FINAL
NAVAL AIR STATION ALAMEDA RESTORATION ADVISORY BOARD MEETING SUMMARY

http://www.efdsw.navfac.navy.mil/environmental/AlamedaPoint.htm
Building 1, Suite 140, Community Conference Center
Alameda Point
Alameda, California

March 14, 2005

The following participants attended the meeting:

Co-Chairs:

Thomas Macchiarella	Base Realignment and Closure (BRAC) Program Management Office (PMO) West, BRAC Environmental Coordinator (BEC), Navy Co-chair
Jean Sweeney	Restoration Advisory Board (RAB) Community Co-chair

Attendees:

Janet Argyres	Bechtel Environmental (Bechtel)
Doug Biggs	Alameda Point Collaborative representative
Jim Barse	Community Member
Neil Coe	RAB
Anna-Marie Cook	U.S. Environmental Protection Agency (EPA)
David Cooper	EPA
Ardella Dailey	RAB/Alameda Unified School District
Tommie Jean Damrel	Tetra Tech EM Inc. (Tetra Tech)
Michele Dermer	Bechtel
Tony Dover	RAB
Jennifer Gibson	Sullivan International Group (Sullivan)
John E. Holes	Veterans Administration
Diane Heinze	Port of Oakland
Linda Henry	Brown and Caldwell
Lisa Houlihan	U.S. Coast Guard
Judy Huang	Regional Water Quality Control Board (RWQCB)
George Humphreys	RAB
Elizabeth Johnson	City of Alameda (City)
Joan Konrad	RAB

Darren Newton	BRAC PMO West Remedial Project Manager (RPM)
Kevin Reilly	RAB
Peter Russell	Russell Resources/City
David Sox	U.S. Coast Guard
Jennifer Stewart	BRAC PMO West RPM
Jim Sweeney	RAB Vice Community Co-chair
Cathie Stumpenhaus	Bechtel
Hannah Thompson	Sullivan
Michael John Torrey	RAB/Housing Authority of the City

The meeting agenda is provided in Attachment A.

MEETING SUMMARY

I. Approval of Minutes

Ms. Sweeney, Community Co-Chair, called the meeting to order at 6:30 p.m.

Ms. Sweeney asked for comments on the minutes from the RAB meeting held on February 3, 2005. Mr. Macchiarella made the following comment:

- On page 4 of 9, first paragraph, first sentence, revise "the Proposed Plan for the Site 25 Skeet Range" to read, "the Proposed Plan for the Site 29 Skeet Range."

The minutes were approved based on incorporation of the above comment.

II. Co-Chair Announcements

Ms. Sweeney stated that she had received information about an award for distinguished achievement in environmental law and policy. This award recognizes an organization or program concerned with environmental matters. Ms. Sweeney suggested that the RAB submit an application for the award, and the RAB agreed. Ms. Cook agreed to help compile a list of environmental regulations that represent the RAB's activities. Ms. Sweeney noted that the deadline for the application is the end of March.

Ms. Sweeney noted that she had distributed several copies of the draft final Operable Unit (OU)-5 feasibility study (FS) report and that she had received several replacement pages for this document. The replacement pages convert the draft final OU-5 FS to the final OU-5 FS. Ms. Sweeney also provided a list of documents and comments she had received recently (Attachment B-1) and noted that she also had e-mailed a partial list of the documents to the RAB members.

Mr. Macchiarella provided the RAB with a list of upcoming significant Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) document submittals anticipated in March and April 2005. The list is included as Attachment B-2 to these minutes.

Mr. Macchiarella stated that the public meeting on the proposed plan for the Site 29 Skeet Range was held on March 7. Two comments were received on the proposed plan. The comment period ends on March 18, 2005. Mr. Humphreys asked whether the Audubon Society had provided comments on the proposed plan. Mr. Macchiarella stated that no comments from the Audubon Society have been received.

Mr. Humphreys commented that the original study for Site 29 had assumed that birds were only eating there about 10 percent of the time. Mr. Humphreys stated that lead shot is a concern at other Bay Area sites where the birds may be feeding also. Mr. Humphreys was unsatisfied with this feeding assumption. Mr. Humphreys noted that this information was not included in the proposed plan. Mr. Macchiarella asked whether Mr. Humphreys was providing general comments or whether the comments should be included in the record of decision. Mr. Humphreys replied that they were general comments. Mr. Humphreys added that compared to the costs of investigating the site, it would have been relatively easy (because of the site's size) to dig up the contamination.

III. Site 27—Dock Zone Draft Remedial Investigation Report Presentation

Ms. Sweeney introduced Ms. Stewart to begin the presentation on the draft remedial investigation (RI) report for Site 27 (Dock Zone). Ms. Stewart reviewed the presentation agenda (Slide 2) and noted that she would present part of the RI report. After her presentation, a number of Bechtel team members would each present other parts of the report. Ms. Stewart stated that the objective of the presentation was to review the results of the RI conducted at Site 27 and provide conclusions (Slide 3).

Site 27 is located in the southeast area of former Naval Air Station (NAS) Alameda and is adjacent to Seaplane Lagoon (Slides 4 and 5). The original 2.2–acre site was expanded to 15.9 acres during the RI investigation.

Ms. Stewart discussed the features of Site 27 (Slides 6 and 7). Site 27 includes Building 168, a 110,000-square-foot warehouse, Building 601 (machine shop), Building 68 (welding shop), an electrical substation, and two lift stations. Site 27 also includes open space, roadways, a historical washdown area, two oil/water separators, and subsurface utilities.

Ms. Stewart presented the history of Site 27 (Slide 8). Before the 1940s, the site was a part of San Francisco Bay. The site was filled and paved by 1945. The open space was historically used by the Navy for aircraft parking as well as equipment and materials staging and storage (Slide 9). The open space is currently used by tenants for equipment and materials staging and storage.

Ms. Stewart presented several photographs of Site 27 and Building 168 (Slides 10, 11, and 12). Historical aerial photographs present the undeveloped site in 1937 and the developed site in 1947 (Slide 13).

Ms. Stewart discussed the original boundaries of Site 27 (Slide 14). Site 27 included underground storage tanks (UST) 15-1, 15-2, and 15-3, which stored fuel before they were removed in 1994. Analytical results from three monitoring wells, installed in 1995, documented the presence of chlorinated volatile organic compounds (VOC) in groundwater. The site boundaries were expanded to include additional USTs, portion of former fuel farm area 37, and portion of fuel lines (Slide 15). Former fuel farm area 37 was designated total petroleum hydrocarbon (TPH) Corrective Action Area (CAA) 11B. Ms. Stewart presented a figure showing the former locations of the USTs and fuel lines (Slide 16).

Ms. Konrad asked when the fuel farms were installed. Cathie Stumpenhaus (Bechtel) stated that the fuel tanks were installed by the Navy in the late 1940s to early 1950s.

Ms. Sweeney asked why Building 168 was specifically included in the RI. Ms. Stumpenhaus responded that during the investigation, step-out samples to determine the edge of the plume had resulted in the expansion of the boundary to include Building 168. Mr. Reilly asked whether the building was a source of contamination. Ms. Stumpenhaus responded that no source had been identified.

Ms. Stumpenhaus presented the RI field activities, which included four phases (Slide 17). Phases I and II were conducted in 2002. Groundwater samples were collected from three monitoring wells to confirm the presence of VOCs. Soil and soil gas samples were also collected. Two additional monitoring wells were installed to determine the extent of the VOCs. Additional samples were collected in Phases III and IV to determine the extent of the VOC plume. As previously mentioned, no source was identified.

Ms. Stumpenhaus discussed the RI findings (Slide 18). A tidal influence study determined that the shoreline wells were subject to tidal fluctuation. Aquifer testing estimated yields of 1,120 to 1,850 gallons of water per day. A basic water quality study determined that the total dissolved solids (TDS) in shoreline wells to be 15,100 to 27,900 milligrams per liter (mg/L). The TDS concentrations in inland wells ranged from 322 to 783 mg/L. The groundwater flow direction is to the northwest (Slide 19).

Ms. Stumpenhaus described the nature and extent of contamination in the soil gas (Slides 20, 21, and 22). Chlorinated VOCs and fuel-related VOCs were found in the western portion of the site. Trichloroethene (TCE) was found beneath and west of Building 168. Mr. Reilly asked whether there was a map showing the concentrations of fuel-related VOCs. Ms. Stumpenhaus replied that this figure was included in the RI report and noted that they were concentrated in the western portion of the site.

Mr. Humphreys asked whether there were correlations between the soil gas and groundwater concentrations. Ms. Stumpenhaus confirmed that it appears to be some correlation.

