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**COMPREHENSIVE LONG-TERM ENVIRONMENTAL
ACTION NAVY
CLEAN II**

**FINAL
INVESTIGATION-DERIVED WASTE
MANAGEMENT PLAN
MARINE CORPS AIR STATION
EL TORO, CALIFORNIA**

CTO-0059

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ACRONYMS/ABBREVIATIONS

| | |
|---------|---|
| BNI | Bechtel National, Inc. |
| Cal/EPA | California Environmental Protection Agency |
| CFR | <i>Code of Federal Regulations</i> |
| CLEAN | Comprehensive Long-Term Environmental Action Navy |
| CRWQCB | California Regional Water Quality Control Board |
| CTO | Contract Task Order |
| DMP | Data Management Plan |
| FSP | Field Sampling Plan |
| GAC | granular activated carbon |
| IDW | investigation-derived waste |
| IDWMP | Investigation-Derived Waste Management Plan |
| LDRs | Land Disposal Restrictions |
| MCAS | Marine Corps Air Station |
| mg/kg | milligrams per kilogram |
| PPE | personal protective equipment |
| QAPP | Quality Assurance Project Plan |
| RAC | Remedial Action Contract |
| RAWP | Risk Assessment Work Plan |
| RCRA | Resource Conservation and Recovery Act |
| RI/FS | Remedial Investigation/Feasibility Study |
| SHSP | Site-Specific Health and Safety Plan |
| SOP | Standard Operating Procedure |
| STLC | soluble threshold limit concentration |
| SWDIV | Southwest Division Naval Facilities Engineering Command |
| TCLP | toxicity characteristic leaching procedure |
| TPH | total petroleum hydrocarbons |
| TTLc | total threshold limit concentration |
| TSD | treatment, storage, and disposal |
| WET | Waste Extraction Test |
| WP | Work Plan |

ACRONYMS/ABBREVIATIONS (continued)

| | |
|-----|------------------------|
| WSA | Waste Storage Area |
| WSF | Waste Storage Facility |

Section 1 INTRODUCTION

A Phase II Remedial Investigation and Feasibility Study (RI/FS) is being performed under the Comprehensive Long-Term Environmental Action Navy (CLEAN) II Program at the Marine Corps Air Station (MCAS) in El Toro, California. The objective of the RI/FS is to address concerns expressed by federal and state regulatory agencies, to determine whether remedial actions are necessary, and to evaluate remedial solutions for the site. This Investigation-Derived Waste Management Plan (IDWMP) was prepared by Bechtel National, Inc. (BNI), as part of Contract Task Order (CTO)-0059 of contract No. N68711-92-D-4670 for the Southwest Division Naval Facilities Engineering Command (SWDIV).

1.1 PURPOSE OF PLAN

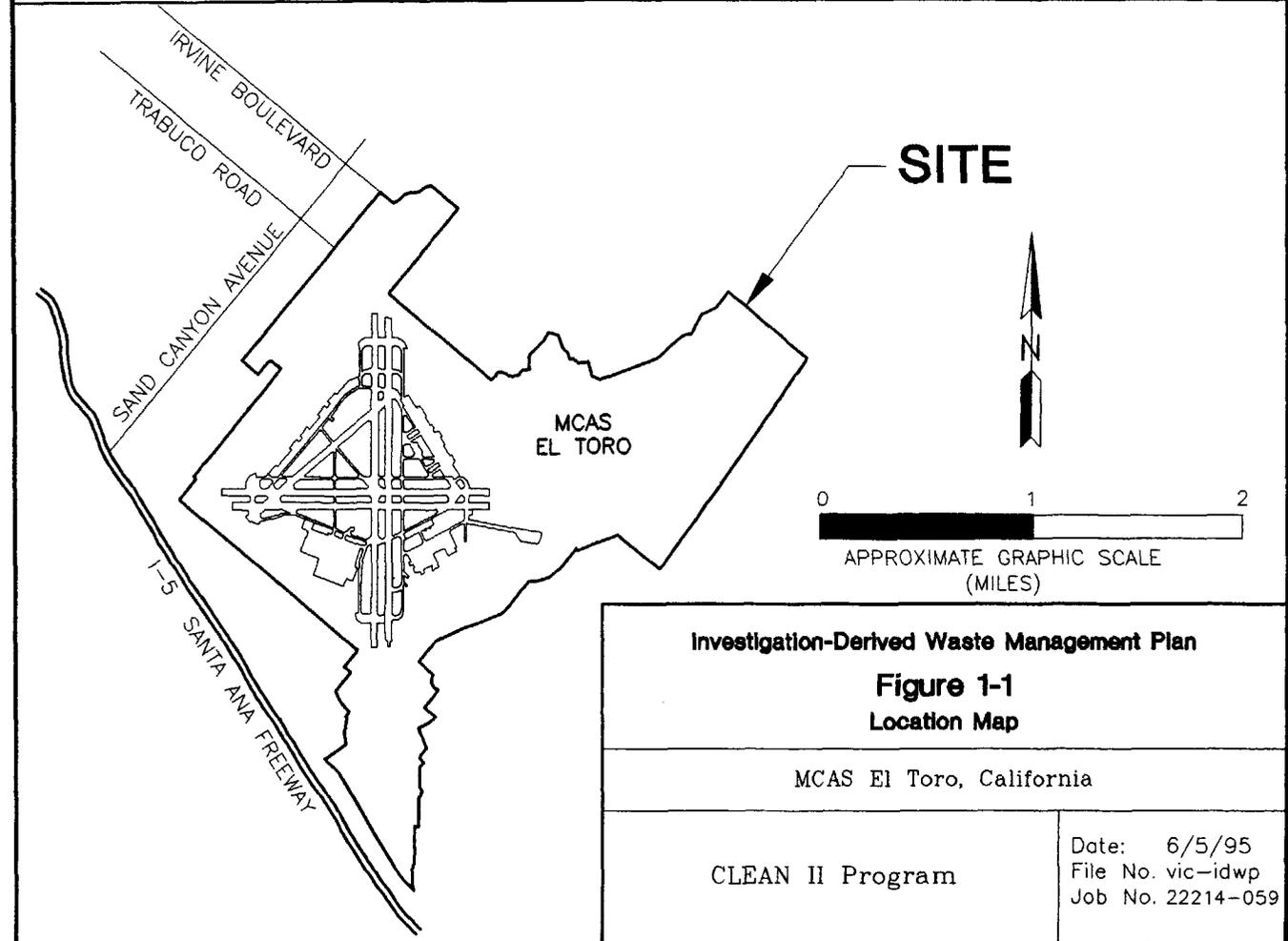
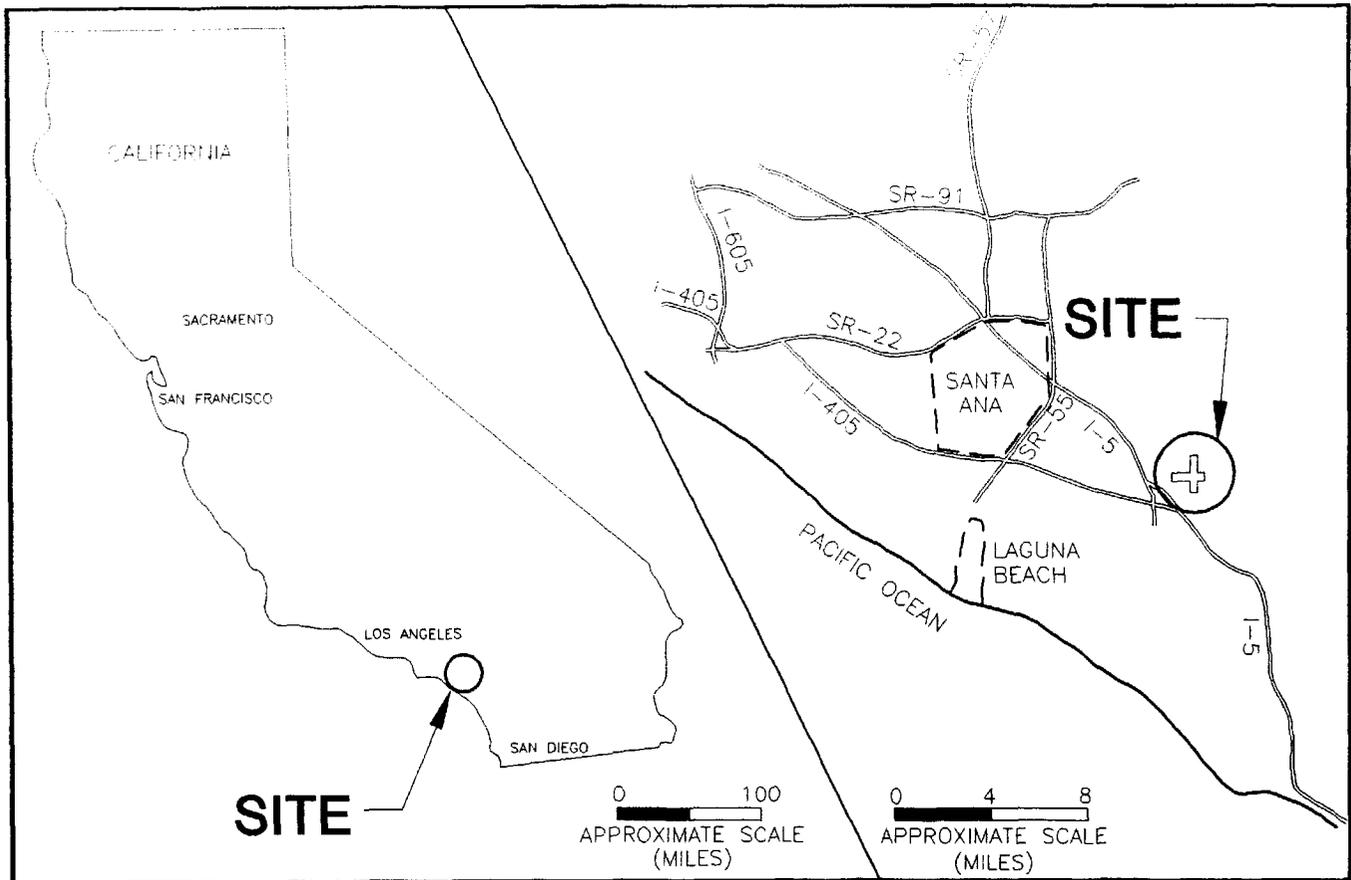
The purpose of this IDWMP is to provide guidelines for the sampling, containment, analysis, classification, handling, and disposal of investigation-derived waste (IDW) generated during various environmental field investigations at MCAS El Toro. This generic installation IDWMP will be augmented by site-specific amendment(s) as specific investigation(s) or as other task(s) require.

