OHM Remediation
Services Corp.
1202 Kettner Boulevard
San Diego, California 92101

Solid Waste Management Unit 7
Transformer Storage Area
Marine Corps Air Station
El Toro, California

SWDIV Contract No. N68711-93-D-1459 – Delivery Order No. 0070 – Revision 0
OHM Project No. 18609 – Document Control No. SW5247 – October 21, 1998

Closure Report

Appendix A - JEG RFA Background Information; Appendix B - BNI RFA Background Information; Appendix C - Tentative Reuse Parcel Location of SWMU 7; Appendix D - Site Assessment/Visit Log; Appendix E - Site Photographs; Appendix F - Laboratory Analytical Reports; Appendix G - Land Survey Data; Appendix H - Waste Manifest

Closure Report

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1202 Kettner Boulevard
San Diego, California 92101

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OHM Remediation Services Corp.
A Subsidiary of OHM Corporation

OHM TRANSMITTAL/DELIVERABLE RECEIPT

CONTRACT N68711-93-D-1459 **DOCUMENT CONTROL NO: SW5247**

TO: Contracting Officer
Naval Facilities Engineering Command
Southwest Division
Mr. Dave Jespersen, Code 57CS1.DJ
Building 131
1220 Pacific Highway
San Diego, California 92132-5101

Date: 22-Oct-98

D.O.: 70

Location: MCAS EL TORO

FROM: Stewart Bornhoft, Program Manager

Edwin Bond
Edwin G. Bond, Contracts Manager

DESCRIPTION OF ENCLOSURE: **Closure Report, Solid Waste Management Unit 7, Transformer Storage Area, dated October 21, 1998**

TYPE: Contract Deliverable ( ) ($) D. O. Deliverable (X) (Tech) Request for Change ( ) Other ( )

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Acronyms and Abbreviations

bgs	below ground surface
BNI	Bechtel National, Inc.
BRAC	Base Realignment and Closure
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CTF	Central Treatment Facility
DO	Delivery Order
DOT	Department of Transportation
DTSC	Department of Toxic Substances Control
EPA	United States Environmental Protection Agency
FS	Feasibility Study
HSP	Health and Safety Plan
IRP	Installation Restoration Program
JEG	Jacobs Engineering Group Inc.
MCAS	Marine Corps Air Station
mg/kg	milligrams per kilogram
OHM	OHM Remediation Services Corp.
PCB	polychlorinated biphenyl
PPE	Personal Protective Equipment
PR	Preliminary Review
PRG	Preliminary Remediation Goal
RAC	Remedial Action Contract
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
ROICC	Resident Officer in Charge of Construction
SOW	Scope of Work
Station	Marine Corps Air Station, El Toro
SWDIV	Southwest Division Naval Facilities Engineering Command
SWMU	Solid Waste Management Unit
TFH	Total Fuel Hydrocarbons
TPH	total petroleum hydrocarbons
TSCA	Toxic Substances Control Act
VOC	volatile organic compound
VSI	Visual Site Inspection
µg/kg	micrograms per kilogram

Section 1
Introduction

This Closure Report summarizes the results of the field remedial activities conducted at the Solid Waste Management Unit (SWMU) 7, a Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) site referred to as "Transformer Storage Area," at the Marine Corps Air Station (MCAS) in El Toro (hereinafter referred to as the "Station"), California. The work was performed by OHM Remediation Services Corp. (OHM) for the Southwest Division Naval Facilities Engineering Command (SWDIV), under Remedial Action Contract (RAC) No. N68711-93-D-1459, Delivery Order (DO) No. 0070.

Field remedial activities such as limited soil removal and confirmation soil sampling at the SWMU 7 Transformer Storage Area site were conducted per recommendations provided by Bechtel National, Inc. (BNI) in the Final Addendum to the RFA report (BNI, 1996). Field work was performed in accordance with SWDIV, the Station, and the Department of Toxic Substance Control (DTSC) approved *Draft Supplemental Work Plan, Closure of Various Temporary Accumulation Areas and RCRA Facility Assessment Sites* (OHM, 1997).

Per the Jacobs Engineering Group Inc. (JEG) RFA report, the definition of a SWMU used by the United States Environmental Protection Agency (EPA) is *"Any discrete unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released"* (JEG, 1993).

1.1 Site Location

The Station is located approximately 45 miles southeast of the city of Los Angeles in Orange County, California; 1 mile north of the intersection of Interstates 5 (Santa Ana) and 405 (San Diego) freeways. The Station covers approximately 4,738 acres. Approximately 800 acres of the Station property are currently designated for agricultural outlease. Agricultural outleased lands are located at the corners of the Station, and are used for plant nursery and crop production (MCAS El Toro, 1997). The location of the Station is shown in Figure 1-1, Facility Location Map.

The SWMU 7 site is located in the southwest quadrant of the Station, east of Bee Canyon Wash and north of railroad tracks (Figure 1-2, Location Map). The site consists of a former bermed area on the southwestern boundary of the Station. The SWMU 7 site was established for the temporary storage of old transformers (now removed) while awaiting transport to an approved off-site facility. The site is fenced, unpaved, and is approximately 80 feet long by 50 feet wide. The storage area was approximately active from 1990 through November 1995 (BNI, 1996).

The depth to groundwater in the vicinity of the SWMU 7 site was based on the available water level data collected from groundwater monitoring well 18_BGMW04B. The location of this well is shown in Figure 1-2. Based on this data, the depth to groundwater at the

SWMU 7 site is approximately 96 feet below ground surface (bgs) (Camp, Dresser, & McKee, Inc. Federal Programs Corporation, 1997).

1.2 Project Objectives

The objectives of this project were to: conduct the field remedial activities, including limited removal of surface soil in the vicinity of the former boring 007H7; and confirmation soil sampling and analysis to obtain regulatory closure of the SWMU 7 site.

1.3 Cleanup Goals

The cleanup goals established for soil removal activities at SWMU 7 site were based on the following:

- **PCBs** — PCB contaminants were determined on a site-by-site basis, based upon EPA Guidance Documents on the presumptive remedy for PCB-contaminated sites, previous El Toro clean-up goals, and/or EPA Region IX Preliminary Remediation Goals (PRGs) (EPA, 1998) (dated August 1996) for industrial land use for organic contaminants.
- VOCs, SVOCs, and Pesticide Contaminants in Soils - EPA Region IX PRG values for industrial usage.

1.4 Project Scope of Work

As stated in the *Draft Supplemental Work Plan* (OHM, 1997), the Scope of Work (SOW) consisted of the following:

- excavation of contaminated soil based upon the recommendations in the BNI Final RFA Addendum Report
- confirmation soil sampling and laboratory analysis of soil samples collected from the excavated areas
- stockpile sampling for waste disposal purposes
- off-site disposal of contaminated soil
- preparation of a Closure Report to describe and document the work performed

Section 2
Previous Investigations and Site Background

The following section summarizes the results of previous investigations at the SWMU 7 site and its background history. Background information regarding SWMU 7 site was obtained from the following documents:

- Final RCRA Facility Assessment Report, Marine Corps Air Station El Toro, California (JEG, 1993)
- Final Addendum RCRA Facility Assessment Report, Marine Corps Air Station El Toro, California (BNI, 1996)
- Final Base Realignment and Closure Cleanup Plan, Marine Corps Air Station El Toro, California (MCAS El Toro, 1997)

2.1 RCRA Facility Assessment

In 1991, JEG as part of the RFA, performed an initial Preliminary Review (PR) and a Visual Site Inspection (VSI) of 307 SWMUs within the Station. JEG also conducted a site visit to observe the current conditions of the SWMUs and performed limited site sampling.

At the SWMU 7 site, JEG identified a stained location and transformer that had leaked oil onto the unpaved soil. Based on the evidence of the leakage, sampling was recommended. At the stained location, soil samples were collected from one boring at depths of 2 and 5 feet bgs.

Results of the soil samples indicated total petroleum hydrocarbons (TPH)/total fuel hydrocarbons (TFH) less than 100 milligrams per kilogram (mg/kg) and volatile organic compounds (VOCs), pesticides, and poly-chlorinated biphenyls (PCBs) less than the EPA PRGs. Therefore, JEG recommended "no further action" for the SWMU 7 site. A copy of the SWMU 7 site VSI evaluation form and figure showing soil boring location and analytical results from the RFA report are included in Appendix A, JEG RFA Background Information.

After review of the JEG RFA report, DTSC requested additional information regarding the SWMU 7 site because one sample location was not sufficient to provide an adequate assessment of a potential release at the site. In July 1995, BNI conducted additional sampling activities at the SWMU 7 site.

A total of 18 soil samples were collected at the surface at depths of 2 feet bgs and 5 feet bgs from six boring locations. Soil borings were placed adjacent to the former JEG boring (Boring 007H1) and around a pile of degraded sand bags (stained area). The sample grid was judgmentally placed at the suggestion of the DTSC representatives during their oversight visit. One sample was collected from the soil pile, and one at a low spot adjacent to the old transformer (now removed).

TPH as diesel was detected below 100 mg/kg, therefore "no further action" for diesel was recommended by BNI. From the surface sample 007H7, PCB Aroclor 1260 was detected at a concentration of 97 micrograms per kilogram (µg/kg). Because the detected concentration of Aroclor 1260 was above the residential PRG (66 µg/kg), BNI recommended that remedial action such as limited removal of surface soils in the area of boring 007H7 be conducted by the RAC contractor at the SWMU 7 site. A copy of the SWMU 7 figure showing soil boring locations and results from the BNI Final RFA Addendum report are included in Appendix B, BNI RFA Background Information.

Installation Restoration Program (IRP) Site 12 (Sludge Drying Beds) is located approximately 60 feet northeast of the SWMU 7 site. IRP Site 12 consists of four units: Unit 1, the location of the former west sludge drying beds; Unit 2, the location of former east sludge drying beds; Unit 3, a drainage ditch; and Unit 4, the former wastewater treatment plant locations. A Phase II Feasibility Study (FS) was conducted by BNI in June 1997 to evaluate potential remedial alternatives for IRP Site 12 Unit 3 (BNI, 1997). Figure 2-1 (Vicinity Map - SWMU 7) shows the location of the IRP Site 12 boundary with respect to the SWMU 7 site.

The Station is preparing for closure in July 1999 in accordance with the Base Closure and Realignment Act of 1993 (BRAC III). The SWMU 7 site is located within an area that has been tentatively identified as part of the "Airport Support Area," according to the El Toro Community Reuse Plan (County of Orange, 1997) as shown in Appendix C, Tentative Reuse Parcel Location of SWMU 7.

Section 3
Field Activities

The following subsections describe the activities that were performed at SWMU 7. Field activities were conducted in accordance with the approved *Draft Supplemental Work Plan* (OHM, 1997).

Field activities conducted at the SWMU 7 site included a site inspection, pre-construction meeting, soil removal activities, confirmation soil sampling, and waste management.

3.1 Preparatory Work

OHM performed a site visit at the SWMU 7 site on October 10, 1997 to locate and mark the soil removal area based on the BNI RFA report drawing. Also, soil-sampling locations were marked based on the visual inspection of the site. A copy of the Site Assessment Log is included in Appendix D, Site Assessment/Visit Log.

OHM, in coordination with the Station's Resident Officer in Charge of Construction (ROICC), conducted a pre-construction meeting. The meeting addressed the Station's regulations for contractors, the construction schedule, Health and Safety coordination, construction quality control, and tenant notifications.

3.2 Soil Removal and Confirmation Sampling Activities

Soil removal activities began on October 21, 1997 and included site preparation and confirmation sampling, as specified in the *Draft Supplemental Work Plan* (OHM, 1997).

The OHM field crew marked an approximately 2½ foot by 2½ foot area around the former soil boring 007H7 location. OHM field crew removed the top 18 inches of soil using a shovel and hand picks. Approximately 0.4 cubic yards of potentially PCB-contaminated soil was removed and stored onsite into two, 55-gallon Department of Transportation (DOT)-approved drums. Plastics and Personal Protective Equipment (PPE) clothing were placed in a separate 55-gallon DOT-approved drum. All three drums were labeled appropriately and placed in a secured area at the site.

After removal of the top 18 inches of soil, two confirmation soil samples (18609-734 and 18609-735) were collected within the soil removal area. One sample was obtained from the bottom floor of the excavation and a second was obtained from the east sidewall of the excavation. Soil sample locations were selected based on the BNI RFA report recommendations and VSI performed during the site visit on October 10, 1997.

Equipment such as shovels, handpicks, and brushes used in the excavation or exclusion zone were decontaminated prior to removal from the site, as identified in the site specific Health and Safety Plan (HSP). Decontamination procedures varied according to the type of

equipment involved. Equipment was triple-rinsed to ensure decontamination and to prevent cross-contamination. One equipment rinsate sample was also collected.

Two soil samples were collected in standard stainless steel sleeves at two depths: 1 foot and 1 ½ foot bgs. The sample locations are shown on Figure 3-1, Site Plan. All the samples were analyzed for PCBs using EPA Method 8080. Photographs of the field activities are presented in Appendix E, Site Photographs.