Ms. Stumpenhaus presented the nature and extent of soil contamination (Slide 23). Benzo(a)pyrene (BAP) equivalent concentrations for polynuclear aromatic hydrocarbons (PAH) were all less than 620 micrograms per kilogram (µg/kg). Iron and thallium were the only metals to exceed both preliminary remediation goals (PRG) and Alameda Point background ranges. Chlorinated VOC concentrations were less than PRGs.

Mr. Reilly asked for additional information regarding the 620 µg/kg criteria used for PAHs. Ms. Stumpenhaus replied that this number is used at NAS Alameda as a screening number for PAHs and added that the maximum concentration for BAP equivalents was 180 µg/kg. Mr. Humphreys noted that the BAP equivalent criterion is based on a cancer risk level of 1×10^{-5}.

Mr. Humphreys noted that metals, such as arsenic, had been detected at other sites above PRGs, but that these detections were attributed to background levels. Mr. Humphreys asked whether such detections also had occurred at Site 27. Ms. Stumpenhaus confirmed that metals had been screened against background numbers. Ms. Stumpenhaus stated that levels of arsenic at Site 27 were well within the background levels and noted that the arsenic background level is above the PRG.

Ms. Stumpenhaus showed Slide 24 and stated that concentrations of six chlorinated VOCs exceeded the maximum contaminant levels (MCL). Benzene concentrations exceeded the MCL in only one sample. Ms. Stumpenhaus presented a figure showing vinyl chloride concentrations in groundwater (Slide 25). A line on the figure represents the area of the plume that exceeds the MCLs. Mr. Humphreys noted that the line is dotted at the boundary of the site and asked whether this indicated that the plume was flowing into

the lagoon. Ms. Stumpenhaus responded that while specific data were not available, it appears that the plume has reached the lagoon.

Ms. Stumpenhaus presented a figure showing cis-1,2-dichloroethene concentrations in groundwater (Slide 26). Mr. Humphreys noted that Older Bay Mud was found at depths of 70 to 80 feet below ground surface and asked whether samples were collected at depths greater than 10 feet below ground surface. Ms. Stumpenhaus responded that samples were collected to 20 feet below ground surface.
Mr. Humphreys asked whether sampling for dense non-aqueous phase liquids (DNAPL) was performed. Ms. Stumpenhaus responded that the levels of PAHs and chlorinated solvents in groundwater did not suggest the presence of DNAPL.

Ms. Sweeney asked whether the fuel farm was the source of the plume. Ms. Stumpenhaus responded that the VOCs exceeding MCLs in the groundwater were not fuel-related VOCs. Mr. Humphreys stated that fuel-related VOCs were detected in soil gas samples. Ms. Stumpenhaus responded that fuel-related VOCs were not found in soil or groundwater; therefore, these VOCs must have entered the soil gas from a source located at another site. Ms. Stumpenhaus noted that the area is used for parking, and these vehicles are potentially the sources of the fuel-related VOCs.

Ms. Stumpenhaus stated that five PAHs exceeded the tap water PRGs (slide 27). These five PAHs were each reported in a single sample. The only metal to exceed both MCLs and Alameda Point background levels was arsenic (Slide 28). Several metals, including copper, lead, mercury, nickel, and zinc, exceeded the California Toxics Rule criteria.

Mr. Reilly asked for clarification between California Toxics Rule criteria and the MCL.
Ms. Stumpenhaus stated that MCLs relate to water quality consistent with human consumption, and the California Toxics Rule criteria relate to water quality needed to support aquatic life.

Ms. Henry presented the results of the incremental cancer risk (Slide 29). The incremental cancer risk presents the calculated risk level after background risk has been subtracted out. Ms. Henry stated that a calculated cancer risk of 10^{-6} or smaller is considered insignificant. A cancer risk between 10^{-6} and 10^{-4} is considered to be in the risk management range. In this range, the regulatory agencies make a decision to determine whether action is needed to reduce potential exposure.

Ms. Henry stated that the receptors evaluated included a resident, occupational worker, and construction worker. Several pathways were evaluated for the resident. The residential use of groundwater was the only pathway to exceed 10^{-4}. The homegrown produce and indoor air pathways have risk in the risk management range.

Mr. Torrey asked whether inhalation of outdoor wind factor had been evaluated. Ms. Henry responded that the contact with soil pathway included the inhalation of dust.

Mr. Coe asked about the calculated risk from arsenic if the background risk was not subtracted out.
Ms. Henry responded that the calculated risk including background was 1×10^{-5}, which is within the risk management range. Ms. Henry reiterated that arsenic levels at this site are within background levels.
Ms. Henry stated that the exposure point concentration of arsenic at Site 27 is 8 milligrams per kilogram (mg/kg). This concentration is lower than the average value for California of 11 mg/kg.

Ms. Dailey asked whether other chemicals were excluded from the risk calculations based on background levels. Ms. Henry responded that the RI includes both total and incremental risk estimates. The total risk

is first calculated for all chemicals. The chemicals determined to be the risk drivers are then evaluated based on background levels.

Mr. Reilly asked whether the ingestion of fish caught in the Bay was included as a pathway in the risk assessment. Ms. Henry stated that this specific pathway was not evaluated. Ms. Huang added that the California Toxics Rule criteria include the ingestion of fish.

Ms. Sweeney asked whether outdoor air was also evaluated in relation to the soil gas. Ms. Henry stated that concentrations in outdoor air are lower than indoor air because of dilution. Ms. Henry stated that houses could act like chimneys by pulling vapors out of the soil. If the indoor air concentrations are within or below the risk management range, there is a high level of confidence that the outdoor air concentrations are not a concern. Ms. Henry stated that all pathways are added together to determine the overall risk.

Ms. Henry presented the results of the screening level ecological risk assessment (Slide 30). Ms. Henry stated that the site has no existing terrestrial habitat and future terrestrial habitat is unlikely. Compounds in groundwater are not expected to migrate to the Bay at levels hazardous to aquatic organisms.

Mr. Torrey stated that numerous raccoons and jackrabbits are found at Site 27. Ms. Henry responded that the protection of these receptors was a risk management decision.

Mr. Reilly asked whether the cumulative impact to organisms in the Bay from groundwater migration from several sites at NAS Alameda was being assessed. Ms. Huang stated that the established criteria are very conservative; however, there is no established methodology to look at synergistic effects from various contaminants.

Mr. Humphreys asked which particular species were evaluated. Ms. Henry stated that aquatic criteria are generalized for various species and are very conservative.

Ms. Dermer presented the RI conclusions (Slide 31). The RI found that no data gaps exist. VOCs in groundwater have been delineated and no VOC source was identified. Human health risk is within the risk management range with the exception of the residential use of groundwater. No significant ecological risk was identified. Ms. Dermer stated that the RI report will be distributed soon, followed by a 60-day comment period.

Mr. Reilly asked whether it was possible to estimate the time period in which the VOCs were released into the environment. Ms. Stumpenhaus noted that TCE and PCE break down into other chemicals. Based on the ratio of these chemicals, it can be determined that the release did not occur recently. A continuing source was not identified.

Ms. Dailey asked for clarification on the risk management range. Ms. Henry explained that a risk between 10^{-6} and 10^{-4} is within the risk management range. As each site is different, risk managers will determine whether additional action is needed at a particular site. Ms. Cook added that EPA will request remedial action if the risk is determined to be greater than 10^{-4}. If the risk is within the risk management range, risk managers will determine whether additional action is needed. Ms. Cook noted that Site 27 is considered to be a drinking water source by EPA and the RWQCB. EPA will ask the Navy to remediate drinking water to the MCLs to address the risk in the risk management range.

IV. Installation Restoration Site 31—Draft Remedial Investigation Workplan Summary Presentation

Mr. Newton stated that he would provide an overview of the upcoming draft RI work plan for Site 31.

Mr. Newton stated that Site 31 includes Coast Guard Housing (Slide 3) and explained that the site is located east of Main Street, adjacent to Fleet Industrial Supply Center (FISC) Alameda Annex. Mr. Newton reviewed the history of NAS Alameda (Slides 4 through 11). Aerial photographs show that the northwest corner of Site 31 contained the North Coast Guard housing in the 1940s, while the remainder of the site was industrial. In the 1950s to the early 1980s, the site was industrial. Marina Village Housing was constructed in the early 1990s. Catellus Development Corporation's current development activities are located to the south of Site 31.

Mr. Newton stated that data were collected at Site 31 during five previous investigations at the site (Slide 12), including investigations at Site 25 under the Installation Restoration (IR) program. Mr. Newton explained that during the Site 25 investigation, samples were collected both within the footprint of Site 25 as well as outside the footprint. Several of these samples fall within the boundary of Site 31.