1.2 PROJECT BACKGROUND

MCAS El Toro is located in Orange County, California, approximately 8 miles southeast of the city of Santa Ana and 12 miles inland from the city of Laguna Beach (Figure 1-1). The station comprises runways, aircraft maintenance and training facilities, housing, shopping facilities, and other support facilities totaling 4,471 acres. For over 50 years, aviation activities at the station have generated waste oils, paint residues, hydraulic fluids, used batteries, and other wastes (some of which have been disposed on-site). Previous studies have indicated areas impacted by these contaminants. The current Phase II RI/FS is planned to characterize the nature and extent of contamination detected during these previous studies.

1.3 SITE HISTORY

In March 1943, MCAS El Toro was commissioned as a Marine Corps pilot fleet operation training facility. In 1950, MCAS El Toro was selected for development as a master jet station and permanent center for Marine Corps aviation on the west coast to support the operations and combat readiness of Pacific Fleet Marine Forces. Since commissioning, MCAS El Toro has been utilized for aviation activities. Other historic base activities include plating, sewage treatment, and incineration of trash. These activities have generated waste oils, paint residues, hydraulic fluid, used batteries, and other wastes. Since 1985, MCAS El Toro has taken actions to assess effects of its activities on the surrounding environment and to remediate areas adversely affected by these activities. A brief description of past disposal and chemical releases at each site is in the Phase I RI Technical Memorandum (Jacobs Engineering 1991a).



1.4 ASSOCIATED DOCUMENTS

The following documents from MCAS El Toro will be utilized for this activity:

- Draft Waste Management Plan (Jacobs Engineering 1991a),
- Addendum to the Draft Waste Management Plan (Jacobs Engineering 1991b),
- Meeting Minutes with Regulatory Agencies (Jacobs Engineering 1991c),
- Meeting Minutes with Regulatory Agencies (Jacobs Engineering 1991d),
- Meeting Minutes with Regulatory Agencies (Jacobs Engineering 1991e), and
- Project Note Memorandum (Jacobs Engineering 1994).

This document is intended for use in conjunction with associated MCAS El Toro Phase II RI/FS plans, including:

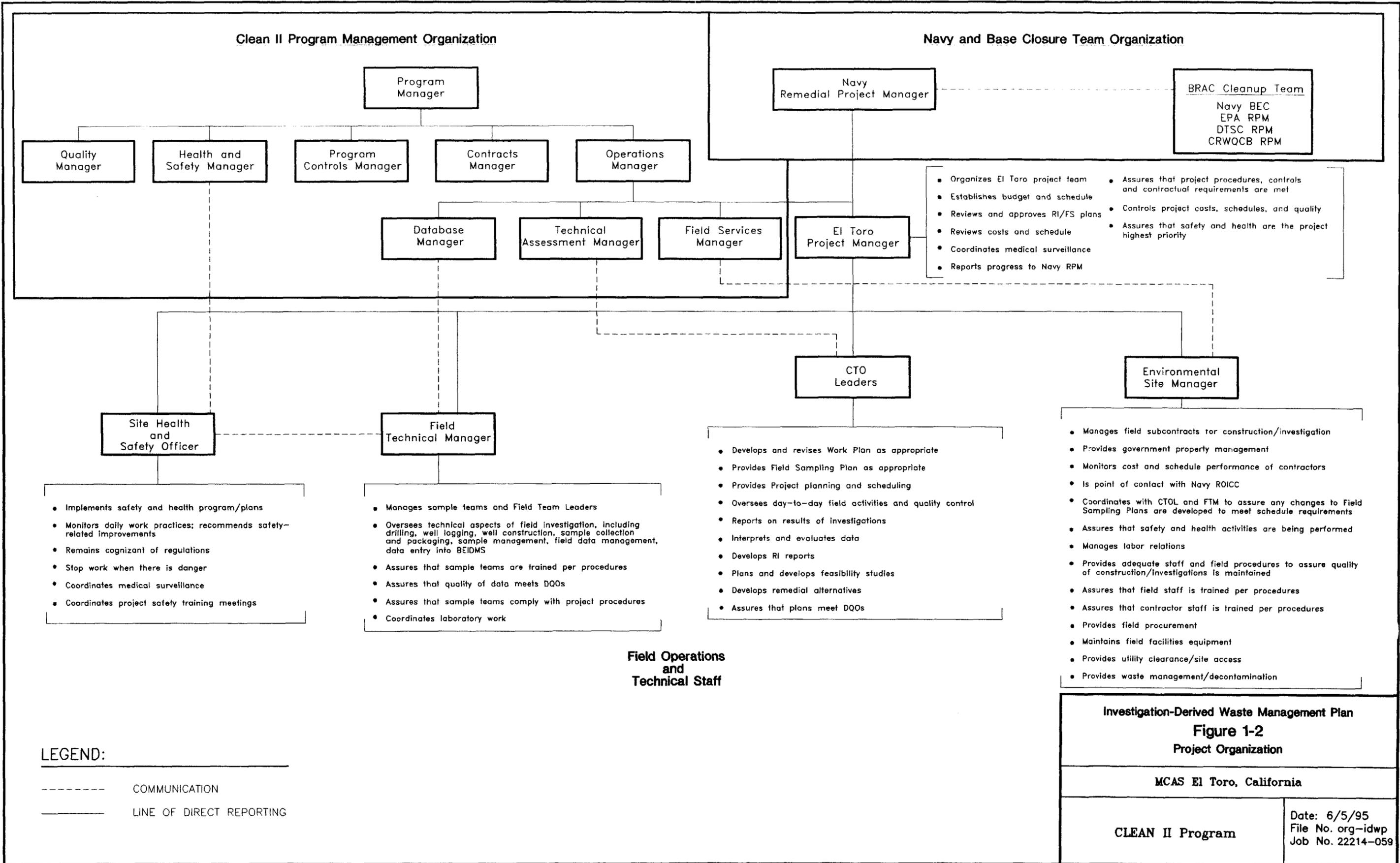
- Work Plan (WP) – summarizes general background and presents rationale for Phase II RI/FS efforts (BNI 1995a);
- Field Sampling Plan (FSP) – summarizes field methods and analytical techniques to be applied for the Phase II RI/FS (BNI 1995b);
- Quality Assurance Project Plan (QAPP) – summarizes data measurement objectives, sample collection procedures, and data quality management procedures (BNI 1995c);
- Data Management Plan (DMP) – summarizes the procedures for managing data collected during the Phase II RI/FS efforts (BNI 1995d);
- Risk Assessment WP (RAWP) – presents the procedures for assessing risks to human health and the environment (BNI 1994);
- Site-Specific Health and Safety Plan (SHSP) Supplement – summarizes measures to protect site workers health and safety (BNI 1995e).

The field activities to be conducted at each site are summarized in site-specific FSPs (BNI 1995b). These site-specific plans identify the subject sites, contaminants of concern, and the waste types expected to be generated, along with any specific handling and disposal concerns applicable to that activity. Additional site background information is presented in these plans.

1.5 PROJECT ORGANIZATION

The overall project organization is presented in Figure 1-2.

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Section 2

WASTES TO BE GENERATED

IDW from the Phase II RI/FS field activities is expected to result from the following:

- oversized and deleterious materials (e.g., construction debris, used batteries);
- soil cuttings (e.g., soil borings, monitoring well installations, soil gas probes, hand auguring);
- samples submitted to laboratory testing for analyses (the laboratory will provide for suitable disposition of the excess sample materials);
- development, purge, and aquifer test water from the monitoring wells;
- decontamination wash water from cleaning drilling, soil gas, and sampling equipment;
- possible wet soils/sediments;
- used personal protective equipment (PPE);
- miscellaneous nonhazardous trash;
- settled solids from decontamination and other liquids;
- spent carbon material from the granular-activated carbon (GAC) system; and
- calibration standards/laboratory reagents for the portable gas chromatograph and immunoassay kits.

If additional waste streams are identified during future work activities, they will be identified in an IDWMP amendment. Efforts to segregate waste will be maximized during operations.

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Section 3

REGULATORY CRITERIA

Federal and state regulations will govern the management of IDW at MCAS El Toro. The regulatory criteria for classifying wastes are discussed in the following subsections.

3.1 FEDERAL HAZARDOUS WASTE CRITERIA

Federal waste classifications are defined in 40 *Code of Federal Regulations* (CFR) 261. After a waste has met the definition of a solid waste (40 CFR 261.2 and 40 CFR 261.4a) and is determined not to be an excluded waste (40 CFR 261.4b), it will become a hazardous waste if it is a listed waste (40 CFR 261.31 to 261.33). If the waste is not a listed waste, it still may be considered a hazardous waste due to its hazardous characteristics (40 CFR 261.21 to 261.24), which include ignitability, corrosivity, reactivity, and toxicity. The procedures specified in 40 CFR 262.11 will be followed to determine whether the waste is hazardous or nonhazardous.

Listed waste definitions are process- and industry-specific or relate to off-specification and discarded chemicals. Definitions of listed waste and characteristics of ignitability, corrosivity, and reactivity are not likely to apply to the IDW generated during the Phase II RI/FS activities as determined from previous sampling results. Toxicity will be the principal parameter to classify hazardous waste for the IDW generated during field activities at MCAS El Toro. The toxicity characteristic of a waste can be tested using the toxicity characteristic leaching procedure (TCLP) test (40 CFR part 261). The TCLP is an extraction test (for soil or for liquids containing greater than 0.5 percent solids by weight) designed to determine the mobility of the more common organic and inorganic contaminants present in a waste. Total analyte concentrations in liquids containing less than 0.5 percent solids by weight (as is expected for liquid IDW generated at the site) are compared directly with the TCLP regulatory standards. Although the regulatory threshold standards apply strictly to contaminant concentrations in the TCLP extract, total contaminant concentrations, as measured by the methods used for sample analysis, can be compared to the TCLP standards and used as a guideline to determine whether the waste associated with the sample warrants TCLP testing.

For solids, if the total concentration of an analyte is less than 20 times the TCLP regulatory standard for that compound, it can be assumed that the waste is not hazardous under the analyte toxicity criteria. However, if the total concentration of the analyte is more than 20 times the respective TCLP regulatory standard, the sample must undergo the TCLP test to determine whether or not the sample is hazardous under the toxicity criteria for that analyte. The hazardous waste determination procedure is depicted in Figure 3-1. The factor of 20 used in the evaluation described above is based on the dilution factor (20 times) involved in performing the TCLP test.

