borings.

7. Comment: Why isn't the GW Sample GP056 entered under lab sample?

Response: See the response to comment #6 above.

8. Comment: Where is the water level mark?

Response: See response to Mr. Ousey's Appendix A written comment #1(a).

9. Comment: What depth was water encountered?

Response: See response to Mr. Ousey's Appendix A written comment #1(a).

10. Comment: Not trying to be picky, the problem is all of the grab groundwater samples have the same omissions; no sample ID or analysis logged or explanation for deviating from sampling plan. Most do not delineate

the water level. Most GW samples were taken months later and show no lithology past the boring depth.

Response: The temporary monitoring wells were installed using direct-push technology. No soil cores were collected during well installation, therefore no information was logged.

Groundwater sample numbers and required analyses were not added to the soil boring logs because the temporary wells were installed and groundwater samples were collected 5 months after completion of the initial soil borings. Water level data in the direct-push boring, while approximate, were noted when observed. Water levels were usually not obtainable because of the low hydraulic conductivity and the slow recharge rate.

Deviations from the original sampling plan were associated with changes in sampling locations rather than procedural changes at a specific location. Deviations were discussed with the agencies and are detailed in the RI Report (Tetra Tech 2008).

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