Mr. Newton discussed the soil samples that yielded usable data for the RI (Slide 13), including two soil samples from the environmental baseline survey, 43 soil samples from 12 locations analyzed for PAHs in 2002, and 648 soil samples collected from 163 borings analyzed for PAHs in 2003 (Slide 14). Mr. Newton stated that the intervals of sampling depth included 0 to 0.5 feet below ground surface (bgs), 0.5 to 2 feet bgs, 2 to 4 feet bgs, and 4 to 8 feet bgs. Usable groundwater data were obtained from three wells monitored as part of the Site 25 quarterly groundwater monitoring program since 2002, and three additional on-site wells installed as part of the Site 25 quarterly groundwater monitoring program (Slide 15).

Mr. Newton discussed the data gaps at Site 31 (Slide 16). A soil data gap exists because Site 31 was used previously as a Defense Reutilization and Marketing Office (DRMO) storage area for unknown materials. There are limited soil data for non-PAH semivolatile organic carbons (SVOC), VOCs, polychlorinated biphenyls (PCB) pesticides, and metals. A benzene plume is known to occur in the groundwater at Site 31 and adjoining sites. Groundwater samples will be collected to assess whether any site-specific releases have impacted Site 31 groundwater. Currently, there are limited data on the concentrations of SVOCs, pesticides, and PCBs in groundwater.

Ms. Sweeney stated that she thought the plume at Site 31 would be evaluated with Alameda Annex IR-02. Mr. Macchiarella responded that the benzene plume was being evaluated in the Site 25 and OU-5 groundwater report. Ms. Dailey stated that she believed that Site 30 and Site 31 would be investigated together. Mr. Macchiarella responded that Site 30 and 31 were originally planned for the same timeline, however; the Navy has expedited investigation activities at Site 30. Mr. Newton detailed that the field investigation for Site 30 was completed in August/September 2004. The Site 30 RI report will be submitted in March 2005. Ms. Cook clarified that the OU-5 groundwater plume includes groundwater at Alameda Point Sites 25, 30, 31 and Alameda Annex IR-02. The portions of this plume that pertain to each site will be included in the reports.

Mr. Newton stated that 50 soil borings are proposed to characterize IR Site 31 and provide sufficient soil data to conduct human health and ecological risk assessments (Slide 17). Soil samples will be collected from three depth intervals in a grid pattern. Samples will be analyzed for non-PAH SVOCs, VOCs, PCBs, pesticides, and metals. Ms. Dailey mentioned previous concerns regarding sampling depths and asked whether these depths were adequate. Ms. Cook stated that concerns at Site 25 were related to the

depths evaluated in the human health risk assessment. The depths evaluated in the risk assessment are independent of the sampling depths. Mr. Newton added that groundwater is anticipated to occur at a depth of 5 to 8 feet bgs; therefore, soil samples cannot be collected below 5 to 8 feet bgs, depending on the specific sampling location. Samples from six additional soil borings will be collected to obtain data on physical parameters needed as input values for fate and transport modeling.

Mr. Newton stated that samples will be collected from six existing monitoring wells to obtain data on any contaminants in groundwater that are unrelated to the area-wide benzene plume (Slide 18). The samples will be analyzed for SVOCs, pesticides, and PCBs. In addition, VOC data from the 2004 quarterly sampling of these wells will be evaluated. Ms. Dailey asked whether soil gas samples would also be collected. Mr. Newton responded that soil gas samples should be collected at depths of several feet bgs, and 5 feet above the vadose zone. Groundwater at Alameda Point, however, occurs at a depth of 5 to 8 feet bgs. DTSC recommends that soil gas samples not be collected in areas of shallow groundwater because sample dilution is likely in these areas because of entrainment of air from the ground surface. Mr. Macchiarella added that DTSC prefers to estimate soil gas concentrations by using a model that is based on groundwater concentrations. Ms. Cook stated that DTSC requested discrete groundwater samples for this purpose and noted that another option is indoor air sampling.

Ms. Dailey stated that previous soil gas sampling had resulted in detections of chemicals at Coast Guard Housing and questioned why these results would not be reevaluated. Mr. Newton stated that the U.S. Coast Guard had performed indoor air sampling. Their report concluded that the concentrations in indoor air equaled the outdoor air concentrations. Mr. Newton noted that 2 feet of fill material was placed on top of the existing grade at Marina Village. In addition, the housing units contain a 40-millimeter vapor barrier. Ms. Dailey reiterated that it seems strange that additional sampling is not planned.

Mr. Newton presented a figure showing the proposed sampling locations (Slide 19). The sample locations are based on a grid pattern that is adjusted for buildings located on the site. Mr. Humphreys stated that sampling activities should consider that the east end of the site was previously used to burn airplanes to recover the aluminum scrap. Mr. Newton stated that he was unaware of specific burning activities at the site, however would consider these past site uses during the site investigation.

Mr. Newton stated that a screening-level (Tier 1) ecological risk assessment would be performed to evaluate potential risk to bird and mammal receptors associated with ingestion of typical food items and soil (Slide 20). The possible outcomes of the screening-level ecological risk assessment are that the soil poses an acceptable ecological risk that requires no further action, a potentially unacceptable ecological risk that requires additional evaluation in an expanded baseline ecological risk assessment (Tier 2), or a potentially unacceptable ecological risk that requires further action.

Mr. Newton stated that the human health risk assessment would evaluate potential soil exposure for the residential, occupational, and construction scenarios (Slide 21). He stated that the total human health risk at Site 31 would be calculated by adding the site-specific risk for soil to the risk for the OU-5 benzene groundwater plume (Slide 22), assuming that no unique on-site sources of groundwater contamination are identified. If one or more on-site sources of groundwater contamination are identified at Site 31, however, then the total human health risk at the site will be calculated by adding the site-specific risk for soil to a site-specific groundwater risk.

Mr. Newton presented the schedule for Site 31 (Slide 12). The draft RI work plan will be submitted for agency review in April 2005 and will be finalized in September 2005. Field work will be performed in late September 2005. The draft RI report is scheduled for submittal in spring 2006.

Ms. Sweeney asked whether observations made during field activities could trigger a removal action. Mr. Macchiarella confirmed that the Navy has the option to perform removal actions at any time during the CERCLA process.

V. BRAC Closure Team Activities

Ms. Huang distributed a handout that summarizes the BCT activities in February 2005 (Attachment B-5). Ms. Huang stated the Navy presented a new one-volume format for the spring 2005 basewide groundwater and landfill gas monitoring annual report. Ms. Huang stated that the BCT is discussing the Alameda Point Site Management Plan (SMP) schedule. A draft of the SMP schedule will be submitted in June 2005.

VI. Community and RAB Comment Period

Mr. Reilly asked about the results from a public meeting that was held to discuss the Site 29 Skeet Range proposed plan. Ms. Huang responded that two public comments were submitted. Mr. Macchiarella stated that all the comments will be considered in the responsiveness summary that will be included in the record of decision.

Mr. Biggs, a representative for the Alameda Point Collaborative (APC) stated that the APC thoroughly reviewed the revised draft site inspection (SI) report for Economic Development Conveyance (EDC)-5 and submitted comments in writing and also verbally at a RAB meeting. Mr. Biggs stated that the APC was dismayed that the Navy did not address these comments in its response to comments. Mr. Biggs noted that a response to their comments would have alleviated concerns by the residents. Mr. Biggs expressed disappointment that the RAB did not follow-up with their concerns.

Mr. Biggs asked for information regarding an EPA study conducted in the prior year on homegrown produce. Ms. Cook responded that the report is almost finalized. Ms. Cook stated that EPA had received additional funding outside of CERCLA for laboratory testing of soils and fruits and vegetables in the APC housing area. The goal of the study was to assess the potential for uptake of PAHs by homegrown produce. Samples of fruits, vegetables, and soil were collected at the root zone, and the preliminary results show that there is no uptake by any of the fruits or vegetables.

Ms. Sweeney asked why the APC comments have not been addressed. Mr. Newton responded that every comment was considered; however, the revised draft SI document was revised so substantially from September 2004 to January 2005 based on all the comments received, that it was no longer practical to respond to every comment. Mr. Macchiarella suggested that the comments be reevaluated to ensure that they were addressed adequately.

Ms. Cook stated that the BCT and the RAB need to communicate better with concerned parties on various documents. Mr. Reilly asked whether there is an additional comment period for the draft final document. Mr. Macchiarella stated that only regulatory agencies make comments in the draft final stages.