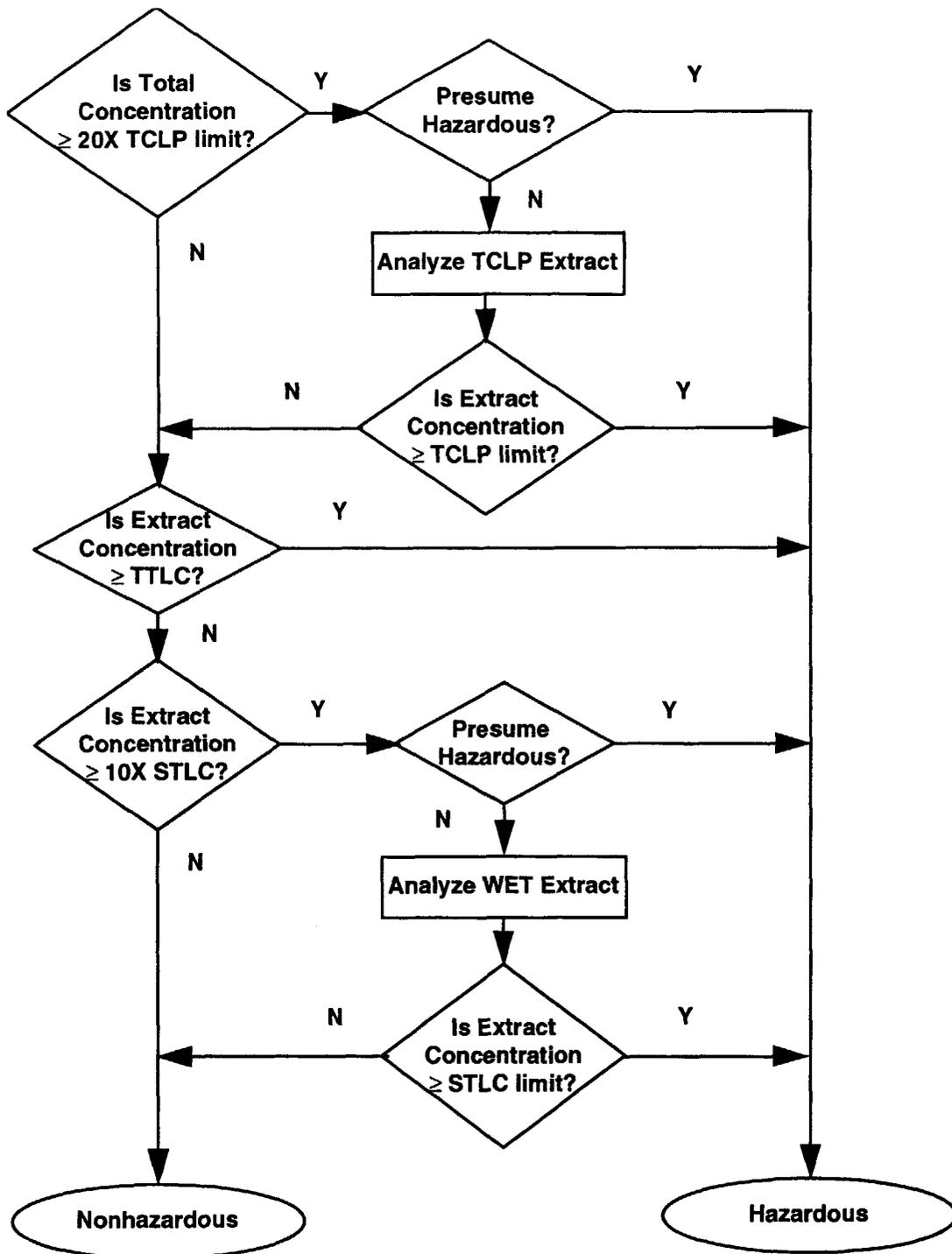


Figure 3-1
Federal and California Hazardous Waste Determination (Toxicity)

3.2 CALIFORNIA HAZARDOUS WASTE CRITERIA

In California, Title 22 of the *California Code of Regulations* (CCR) has been recodified in order to obtain Resource Conservation and Recovery Act (RCRA) authorization. The recodification uses the text and format of 40 CFR 260 to 270 as a basis, but it incorporates more stringent and broader jurisdictional amendments where applicable (Title 22 Sec. 66261.1 et. seq.).

California hazardous waste criteria include the federally listed wastes and hazardous characteristics criteria (e.g., toxicity, ignitability, reactivity, and corrosivity) described above. In addition to the TCLP criteria for toxicity, the California regulations include an additional set of standards for determining toxicity. Threshold standards, both total threshold limit concentration (TTLC) and soluble threshold limit concentration (STLC), are promulgated for 20 metals and 18 organics, mostly herbicides and pesticides.

Total contaminant concentrations are compared against the TTLC values and the results of the California Waste Extraction Test (WET) (similar to the TCLP test) are compared against the STLC values. Similar to federal requirements, total contaminant concentrations can be used as guidelines to determine whether the WET procedure is needed. However, a factor of 10 is used to compare total contaminant concentrations to STLC values due to a difference in dilution factors between the TCLP and STLC tests. The process of this comparison is illustrated in Figure 3-1.

3.3 PETROLEUM HYDROCARBON-CONTAMINATED SOIL

IDW consisting of soil contaminated with petroleum hydrocarbons is routinely generated during investigation and remediation of petroleum-product storage tanks and vehicle maintenance areas. This soil would also include drill cuttings and muds generated during the installation of monitoring wells. Since the generation of such IDW could be an integral part of many environmental activities at MCAS El Toro, the handling of this type of IDW is considered separately.

Guidelines for disposal of soil and TPH are based on the permit restrictions of available disposal or treatment facilities, the *Leaking Underground Fuel Tank Field Manual* (CRWQCB 1989), and the *Designated Level Methodology* (CRWQCB 1986) (Figure 3-2). Based on past experience, soil containing less than 1,000 milligrams per kilogram (mg/kg) of total petroleum hydrocarbons (TPH) may be disposed at a permitted off-site landfill or, with approval from the California Regional Water Quality Control Board (CRWQCB), disposed at a MCAS El Toro landfill. Other off-site facilities accept soil containing more than 1,000 mg/kg of TPH, but will treat the soil and dispose it at these permitted facilities (GE 1994). Soil with concentrations of TPH of 100 mg/kg or less has been used for routine landscaping purposes (SWDIV 1994) or possible disposal at existing MCAS El Toro landfills. In the event that soil is to be used for such land applications in areas unpermitted for land disposal, regulatory agencies, such as the CRWQCB, should be consulted prior to deposition of the soil.

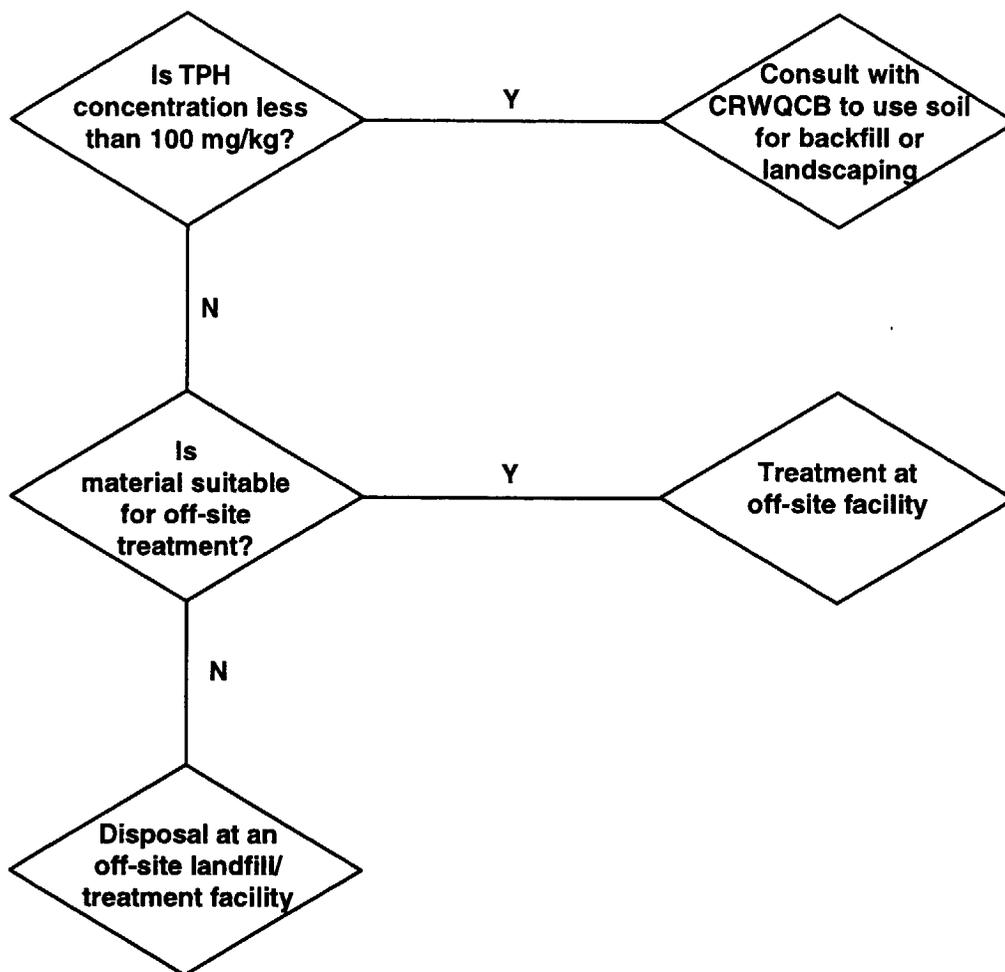


Figure 3-2
Petroleum Hydrocarbon-Contaminated Waste Handling

Section 3 Regulatory Criteria

Therefore, IDW consisting of soil containing TPH as the only contaminant has both a disposal and treatment option. Other waste streams generated during these field activities, such as PPE and used sampling supplies, would be disposed as nonhazardous waste.

These treatment and/or disposal guidelines apply only in the absence of other constituents that would make the soil a hazardous waste. If the soil contains hazardous constituents, the soil becomes a hazardous waste. The regulatory criteria for hazardous waste are described above.

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Section 4

WASTE CHARACTERIZATION

With the exception of oversize and deleterious debris generated, characterization of waste will be performed through the analysis of soils and water samples collected during the investigation. The IDW generated from each location will be segregated until analytical data is available for appropriate classification and disposition, or until an IDW subcontractor characterizes and prepares for disposal of the IDW.