The analytical results of the confirmation soil samples collected from the soil removal area are presented in Table 3-1, Confirmation Soil Sample Analytical Results - SWMU 7. No PCB compounds were detected at or above the laboratory reporting limits for both soil samples. Analytical reports provided by the VOC Laboratory are included in Appendix F, Laboratory Analytical Reports.

Following receipt of the confirmation sampling results, the soil removal area was backfilled with nonimpacted or "clean" stockpiled soil from the Station's Biocell area.

3.3 *Land Surveying*

After completing the confirmation soil sampling, the soil sample locations were surveyed by Calvada Surveying Inc., a California-registered land surveyor. The surveyed locations were measured to ± 0.01 feet horizontally and tied to the California State Plane Coordinate Systems, North American Datum 1983. The surveyed elevations were measured to ± 0.01 feet vertically and tied to mean sea level elevation. The land survey data for SWMU 7 are presented as Appendix G, Land Survey Data.

3.4 *Waste Management*

Waste generated during the soil removal activities at the SWMU 7 site included the following:

- one 55-gallon drum of PPE and plastics
- 0.4 cubic yard of soil in two 55-gallon drums
- approximately 6 gallons of decontamination wash water, stored onsite at the Station's Central Treatment Facility (CTF) in a specifically marked closed-top polyethylene storage tank

All generated wastes have been disposed of in accordance with applicable State and Federal regulations. Based on the results and review of analytical data, OHM disposed of the wastes as follows:

- All three drums (two drums of potentially PCB-contaminated soil and one drum of PPE) were disposed of offsite as "Hazardous Waste" under the Toxic Substance Control Act (TSCA) regulation at Chemical Waste Management Facility in

Kettleman City, California. A copy of the waste manifest is provided in Appendix H, Waste Manifest.

- Wastewater generated from decontamination activities was treated through the Station's Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Carbon Adsorption Treatment System (operated and maintained by OHM) located at the CTF, following the determination that the constituents were within the normal range for treatment. Treated effluent water was sampled, and based on the review of the analytical results, transferred to the Station's Golf Course holding tank for reuse.

Section 4
Conclusions and Recommendations

The following conclusions are based upon information from the RFA reports, and the field soil removal and soil sampling activities:

- SWMU 7 was a temporary transformer storage area (active from approximately 1990 to 1995) established by the Station to store used transformers until disposed of offsite (BNI, 1996).
- Soil sampling performed during the RFA sampling visit confirmed "no further action" concentrations for TPH as diesel, and detected PCB Aroclor 1260 (97 µg/kg) in only one surface sample (boring 007H7) above the Residential PRG.
- OHM removed and disposed offsite approximately 0.4 cubic yard of potentially PCB-contaminated soil within the area of former boring 007H7. Results of the two confirmation soil samples collected from the bottom and wall of the soil removal area detected no PCB concentrations above the EPA Residential PRGs (EPA, 1998).

The objectives of this project were achieved; PCB-contaminated soil and PPE waste were removed and disposed of to an appropriate off-site facility. Confirmation sampling analytical results detected concentrations of PCB compounds at levels below the EPA Residential PRGs. Based on the information provided, closure goals were achieved with respect to limited soil removal remedial action for the SWMU 7 site; therefore, it is recommended that the SWMU 7 (Transformer Storage Area) site be identified as "closed".

Section 5
References

Bechtel National, Inc. 1997. *Draft Final Phase II, Feasibility Study Report, OU-3A Site 12, Sludge Drying Beds, Marine Corps Air Station, El Toro, California.* March. CTO-0079/0389.

Bechtel National, Inc. 1996. *Final Addendum RCRA Facility Assessment Report*, Marine Corps Air Station El Toro, California.

BNI. See Bechtel National, Inc.

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CDM. See Camp, Dresser and McKee, Inc. Federal Programs Corporation.

County of Orange. 1997. *Alternative A, El Toro Community Reuse Plan, 1997 Working Map, Land Uses/Conveyances, Gross Acres.* [Prepared by P&D Consultants for the County of Orange, March 1997.]

EPA. See United States Environmental Protection Agency.

Jacobs Engineering Group Inc. 1993. *Final RCRA Facility Assessment Report, Marine Corps Air Station El Toro, California.*

JEG. See Jacobs Engineering Group Inc.

Marine Corps Air Station El Toro, California. 1997. *Final Base Realignment and Closure Cleanup Plan.* March.

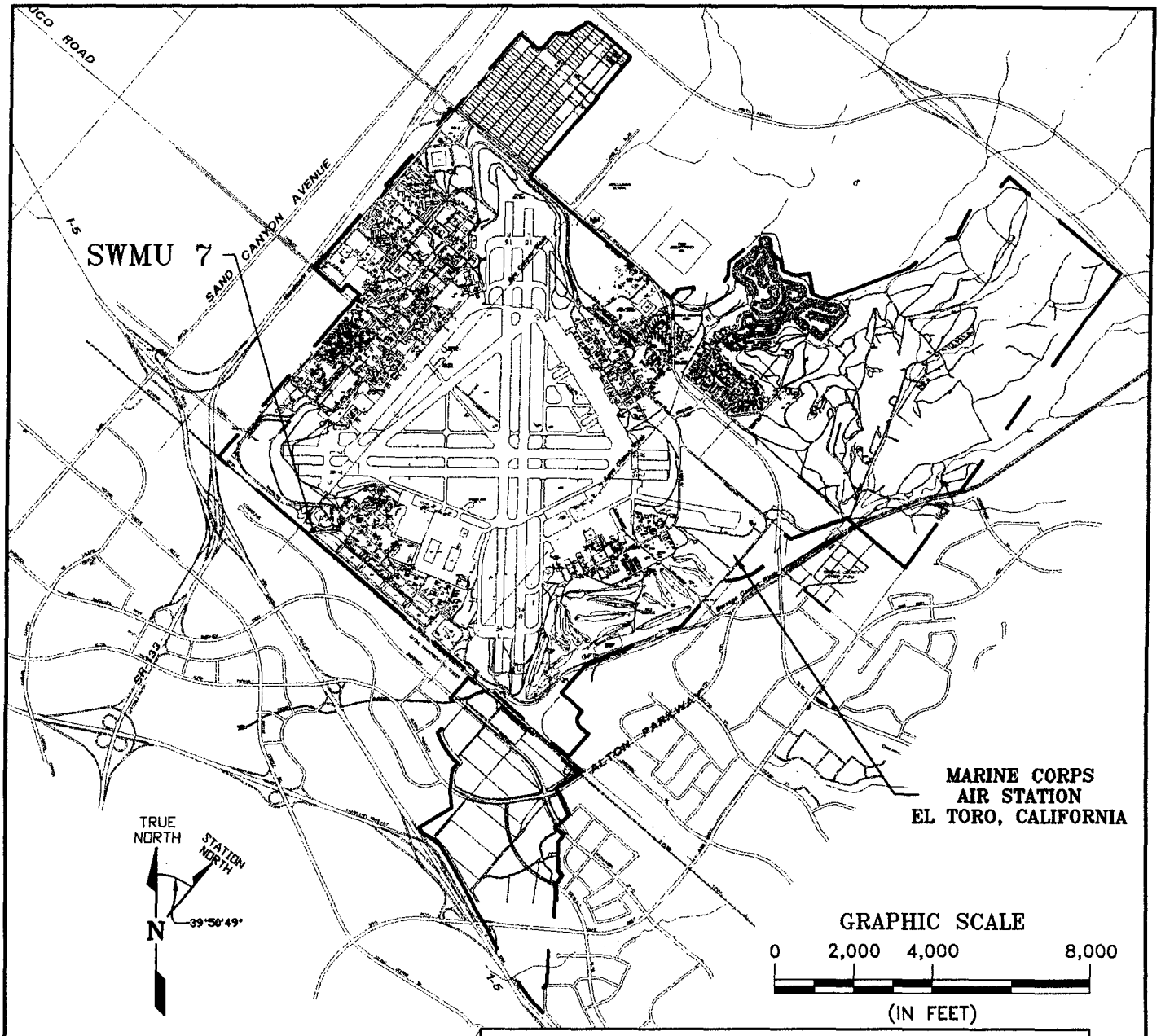
MCAS El Toro. See Marine Corps Air Station El Toro, California.

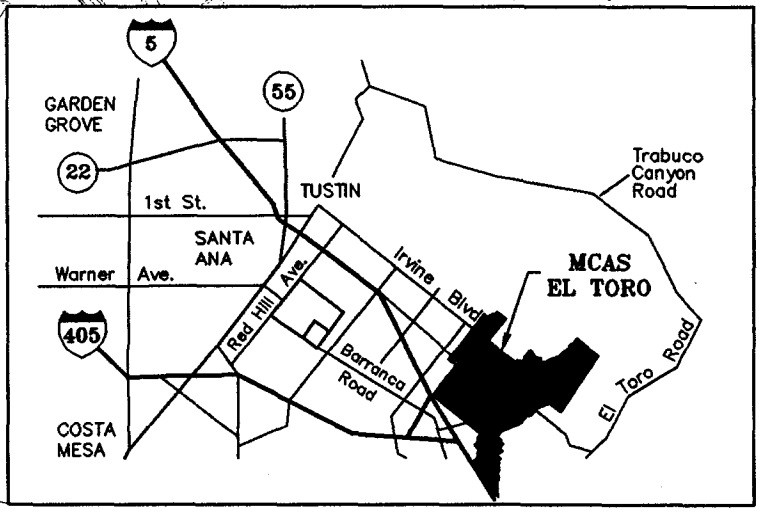
OHM. See OHM Remediation Services Corp.

OHM Remediation Services Corp. 1997. *Draft Supplemental Work Plan, Closure of Various Temporary Accumulation Areas and RCRA Facility Assessment Sites, Marine Corps Air Station El Toro, Santa Ana, California.* March.

United States Environmental Protection Agency. 1998. *Region IX Preliminary Remediation Goals (PRGs) 1998*, Memorandum from Stanford J. Smucker to the PRG Table Mailing List. 1 May.

Figures





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SAN DIEGO, CA

CONTRACT NAME: SWDIV

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CHECKED BY	DATE	
APPROVED BY	DATE: 10/21/98	
PROJECT MANAGER	DATE: 10/21/98	

FACILITY LOCATION MAP
SWMU 7

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

AUTOCAD FILE No.	PLOT SCALE	SHEET	OF	SCALE	DOCUMENT CONTROL No.	OHM PROJECT No.	FIGURE No.	REVISION
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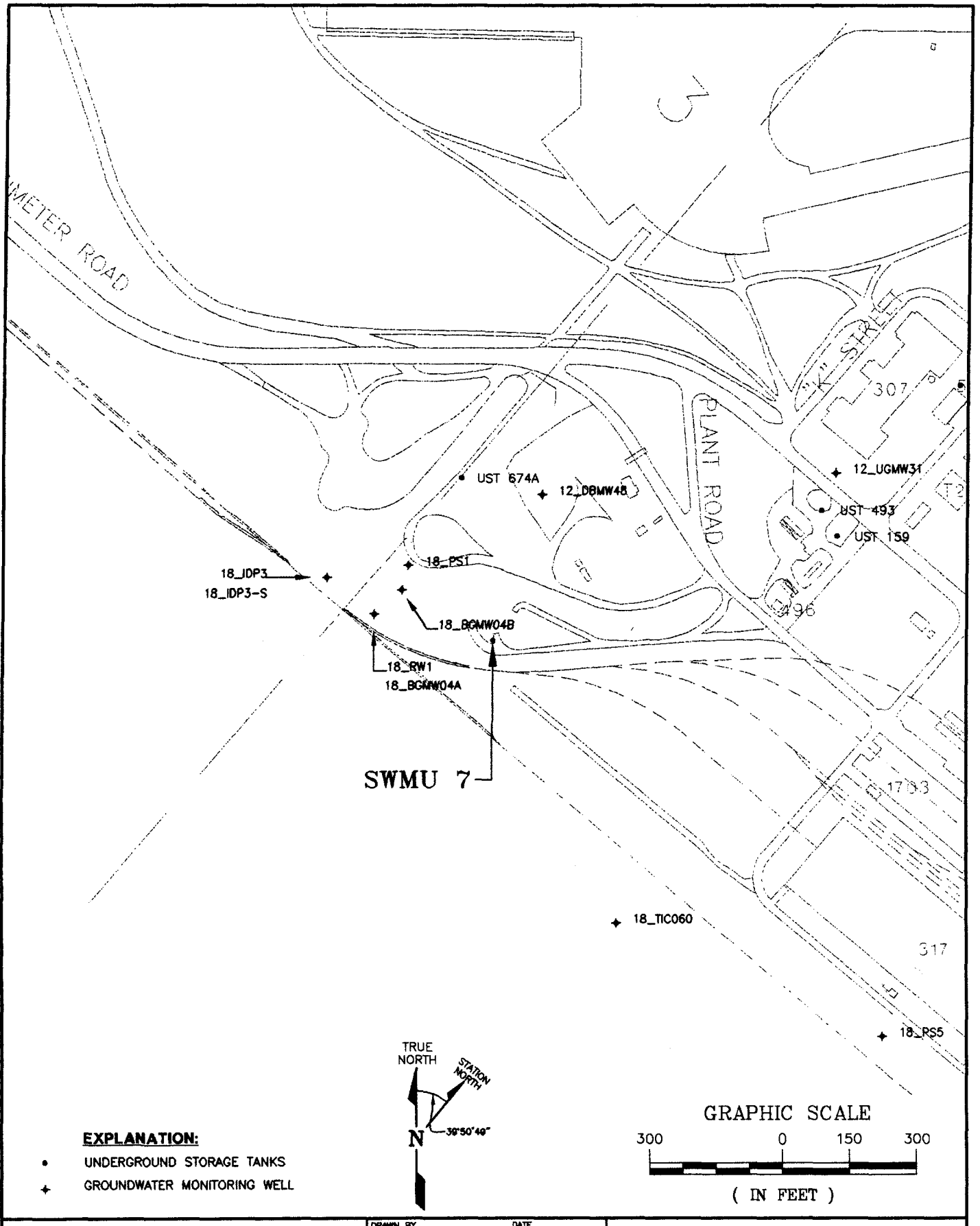