Ms. Dailey suggested that the Navy prepare descriptions of how the comments were addressed in the draft final document. Mr. Macchiarella agreed that the Navy would prepare these descriptions.

Mr. Torrey stated that the Alameda Star-Times was currently featuring a week-long segment regarding chemicals in the human body. Mr. Torrey encouraged RAB members to review this segment.

There were no further comments. The meeting was adjourned at 8:30 p.m.

ATTACHMENT A

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING AGENDA
March 14, 2005

(One Page)

RESTORATION ADVISORY BOARD

NAVAL AIR STATION, ALAMEDA

AGENDA

MARCH 14, 2005 6:30 PM

ALAMEDA POINT – BUILDING 1 – SUITE 140
COMMUNITY CONFERENCE ROOM
(FROM PARKING LOT ON W MIDWAY AVE, ENTER THROUGH MIDDLE WING)

TIME	SUBJECT	PRESENTER
6:30 - 6:45	Approval of Minutes	Jean Sweeney
6:45 - 7:00	Co-Chair Announcements	Co-Chairs
7:00 – 7:35	Presentation on the Draft Remedial Investigation Report for Site 27 (Dock Zone)	Jennifer Stewart and Bechtel Env., Inc.
7:35 – 8:00	Presentation on the Draft Workplan for Remedial Investigation at Site 31 (Marina Village)	Mr. Darren Newton
8:00 – 8:10	BCT Activities	Judy Huang
8:10 – 8:30	Community & RAB Comment Period	Community & RAB
8:30	RAB Meeting Adjournment	

ATTACHMENT B

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING HANDOUT MATERIALS

B-1 List of Navy CERCLA program documents received by Jean Sweeney. March 14, 2005. (1 page)

B-2 List of significant Navy CERCLA program documents for March/April 2005, presented by Thomas Macchiarella, BRAC PMO-West. March 14, 2005. (1 page)

B-3 Site 27 (Dock Zone) Draft Remedial Investigation Report. Presented by Jennifer Stewart, Navy, Cathie Stumpenhaus and Michele Dermer of Bechtel, and Linda Henry of Brown and Caldwell. (16 pages)

B-4 Draft Site 31 Remedial Investigation Work Plan Summary. Presented by Darren Newton, Navy. (12 pages)

B-5 February 2005 BCT activities update. Presented by Judy Huang, Regional Water Quality Control Board. March 14, 2005. (1 page)

ATTACHMENT B-1

LIST OF RECEIVED NAVY CERCLA PROGRAM DOCUMENTS

(One Page)

Jan 26 EPA Request to extend comment period for Sea plane Lagoon
Feb 2 navy response to EPA Comments re: Site 26 Western Hangar Area.
Feb 2 Navy Response to EPA Comments re site 26 Western Hangar Area
Feb 3 Draft Final SI EDC - 2 Volumes. I have 2 copies
Feb 5 EDC 5 Final Draft SI report. The final is due in March 2005
Feb 7 EPA comments on Draft FS on IR 28 Todd Shipyard
Feb Draft Final workplan for site 32 NW Ordinance.
Feb 9 Proposed Plan Skeet Range Site 29
Feb 9 Draft fianl soil feasiblilty OU 5
Feb. 9 Groundwater remedial Investigation/FS Site 25 Annex Site IR -02
Feb 10 Fianl Fall 2004 Tidal Study of RI 1 & 2
Feb 14 Response to Lia's comments RE: OU 5 Nov 2004
Comments from DST:
Feb. 11 Draft final RI sampling work plan IR2 Westbeach
Feb 11 Replacement pages 6-12 and 6-13 RE: OU1 sites 6,7,8,16
Feb 17 Clean 3 replacement pages C4-1 Site 32
Feb 17 Water Control Board Comments on Draft FS for Todd Shipyards
Feb 2005 Public meeting regarding no action for former skeet range
IR 29 March 7 6:30 - 8 P.M Build 1 Room 201 AP.
Feb 18 final Action time critical removal site 9
Feb 25 Free product removal Site 9 (Build 410)
Mar 2 Addendum for FS Report Site 14
Mar 3 Fianl Draft RI Sites 9,13,22,23 OU2A
Mar 11 Final Soil Feasibility study OU5
Mar 14 Final Site Inspection EDC 5

ATTACHMENT B-2

LIST OF UPCOMING CERCLA DOCUMENTS
FOR MARCH/APRIL 2005
(One Page)

Alameda Point Restoration Advisory Board Meeting
March 14 , 2005

Significant Navy CERCLA program documents planned for March/April 2005

- OU-2A Draft Final RI Report
- Site 17 (Seaplane Lagoon) Draft Final Feasibility Study
- Site 1, 2 Draft Radiological Survey Report
- Draft Final Datagap Sampling Workplan (Offshore sediments)
- Site 30 (Miller School) Draft Remedial Investigation Report
- Site 30 (Miller School) Action Memo
- Site 31 (Marina Village) Draft Remedial Investigation Workplan
- Site 2 (West Beach Landfill) Final Remedial Investigation Workplan
- Site 25 (Coast Guard Housing) Final Soil Feasibility Study
- Site 26 (Western Hangar Zone) Draft Final Feasibility Study
- Site 27 (Dock Zone) Draft Remedial Investigation Report
- Site 32 (Northwestern Ordnance Storage Area) Final Remedial Investigation Workplan
- Site 28 (Todd Shipyard) Draft Final FS Report

ATTACHMENT B-3

SITE 27—DOCK ZONE

DRAFT REMEDIAL INVESTIGATION REPORT

(Sixteen Pages)

ALAMEDA POINT

Site 27 – Dock Zone Draft Remedial Investigation Report

March 14, 2005

by

Jennifer Stewart

and

Bechtel Environmental Inc.

ALAMEDA POINT

Agenda

- Objective
- Site Location
- Site Features
- Site History/Use
- Remedial Investigation Activities
- Nature and Extent of Contamination
- Human Health Risk Assessment
- Ecological Risk Assessment
- Conclusions

Objective

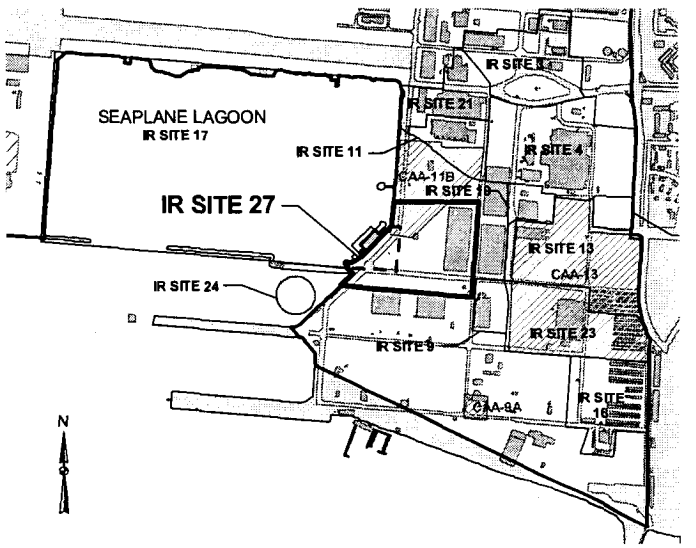
- To review the results of the Remedial Investigation (RI) conducted at Site 27 and provide conclusions

Site Location

- Southeast area of former NAS Alameda
- Adjacent to Seaplane Lagoon
- Original size 2.2 acres
- Expanded size 15.9 acres

ALAMEDA POINT

Site Location Map



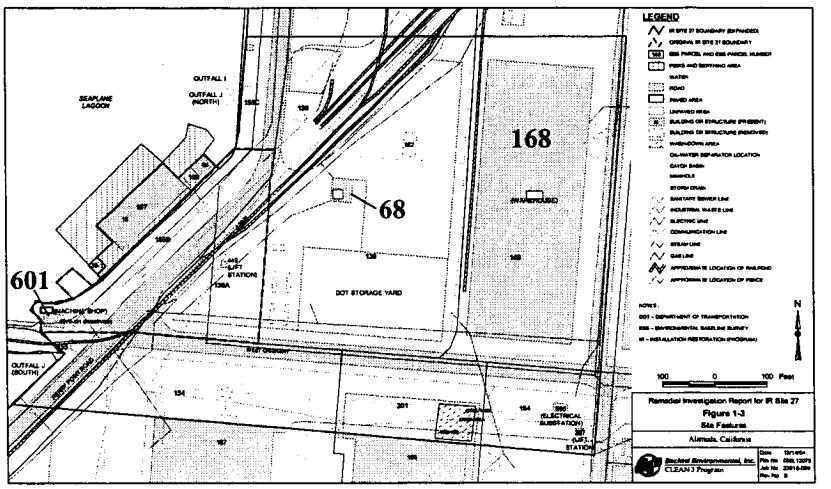
ALAMEDA POINT

Site Features

- Buildings and Structures
  - Building 168 – 110,000 sq. ft. warehouse
  - Two small buildings: Building 601 (machine shop) and Building 68 (welding shop)
  - Three structures: electrical substation and two lift stations
- Open space
- Roadways, railroad tracks and sidings
- Historical washdown area and two oil/water separators
- Subsurface utilities