The sample analyses used to characterize IDW in this manner are described as follows:

- **Waste soil cuttings from borings and wells** – The results of analyses of soil samples collected from the boreholes/wells as part of the investigation will be used to characterize these materials.
- **Decontamination water from cleaning drilling and sampling equipment** – The results of analyses of wastewater samples collected from the decontamination water as part of the investigation will also be used to characterize these materials.
- **Development, pumping test, and purge water from monitoring wells** – The results of analyses of the groundwater samples collected as part of the investigation will be used to characterize these materials.
- **Used PPE** – Used PPE generated at each site will be placed in separate drums. The PPE will be classified, handled, and disposed depending on the classification of the IDW generated at each specific site.

The analytical protocols for the samples that will be collected as part of the investigation and used to characterize the IDW discussed above will be summarized in the site-specific plans. Additional sampling and analysis of solid and liquid wastes may be required for acceptance at the treatment, storage, and disposal (TSD) facility. Representative samples may also be collected from the decontamination water generated during decontamination of drilling equipment, soil gas probes, and soil sampling equipment prior to disposal through the waste storage area (WSA) GAC system. Representative wastewater samples will be collected when:

- the phase of investigation is completed and less than 500 gallons of wastewater was generated, or
- one sample per 500 gallons of decontamination wastewater will be collected when quantities of decontamination wastewater are estimated to be more than 500 gallons.

For aquifer pumping tests, water samples will be collected at the beginning and end of the pumping test. The water produced from the pumping test will be stored in 20,000-gallon portable tanks.

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Section 5

WASTE CLASSIFICATION

Federal, state, and base regulations will govern the management of IDW at MCAS El Toro. Specific requirements will depend on the type and concentrations of the compounds detected. Five categories are defined for classifying such IDW:

- **Hazardous waste** – Waste soil, wastewater, or debris that has contaminant concentrations that meet criteria for hazardous waste, as defined by federal and state regulations.
- **Designated waste and nonhazardous waste** – Designated wastes are nonhazardous wastes that pose a threat to water quality, or state-defined hazardous waste that has been granted a variance from hazardous waste management requirements. Nonhazardous waste is nondesignated solid waste with a significant portion of putrescible or degradable material, and nonhazardous wastewater.
- **Petroleum hydrocarbon-contaminated soil** – Waste soil, including drill cuttings and muds, that has concentrations of TPH, but no other compounds that would classify the soil as a hazardous waste.
- **Inert waste** – Nonhazardous, nondesignated waste without significant quantities of putrescible or degradable matter.
- **Radioactive and mixed waste** – Waste soil, wastewater, or debris that emits radiation above normal environmental levels.

Classification will be based on analytical data from the respective borehole, sediment sample, or groundwater sample.

5.1 HAZARDOUS WASTE

Material will be characterized as hazardous waste if it exhibits the characteristic of toxicity under either the federal or the California definition. IDW usually does not meet the criteria of ignitability, corrosivity, or reactivity unless material other than soil cuttings and well development water is encountered (e.g., phase-separated petroleum product). Plans for characterization and disposal of such material will be developed as needed.

The identification and characterization of waste that exhibits the characteristic of toxicity will be performed through the analysis of soils and water samples collected during the investigation. Soil cuttings and development water from each location will be segregated until analytical data is available for appropriate classification and disposition.

Procedures used to determine if waste is hazardous, based on toxicity, are summarized in the flowcharts presented as Figures 3-1 and 3-2 for waste soil and wastewater, respectively, and are described below.

5.2 DESIGNATED AND NONHAZARDOUS WASTE

For waste containing detectable concentrations of contaminants, a determination will be made if it is considered to be hazardous by either federal or California criteria. If the

waste is determined to be nonhazardous, the waste drum will be classified and labeled as designated waste (soil and debris) or nonhazardous waste (wastewater or groundwater).

5.3 PETROLEUM HYDROCARBON-CONTAMINATED SOIL

Handling of soil containing detectable concentrations of TPH must be assessed on a case-by-case basis. In general, soil containing TPH in concentrations below 100 mg/kg is considered nonhazardous. Soils that exceed the 100 mg/kg concentration level can have several treatment and disposal options as described in Section 3.3.

5.4 RADIOACTIVE WASTE

If the gross radioactivity (alpha, beta, and gamma) reported for samples representative of the waste is elevated above background levels, radioactive material will be segregated from the IDW (typically these materials are metallic and should consist of instrument gauges at MCAS El Toro). Determination of natural background counts will be conducted in accordance with CLEAN II Standard Operating Procedure (SOP) 20. Segregated radioactive materials will be disposed at an appropriate repository.

If the IDW is determined to be radioactive and hazardous based on toxicity characteristics, the radioactive materials will be physically segregated and the segregated waste will be handled appropriately as radioactive or hazardous waste..

5.5 INERT WASTE

If contaminants are not present at concentrations above detection limits or, in the case of metals, are present at concentrations similar to background levels, the waste will be designated as inert. This definition of inert should not be confused with the classical chemical definition of inert (i.e., limited reactivity).

Section 6

WASTE HANDLING AND DISPOSAL

This section discusses Phase II RI/FS waste handling documentation and disposal control issues. Additionally, waste generated and stored during Phase I RI/FS field activities is discussed.

6.1 PHASE I REMEDIAL INVESTIGATION/FEASIBILITY STUDY WASTE

A waste storage facility (WSF) was constructed at MCAS El Toro for long-term storage of drill cuttings and solids generated from drilling mud and wastewaters with a high solids content during the Phase I RI/FS. The WSF is an unlined, bermed, 200- by 450-foot area that is situated on top of Site 5 (Perimeter Road Landfill) (Figure 6-1). It is divided into two approximately equal cells for storage of nonhazardous and designated wastes. The north half (referred to as the "clean" area) stores nonhazardous wastes; it has a 1-foot berm. The south half stores designated wastes; it has a 3-foot berm. Phase II RI/FS nonhazardous and designated IDW will be stored at the WSA. The wastes transferred to the facility are to be stored until final treatment and disposal alternatives for the landfills have been evaluated.

6.2 INTERIM WASTE HANDLING FOR PHASE II REMEDIAL INVESTIGATION/FEASIBILITY STUDY

All drill cuttings, waste sediments, development and purge water, decontamination wash water, and used PPE will be placed in labeled Department of Transportation 17H 55-gallon drums, tanks, or roll-off bins and will be stored on-site in the designated areas (Figure 6-1). Each container of waste will be clearly marked to indicate the waste source and contents. In this way, results of individual samples can be traced back to specific waste containers. Procedures for storing, labeling, documenting, and tracking the IDW follow.

Waste containers will be placed in the WSA (as discussed below), not left at widespread points of generation. The SHSPs will also provide details of emergency response and spill-control procedures. The IDW containers will be labeled as "Investigation-Derived Waste." Disposition of IDW will be determined within a period of 90 days from the date of generation. Hazardous waste will be transported to an appropriate disposal facility before the 90-day period expires.

6.2.1 Waste Storage Area

The WSA was established during the Phase I RI/FS and will be used during Phase II RI/FS field activities. It is located on the north side of the intersection of North Marine Way and the Gate 2 entrance road, and is situated on top of Site 3 (Original Landfill) as shown on Figure 6-1. The WSA is a 482- by 123-foot concrete pad that slopes at a 1-percent cross fall toward the east/west centerline and at a 2.5-percent cross fall on the east/west centerline into a 1-foot-wide trench drain. In the event of rain, water collected within the WSA was designed to drain to the trench drain and be collected in a concrete sump (10 by 10 by 4 feet). Water from the sump could then be pumped automatically into two 22,000-gallon Baker tanks for processing by the GAC system. The WSA and the surge tank capacity of the GAC system were designed to contain and treat rainwater generated by a 25-year, 24-hour rainfall event. The WSA pad will be used to store containers of hazardous waste. Containers with nonhazardous waste will be placed on plastic sheeting spread in the unpaved areas of the WSA.

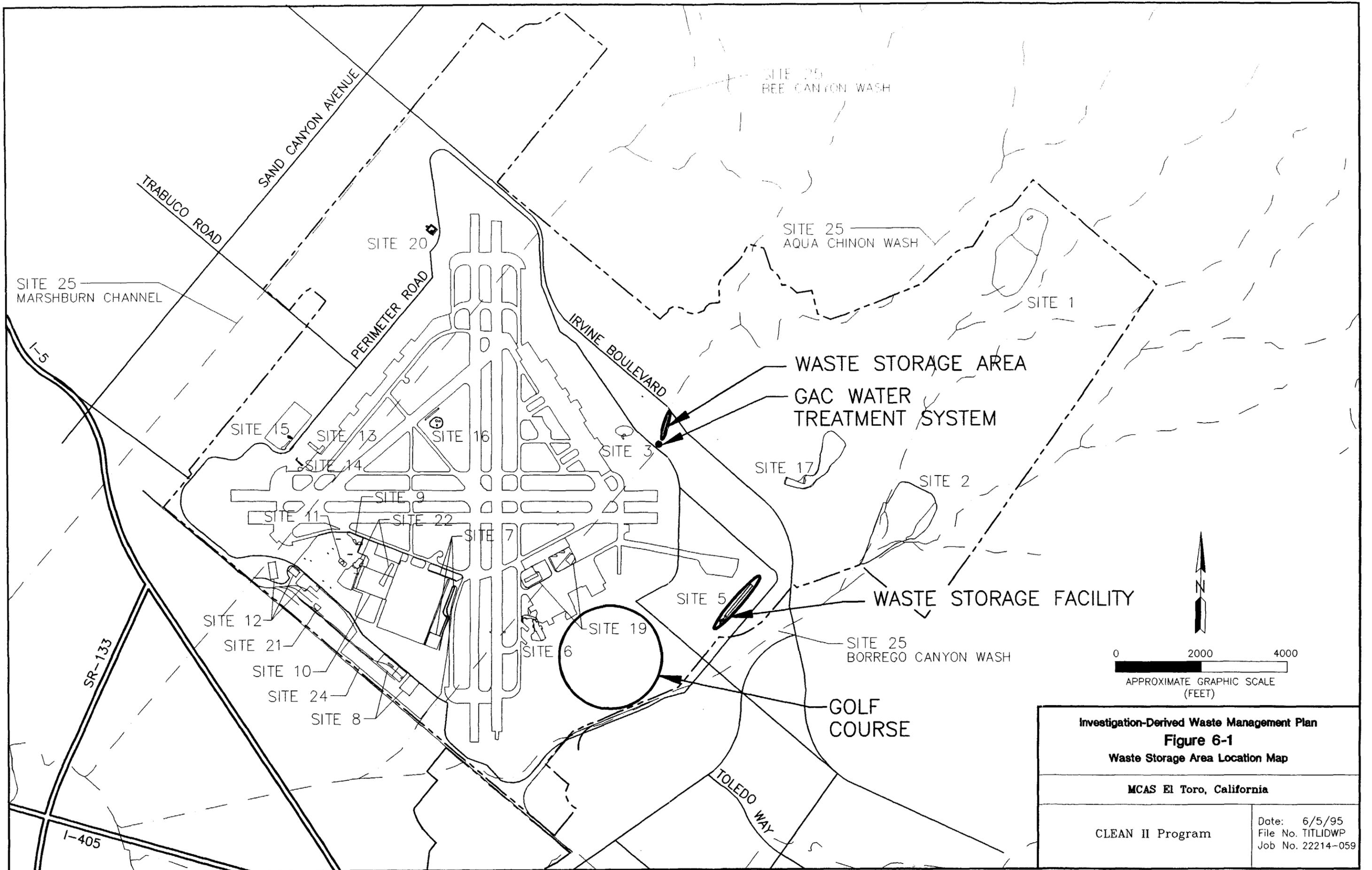
Appropriate wastewaters will be processed through the on-station GAC system during the Phase II RI/FS. The GAC system is located within the WSA, which in turn is situated on top of Site 3 (Original Landfill) as shown on Figure 6-1. The GAC system consists of three 2,000-pound-capacity GAC adsorber units connected in series (with two feedwater pumps) to "Y" strainers, two basket strainers, and one bag filter (Figure 6-2). An "Operations Manual" for this system along with discharge requirements is to be provided before CLEAN II operations begin. The GAC system will be operated by the RAC contractor and will be responsible for arranging appropriate operation, maintenance, and discharge requirements.