OHM Remediation Services Corp. A Subsidiary of OHM Corporation, SAN DIEGO, CA	DRAWN BY R. PIRMORADIAN DATE 10/20/98	LOCATION MAP SWMU 7	
	CHECKED BY DATE		
	APPROVED BY JR DATE 10/21/98		
CONTRACT NAME SWDIV	PROJECT MANAGER W Sadlo DATE 10/21/98	MARINE CORPS AIR STATION EL TORO, CALIFORNIA	

AUTOCAD FILE No.	PLOT SCALE	SHEET	OF	SCALE	DOCUMENT CONTROL No.	OHM PROJECT No.	FIGURE No.	REVISION
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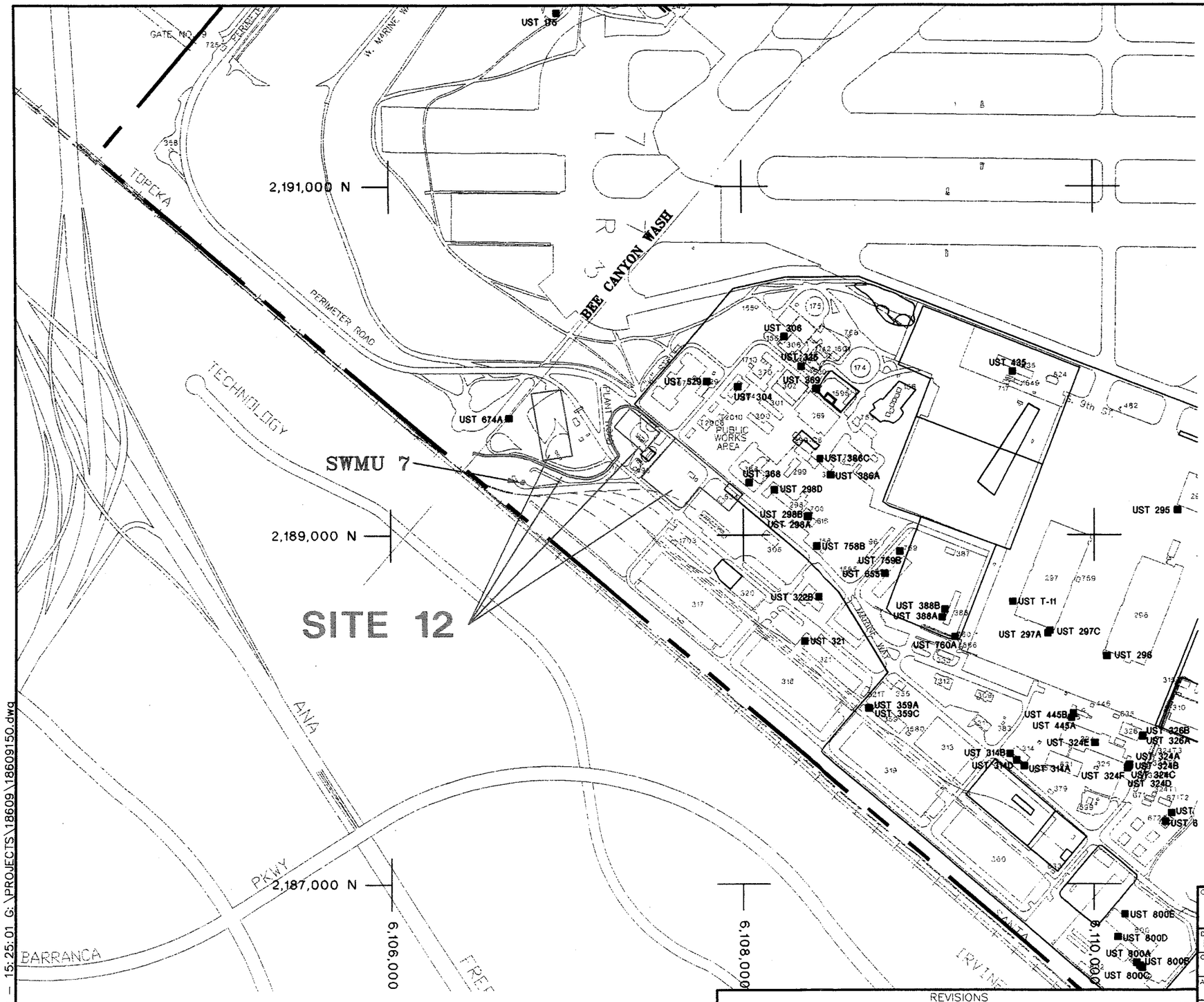

EXPLANATION:

- BUILDING OR PAD
- IMPROVED / UNIMPROVED ROAD
- WASH OR STREAM
- RAILROAD
- MCAS ELTORO BOUNDARY
- ZONE OR PARCEL BOUNDARY
- UNDERGROUND STORAGE TANKS

REFERENCE:
BECHTEL NATIONAL INC. DRAWING
FILE NO. 075U1703
JET FUEL–Y & D DWG. NO. 770988 & 770989
JET FUEL PROPOSED–QUINTON ENGINEERS LTD. 15 OF 29 24364

N

GRAPHIC SCALE
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(IN FEET)

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02	17486157.DWG (XREF) BY R. PIRMORADIAN		

CONTRACT NAME	SWDIV
DRAWN BY / DATE	R. PIRMORADIAN 10/20/98
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AUTOCAD FILE No.	18609150.DWG

OHM Remediation Services Corp.
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VICINITY MAP
SWMU 7

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

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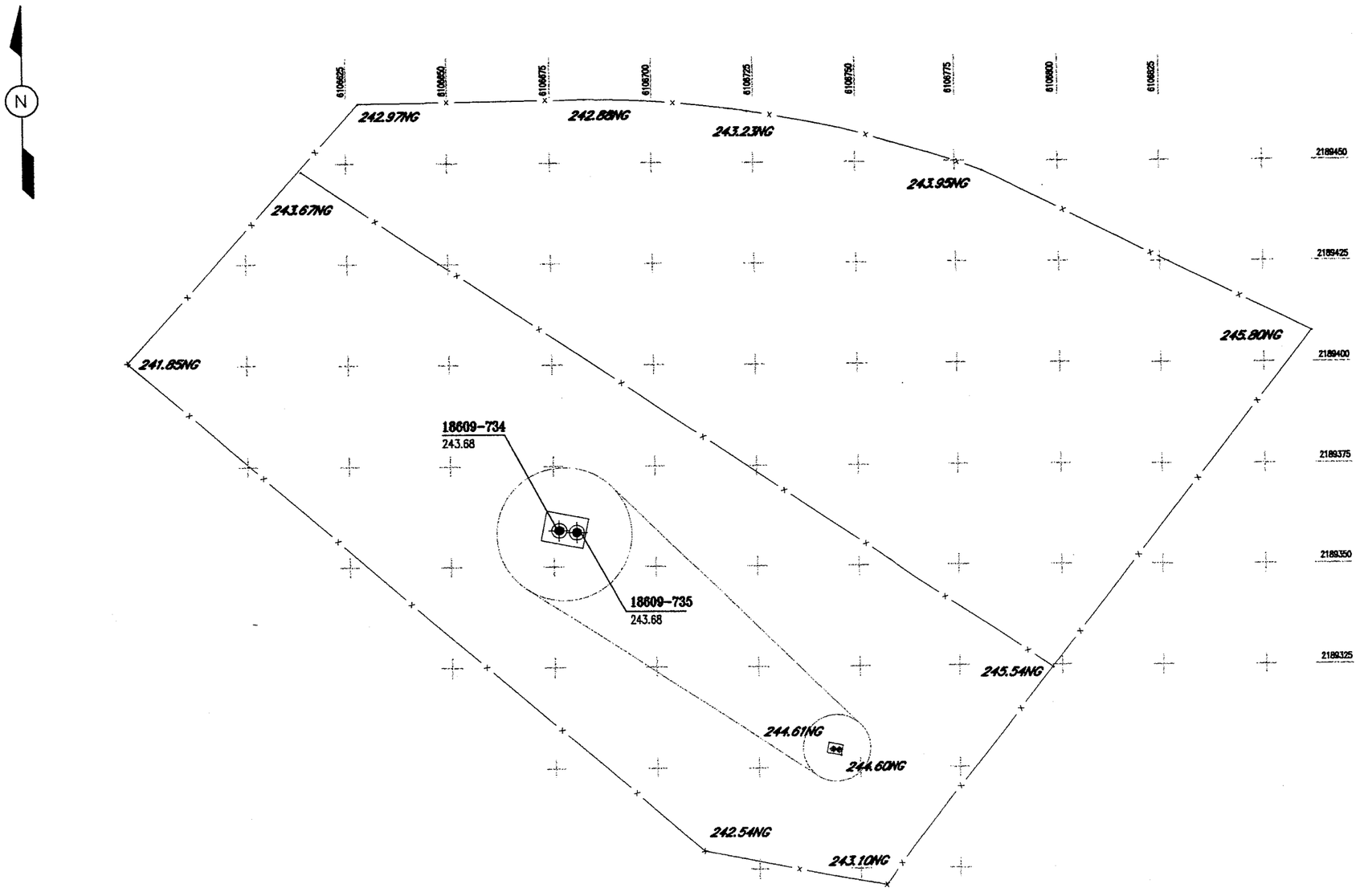

LEGEND

- SAMPLE POINTS (10-31-97)
- CHAIN LINK FENCE
- NG NATURAL GROUND

SAMPLE COORDINATE LISTING

DESCRIPTION	NORTHING	EASTING	ELEV.
18609-734	2189304.4943	6106743.3777	243.68
18609-735	2189304.3284	6106744.7850	243.68

GRAPHIC SCALE

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OHM Remediation Services Corp.
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SAN DIEGO, CA

DRAWN BY: R. PIRMORADIAN DATE: 10/21/98
CHECKED BY: DATE:
APPROVED BY: DR DATE: 10/21/98
PROJECT MANAGER: DATE: 10/21/98
AUTOCAD FILE No.: 18609149.DWG

SITE PLAN
SWMU 7

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.
AS NOTED	1	1	SW5247	18609	FIG 3-1

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Tables

Table 3 - 1
Confirmation Soil Sample Analytical Results -SWMU 7

OHM Sample Number					18609-734	18609-735	18609-736
Sample Location					SWMU-7 B Floor	SWMU-7 SideWallEast	Equipment Rinsate
Date Collected					10/24/97	10/24/97	10/24/97
Sample Depth (feet below ground surface)					1.5	1.0	NA
	Unit	Background	PRG Residential	PRG Industrial			
EPA 8081							
Aroclor-1016	µg/kg	NE	3400	63000	43 U	43 U	NA
Aroclor-1221	µg/kg	NE	200	1300	43 U	43 U	NA
Aroclor-1232	µg/kg	NE	200	1300	43 U	43 U	NA
Aroclor-1242	µg/kg	NE	200	1300	43 U	43 U	NA
Aroclor-1248	µg/kg	NE	200	1300	43 U	43 U	NA
Aroclor-1254	µg/kg	NE	970	18000	43 U	43 U	NA
Aroclor-1260	µg/kg	NE	200	1300	43 U	43 U	NA
Aroclor-1016	µg/L	NE	NE	NE	NA	NA	1 U
Aroclor-1221	µg/L	NE	NE	NE	NA	NA	1 U
Aroclor-1232	µg/L	NE	NE	NE	NA	NA	1 U
Aroclor-1242	µg/L	NE	NE	NE	NA	NA	1 U
Aroclor-1248	µg/L	NE	NE	NE	NA	NA	1 U
Aroclor-1254	µg/L	NE	NE	NE	NA	NA	1 U
Aroclor-1260	µg/L	NE	NE	NE	NA	NA	1 UJ