ALAMEDA POINT

Site Features Map



ALAMEDA POINT

Site History/Use

- Fill History
  - Part of San Francisco Bay prior to 1940s
  - Filled and paved by 1945
- Buildings
  - 168: constructed in 1946; formerly and currently in use as warehouse
  - 601: constructed in 1980 to house oil/water separator, currently in use as machine shop
  - 68: constructed in 1988 for various waterfront services, currently in use as welding shop

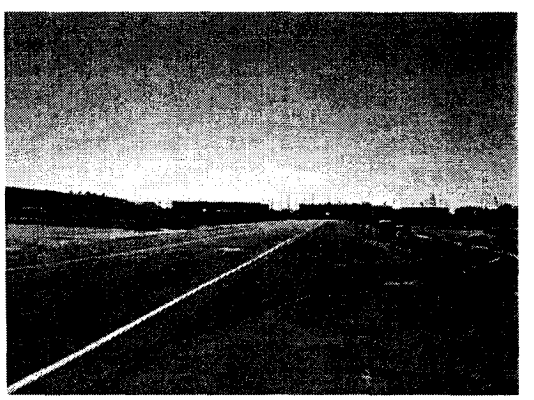
ALAMEDA POINT

Site History/Use (Continued)

- Open space
  - historically used by Navy for aircraft parking, equipment and materials staging and storage
  - currently used by tenants for equipment and materials staging and storage

ALAMEDA POINT

Near NW corner of Site 27, Facing South



ALAMEDA POINT

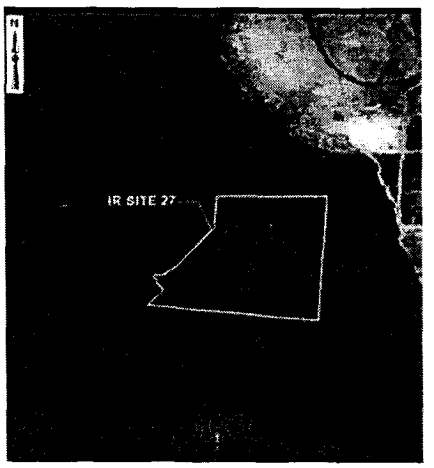
SW Corner of Site 27, Facing East

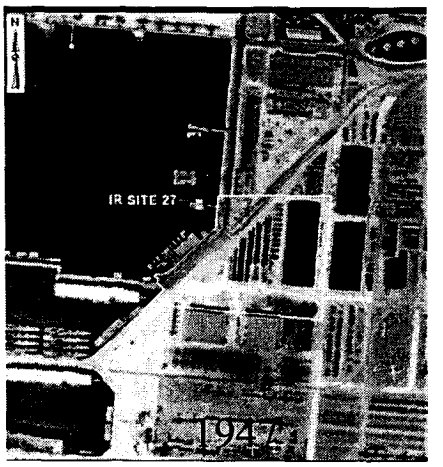
ALAMEDA POINT

Building 168 Interior

ALAMEDA POINT

Historical Aerial Photos





ALAMEDA POINT

Site History/Use (Continued)

- Original Boundaries of Site 27
  - Fuel storage Underground Storage Tanks (USTs) 15-1, 15-2, 15-3; removed in 1994
  - Monitoring wells 15-MW1, 15-MW2, 15-MW3 installed in 1995 and documented presence of chlorinated Volatile Organic Compounds (VOCs) in groundwater

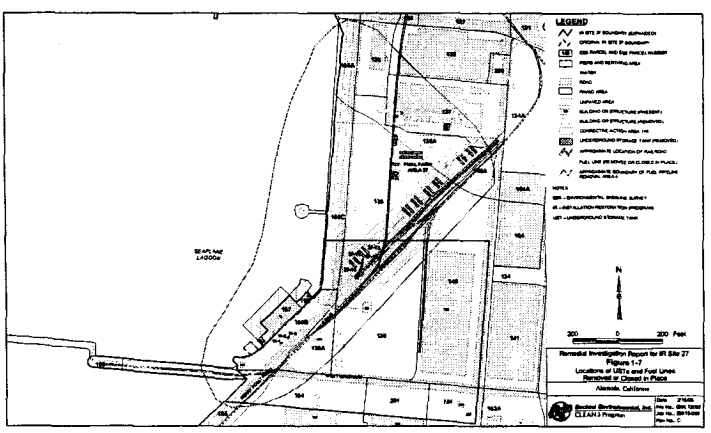
ALAMEDA POINT

Site History/Use (Continued)

- Expanded Boundaries of Site 27
  - USTs 37-13 through 37-16, located in northwest corner of site in Fuel Farm Area 37; removed in 1997
  - Former Fuel Farm Area 37 designated Total Petroleum Hydrocarbon (TPH) Corrective Action Area 11B
  - Fuel lines removed in 1998 and 1999
  - Fuel Line and UST Location Map (Figure 1-7)

ALAMEDA POINT

Former Locations of Underground Storage Tanks and Fuel Lines



ALAMEDA POINT

RI Field Activities

- Four Phases
  - Phases I and II in 2002
  - Phase III in 2003
  - Phase IV in 2004

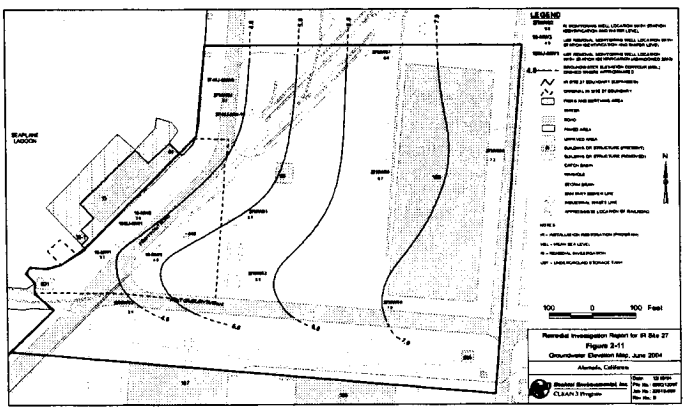
ALAMEDA POINT

RI Findings

- Tidal influence study
  - Shoreline wells subject to tidal fluctuation
  - Mean daily water levels for shoreline wells calculated
- Aquifer testing
  - Estimated yields of 1,120 to 1,850 gallons per day
- Groundwater – Basic Water Quality
  - Shoreline wells - Total Dissolved Solids (TDS) 15,100 to 27,900 mg/L
  - Inland wells - TDS 322 to 783 mg/L
- Groundwater flow direction to the northwest (Figure 2-11)

ALAMEDA POINT

Groundwater Elevation and Flow Direction – First Water Bearing Zone



ALAMEDA POINT

Nature and Extent – Soil Gas

- Chlorinated VOCs (Figure 4-14)
  - tetrachloroethene (PCE), trichloroethene (TCE), cis and trans-dichloroethene (DCE), vinyl chloride, and 1,1- dichloroethane (DCA) – western portion of site
  - TCE – beneath and west of Building 168

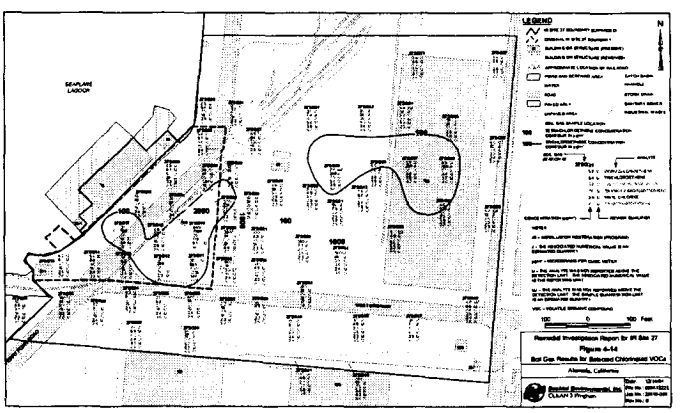
ALAMEDA POINT

Nature and Extent – Soil Gas

- Fuel-related VOCs
  - Benzene, toluene, ethylbenzene and xylenes (BTEX) and methyl tert-butyl ether (MTBE) – western portion of site