Per agreement with the regulatory agencies, during Phase I RI/FS field activities, rainfall runoff collected at the WSA while IDW was present was treated by the GAC system prior to discharge to the base golf course. For Phase II RI/FS field activities, it is planned to continue this process.

6.2.2 Container Labeling

Each container of IDW will be labeled to indicate the contents, source, and nature of the waste. Labeling will consist of either placing durable, adhesive labels on the container, placing appropriate information in a plastic envelope, or using paint pens to label the containers. The process of labeling 55-gallon drums will involve placing two labels on each drum, one on the exterior side of the drum and one on the inside surface of the lid. Baker tanks and roll-off bins will also be marked with a minimum of two labels. The labels will contain the following information:

- site identification,
- well or boring identification,
- date of generation,
- nature of contents (e.g., soil cuttings, purge water), and
- approximate depths from which waste was collected (for soil borings).



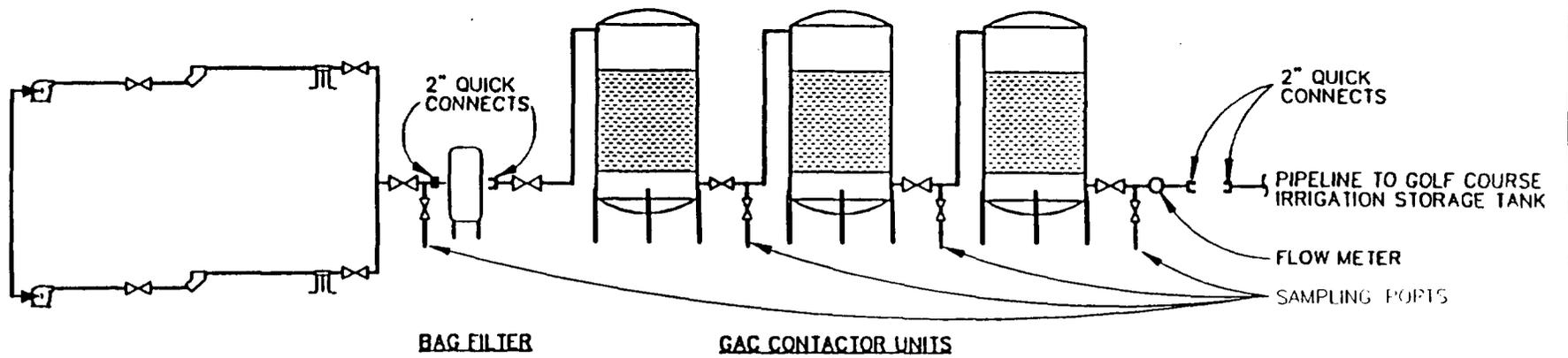
Investigation-Derived Waste Management Plan
Figure 6-1
Waste Storage Area Location Map

MCAS El Toro, California

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TREATMENT SYSTEM "Y" BASKET
 FEED PUMPS STRAINERS STRAINERS

BAG FILTER

GAC CONTACTOR UNITS

2" QUICK CONNECTS
 PIPELINE TO GOLF COURSE IRRIGATION STORAGE TANK

FLOW METER

SAMPLING PORTS

Investigation-Derived Waste Management Plan

Figure 6-2
 GAC Treatment System

MCAS El Toro, California



Bechtel National, Inc.
 CLEAN II Program

Date: 07/03/95
 File No. 95000x
 Job No. 22214

Containers storing wastes that are not yet characterized will be labeled as "awaiting results of analysis."

6.2.3 Waste Tracking

Control of the generation and disposal of IDW will be maintained by implementing a waste-tracking inventory. This system consists of inventory forms, which are completed or updated after each field event for each container of waste. The inventory form provides the following information:

- site identification,
- origination point of the waste (well or boring identification),
- waste matrix,
- approximate volume of waste,
- date of waste generation,
- date waste transferred to the WSA,
- method of storage and reference number,
- analytical results associated with the waste,
- date of additional sampling,
- date of waste classification,
- date of waste treatment or disposal, and
- method of disposal.

A copy of the waste tracking form is provided as Figure 6-3. Disposition of the IDW will be determined during a period of 90-days following generation; hazardous waste will be disposed at an appropriate facility before the 90-day period expires.

6.2.4 Waste Sample Control

Documentation and tracking protocols for waste samples will consist of properly handling and documenting the sample shipment according to the CLEAN II SOP 9, Sample Containers, Preservation, and Handling; and SOP 10, Sample Custody, Transfer, and Shipment. Sample containers will be labeled with the following information:

- site identification,
- well or boring identification,
- sample ID number,
- sample depth (if applicable),
- date and time of sample collection,
- media type,

- analytical method, and
- preservative, if applicable.

Waste sample tracking will be documented in the site investigation sample collection notebook, described in CLEAN II SOP 10, Sample Custody, Transfer, and Shipment.

6.3 WASTE DISPOSAL

Following classification, the waste in each container will be handled and disposed according to its classification, as described below. Additional sampling and analysis may be required for TSD facility acceptance at both hazardous and nonhazardous waste facilities. A Uniform Hazardous Waste Manifest shall be prepared for every hazardous waste shipment going off-station to an authorized disposal facility (Figure 6-4). The manifest shall be signed by an authorized representative of the MCAS El Toro Environmental Department. Waste classifications and disposal options are summarized in Figure 6-5.

California regulations relate waste classifications with classes of Waste Management Units. Designated wastes must be disposed in Class II or higher facilities. Nonhazardous solid wastes must be disposed in Class III or higher facilities. Petroleum hydrocarbon soils will be treated or disposed at facilities permitted to handle this waste. Inert wastes may be disposed in unclassified disposal facilities.

6.3.1 Hazardous Waste

Federal and California Land Disposal Restrictions (LDRs) are in effect for most hazardous wastes. Based on the results of hazardous waste testing, the LDRs will need to be identified for all contaminants that are considered hazardous. Due to the scope of LDRs, it is not practical at this time to identify LDRs for all potential contaminants that may be encountered. After LDRs have been determined, off-site facilities licensed to accept such waste will be identified; disposal options will be presented to the SWDIV Remedial Project Manager and Contracting Office; and transport will be arranged for disposal of this waste at the facility selected by the Navy.

6.3.2 Nonhazardous Waste

Nondesignated, nonhazardous solid waste shall either be transported to a Class II or Class III facility permitted to accept the material or used as cover material for one of the landfill sites at MCAS El Toro. In some cases, nonhazardous soils may be spread on the ground at the site of generation. This will be done only with regulatory and Navy approval. Nonhazardous wastewater shall be disposed through the GAC system or the base sanitary sewer system (after receiving authorization from the Navy).

Section 6 Waste Handling and Disposal

Press Print or Type Form designed for use on nine (9) inch typewriter.
 and Front of Page 7

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CA6171002320P Manifest Document No. _____

2. Page 1 of _____ information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address CG, MCAS EL TORO (CODE 1AW), P.O. BOX 95001, SANTA ANA, CA 92709-5001

4. Generator's Phone (714) 726-2164

5. State Manifest Document Number 90420296

6. State Generator's ID HAHQ316-0319116

7. Transporter 1 Company Name _____ 8. US EPA ID Number _____ 9. State Transporter's ID _____

10. Designated Facility Name and Site Address _____ 11. US EPA ID Number _____ 12. State Facility's ID _____

13. Facility's Phone _____

| 11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) | 12. Container Type | 13. Total Quantity | 14. Unit Wt/Vol | 15. Waste No. |
|--|--------------------|--------------------|-----------------|--------------------|
| a. _____ | _____ | _____ | _____ | State EPA/Other |
| b. _____ | _____ | _____ | _____ | State EPA/Other |
| c. _____ | _____ | _____ | _____ | State EPA/Other |
| d. _____ | _____ | _____ | _____ | State EPA/Other |

16. Additional Description for Materials Listed Above _____

17. Handling Codes for Wastes Listed Above
 a. _____ b. _____
 c. _____ d. _____

18. Special Handling Instructions and Additional Remarks _____

19. GENERATOR'S CERTIFICATION: I have certified that the contents of this assignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by Highway according to applicable international and national government regulations.
 If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name _____ Signature _____ Month Day Year _____

20. Transporter 1 Acknowledgement of Receipt of Materials
 Printed/Typed Name _____ Signature _____ Month Day Year _____

21. Transporter 2 Acknowledgement of Receipt of Materials
 Printed/Typed Name _____ Signature _____ Month Day Year _____

22. Discrepancy Indication Space _____

23. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
 Printed/Typed Name _____ Signature _____ Month Day Year _____

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802 WITHIN CALIFORNIA CALL 1-800-952-7550