Explanation:
EPA - United States Environmental Protection Agency
J - estimated
NA - not analyzed
NE - not established
OHM - OHM Remediation Services Corp.
PRG - Preliminary Remediation Goal, EPA Region IX, May 1998
U - not detected above or equal to the stated reporting limit
µg/kg - micrograms per kilogram
µg/L - micrograms per liter

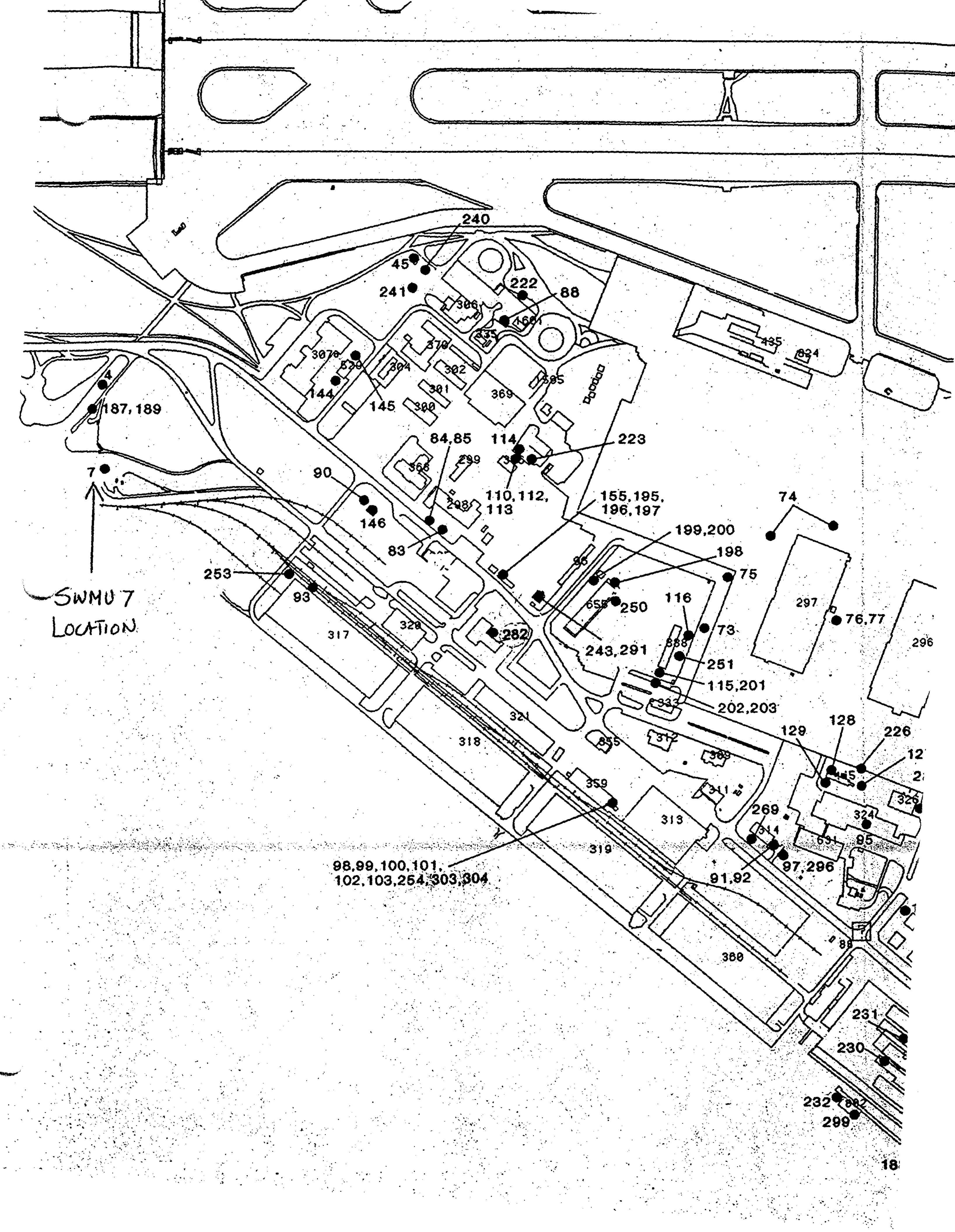
Appendix A
JEG RFA Background Information

TABLE 4-1
COMPREHENSIVE LIST OF SWMUs AND AREAS OF CONCERN
IDENTIFIED DURING THE PRELIMINARY REVIEW/VISUAL SITE INSPECTION
MCAS EL TORO RFA

SWMU	SMWU TYPE	SOURCE (1)	LOCATION/BUILDING	COMMENTS	DATE	SIZE	MATERIAL	CONTENTS
1	Former Scrap Metal Yard	Photograph	Near Golf course					
2	Vegetation Piles	Photograph	Near Golf Course					
3	Marshburn Channel	I	See Figure 1-2 of PR/VSI					
4	Bee Canyon Wash	I	See Figure 1-2 of PR/VSI					
5	Borrego Canyon Wash	I	See Figure 1-2 of PR/VSI					
6	Landfarming site	e	NW Bee Canyon Wash	For remediating petroleum-contaminated soil				
7	Transformer storage area	e	E of Bee Canyon Wash					
8	Abandoned Well 50-3285	i	E. of Magazine Rd, W. of Bldg. 809	Drilled in 1950, depth 3285 feet				
9	Fuel bladder	e	East of Aqua Chinon Wash	2,000-gallon fuel bladder				
10	Abandoned Well 24-4274	i	E of bldg 385	RI/FS Site				
11	Aqua Chinon Wash	I	See Figure 1-2 of PR/VSI					
12	Active Sanitary Sewer Lines	I	See Figure 3-2 of PR/VSI					
13	Drop Tank Storage Area	e	SW of bldgs 114 & 115	Tanks drained onto adjacent soil or storm drain				
14	Drop Tank Storage Area	e	NW of bldgs 605	Tanks drained onto adjacent soil or storm drain				
15	Wash water runoff site	e	SW of direct fueling stations 576	Wash water runoff onto unprotected soil				
16	Wash water runoff site	e	NW of fueling stations 574	Wash water runoff onto unprotected soil				
17	Underground Storage Tank	f	Tank Farm 2	Spill Containment Tank, Active	1988	2,000 gal	Fiberglass-Coated Steel	Waste JP-5
18	Underground Storage Tank	f	Tank Farm 4	Spill Containment Tank, Active	1988	2,000 gal	Fiberglass-Coated Steel	Waste JP-5
19	Underground Storage Tank	f	Tank Farm 4	Spill Containment Tank, Active	1988	2,000 gal	Fiberglass-Coated Steel	Waste JP-5
20	Underground Storage Tank	f	414	Located near 414; piped to Farm 5, Active	1988	2,000 gal	Fiberglass-Coated Steel	Waste JP-5
21	Underground Storage Tank	f	Tank Farm 5	Spill Containment Tank, Active	1988	2,000 gal	Fiberglass-Coated Steel	Waste JP-5
22	Underground Storage Tank	f	Tank Farm 5,6	Spill Containment Tank, Active	1988	2,000 gal	Fiberglass-Coated Steel	Waste JP-5
23	Underground Storage Tank	f	Tank Farm 555	Spill Containment Tank, Active	1988	2,000 gal	Fiberglass-Coated Steel	Waste JP-5
24	Underground Storage Tank	f	Tank Farm 6	Spill Containment Tank, Active	1988	2,000 gal	Fiberglass-Coated Steel	Waste JP-5
25	Drum Storage Area	b	5					
26	Hazardous Waste Storage Area	Active	5					
27	Hazardous Waste Storage Area	Active, b	AERO CLUB 10					
28	Fuel Spill Site	e	AERO CLUB 10	Routine fuel spills in the past				
29	Drum Storage Area	c	AERO CLUB 10			240 sq ft		
30	Drum Storage Area	b,c	29			360 sq ft		

Table 6-15
Recommendations for SWMUs/AOCs
MCAS El Toro RFA

SWMU No.	SWMU/AOC Type	Recommendation (FA/NFA)	Description of Further Action	Rationale for Further Action
3	Marshburn Channel	NFA	--	--
4	Bee Canyon Wash	NFA	--	--
5	Borrego Canyon Wash	NFA	--	--
6	Landfarming site	NFA	--	--
7	Transformer storage area	NFA	--	--
8	Abandoned Well 50-3285	NFA	--	--
9	Fuel bladder	NFA	--	--
11	Agua Chinon Wash	NFA	--	--
13	Drop Tank Storage Area	NFA	--	--
14	Drop Tank Fuel Storage Area	FA	Repair cracks in pavement	Prevent future migration of petroleum hydrocarbons
15	Wash Water Runoff Site	NFA	--	--
16	Wash Water Runoff Site	NFA	--	--
20	Underground Storage Tank	NFA	--	--
26	Hazardous Waste Storage Area	FA	Excavate shallow, stained soil	Moderate petroleum hydrocarbon contamination
27	Hazardous Waste Storage Area	NFA	--	--
30	Drum Storage Area	NFA	--	--
33	Hazardous Waste Storage Area	FA	Excavate shallow, stained soil	Petroleum hydrocarbon contamination
39	Hazardous Waste Storage Area	FA	Shallow soil borings	Potential for SVOCs and pesticides/PCBs in shallow soil
41	Vehicle Wash Rack	NFA	--	--
45	Drum Storage Area	NFA	--	--
46	Vehicle maintenance and parking	FA	Additional boring(s)	Petroleum hydrocarbon contamination, unknown extent
48	Underground Storage Tank	NFA	--	--
49	Underground Storage Tank	NFA	--	--
57	Underground Storage Tank	NFA	--	--
59	Underground Storage Tank	NFA	--	--
65	Underground Storage Tank	NFA	--	--
70	Hazardous Waste Storage Area	NFA	--	--
73	Hazardous Waste Storage Area	NFA	--	--
76	Oil/Water Separator	NFA	--	--
83	Hazardous Waste Storage Area	NFA	--	--


240
45
241
222
88
306
160
335
370
3070
529
304
302
595
435
824
369
301
300
144
145
4
187,189
7
SWMU 7
LOCATION
84,85
114
223
368
299
90
146
110,112,
113
298
155,195,
196,197
74
83
199,200
198
253
75
93
297
655
250
116
76,77
296
73
320
317
282
888
243,291
251
115,201
333
202,203
321
318
312
129
128
226
855
309
359
311
326
324
269
313
314
95
319
631
98,99,100,101,
102,103,254,303,304
91,92
97,296
380
231
230
232
299

LEGEND

● SWMU/AOC LOCATION

243 SWMU/AOC IDENTIFICATION NUMBER

FIGURE 5-1
SOLID WASTE
MANAGEMENT UNITS
AND AREAS OF CONCERN

MCAS EL TORO RCRA FACILITY ASSESSMENT – SAMPLING VISIT RESULTS

SWMU/AOC NUMBER	SWMU/AOC TYPE (FIGURE)	BORING NUMBER	SAMPLE DEPTH (FEET)	ANALYTICAL TEST RESULTS							RECOMMENDATIONS	
				TPH (mg/kg)	TFH (mg/kg)		VOCs (ug/kg)	SVOCs (ug/kg)	PESTICIDES/PCBs (ug/kg)	METALS (mg/kg)	Action	Rationale
					Gasoline	Diesel						
7	Transformer Storage Site (5)	H1	2	ND	NA	NA	Methylene Chloride-4 J * Acetone-22 B * Toluene-2 J 2-Butanone-20 1,1,2,2-Tetrachloroethane-2 J 4-Methyl-2-Pentanone-7 J 2-Hexanone-13	NA	4,4'-DDT-11 4,4'-DDE-3.9 Methoxychlor-18	NA	NFA	TPH/TFH < 100 ppm VOCs < ETM & PRG Pest/PCB < ETM & PRG
			5	ND	NA	NA	Methylene Chloride-4 J * Acetone-7 BJ * Toluene-3 J Xylene-2 J	NA	4,4'-DDT-4.4	NA		CRDL - Contract Required Detection Limit
			5 (Duplicate)	ND	NA	NA	Methylene Chloride-1 BJ * Acetone-7 BJ * 2-Butanone-2 BJ *	NA	4,4'-DDT-12 4,4'-DDE-9 6	NA		