ALAMEDA POINT

Soil Gas Figure



ALAMEDA POINT

Nature and Extent - Soil

- Polynuclear Aromatic Hydrocarbons (PAHs): Benzo(a)pyrene (BAP) equivalent concentrations all less than 620 μg/kg
- Metals: only iron and thallium exceed both Preliminary Remediation Goals (PRGs) and Alameda Point background ranges
- Chlorinated VOCs: concentrations less than PRGs

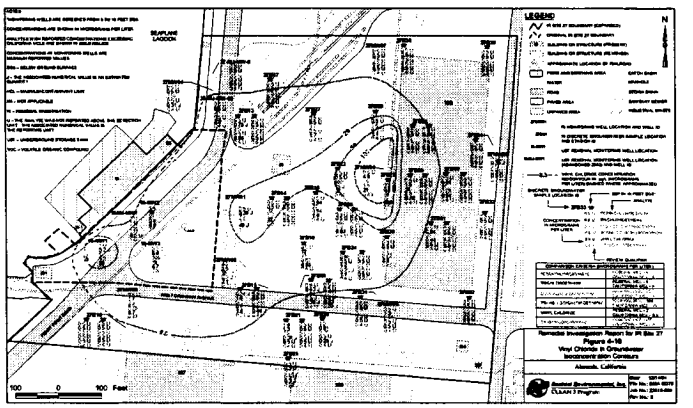
ALAMEDA POINT

Nature and Extent - Groundwater

- VOCs exceeding Maximum Contaminant Levels (MCLs) - (See Figure 4-10 and 4-11)
  - Six Chlorinated VOCs
    - 1,1-DCA
    - cis and trans-1,2-DCE,
    - PCE
    - TCE
    - vinyl chloride
  - Benzene – exceeded MCL in single sample

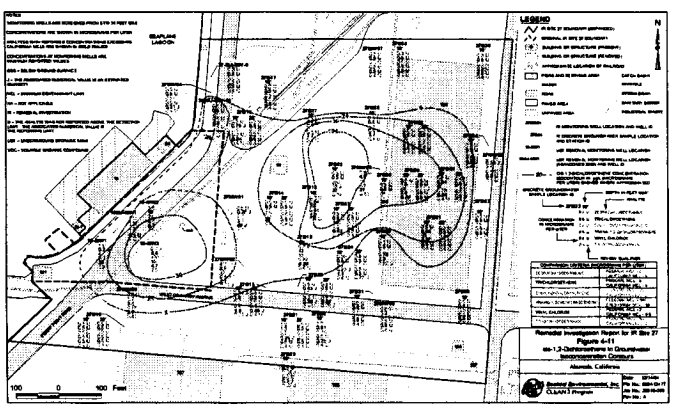
ALAMEDA POINT

Vinyl Chloride Concentrations in Groundwater



ALAMEDA POINT

cis-1,2-DCE Concentrations in Groundwater



ALAMEDA POINT

Nature and Extent - Groundwater

- Five PAHs exceeding Tap Water PRGs
  - Benzo(a)anthracene
  - Benzo(a)pyrene
  - Chrysene
  - Dibenz(a,h)anthracene
  - Indeno(1,2,3-cd)pyrene
- Limited distribution – each reported in a single sample

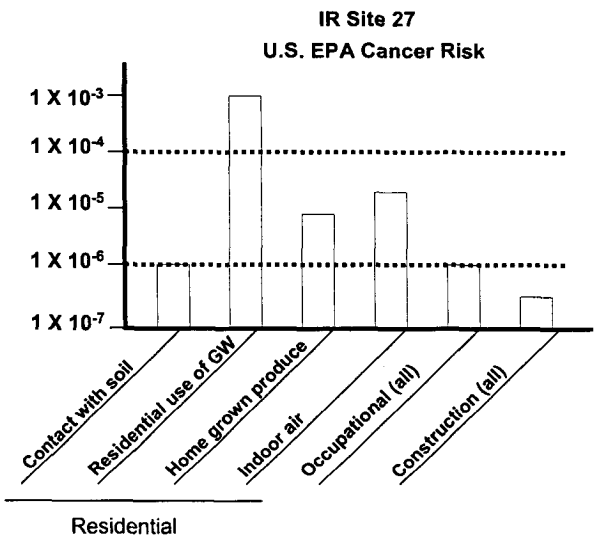
ALAMEDA POINT

Nature and Extent - Groundwater

- Metals
  - exceeding MCL and Alameda Point Background
    - arsenic
  - exceeding California Toxics Rule criteria
    - copper, lead, mercury, nickel and zinc

ALAMEDA POINT

Incremental Cancer Risk



ALAMEDA POINT

Screening-Level Ecological Risk Assessment

Potential Ecological Risk is Negligible	
Soil	•No existing terrestrial habitat •Future terrestrial habitat is unlikely
Ground water	•Compounds are not expected to migrate to the bay at levels hazardous to aquatic organisms

Conclusions

- Adequate data, no gaps
- VOCs in groundwater delineated
- No source of VOCs in soil
- Human health risk within management range, with exception of residential use of groundwater
- No significant ecological risk

ATTACHMENT B-4

DRAFT REMEDIAL INVESTIGATION
WORKPLAN SUMMARY PRESENTATION
~~(Twelve~~ Ten Pages)

Welcome

BRAC
PMO WEST

INSTALLATION RESTORATION SITE 31
ALAMEDA POINT
ALAMEDA, CALIFORNIA

Draft Remedial Investigation Workplan Summary Presentation

RAB Meeting March 14, 2005

Darren Newton
Remedial Project Manager
BRAC Program Management Office West

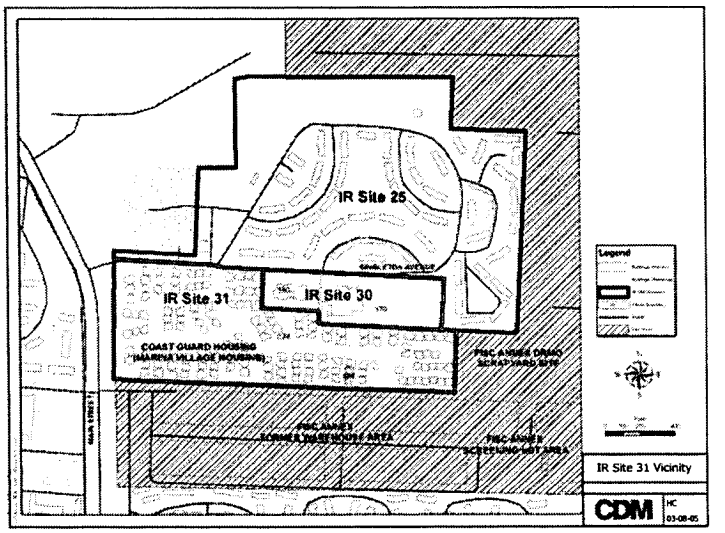
Agenda

BRAC
PMO WEST

- **Site Location**
- **History of Site**
  - **—aerial photo review**
- **Summary of Previous Investigations**
- **Historical Data**
  - **—Soil**
  - **—Groundwater**
- **What are the data gaps**
  - **—Sampling Rationale**
- **Ecological Risk Assessment**
- **Human Health Risk Assessment**
- **Schedule**