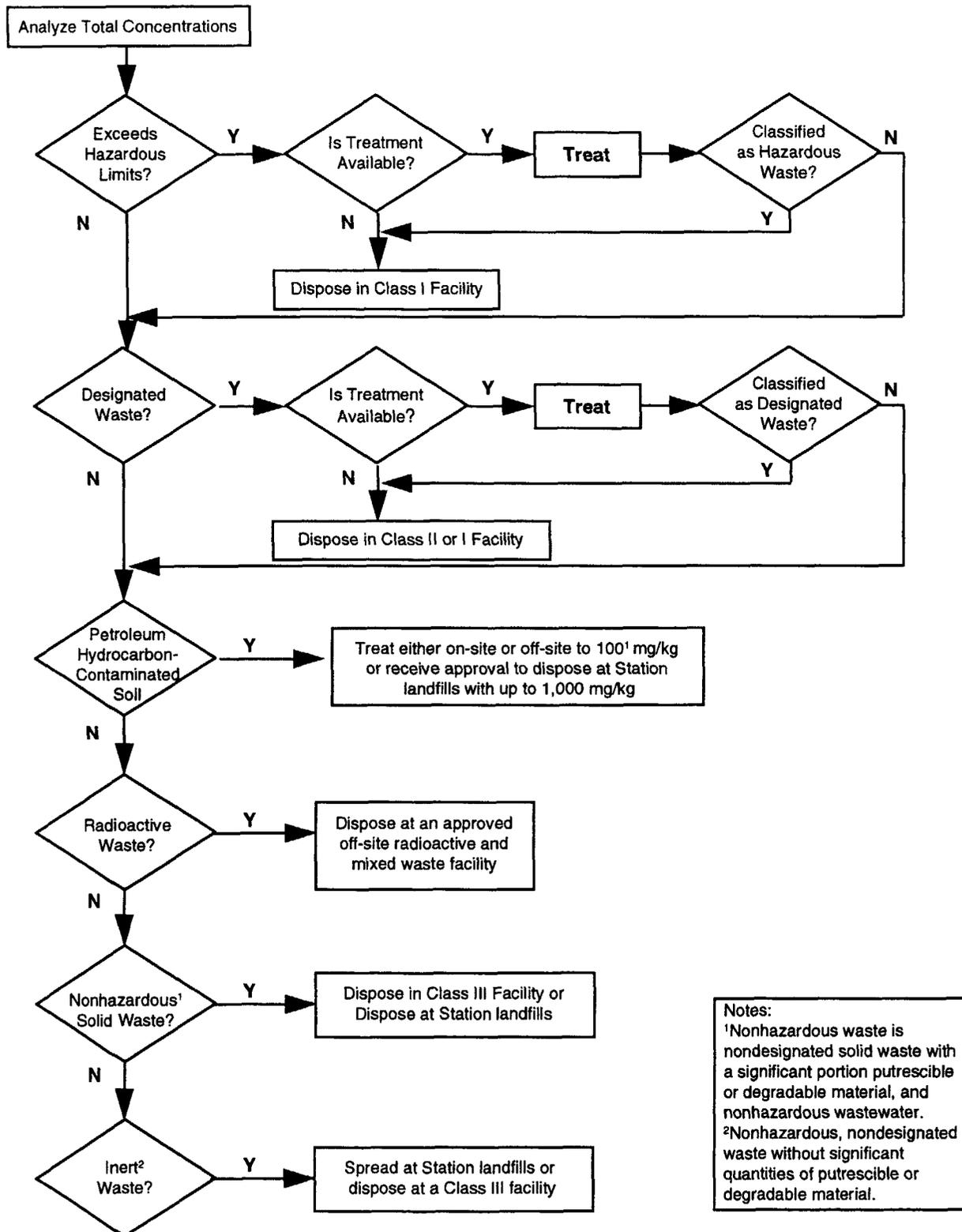
RECEIVED BY _____

FA C I L I T Y

WB 8022 A
 PA 8700-22

Do Not Write Below This Line

Figure 6-4
 Uniform Hazardous Waste Manifest



Notes:
 ¹Nonhazardous waste is nondesignated solid waste with a significant portion putrescible or degradable material, and nonhazardous wastewater.
 ²Nonhazardous, nondesignated waste without significant quantities of putrescible or degradable material.

**Figure 6-5
 Waste Classification and Disposal**

Section 6 Waste Handling and Disposal

6.3.3 Designated Waste

Waste soil (including drill cuttings) and debris that are classified as designated waste shall be transported to a disposal facility licensed to accept such wastes, either Class I or II facilities.

6.3.4 Petroleum Hydrocarbon-Contaminated Soil

Petroleum hydrocarbon-contaminated soil may be used in routine land applications if the concentrations of TPH are 100 mg/kg or less, as described in Section 3.3. Soil contaminated with higher concentrations of TPH will either be treated with an approved treatment system capable of treating to 100 mg/kg or taken off-site for disposal at a licensed facility. Treatment systems may be on-site or off-site and commonly involve thermal desorption or bioremediation. If the CRWQCB concurs, soil containing up to 1,000 mg/kg may be disposed at MCAS El Toro landfills.

6.3.5 Inert Waste

Inert waste will be spread at the source, if permitted. Otherwise, it will be disposed at a Class III disposal site.

6.3.6 Radioactive Waste

Off-site facilities licensed to accept radioactive wastes will be identified, and transport will be arranged for disposal of these wastes.

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Section 7 REFERENCES

- Bechtel National, Inc. 1994. *Draft Risk Assessment Plan Phase II Remedial Investigation/Feasibility Study*. Marine Corps Air Station El Toro, California.
- . 1995a. *Revised Draft Work Plan Phase II Remedial Investigation/Feasibility Study*. Marine Corps Air Station El Toro, California. Prepared for Southwest Division, Naval Facilities Engineering Command.
- . 1995b. *Draft Field Sampling Plan Phase II Remedial Investigation/Feasibility Study*. Marine Corps Air Station El Toro, California.
- . 1995c. *Draft Quality Assurance Project Plan Phase II Remedial Investigation/Feasibility Study*. Marine Corps Air Station El Toro, California.
- . 1995d. *Final Data Management Plan*. Marine Corps Air Station El Toro, California.
- . 1995e. *Final Site-Specific Health and Safety Plan Supplement Phase II Remedial Investigation/Feasibility Study*. Marine Corps Air Station El Toro, California.
- BNI. *See* Bechtel National, Inc.
- California Regional Water Quality Control Board. 1986. *The Designated Level Methodology for Waste Classification and Cleanup Level Determination (Tentative)*. October. Central Valley Region.
- . 1989. *Leaking Underground Fuel Tank Field Manual: Guidance for Site Assessment, Cleanup, and Underground Storage Tank Closure*. State of California Leaking Underground Fuel Tank Task Force. October.
- . 1994. California Regional Water Quality Control Board, personal communication with John Manotti. 13 April.
- CRWQCB. *See* California Regional Water Quality Control Board.
- Jacobs Engineering. 1991a. *Marine Corps Air Station El Toro: Installation Restoration Program Phase I Remedial Investigation. Draft Waste Management Plan*. Prepared for Southwest Division, Naval Facilities Engineering Command.
- . 1991b. Addendum to the DMP.
- . 1991c. Meeting Minutes with Regulatory Agencies. 24 July.
- . 1991d. Meeting Minutes with Regulatory Agencies. 11 and 12 September.
- . 1991e. Meeting Minutes with Regulatory Agencies. 13 and 14 November.
- . 1993a. (Risk Assessment)
- . 1994. Project Note Memorandum. 15 September.
- Jacobs Engineering Group, Inc. *See* Jacobs Engineering.
- GE. *See* Greenfield Environmental.

Greenfield Environmental. 1994. Personal communication with Kim Carter. 20 April.

Southwest Division Naval Facilities Engineering Command. 1994. Personal communications with Steve Sanford. 12 and 20 April.

SWDIV. *See* Southwest Division Naval Facilities Engineering Command.

**RESPONSE TO INVESTIGATION-DERIVED WASTE MANAGEMENT PLAN (IDWMP)
 PHASE II REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
 MCAS El Toro, California**

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| <p>Originator: Vish Parplani, Commanding General MCAS El Toro</p> <p>To: Timothy W. Latas CLEAN II Team</p> <p>Date: 28 February 1995</p> | <p>CLEAN II Program Contract No. N68-711-92-D-4670 CTO-0059 File Code: 0306</p> |
| <p><u>GENERAL COMMENTS</u></p> <p>1. The following comments are submitted on the draft IDWMP:</p> <p>a) Section 1.5 - Project Organization, Figure 1-2 - The project organization is limited to upper management level only. Additional working level management will be informative. Where is Mr. Dante Tedaldi's position?</p> | <p><u>GENERAL RESPONSES</u></p> <p>RESPONSE a): The organization chart has been replaced with a chart developed for the Phase II RI/FS work plan. Many personnel shown on this chart will be assigned in the next few months. Mr. Tedaldi provides technical review and support for the U.S. EPA.</p> |
| <p>b) Section 3.3 - Petroleum Hydrocarbon-Contaminated Soil - Figure 3-2 - It appears that a bioremediation facility is likely to be on the base. What type of bioremediation facility is likely to be on the base.</p> | <p>RESPONSE b): A portable thermal desorption system will most likely be used on-site at MCAS El Toro and may be operated by the Remedial Action Contractor (RAC) OHM Remedial Services, Inc. Figure 3-2 has been revised.</p> |
| <p>6.3 <u>Waste Disposal.</u> Add: "A Uniform Hazardous Waste Manifest shall be prepared for every hazardous waste shipment going off-station to an authorized disposal facility. Manifest shall be signed by an authorized representative of the Station Environmental Department (Block 16 of attached example).</p> | <p>RESPONSE 6.3: Incorporated statement and included sample manifest as a figure.</p> |

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PHASE II REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
MCAS El Toro, California**