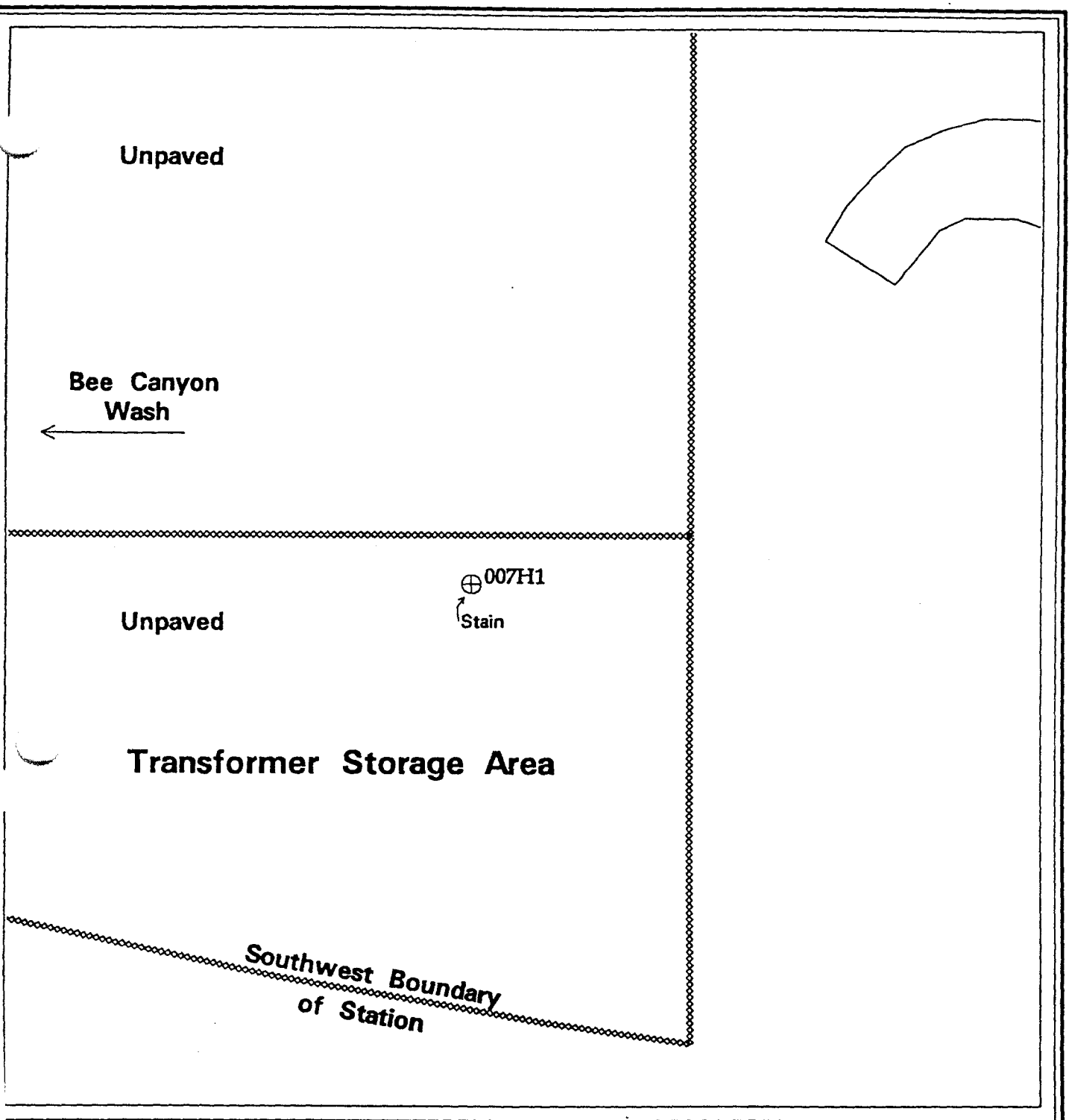


Figure 5 Sample Location Map

SWMU/AOC Number and Type:
7 - Transformer Storage Area

Boring Location and Number:

- 123H4 5′ Deep Boring
- 123B4 25′ Deep Boring
- 123A4 60′ Long, Angle Boring

Features:

- Building
- Concrete
- Fence
- Railroad

Scale

0 10 20 40 Feet

MCAS El Toro
RCRA Facility Assessment

Evaluation Form
SWMU/Area of Concern
Number 7

Unit Characteristics

The PCB transformers are stored in an unpaved area located adjacent to the western boundary fence near Gate No. 3. The area was recently established for storage and will only be used until the Station is able to dispose of the transformers. The storage area is approximately 2 acres and is surrounded by a chain link fence. There are roughly 20 to 30 transformers inside the storage area. Much of the vegetation has overgrown the transformers. One transformer, located near the center of the storage area, had leaked oil from a valve onto the unpaved soil.

Waste Characteristics

PCB insulation oil

Migration Pathways

Soil

Evidence of Release

Stained soil and transformer near the center of the storage area

Exposure Potential

On-Station personnel

Recommendations

Based on the evidence of leakage, a sampling visit is recommended for this PCB transformer storage area

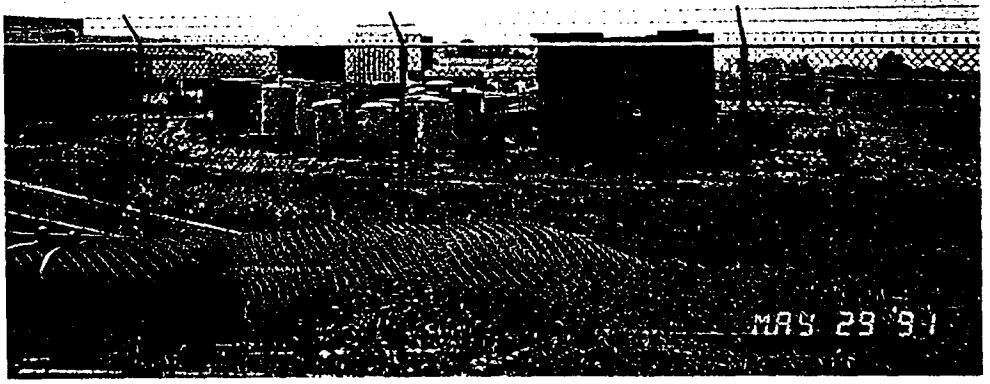
Evaluation Form
SWMU/Area of Concern
Number 7

Name: PCB Transformer Storage Area

Location: East of Bee Canyon Wash and north of railroad tracks at the Station's SW boundary

Size: Approximately 1 acre

Date of Site Visit: 22 April 1991



Period of Operation

Currently active

Appendix B
BNI RFA Background Information

Table 1-1
Summary of Proposed Activities and Results for Sampled Sites

SWMU[a]/AOC[b] Description/Location	Summary of Proposed Sampling to Meet Data Quality Objective(s)	Summary of Results
7 Transformer Storage Area	Collect 18 soil samples for VOCs[c]/pest[d]/ PCBs[e]/SVOCs[f] and inorganic analyses from six locations to assess potential for releases. Previous single sampling location insufficient for recommendation.	Eighteen soil samples collected from six locations at three depths; diesel detected at two locations below action levels; PCBs detected above action level in one sample of surface soil.
9 Fuel Bladder East of Agua Chinon	Collect 12 soil samples from three locations for diesel analyses to assess the potential for a release above action levels.	Twenty samples collected from five locations at four depths; diesel detected above action levels at one location from 8 to 12 feet deep.
39 Active Hazardous Waste Storage Area/ Building 115	Collect four soil samples from one location to assess the potential for waste oils (SVOCs) and PCBs in soil above 10 feet.	Four soil samples collected; SVOCs detected below action levels at a similar depth (SWMU 9) as previous data (8.5 feet); a "release" was not detected.
46 Vehicle Maintenance and Parking/DRMO[g]	Collect nine soil samples from three locations to assess potential extent of TPH[h]-diesel/gas release.	Twelve soil samples collected from four locations at three depths; diesel detected at one location in one sample below action levels; a "release" was not detected.
88 Drum Storage Area/ Building 306	Collect three soil samples for PCBs from one location to assess the potential for a release in soil above 10 feet.	Seventy-four shallow soil samples collected from 47 locations; PCBs detected in shallow soils (to a depth of 2 feet) over a wide area; the extent of the PCB "release" was assessed.
131 Engine Test Cell/Building 447	Sufficient information exists to transfer SWMU 131 to the Remedial Action Contract contractor's scope. No further assessment is necessary.	No field activities performed.
165 Drum Storage Area/ Building 651	Collect soil samples from three locations for VOCs/pest/PCBs/SVOCs and inorganic analyses to assess potential for releases.	Six soil samples collected at two locations; a "release" was not detected.
171 Hazardous Waste Storage Area/Building 672	Collect four soil samples from one location to assess the potential for waste oils (SVOCs) in soil above 10 feet.	Four soil samples collected; SVOCs detected below action levels at a similar depth (SWMU 9, 39) as previous data (8.5 feet); a "release" was not detected.

(table continues)

Section 3
SITE-SPECIFIC RESULTS AND RECOMMENDATIONS

The seven-step DQO process (U.S. EPA 1994) is an integral part of the Addendum to the RFA Work Plan and the FSP, and forms the basis for the work reported in this Final Report. The sample location, number of samples, and type(s) of analyses were decided upon by using the DQO process.

Analyses were performed for contaminants of potential concern specific to each of the sites, with the most prevalent analyses being for volatile and semivolatile organics and PCBs. Metals were identified as contaminants of potential concern at three of the sites (SWMU 7, 165, and TAA-7). Field screening XRF was used as an indicator for selected metals contamination. Off-site laboratory analytical results, however, were used as the primary method for evaluating the concentrations of metals contamination for decision-making purposes.

Except for arsenic and beryllium, the concentrations of specific metal contaminants of concern were below PRG criteria for both the XRF and off-site results. Arsenic and beryllium are naturally occurring constituents of the native soils in the area. These two metals are present at levels above PRGs for residential soil.

Background levels for metals, including arsenic and beryllium, were reported by Jacobs Engineering (1993) and recalculated by BNI (1996). Eleven samples for background were collected for that report and a full suite of analyses, including metals, were performed on the samples. All metals analyzed, with the exception of arsenic and beryllium, are present at concentrations below PRGs. Based on statistical analyses of the background data and an agreed statistical method, the upper limit for background for the El Toro site was reported as 8.5 milligrams per kilogram (mg/kg) for arsenic and 0.89 mg/kg for beryllium.

A total of ten samples including duplicate samples from two sites, SWMU 7 (boring location 007H3) and 165 (boring location 165A2), were analyzed for metals. A comparison of the results from the samples with the reported background limit concentrations for arsenic and beryllium is presented in Figure 3-1. It is recognized that the arsenic and beryllium values are above PRGs for residential soil, but the results indicate the values are below reported background limit values.

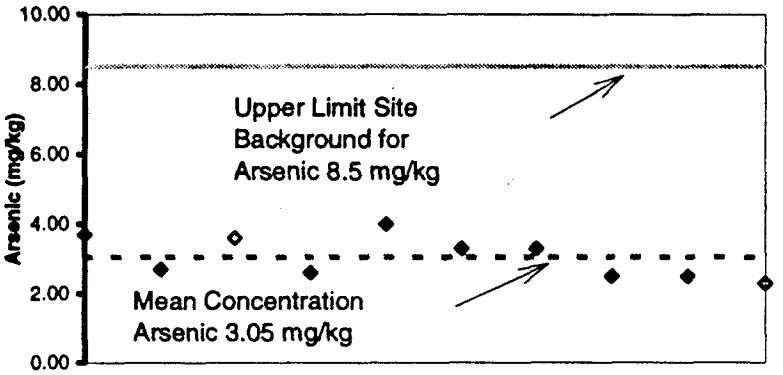
3.1 SWMU 7 – TRANSFORMER STORAGE AREA

3.1.1 Data Quality Objectives for SWMU 7

The original RFA activities collected shallow samples at one stained location only, with no indication of a release. However, DTSC felt that one sample location was inadequate and requested additional information. Additional soil samples, therefore, were collected and analyzed to provide an adequate assessment of a potential release in the Transformer Storage Area (SWMU 7). Soil samples were to be collected at the surface and at depths of 2 and 5 feet from six locations—adjacent to 007H1, around a pile of degraded sand bags (stained area), and adjacent to an old abandoned transformer. The sample grid was judgmentally placed at the suggestion of DTSC representatives during their oversight visit, in order to collect one sample from the soil pile and one at a low spot adjacent to the (now removed) old transformer.