Site Location

BRAC
PMO WEST



History of the Site

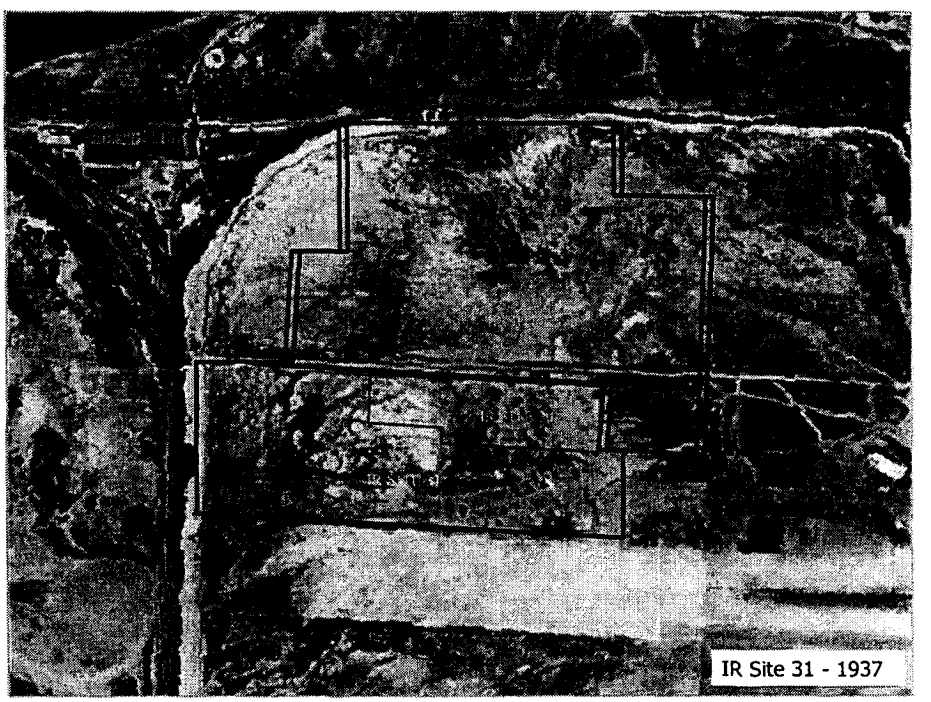
BRAC
PMO WEST

- The geographical area of IR Site 31 was created by the successive filling of tidal flats between 1859 and 1930, before Navy occupancy.
- Army acquired the western portion of Alameda Island, now referred to as Alameda Point, and began construction activities in 1931.
- Navy acquired the land from the Army in 1936
- In the 1940s the northwest corner of the site contained housing, while the remainder of the site was industrial
- 1950s – early 1980s the site was industrial
- Early 1990s the Marina Village Housing was constructed

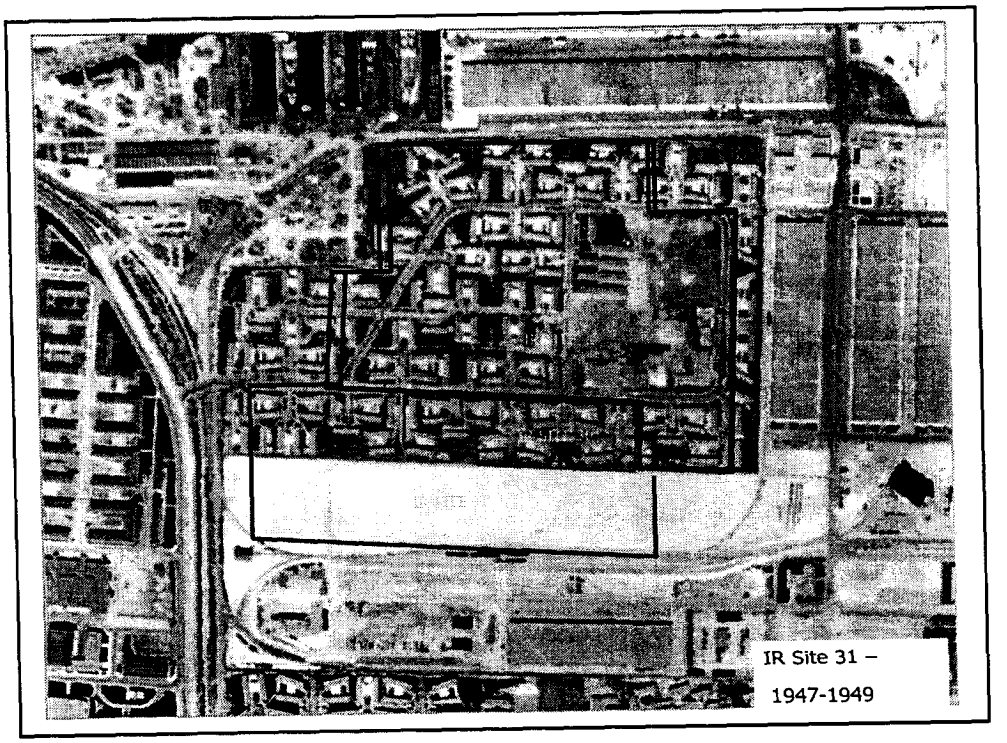
Aerial Photo Review

BRAC
PMO WEST

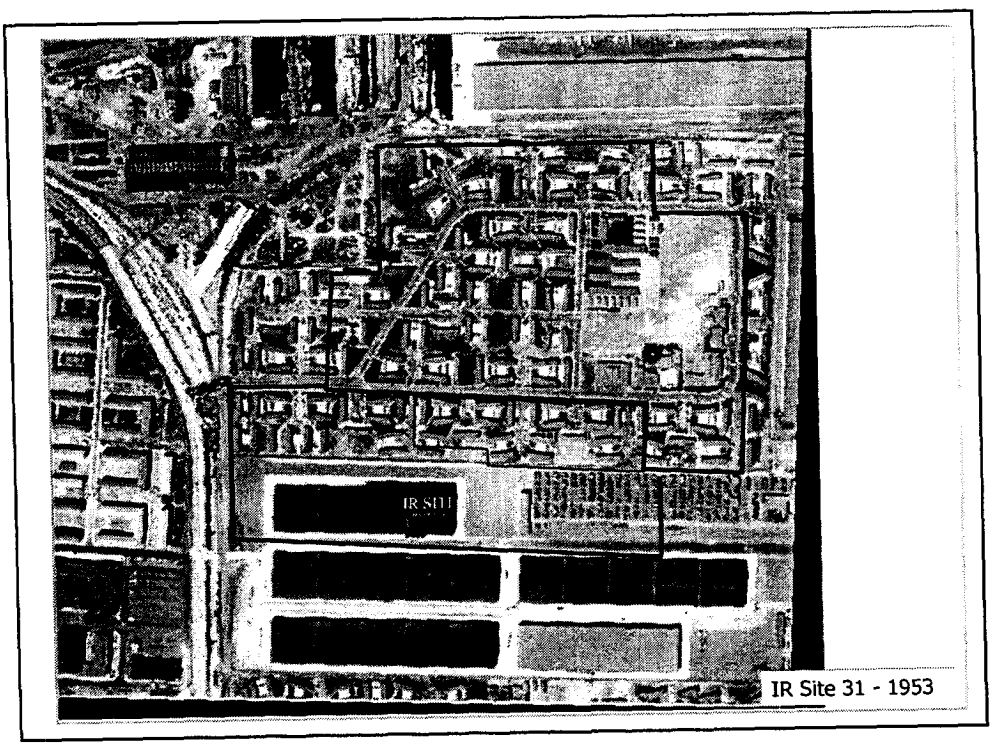
Review of aerial photos from the 1930's to present



IR Site 31 - 1937



IR Site 31 –
1947-1949



IR Site 31 - 1953

Summary of Aerial Photo Review

BRAC PMO WEST

IR Site 31 historic aerial photograph timeline:

- 1937 - area was undeveloped tidal flat
- 1947 – 1949 'North Coast Guard housing' existed in northwest corner of IR Site 31,
- 1953 – a warehouse was built on site, beginning the industrial storage
- 1959 to 1985 – no changes
- 1989 to 1993 - Marina Village Housing was built on site. Current site condition

Summary of Previous Investigations

BRAC PMO WEST

Data were collected at IR Site 31 during five previous investigations at the site:

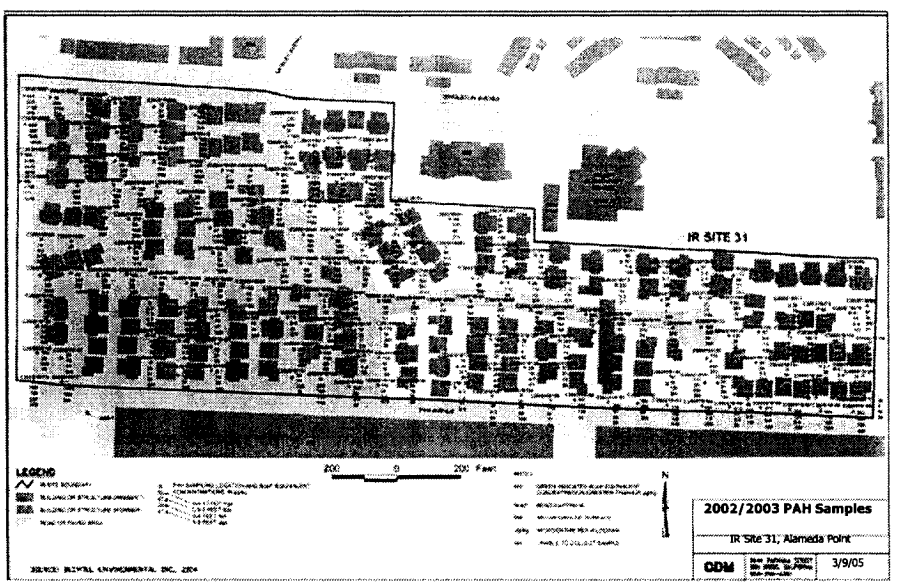
- Phase 1 and Phase 2 of the environmental baseline survey (1993-1994)
- soil gas sampling and air sampling (1990-2001).
- IR Program investigations at IR Site 25 (2001-2004)
- PAH Background Study , August 2002
- As part of a refined PAH assessment, August 2003

Summary of Historical Soil Data

BRAC
PMO WEST

The following soil samples have yielded usable data for the RI:

- Two soil samples collected from two locations during the EBS were analyzed for pesticides, PCBs, and metals (1994);
- In 2002, 43 soil samples from 12 locations and analyzed for PAHs.
- In 2003 a total of 648 soil samples collected from 163 borings and analyzed for PAHs.