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| <p>Originator: T. H. Christensen, Assistant Chief of Staff, Installation United States Marine Corps</p> <p>To: Vish Parpiani, Environmental Engineer MCAS El Toro</p> <p>Date: 28 February 1995</p> | <p>CLEAN II Program Contract No. N68-711-92-D-4670 CTO-0059 File Code: 0306</p> |
| <p>Paragraph 1.2 and Figure 1-1. Paragraph 1.2 references the site to the cities of Santa Ana and Laguna (Beach) and refers the reader to Figure 1-1 that does not show either of those two cities. Recommend they be shown on figure 1-1 to orient the reader that is unfamiliar with the area.</p> | <p>RESPONSE: Cities are shown on Figure 1-1.</p> |
| <p>Figure 3-2. Why is the only treatment option the bioremediation facility? In paragraph 6.3.4 the Tustin thermal desorption units is named as a possibility. For this figure shouldn't we leave it open to any approved treatment system that can deliver output under 100 mg/kg?</p> | <p>RESPONSE: Figure 3-2 revised and paragraph 6.3.4 revised to state treatment with an approved system capability of meeting the 100 mg/kg treatment goal. These treatment systems may be located on-site or off-site.</p> |
| <p>Paragraph 6.1 and Figure 6-1. The paragraph discusses the WSF but this feature is not highlighted on Figure 6-1.</p> | <p>RESPONSE: The WSF will be designated on Figure 6-1.</p> |
| <p>Paragraph 6.2.1, last sub-paragraph. MWR has been a reluctant user of reclaimed water. They will have to approve this use. If there is an algae bloom that affects their greens they will stop using reclaimed water at all which would require another alternative to discharge the output of the GAC system, perhaps to the sanitary sewer?</p> | <p>RESPONSE: The Remedial Action Contractor (RAC) (OHM, Inc.) will operate the GAC system and be responsible for meeting discharge requirements and coordinate reuse of the reclaimed wastewater.</p> |
| <p>Paragraph 6.3.2. What "base treatment facility?" Is this referring to the GAC system? If so call it that. If not the GAC system there is no wastewater treatment system on the station to my knowledge.</p> | <p>RESPONSE: Changed to read GAC system.</p> |
| <p>Figure 6-3. Neither petroleum hydrocarbon contaminated soil (Section 6.3.4) or radioactive mixed waste (Section 6.3.6) are in this figure. If they are important enough to warrant sections in the text they should show on the flow diagram or there should be a note as to why and how they are excluded and that their classification and disposal is handled differently.</p> | <p>RESPONSE: Petroleum hydrocarbon contaminated soil and radioactive and mixed waste include on Figure 6-5.</p> |

**RESPONSE TO INVESTIGATION-DERIVED WASTE MANAGEMENT PLAN (IDWMP)
 PHASE II REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
 MCAS El Toro, California**

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| <p>Originator: Timothy J. Evans, Counsel MCAS El Toro</p> <p>To: Vish Parpiani MCAS El Toro</p> <p>Date: 6 March 1995</p> | <p>CLEAN II Program Contract No. N68-711-92-D-4670 CTO-0059 File Code: 0306</p> |
| <p>Section 3.2 California Hazardous Waste Criteria should include cites to the California Code of Regulations (CCR) Title 22. Since we are required to follow the analysis plan, the analysis section should reference specific regulations in Title 22 CCR. I would have included them in my review, however, as you may be aware, no one on this station has a current copy. Not to worry, Counsel's office has them on order and should receive them within the next month.</p> | <p>RESPONSE: Reference to Section to 22 CCR Sec. 66261.1 et. seq. included.</p> |
| <p>Section 3.3 Petroleum Hydrocarbon-Contaminated Soil should include specific references to Title 23 Water Resources Board regulations and other applicable policy documents. The Regional Water Quality Control Board as well as the Orange County Environmental Health Division have some policy documents on this issue and Bechtel should try and get a copy of them to include in an Appendix to the DWMP. The plan should be as complete as possible to evidence the fact that the Station is doing its best to comply with federal, state, and local regulations.</p> | <p>RESPONSE: Title 23 and Regional Water Quality Control Board documents discuss cleanup of petroleum hydrocarbon contaminated soil. Off-site disposal will be based on permit restrictions of available disposal or treatment facilities.</p> <p>On-site treatment goals will require a TPH of 100 mg/kg. Disposition of the on-site treated soil will depend on site actions, but may include using treated soil for site backfill or as grading material at either Site 2, 5, or 17.</p> |
| <p>Rewrite Paragraph 2, sentence 3 of Section 3.3 Petroleum Hydrocarbon-Contaminated Soil to read "less than 1,000 milligrams per kilogram" vice "up to 1,000 milligrams per kilogram." This adds a little margin of safety.</p> | <p>RESPONSE: Comment incorporated.</p> |
| <p>Rewrite sentence 3 of Section 5.3 Petroleum Hydrocarbon-Contaminated Soil to read "as described in Section 3.3" vice "as described in Section 3.3.1." There is no Section 3.3.1.</p> | <p>RESPONSE: Comment incorporated.</p> |
| <p>Rewrite Sentence 1 of Section 6.3.4 Petroleum Hydrocarbon-Contaminated Soil to read "as described in Section 3.3" vice "as described in Section 3.3.1." There is no Section 3.3.1.</p> | <p>RESPONSE: Comment incorporated.</p> |

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PHASE II REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
MCAS El Toro, California**

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| <p>Originator: Edward J. Rumsey, Director, Engineering Division MCAS El Toro</p> <p>To: AC/S Environment and Safety (IAU)</p> <p>Date: 3 February 1995</p> | <p style="text-align: right;">CLEAN II Program Contract No. N68-711-92-D-4670 CTO-0059 File Code: 0306</p> |
| <p>Figure 3-2. Why don't we add a decision box that allows for the use of the Site 13 Thermal Desorption Unit while it is on-site. THP containing soils that are encountered during its presence or prior could be treated versus disposal at a landfill. Verify that longer contact times in the unit will allow for remediation to the 100 threshold versus the 1000 goal at Site 13.</p> | <p>RESPONSE: Figure 3-2 revised to read a decision for "an approved treatment system available (either on-site or off-site)". This allows flexibility to whether the wastes go to bioremediation thermal desorption, or similar system located on off-site.</p> |
| <p>Paragraph 6.2.1. Before disposal of water in the golf course water tank, MWR needs to be consulted. Specific concerns that they have voiced in the past is quantity and quality.</p> | <p>RESPONSE: The Remedial Action Contractor (RAC) is responsible for operation maintenance, and meeting discharge requirements. The RAC will also coordinate reuse of the reclaimed wastewater.</p> |
| <p>Paragraph 6.3.4. This doesn't match the rest of the text. Neither the text or the decision flow chart. (Figure 3-2) support this disposal method.</p> | <p>RESPONSE: Figure 3-2 and Section 6.3.4 revised to reflect "an approved treatment system" capable of meeting the treatment goal of 100 mg/kg. This allows flexibility at the time of IDW generation for appropriate treatment.</p> |

**RESPONSE TO INVESTIGATION-DERIVED WASTE MANAGEMENT PLAN (IDWMP)
 PHASE II REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
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| <p>Originator: Bonnie Arthur, Remedial Project Manager United States Environmental Protection Agency</p> <p>To: Joseph Joyce, BRAC Environmental Coordinator MCAS El Toro</p> <p>Date: 28 March 1995</p> | <p>CLEAN II Program Contract No. N68-711-92-D-4670 CTO-0059 File Code: 0306</p> |
| <p>1) Page 5-2, Section 5.4; The text indicates that gross radioactivity levels will be compared to ambient 100 ct/min. Please provide these ambient levels and indicate when the regulatory agencies reviewed/approved these levels.</p> | <p>RESPONSE 1): Radiological screening of soil samples is included in Bechtel National SOP 20 (which have been distributed to regulatory agencies). The establishment of background is documented in this SOP. The text has been changed to incorporate reference.</p> |
| <p>2) Page 6-7, Section 6.3; In most cases, EPA recommends that storage of hazardous waste not exceed 90 days.</p> | <p>RESPONSE 2): The IDW will not be classified until analytical results from the investigation or specific waste classification analyses are completed. However, the IDW will be handled and stored as hazardous waste until the analytical results are available. The start of the 90 day storage period will begin the day of generation of the IDW. All Waste classification must be completed in less than 90 day period, so appropriate disposal can occur for hazardous waste.</p> |
| <p>3) Page 6-9, Section 6.3.4; Please update whether the MCAS Tustin thermal desorption unit will be utilized for treatment of petroleum hydrocarbon-contaminated soil.</p> | <p>RESPONSE 3): Due to the uncertainty of availability of the MCAS Tustin thermal desorption unit, this section and Figure 3-2 have been revised to reflect that "an appropriate treatment system" will be used and may be located either on- or off-site. This system (whether bioremediation, thermal desorption, or other system) must be capable of meeting the 100 mg/kg treatment goal for petroleum hydrocarbon contamination.</p> |

**RESPONSE TO INVESTIGATION-DERIVED WASTE MANAGEMENT PLAN (IDWMP)
PHASE II REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
MCAS El Toro, California**

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| <p>Originator: Lawrence Vitale California Regional Water Quality Control Board - Santa Ana Region</p> <p>To: Juan Jimenez Department of Toxic Substance Control</p> <p>Date: 8 February 1995</p> | <p style="text-align: right;">CLEAN II Program Contract No. N68-711-92-D-4670 CTO-0059 File Code: 0306</p> |
| <p>Section 3. REGULATORY CRITERIA</p> <p>Page 3-3, Petroleum Hydrocarbon-Contaminated Soil. The first sentence of the second paragraph, regarding no specific guidelines or requirements concerning soil contaminated with petroleum hydrocarbons (TPH), should be deleted. There are guidelines and requirements regarding TPH soil contamination based on site specific conditions. These requirements are based on, contaminant nature, depth to groundwater or distance to surface water, lithology, stratigraphy, surface features and other groundwater characteristics. Some of the guidance and regulatory documents include: Leaking Underground Fuel Tank Guidelines, Title 23 California Code of Regulations, Chapter 16, Underground Storage Tank Regulations, and the Designated Level Methodology, for waste classification and cleanup level determination.</p> | <p>RESPONSE: Concur with deletion of first sentence. The LUFT and Title 23 CCR are useful for establishing cleanup and will be used as a guidance for petroleum hydrocarbon contamination cleanup. The Designated Level Methodology will be consulted for hazardous waste threshold limit concentrations for waste characterization and designated levels for site cleanup to protect groundwater and surface waters. The references have been included.</p> |
| <p>Page 3-4, Figure 3-2. Another choice for petroleum hydrocarbon (TPH) contaminated soil disposal, for soils with TPH concentration above 100 mg/kg, could be disposal at one of the Base landfills, if sufficient water quality protection is provided.</p> | <p>RESPONSE: Disposal of soils with TPH concentrations of less than 100 mg/kg may occur at the station landfills. The RWQCB will be consulted if disposal of soils with greater than 100 mg/kg of TPH is recommended at the station landfills.</p> |
| <p>Page 5-2, 5.2 Designated and Nonhazardous Waste. It may be inaccurate to label drums as Designated waste. Title 23 California Code of Regulations, Chapter 16, Section 2522 Designated Waste, defines a Designated waste as, "nonhazardous waste which consists of or contains pollutants which under ambient environmental conditions in the waste management unit could be released at concentrations in excess of applicable water quality objectives, or which could cause degradation of waters of the state". Therefore, in order to classify a waste as Designated you must know where the waste will be disposed and what the water quality objectives for the disposal location are. It would be more appropriate to label the waste drums as either hazardous waste or nonhazardous and determine if the waste is Designated when the disposal location has been determined.</p> | <p>RESPONSE: Concur. The drums will be labeled as "Investigation-Derived Waste". Once analytical results are available, the IDW will be classified and appropriate disposal taken. However, from the date of collection to classification, the drummed IDW will be stored and handled as hazardous.</p> |