Boring Location	Sample Interval (feet bgs)	Arsenic (mg/kg)	Beryllium (mg/kg)
007H2	2.0-3.0	3.70	0.52
007H3	2.0-3.0	2.70	0.44
007H3*	2.0-3.0	3.60	0.51
007H4	2.0-3.0	2.60	0.44
007H5	2.0-3.0	4.00	0.48
007H6	2.0-3.0	3.30	0.40
007H7	2.0-3.0	3.30	0.48
165A1	8.5-9.0	2.50	0.37
165A2	9.0-10.0	2.50	0.30
165A2*	9.0-10.0	2.30	0.28
Reported Background Value:		8.50	0.89

Notes: Charts include data from SWMUs 7 and 165; both are located on the western portion of the facility.
* Indicates duplicate sample
** Background values for arsenic and beryllium reported by BNI 1996



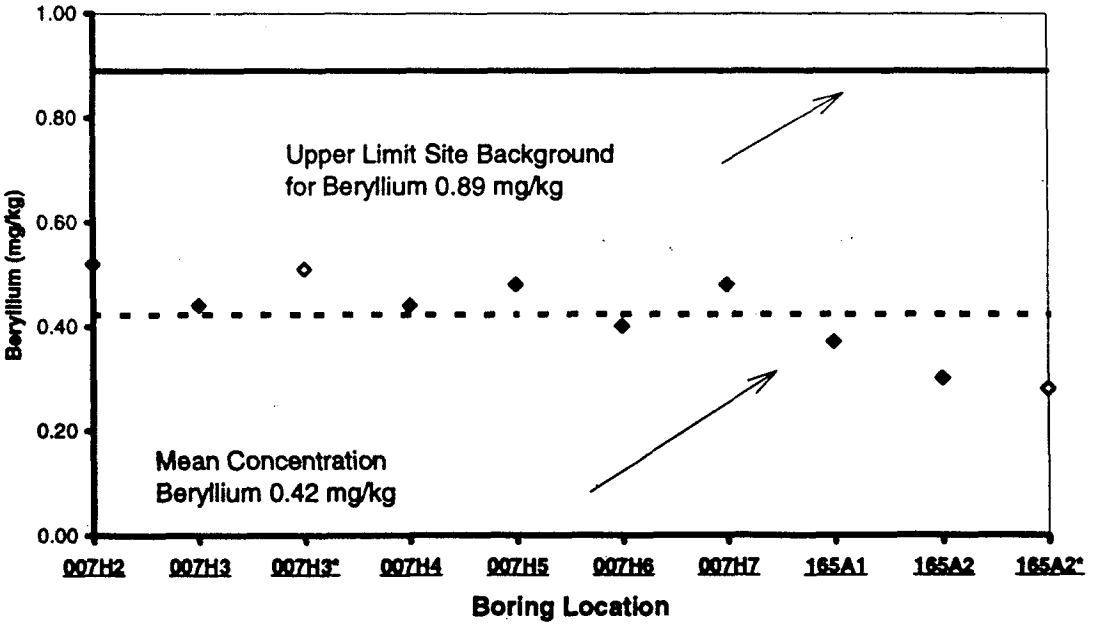


Figure 3-1
Comparison of Arsenic and Beryllium Concentrations to Background

The samples were screened for PCBs, PAHs, and petroleum products using immunoassay kits, and for inorganics (metals) using XRF. For PCBs, the method detection limit (MDL) is 200 micrograms per kilogram (µg/kg) for Aroclor 1260; the residential PRG is 66 µg/kg. Despite an MDL above the residential PRG, the method was considered appropriate since the industrial PRG is 340 µg/kg and can be used to make field decisions. Off-site analyses would be the basis for a final "no further action" recommendation. Therefore, a result of 200 µg/kg or greater would be considered a positive reading. Twenty-five percent of total samples collected, or a minimum of three of the PCB samples, were split for confirmation analyses.

The PRG for benzo(a)pyrene is also below the MDL by immunoassay; however, it was recognized that surrogate PAHs such as fluorene, chrysene, and pyrene could be detected below PRGs by the immunoassay method. A positive result for PAH is defined as 2 mg/kg. As with PCBs, 25-percent of the total or a minimum of three of the positive PAH samples were split for off-site confirmation analyses. An additional sample was collected depending upon the screening results to assure that sufficient data existed to make a recommendation.

Immunoassay analyses for petroleum were performed with an initial MDL of 15 mg/kg. If a positive result was obtained from the initial run, a second analysis with a 100 mg/kg MDL was performed. Action criteria for petroleum contamination is defined under California LUFT as 1,000 mg/kg, significantly above the MDLs for the immunoassay analyses used in the field.

XRF for metals was performed for screening purposes to determine if significant contamination was present. Confirmatory off-site analyses were used for decision making regarding metals contamination for a site.

No other sampling or analyses was planned or done at this location other than the required QA/QC and split sampling for off-site confirmation.

3.1.2 Results

Eighteen grab and one duplicate soil sample (007H3, 2.0 to 3.0 feet) were collected from six locations (007H2 through 007H7) at three depths 0.5 to 0.8 feet (surface sample); 2.0 to 3.0 feet; and 5.0 to 5.5 feet. However, at locations 007H6 and 007H7 the third interval was only 5.0 to 5.3 feet because a cobble caused refusal of the sampling tool. A summary of the results and a map of SWMU 7 are shown on Figure 3-2.

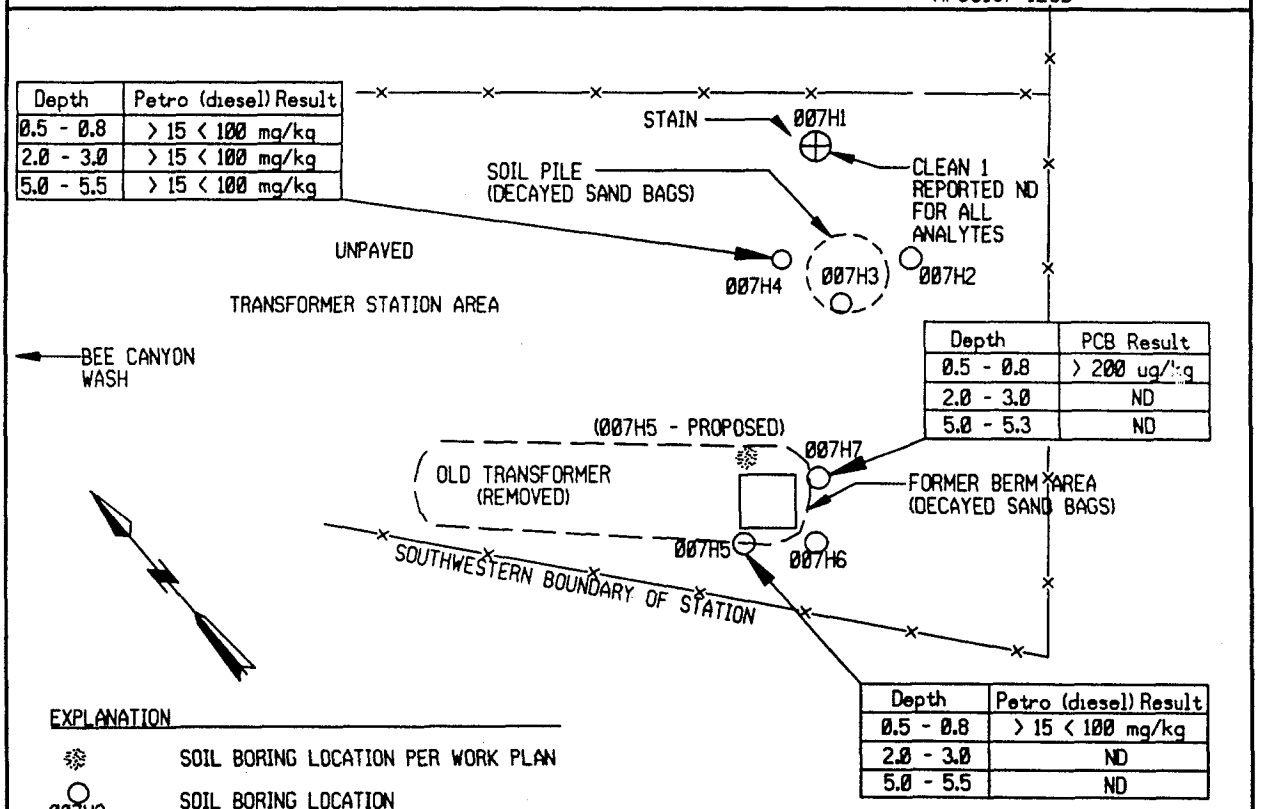
Diesel was detected by immunoassay at concentrations greater than 15 mg/kg but less than 100 mg/kg at two locations (007H4 and 007H5). These concentrations are below action criteria (greater than 1,000 mg/kg). Diesel fuel was detected at location 007H4 in surface soil and at depths of 2.0 to 3.0 feet and 5.0 to 5.5 feet below ground surface (bgs). The diesel fuel at 007H5 was only detected in surface soil sample.

Number of Borings:	6
Number of Samples:	18 Target Compound Analyses, 1 Field Duplicate, 1 Rinse Blank, 1 Trip Blank, 1 MS/MSD 22 Total (All media and types)
Depth Intervals Sampled	0.5-0.8 ft, 2.0-3.0 ft, 5.0-5.3 ft
Recommended Action	Transfer to Remedial Action Contractor for limited removal action

Analyses Performed	* Analyzed by immuno/xrf	Number of Pos Results	Confirmatory Samples Analyzed Off-site	Number of Results Above Criteria
VOCs	19	4>15mg/kg <100mg/kg	4 of 19 + 3 QC Samples	0
PAHs	19	0	4 of 19 + 3 QC Samples	0
PCB/Pest	19	1>200µg/kg	5 of 19 + 3 QC Samples	0
Metals	19	0	4 of 19 + 3 QC Samples	0

* Note: No off-site confirmation of positive immunoassay results for this SWMU.

	Soil Boring	Interval	Value
Positive Immunoassay Results for PETRO (diesel)	007H4	0.5-0.8 ft	> 15 mg/kg <100 mg/kg
	007H4	2.0-3.0 ft	> 15 mg/kg <100 mg/kg
	007H4	5.0-5.5 ft	> 15 mg/kg <100 mg/kg
	007H5	0.5-0.8 ft	> 15 mg/kg <100 mg/kg
Positive Fixed Lab Results for PCBs	007H7	0.5-0.8 ft	97 ppb µg/kg Aroclor 1260



RFA Addendum Final Report

Figure 3-2

Soil Boring Locations and Results - SWMU 7

MCAS El Toro, California

Bechtel National, Inc.
CLEAN II Program

Date: 11/27/95
File No. Fig3-2
Job No. 22214

A laboratory confirmation sample for the interval 2.0 to 3.0 feet from borehole 007H4 was analyzed for VOCs. Only acetone (a common lab contaminant) was reported at 1,300 parts per billion (ppb). Two tentatively identified compounds (TICs), boric acid trimethyl ester and isopropyl alcohol, were reported at low ppb levels. Confirmatory samples were not available for the other intervals reporting positive immunoassay results for petroleum; however, there was no indication of a petroleum release above action criteria levels.

PCBs were detected by immunoassay in excess of 200 µg/kg in surface soil (0.5 - 0.8 feet) at one location (007H7). An off-site confirmation sample was collected and a result of 97 µg/kg was reported. Other PCB confirmatory analyses were performed for four samples for which immunoassay results were negative.

3.1.3 Variances

Summary data were not available to the field-sampling team prior to demobilization, and the decision was made to limit sampling to the six locations in the FSP.

3.1.4 Recommendations

Since diesel was either not detected or detected below action criteria (at two locations), it is recommended that SWMU 7 does not require further action for diesel. The PCB surface sample at 007H7 was positive at 97 µg/kg Aroclor 1260. This is above the residential PRG for Aroclor 1260. Based on this data, it is recommended that the SWMU be transferred to the RAC contractor for remedial action such as limited removal of surface soils in the area of test boring 007H7.

3.2 SWMU 9 – FUEL BLADDER EAST OF AGUA CHINON

3.2.1 Data Quality Objectives for SWMU 9

Additional samples were required to adequately assess the potential extent of a diesel fuel spill that was reported in the RFA (Jacobs Engineering 1993). Diesel at concentrations of approximately 200 and 400 mg/kg were reported during CLEAN I activities in soil at hand-auger boring 009H2 from 2- and 5-foot depths, respectively.

The plan was to collect samples at three locations adjacent to 009H2 using the systematic sample screening approach, and to collect three soil samples from each location at depths of 8, 12, and 20 feet (Figure 3-3) below the original ground surface. The stipulated depths were to assure that samples were gathered from the same zones as reported in the RFA. The area has been covered with approximately 6 feet of clean fill since the time of initial sampling for the RFA.