Summary of Historical Groundwater Data

BRAC PMO WEST

Groundwater samples have yielded usable data for this RI at IR Site 31:

- Three wells located on site are part of the Site 25 Quarterly Groundwater Monitoring program since 2002.
- In the summer of 2004, three additional onsite wells were installed as part of the Site 25 quarterly groundwater monitoring program

What are the data gaps ?

BRAC PMO WEST

Soil

- A soil data gap exists because
  - IR Site 31 was previously used for storage of unknown materials,
  - there are limited soil data for non-PAH SVOCs, VOCs, PCBs, pesticides and metals.

Groundwater

- Groundwater data gaps
  - to assess whether any site-specific releases have impacted groundwater beneath the site.
  - there is limited SVOC, pesticide, and PCB groundwater data

Sampling Rationale
(Soil)

BRAC
PMO WEST

- 50 soil borings are proposed for analytical sampling to:
  - characterize the site
  - provide sufficient soil data to conduct human-health and ecological risk assessments
  - Soil samples will be collected from three depth intervals in each boring, prior to encountering groundwater (0-2, 2-4, 4-8)
  - Soil boring locations were based on a grid pattern
  - Soil samples will be analyzed for: non-PAH SVOCs, VOCs, PCBs, pesticides and metals
- 6 additional borings are proposed for:
  - soil physical parameters and analyzed for: Density and moisture, Grain size, Hydraulic conductivity, Total Organic Carbon (TOC), and Air permeability

Sampling Rationale
(groundwater)

BRAC
PMO WEST

6 monitoring wells are proposed for analytical sampling to determine whether there has been a chemical release to groundwater that is unique to IR Site 31 and unrelated to the area-wide benzene groundwater plume.

Samples from the six existing monitoring wells will be analyzed for: SVOCs, Pesticides, and PCBs

- VOC results from the 2004 quarterly sampling of the on-site monitoring wells will be used

Human Health Risk Assessment
(Soil)

BRAC
PMO WEST

Routes of potential soil exposure are the following:

- **Residential** - exposure routes include incidental soil ingestion, dermal contact with soil, inhalation of particulates from soil, inhalation of vapors in indoor and outdoor air (from soil and groundwater), and ingestion of home grown produce;
- **Occupational** - exposure routes include incidental soil ingestion, dermal contact with soil, inhalation of particulates from soil, and inhalation of vapors in indoor and outdoor air;
- **Construction** - exposure routes include incidental soil ingestion, dermal contact with soil, inhalation of particulates from soil, and inhalation of vapors in ambient air.

Human Health Risk Assessment
(groundwater)

BRAC
PMO WEST

The HHRA for groundwater exposure assumes the following:

- If no new on-site source for groundwater contamination is identified, then the total risk will be calculated by adding the human health risks for the OU-5 benzene groundwater plume to the soil risk.
- If a chemical release to groundwater is identified as unique to IR Site 31 and unrelated to the area-wide groundwater plume, then the total risk will be calculated by calculating a site specific groundwater risk and adding it to the soil risk.

Schedule

BRAC
PMO WEST

- Draft RI Work Plan (WP) submitted for Agency review April 2005.
- Draft Final RI WP, including RTCs, submitted for Agency review August 2005.
- Final RI WP September 2005.
- Perform fieldwork Late September 2005
- Draft RI Report submitted for Agency review Spring 2006
- Draft Final and Final RI Reports, including RTCs, submitted for Agency review Summer 2006

ATTACHMENT B-5

FEBRUARY 2005 BCT ACTIVITIES UPDATE

(One Page)

February 2005 BCT Activities Update
For March 14, 2005 RAB

I. Monthly BCT Meeting, February 15, 2005

A. Presentation on the New "One Volume" Format for the Spring 2005 Annual Report:
Navy Contractor ITSI presented the new "one-volume format" for the Annual Basewide Groundwater Monitoring Report. The report has been reduced from twelve volumes to one volume. BCT members provided comments and suggestions on screening levels and better graphical presentation of the groundwater plumes.

B. Presentation on the Draft Site 27 RI Report:
The objective of the presentation was to review the results of the RI conducted at Site 27. Site 27 is located in the southeast area of former NAS Alameda adjacent to Seaplane Lagoon. The original site was 2.2 acres in size and this was expanded to 15.9 acres.

Building 168, an 110,000 square foot warehouse, is currently in use. Building 601 may have formerly housed an oil/water separator and is currently used as a machine shop. The site also includes a washdown area north of Building 166, two oil/water separators, subsurface utilities, railroad tracks no longer in use, and open space for storage. The site also contained several Resource Conservation and Recovery units and underground storage tanks. Please see Handout from March RAB for more information.

C. Review Plans for Site 29 (Skeet Range) Public Meeting and review period:
Mr. Macchiarella stated that the about 700 copies of the proposed plan were distributed. The public comment period runs from February 15 through March 18. An ad was placed in several local newspapers. The public meeting will be held on March 7th from 6:30 to 8:00 pm in Room 201.

Mr. Macchiarella reviewed the format of the public meeting. The Navy will provide information on the site in a brief presentation that will be recorded by a court reporter. The public will then be invited to ask questions and receive responses, neither of which will be recorded. The public will then be invited to provide any comment to be recorded by the court reporter. These comments will be addressed in the responsiveness summary included in the Record of Decision. .

D. Handout and discuss updated entire Alameda Point SMP Schedule:
Navy Contractor distributed an updated BCT schedule that included all extensions on documents. Ms. Cook requested that the distribution date be included on the schedule. Ms. Liao requested a two week extension to the OU-1 Draft FS Comment deadline. BCT members concur with the request provided that the extension would not affect any other activities.

Mr. Macchiarella stated that the first draft of the site management plan (SMP) schedule would be submitted in June 2005. Ms. Cook stated that the SMP schedule can be discussed at the April BCT meeting and at the May RAB meeting.

SulTech

A Joint Venture of Sullivan Consulting Group and Tetra Tech EM Inc.

TRANSMITTAL/DELIVERABLE RECEIPT

Contract No. N68711-03-D-5104 Document Control No. TC . B010 . 12098

TO: Contracting Officer
Karen Rooney, Code 02RE
Naval Facilities Engineering Command
Southwest Division
1230 Columbia Street, Suite 870
San Diego, CA 92101-8517

DATE: 05/19/05
CTO: 0010
LOCATION:
Alameda Point, Alameda, California

FROM: **Steven Bradley**, Contract Manager

DOCUMENT TITLE AND DATE:
Final March 14, 2005 Restoration Advisory Board Monthly Meeting Summary

TYPE: ☐ Contractual Deliverable ☒ Technical Deliverable (DS) ☒ Other (TC)

VERSION: Final (e.g., Draft, Draft Final, Final) REVISION #: NA

ADMIN RECORD: Yes ☒ No ☐ CATEGORY: Confidential ☐

SCHEDULED DELIVERY DATE: 4/25/05 ACTUAL DELIVERY DATE: 05/20/05

NUMBER OF COPIES SUBMITTED TO NAVY: O/5C/4E

O = original transmittal form
C = copy of transmittal form
E = enclosure

COPIES TO: (Include Name, Navy Mail Code, and Number of Copies)

NAVY:	SulTech:	OTHER:
T. Macchiarella (BPMOW.TM)	File/Doc Control	
O/1E	1C/1E (w/QC)	
J. Howell-Payne (BPMOW.JH)	Doug Davenport	
1C + letter only	1C/1E	
Nars Ancog (03EN.NA)	Lona Pearson	
1C + letter only	1C/1E	
Diane Silva *(05GIH.DS)	Jeanette Anderson	
3C/3E	1C/1E	

Date/Time Received

*Admin Record Recipient

rev 10/01/03