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| <p>Originator: Lawrence Vitale California Regional Water Quality Control Board - Santa Ana Region</p> <p>To: Juan Jimenez Department of Toxic Substance Control</p> <p>Date: 8 February 1995</p> | <p style="text-align: right;">CLEAN II Program Contract No. N68-711-92-D-4670 CTO-0059 File Code: 0306</p> |
| <p><u>GENERAL COMMENTS</u></p> <p>2. The Department is concerned over the potential conflict associated with the storage of IDW for an unspecified time period so that it can be addressed with the final remedy and 90 day storage requirement which all generators have to deal with. The Navy/Marines have to comply with laws and regulations which are substantive and may follow guidance as appropriate. (See CCR, Title 22, Division 4.5, Chapter 10 et. al., as applicable.)</p> | <p><u>GENERAL RESPONSES</u></p> <p>RESPONSE 2: Once analytical results are available, the IDW will be classified for final disposal. If the IDW is classified as hazardous, then it will be stored for less than 90 days, following generation of the waste. The IDW may be addressed with the final remedy if classified as non hazardous.</p> |

**RESPONSE TO INVESTIGATION-DERIVED WASTE MANAGEMENT PLAN (IDWMP)
PHASE II REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
MCAS El Toro, California**

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| <p>Originator: William Lee Environmental Department, MCAS El Toro</p> <p>To: Joseph Joyce MCAS El Toro</p> <p>Date: Unknown</p> | <p>CLEAN II Program Contract No. N68-711-92-D-4670 CTO-0059 File Code: 0306</p> |
| <p><u>SPECIFIC COMMENTS</u></p> | <p><u>SPECIFIC RESPONSES</u></p> |
| <p>1. Page 1-2, Figure 1-1. The figures as provided, do not have scales. Please provide.</p> | <p>RESPONSE 1: Scales added.</p> |
| <p>2. Page 3-3, Paragraph 3. See Mr. Vitale's first comments.</p> | <p>RESPONSE 2: See responses above.</p> |
| <p>Section 4. WASTE CHARACTERIZATION</p> | |
| <p>3. Page 4-1. The second bullet item on this page refers to "Decontamination water from cleaning drilling equipment." However, the associated text addresses the results of analysis for soil samples collected from boreholes/wells... Since waste soil samples are addressed in the first bullet item, I presume you mean water samples. Please correct.</p> | <p>RESPONSE 3: Corrected to read "results of analyses of wastewater samples".</p> |
| <p>4. Page 4-1. The third bullet item refers to both "Waste sediments/decontamination water from vibracore activities. Please revise the text so that it clearly demonstrates that this bullet item addresses waste characterization for both sediments and decontamination water.</p> | <p>RESPONSE 4: This bullet deleted because no vibracore activities are planned. The second bullet is revised to read "Decontamination water from cleaning, drilling and sampling equipment" to account for waste water derived from sampling equipment decontamination.</p> |
| <p>5. Page 4-1. The last paragraph mentions that "Representative samples may also be collected from the waste liquids generated during decontamination of soil gas probes and ..." The text should be expanded to state the criteria which will be used and the decision maker identified, in advance, as to when these "Representative samples" should be taken and who will make the call. I presume that the call be done in the field and documented in some form or another. Lets discuss the details.</p> | <p>RESPONSE 5: Paragraph revised to indicate wastewater samples will be collected for to represent 500 gallons of wastewater or as needed to satisfy discharge requirements.</p> |
| <p>Section 5: WASTE CLASSIFICATION</p> | |
| <p>6. Page 5-1. The first paragraph in Section 5.1, lines 2-4 contradicts the first sentence of paragraph 1. Either all the federal, state and base regulations for classifications of waste will be applicable, i.e., IDW will be defined as hazardous under the criteria of ignitability, corrosivity, or reactivity period, if they are applicable or they will not be. If the criteria applies in general it also applies to soil cuttings and well development water. The criteria applies. Please revise lines 2-4 of paragraph 1 in Section 5.1 to state this.</p> | <p>RESPONSE 6: Sentence revised to state IDW "usually does not meet the criteria of ignitability, corrosivity, or reactivity unless material other than soil cuttings and well development is encountered (e.g., phase-separated petroleum product). If toxicity criteria are exceeded (Figure 3-1), the material will be classified as hazardous. If analytical results indicate that ignitability, corrosivity, or reactivity are of concern, these analyses will be conducted.</p> |

**RESPONSE TO INVESTIGATION-DERIVED WASTE MANAGEMENT PLAN (IDWMP)
PHASE II REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
MCAS El Toro, California**

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|---|--|
| <p>Originator: William Lee Environmental Department, MCAS El Toro</p> <p>To: Joseph Joyce MCAS El Toro</p> <p>Date: Unknown</p> | <p style="text-align: right;">CLEAN II Program Contract No. N68-711-92-D-4670 CTO-0059 File Code: 0306</p> |
| <p>7. Page 5-2. Paragraph is entitled "Designated and Nonhazardous Waste". It may be inappropriate to classify and label wastes as designated. It may be classified as a special waste, if applicable, per CCR, Title 22, Division 4.5, Article 4.5 by following the requirements in Article 5, Section 66261. et. al. Lets discuss. See Mr. Vitale's comment as well.</p> | <p>RESPONSE 7: The IDW will be labeled as "Investigation-Derived Waste" until appropriate classification can be determined from analytical results which will be conducted in less than 90 days from the date of generation so the IDW are stored for less than 90 days.</p> |
| <p>Section 6. WASTE HANDLING AND DISPOSAL</p> <p>8. Page 6-1. It is the Departments understanding that all non hazardous wastes are being addressed in less than 90 days. The first paragraph states that "The wastes transferred to the facility are to be stored until final treatment and disposal alternatives for soils remediation have been evaluated." There is clearly a disconnect here. The hazardous or as it is referred to in the text "designated" wastes which are being stored in the south half of the facility have exceeded their 90 day storage limit. These inappropriately designated hazardous wastes have to move as soon as possible. There are a number of reasons for this:</p> | <p>RESPONSE 8: All IDW will be handled and stored as if it were hazardous waste. However, classification of the IDW will be determined by analytical results from the investigation or from sampling of the IDW for waste purposes. Classification will be completed in less than 90 days so appropriate disposal can take place.</p> |
| <p>1) Wastes which have regulatory requirements have to be dealt with in the time frames prescribed in the same manner by all generators.</p> | <p>RESPONSE 1): Concur.</p> |
| <p>2) There is a considerable time difference between implementation of the Phase II Work Plan and the Final Record of Decision is reached, at which time the final treatment and disposal alternatives for soils remediation will be potentially addressed. This large difference in time does not allow for a timely follow through for implementation of the generator requirements.</p> | <p>RESPONSE 2): Concur.</p> |
| <p>3) If the Navy or any Potentially Responsible Party, PRP, for that matter were investigating a site with little potential for hazardous wastes, in the Site Inspection phase for instance, the IDW materials could be presumed to be nonhazardous due to the lack of evidence. In this case, however, the sites being investigated are presumed or documented to have had a release or a threat of release. As such they have to be handled as hazardous until the sample results show them to be nonhazardous. Keep in mind that this Phase II Work Plan is written to determine extent of contamination.</p> | <p>RESPONSE 3): The IDW will not be classified until analytical results from the investigation or specific waste samples are available. The IDW will be handled and stored following hazardous waste protocols but will not be classified as hazardous unless analytical results indicate this class of waste.</p> |

**RESPONSE TO INVESTIGATION-DERIVED WASTE MANAGEMENT PLAN (IDWMP)
 PHASE II REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
 MCAS El Toro, California**

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| <p>Originator: William Lee Environmental Department, MCAS El Toro</p> <p>To: Joseph Joyce MCAS El Toro</p> <p>Date: Unknown</p> | <p>CLEAN II Program Contract No. N68-711-92-D-4670 CTO-0059 File Code: 0306</p> |
| <p>Please revise Section 6 as appropriate.</p> <p>How can the 50 cubic yards be dealt with in near future? Is it possible to include these wastes with the proposed Removal Actions? Lets discuss.</p> | <p>RESPONSE: We assume the "50 yards" refers to the Phase I RI Technical Memorandum reference to 50 yards of drummed designated wastes (page 2-53). No drums have been observed at the WSF or WSA and this drummed material was incorporated into the "burritos". The final disposition of the designated and non hazardous waste in the burritos will be assessed following the RI.</p> |
| <p>9 <u>Page 6-5.</u> See previous comments on storage of wastes. The IDW containing wastes should be labeled as hazardous until such time as they are no longer considered hazardous. This can occur by sampling results, treatment or some other acceptable manner.</p> | <p>RESPONSE 9: This IDW will not be classified as hazardous until analytical results indicate this class of waste.</p> |
| <p>10 <u>Page 6-7.</u> Please revise Figure 6-4 as follows:</p> <p>1) For the wastes which require treatment, post treatment should have an arrow/option to go through the currently designated waste decision box. I.e., if it is treated sufficiently it no longer has to go to an expensive Class I landfill.</p> | <p>RESPONSE 10 (1): Figure 6-5 revised to illustrate decisions made after treatment.</p> |
| <p>2) Is there an option to treat designated waste? If so can the treated waste be treated sufficiently to be addressed as non hazardous? These options should be included in Figure 6-3</p> | <p>RESPONSE 2): Treatment option added and decisions made after treatment.</p> |
| <p>3) See previous comments on the use of the term Designated Waste.</p> | <p>RESPONSE 3): Considered.</p> |
| <p>4) There may be additional options for non hazardous solid waste and/or treated wastes. Lets discuss.</p> | <p>RESPONSE 4): Optional add for disposal of nonhazardous solid waste at station landfill.</p> |
| <p>11. <u>Page 6-9.</u> Please add section 6.3.7 with the heading of Treated Waste. This section should identify the options for treated waste streams.</p> | <p>RESPONSE 11: Discussion of treatment added to various waste classifications, as appropriate.</p> |