Sampling was expanded from that defined in the final addendum Work Plan to include additional samples from adjacent and deeper locations to provide sufficient data to make a preliminary recommendation. The grid size used was based on the dimensions of the fuel bladder footprint area, and the locations of previous samples. This approach

BOREHOLE LOG

PROJECT and JOB NUMBER: Navy Clean II 065			HOLE NO.: 007H2
			SHEET NO.: 1 OF 1
DRILLER: J. Lear/W. McConihe	SITE and LOCATION: SWMU 7 MCAS EL TORO		FILL (FT): 5.5 / BEGUN: 7-7-95
DRILL MAKE AND MODEL: 3" Hand Auger	COORDINATES: N 2,189,320.08 E 6,106,776.14	LOGGED BY: W. McConihe	ROCK (FT): NA / COMPLETED: 7-7-95
HOLE SIZE and/or CORE SIZE/DIAMETER: 3" 3"	GROUND EL. & DEPTH/EL. GROUND WATER: 244.52 / N/A /	CHECKED BY:	TOTAL DEPTH: 5.5 / UPDATE: 4-17-96

Organic Vapor Reading (ppm)	Core ROD %	Core/Soil Recovery (%)	Core Length/ Smplr Advance	Blow Counts or Recovery (ft)	Core Run No./ Sampler Type	Elevation in Feet 244.5	Depth in Feet	Graphics	Smplr/recovery	Description and Classification	(Template: NAVY) Remarks:
0		100	0.3			243.3				0.0 - 1.3 Ft. Clayey SAND, (SC); Clayey Sand and Sandy Clay. Brown (10YR 3/3), damp, dense, fine to medium grained.	Sample Number 0650126 0.5 - 0.8'
0		100	1.0							1.3 - 5.5 Ft. Silty SAND, (SM); Brown (10YR 4/2), damp, loose, fine grained, occasional gravels to 1.5 inches.	0650127 2.0 - 3.0'
										Some clayey zones.	
0		100	0.5			239.0	5				0650128 5.0 - 5.5'
										Total Depth: 5.5 Ft.	
											Hole advanced with a hand auger. Backfilled with spoils. Undisturbed VOA sample collected with a 1.5" SS Sleeve.

BOREHOLE LOG

BECHTEL

PROJECT and JOB NUMBER: Navy Clean II 065			HOLE NO.: 007H3
			SHEET NO.: 1 OF 1
DRILLER: J. Lear/W. McConihe	SITE and LOCATION: SWMU 7 MCAS EL TORO		FILL (FT): 5.5 / BEGUN: 7-7-95
DRILL MAKE AND MODEL: 3" Hand Auger	COORDINATES: N 2,189,316.85 E 6,106,756.49	LOGGED BY: W. McConihe	ROCK (FT): NA / COMPLETED: 7-7-95
HOLE SIZE and/or CORE SIZE/DIAMETER: 3" 3"	GROUND EL. & DEPTH/EL. GROUND WATER: 244.53 / N/A /	CHECKED BY:	TOTAL DEPTH: 5.5 / UPDATE: 4-17-96

(Template: NAVY)

Organic Vapor Reading (ppm)	Core ROD %	Core/Soil Recovery (%)	Core Length/ Smplr Advance	Blow Counts or Recovery (ft)	Core Run No./ Sampler Type	Elevation in Feet	Depth in Feet	Graphics	Smpl./recovery	Description and Classification	Remarks:
						244.5					
0		100	0.3			243.0				0.0 - 1.5 Ft. Clayey SAND, (SC).	Sample Number 0650129 0.5 - 0.8'
0		100	1.0			240.5				1.5 - 4.0 Ft. Silty SAND, (SM).	0650130 2.0 - 3.0' 0650131 2.0 - 3.0' (Duplicate)
0		100	0.5			239.0	5			4.0 - 5.5 Ft. Clayey SAND, (SC); Dark brown (10YR 3/2), damp to dry, dense, fine to medium grained, some gravels. Total Depth: 5.5 Ft.	0650132 5.0 - 5.5'

Hole advanced with a hand auger. Backfilled with spoils. Undisturbed VOA samples collected with a 1.5" SS Sleeve.

BOREHOLE LOG

PROJECT and JOB NUMBER: Navy Clean II 065			HOLE NO.: 007H4
			SHEET NO.: 1 OF 1
DRILLER: J. Lear/W. McConihe	SITE and LOCATION: SWMU 7 MCAS EL TORO		FILL (FT): 5.5 / BEGUN: 7-7-95
DRILL MAKE AND MODEL: 3" Hand Auger	COORDINATES: N 2,189,336.45 E 6,106,751.50	LOGGED BY: W. McConihe	ROCK (FT): NA / COMPLETED: 7-7-95
HOLE SIZE and/or CORE SIZE/DIAMETER: 3" 3"	GROUND EL. & DEPTH/EL. GROUND WATER: 244.26 / N/A /	CHECKED BY:	TOTAL DEPTH: 5.5 / UPDATE: 4-17-96

(Template: NAVY)

Organic Vapor Reading (ppm)	Core ROD %	Core/Soil Recovery (%)	Core Length/ Smplr Advance	Blow Counts or Recovery (ft)	Core Run No./ Sampler Type	Elevation in Feet	Depth in Feet	Graphics	Smpl./recovery	Description and Classification	Remarks:
						244.3					
0		100	0.3			243.0				0.0 - 1.3 Ft. Clayey SAND, (SC); Clayey Sand and Sandy Clay. Brown (10YR 3/3), damp, dense, fine to medium grained.	Sample Number 0650133 0.5 - 0.8'
0		100	1.0							1.3 - 5.5 Ft. Silty SAND, (SM); Brown (10YR 4/2), damp, loose, fine grained, occasional gravels to 1.5 inches. Increasing clay below 2.8 Ft.	0650134 2.0 - 3.0'
0		100	0.5			238.8	5			Total Depth: 5.5 Ft.	0650135 5.0 - 5.5'
											Hole advanced with a hand auger. Backfilled with spoils. Undisturbed VOA sample collected with a 1.5" SS Sleeve.

	SITE and LOCATION: SWMU 7 MCAS EL TORO	HOLE NO.: 007H4

BOREHOLE LOG

PROJECT and JOB NUMBER: Navy Clean II 065			HOLE NO.: 007H5
			SHEET NO.: 1 OF 1
DRILLER: J. Lear	SITE and LOCATION: SWMU 7 MCAS EL TORO		FILL (FT): 5.5 / BEGUN: 7-7-95
DRILL MAKE AND MODEL: 3" Hand Auger	COORDINATES: N 2,189,299.09 E 6,106,718.75	LOGGED BY: W. McConihe	ROCK (FT): NA / COMPLETED: 7-7-95
HOLE SIZE and/or CORE SIZE/DIAMETER: 3" 3"	GROUND EL. & DEPTH/EL. GROUND WATER: 243.54 / N/A /	CHECKED BY:	TOTAL DEPTH: 5.5 / UPDATE: 4-17-96

(Template: NAVY)

Organic Vapor Reading (ppm)	Core ROD %	Core/Soil Recovery (%)	Core Length/ Smplr Advance	Blow Counts or Recovery (ft)	Core Run No./ Sampler Type	Elevation in Feet	Depth in Feet	Graphics	Smp./recovery	Description and Classification	Remarks:
						243.5					
0		100	0.3							0.0 - 3.0 Ft. Silty SAND (SM); Brown (10YR 4/3), damp, loose, fine to medium grained.	Sample Number 0650136 0.5 - 0.8'
0		100	1.0							Some clayey partings.	0650137 2.0 - 3.0'
						240.5				3.0 - 5.0 Ft. Clayey SAND, (SC); Clayey Sand to Silty Sand. Gray-brown (10YR 3/2), damp, dense, fine to medium grained, occasional gravels.	
						238.5					
0		100	0.5			238.0	5			5.0 - 5.5 Ft. Silty SAND, (SM); Brown (10YR 4/3), damp, medium dense, fine grained, some clay.	0650138 5.0 - 5.5'
										Total Depth: 5.5 Ft.	
											Hole advanced with a hand auger. Backfilled with spoils. Undisturbed VOA sample collected with a 1.5" SS Sleeve.

BOREHOLE LOG

PROJECT and JOB NUMBER: Navy Clean II 065			HOLE NO.: 007H6
			SHEET NO.: 1 OF 1
DRILLER: J. Lear/W. McConihe	SITE and LOCATION: SWMU 7 MCAS EL TORO		FILL (FT): 5.3 / BEGUN: 7-10-95
DRILL MAKE AND MODEL: 3" Hand Auger	COORDINATES: N 2,189,306.99 E 6,106,738.10	LOGGED BY: W. McConihe	ROCK (FT): NA / COMPLETED: 7-10-95
HOLE SIZE and/or CORE SIZE/DIAMETER: 3" 3"	GROUND EL. & DEPTH/EL. GROUND WATER: 244.31 / N/A /	CHECKED BY:	TOTAL DEPTH: 5.3 / UPDATE: 4-17-96

(Template: NAVY)

Organic Vapor Reading (ppm)	Core RQD %	Core/Soil Recovery (%)	Core Length/ Smplr Advance	Blow Counts or Recovery (ft)	Core Run No./ Sampler Type	Elevation in Feet	Depth in Feet	Graphics	Smpl./recovery	Description and Classification	Remarks:
						244.3					
0		100	0.3			243.3				0.0 - 1.0 Ft. Clayey SAND, (SC); Brown (10YR 3/3), damp, dense, fine to medium grained.	Sample Number 0650141 0.5 - 0.8'
1		100	1.0			240.9				1.0 - 3.4 Ft. Silty SAND, (SM); Brown (10YR 4/3), damp, loose, fine to medium grained.	0650142 2.0 - 3.0'
0		100	0.3			239.0	5			3.4 - 5.3 Ft. Clayey SAND, (SC); Clayey Sand to Sandy Clay. Brown (10YR 4/2), dry, dense, fine grained, caliche deposists and specks to 0.2 inches below 4.5 ft.	0650143 5.0 - 5.3'
										Total Depth: 5.3 Ft.	

Hole advanced with a hand auger.
Backfilled with spoils.
Undisturbed VOA sample collected with a 1.5" SS Sleeve.

BOREHOLE LOG

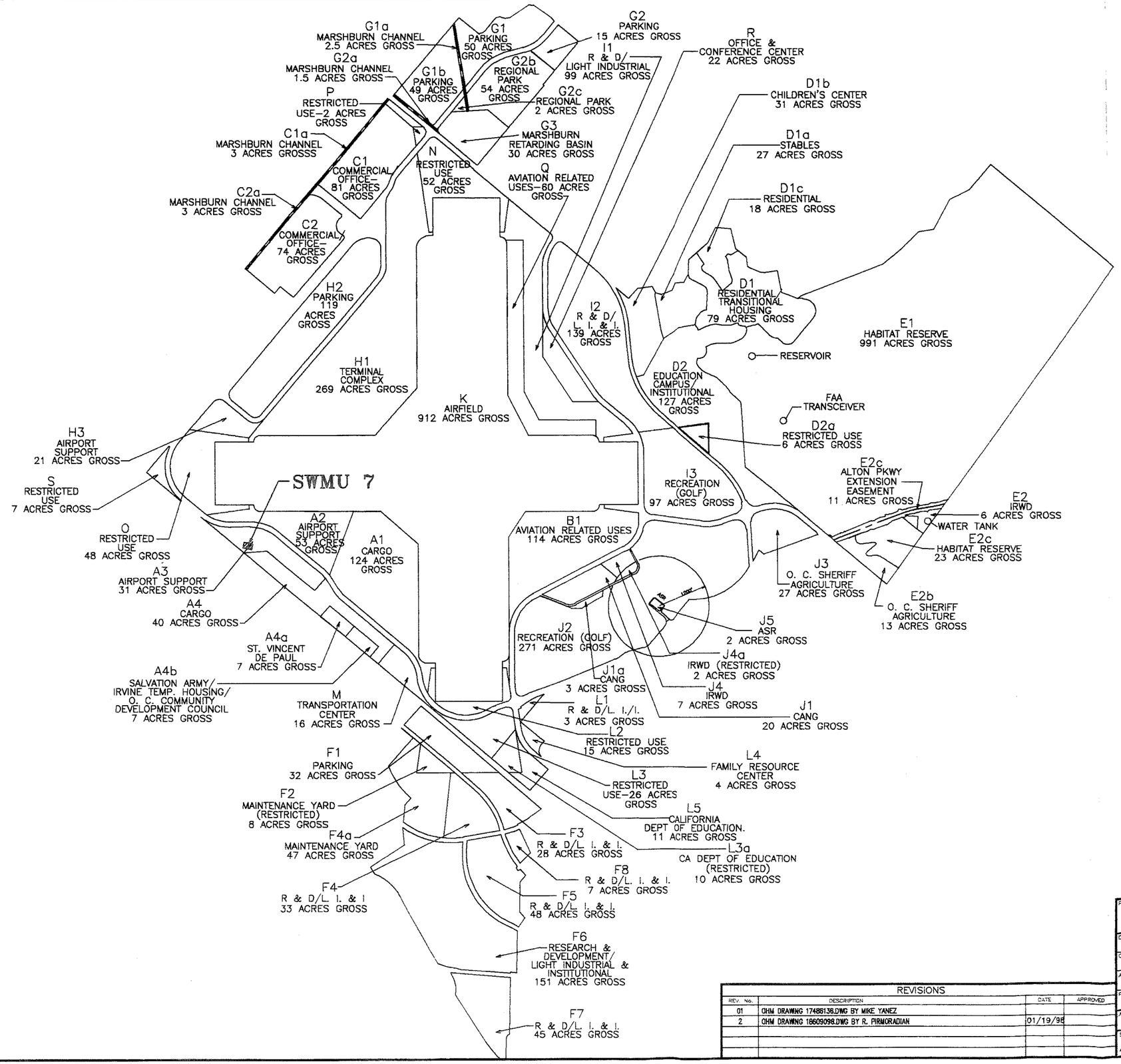
PROJECT and JOB NUMBER: Navy Clean II 065			HOLE NO.: 007H7
			SHEET NO.: 1 OF 1
DRILLER: J. Lear/W. McConihe	SITE and LOCATION: SWMU 7 MCAS EL TORO		FILL (FT): 5.3 / BEGUN: 7-10-95
DRILL MAKE AND MODEL: 3" Hand Auger	COORDINATES: N 2,189,315.40 E 6,106,725.70	LOGGED BY: W. McConihe	ROCK (FT): NA / COMPLETED: 7-10-95
HOLE SIZE and/or CORE SIZE/DIAMETER: 3" 3"	GROUND EL. & DEPTH/EL. GROUND WATER: 244.19 / N/A /	CHECKED BY:	TOTAL DEPTH: 5.3 / UPDATE: 4-17-96

(Template: NAVY)

Organic Vapor Reading (ppm)	Core ROD %	Core/Soil Recovery (%)	Core Length/ Smplr Advance	Blow Counts or Recovery (ft)	Core Run No./ Sampler Type	Elevation in Feet 244.2	Depth in Feet	Graphics	Smpl./recovery	Description and Classification	Remarks:
0		100	0.3			243.0				0.0 - 1.2 Ft. Clayey SAND, (SC); Clayey Sand to Sandy Clay. Brown (10YR 3/3), damp, dense, fine to medium grained.	Sample Number 0650144 0.5 - 0.8'
0		100	1.0			241.0				1.2 - 3.2 Ft. Silty SAND, (SM); Brown (10YR 4/3), damp, loose, fine to medium grained.	0650145 2.0 - 3.0'
0		100	0.3			238.9	5			3.2 - 5.3 Ft. Clayey SAND, (SC); Clayey Sand to Sandy Clay. Brown (10YR 4/2), dry, dense, fine grained, caliche deposits and specks to 2.0 inches below 4.5 ft.	0650146 5.0 - 5.3'
										Total Depth: 5.3 Ft.	

Hole advanced with a hand auger. Backfilled with spoils. Undisturbed VOA sample collected with a 1.5" SS Sleeve.

Appendix C
Tentative Reuse Parcel Location of SWMU 7



GRAPHIC SCALE
0 600 1,200 2,400
(IN FEET)

REVISIONS			
REV. No.	DESCRIPTION	DATE	APPROVED
01	OHM DRAWING 17486136.DWG BY MIKE YANEZ		
2	OHM DRAWING 18609098.DWG BY R. PIRMORADIAN	01/19/98	

PROJECT: SWDIV

OHM Remediation Services Corp.
A Subsidiary of OHM Corporation
SAN DIEGO, CA

DRAWN BY: R. PIRMORADIAN — DATE: 10/20/98
CHECKED BY — DATE
APPROVED BY: DR — DATE: 12/21/98
PROJECT MANAGER — DATE
AUTOCAD FILE No.: 18609148.DWG

EL TORO COMMUNITY REUSE PLAN
1997 WORKING MAP LAND USES/ CONVEYANCES GROSS ACRES
SWMU 7
MARINE CORPS AIR STATION EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.
AS NOTED	1	1	SW5247	18609	FIG 1

Oct 20, 1998 - 15:37:03 G:\PROJECTS\18609\18609148.dwg

Appendix D
Site Assessment/Visit Log

SITE ASSESSMENT LOG

MCAS EL TORO

TEMPORARY ACCUMULATION AREA & RFA SITE

18609, D.O. 70

TAA SITE: N/A RFA SITE: 7 SWMU NO. 7

Field Observations by: Dhananjay Rawal & Walid **Date:** October 10, 97.

TAA area: Paved or Unpaved → SWMU Area, Unpaved, in a fenced area

Paved: Concrete or Asphalt, Condition of the Concrete/Asphalt: Minor Cracks, Stains, etc. N/A

Unpaved: (Open on the Ground) or ~~Inside the Building~~

Is there any Drums or any types of Waste Stored: Yes (No), If Yes, Describe:

Fenced: (Yes)/No, **Sump:** Yes (No) **Concrete Berm**: Yes (No), ___ inch, **Roof:** Yes (No)

Describe other Structural details: None, Storage Area for heavy Vehicles etc, Pallets.

TAA Decontamination and/or Demolition Possible: Yes (No) Not applicable.

Site Setup Constrains: Equipment Operation, movement of Excavator or Backhoe, None, NO Equipment required, Very Small Soil Removal area,

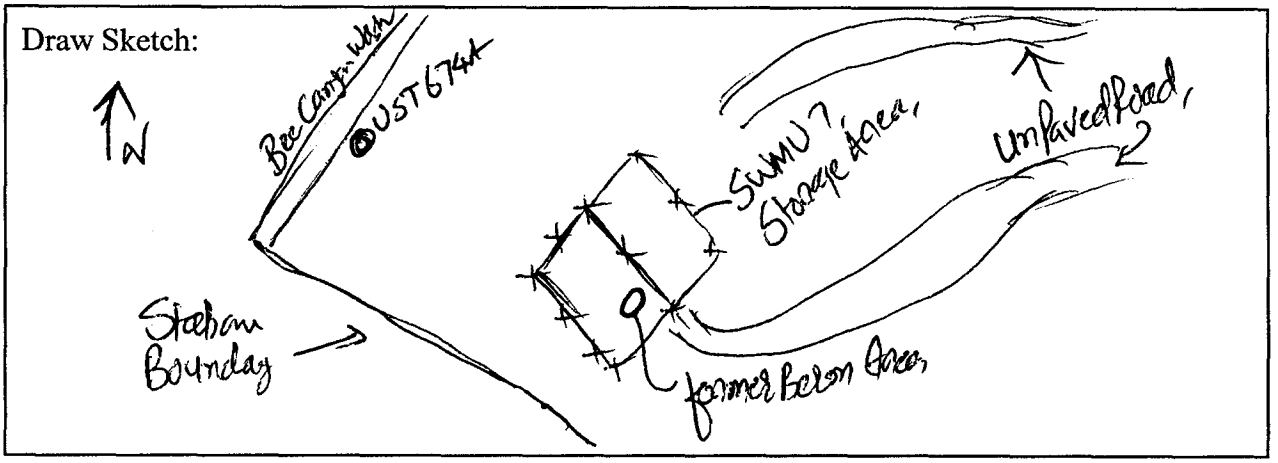
Nearest Building or Structure Distance: → IRP Site 12, Bee Canyon Wash, UST 6744,

Any Underground Piping/Lines, or Transformer Observed: — None, Storage of heavy Equipment etc

Overhead Utility Lines/Poles: None,

Photograph Roll No. 5. Please attach all the Photographs to this sheet.

Draw Sketch:



Appendix E
Site Photographs

Final Site Condition After Soil Removal at SWMU 7

Appendix F
Laboratory Analytical Reports

OHM Remediation Services Corp
Subsidiary of OHM Corporation
U.S. Route 224 East • Findlay, Ohio 45840 • (419) 423-3526

CHAIN-OF-CUSTODY RECO

PROJECT DATA MANAGER'S COPY

212078

FORM 0019 REV. 2-97

LAB COORDINATOR	LAB COORDINATOR'S PHONE	LAB COORDINATOR'S FAX	LABORATORY SERVICE ID	LABORATORY CONTACT	MAIL REPORT (COMPANY NAME)
YNE IsHida	(714) 263-1146	(714) 263-1147	697-10-497		
CT NAME: MW #7	PROJECT LOCATION: EL TORO MCAS	PROJECT NUMBER: 18609	LABORATORY PHONE	LABORATORY FAX	RECIPIENT NAME
CT CONTACT: IsHida	PROJECT PHONE NUMBER: 263-1146	PROJECT FAX: 263-1147	LABORATORY ADDRESS		ADDRESS
CT ADDRESS: 31 MAIN St.	CITY, STATE AND ZIPCODE: IRVINE, CA.	CLIENT: SWDIV	CITY, STATE AND ZIPCODE		CITY, STATE AND ZIPCODE
CT MANAGER: 11 SEDLAK	PROJECT MANAGER'S PHONE: 263-1146	PROJECT MANAGER'S FAX: 263-1147			

Sample Identifier	Matrix	Date	Time	Preserved	# of Cont	QC Level	T.A.T	Analyses PCBs ONLY-6001
18609-T34	S	10/24/97	1300	—	1	C	5DAY	X
18609-T35	S	10/24/97	1320	—	1	C	5DAY	X
18609-T36	W	10/24/97	1330	—	1	C	5Day	X

VOC

Comments

Requested 72h TAT

10/27/97

JMB 10/24/97

SAMPLES COLLECTED BY	COURIER AND AIR BILL NUMBER			COOLER TEMPERATURE UPON RECEIPT
RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
[signature]	[signature] VOC	10/24/97	1720	

Distribution: White - Laboratory (To be returned with Analytical Report); Goldenrod - Project File; Yellow - Project Data Manager

Project Information Section
For Project Personnel Only
Do Not Submit to Laboratory

Sample Point Location	Sample Type G	C	F	QC
1. SWMU #7 @ 1'S BF	X			
2. SWMU #7 @ 1' SWE	X			
3. Rinsate	X			X

Comments

B.F. = Bottom Floor
S.W.E = Side Wall East

Sample Type: G - Grab, C - Composite, F - Field Sample, QC - Quality Control Sample

COMPLETED

OHM Remediation Services Corp
Subsidiary of OHM Corporation
U.S. Route 224 East • Findlay, Ohio 45840 • (419) 423-3526

CHAIN-OF-CUSTODY RECORD

PROJECT DATA MANAGER'S COPY

212078

FORM 0019 REV. 2-97

OHM's LAB COORDINATOR	LAB COORDINATOR'S PHONE	LAB COORDINATOR'S FAX	LABORATORY SERVICE ID	LABORATORY CONTACT	MAIL REPORT (COMPANY NAME)
DWAYNE ISHIDA	(714) 263-1146	(714) 263-1147	697-10-497		
PROJECT NAME: SWMU #7	PROJECT LOCATION: EL TORO MCAS	PROJECT NUMBER: 18609	LABORATORY PHONE	LABORATORY FAX	RECIPIENT NAME
PROJECT CONTACT: D. ISHIDA	PROJECT PHONE NUMBER: 263-1146	PROJECT FAX: 263-1147	LABORATORY ADDRESS		ADDRESS
PROJECT ADDRESS: 2031 MAIN ST.	CITY, STATE AND ZIPCODE: IRVINE, CA.	CLIENT: SWDIV	CITY, STATE AND ZIPCODE		CITY, STATE AND ZIPCODE
PROJECT MANAGER: Bill SEDLAK	PROJECT MANAGER'S PHONE: 263-1146	PROJECT MANAGER'S FAX: 263-1147			

Analyses: PCBS ONLY-8081

VOC

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	PCBS ONLY-8081								Comments
1 ✓	18609-734	S	10/24/97	1300	—	1	C	5DAY	X								Requested 72 h TAT
2 ✓	18609-735	S	10/24/97	1320	—	1	C	5DAY	X								[signature] 10/27/97
3 ✓	18609-736	W	10/24/97	1330	—	1	C	5DAY	X								
4																	
5																	
6																	
7																	
8																	
9																	
10																	

MB 10/24/97

SAMPLES COLLECTED BY: MB

COURIER AND AIR BILL NUMBER:

COOLER TEMPERATURE UPON RECEIPT:

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
[signature]	[signature]	10/24/97	[illegible]	

Distribution: White - Laboratory (To be returned with Analytical Report); Goldenrod - Project File; Yellow - Project Data Manager

Project Information Section
For Project Personnel Only
Do Not Submit to Laboratory

Sample Point Location	G	C	F	QC
1. SWMU #7 @ 1.5' BF	X			
2. SWMU #7 @ 1' SWE	X			
3. Rinsate	X			X

Comments

B.F. = Bottom Floor
S.W.E = Side Wall East

Sample Type: G - Grab, C - Composite, F - Field Sample, QC - Quality Control Sample

OHM Remediation Services Corp
Subsidiary of OHM Corporation
U.S. Route 224 East • Findlay, Ohio 45840 • (419) 423-3526

CHAIN-OF-CUSTODY RECORD

LABORATORY COPY
212078

G9710447

FORM 0019 REV. 2-97

OHM's LAB COORDINATOR	LAB COORDINATOR'S PHONE	LAB COORDINATOR'S FAX	LABORATORY SERVICE ID	LABORATORY CONTACT	MAIL REPORT (COMPANY NAME)
DWAYNE ISHIDA	(714) 263-1146	(714) 263-1147			
PROJECT NAME	**PROJECT LOCATION**	**PROJECT NUMBER**	**LABORATORY PHONE**	**LABORATORY FAX**	**RECIPIENT NAME**
SWMU #7	EL TORO MCAS	18609			
PROJECT CONTACT	**PROJECT PHONE NUMBER**	**PROJECT FAX**	**LABORATORY ADDRESS**		**ADDRESS**
D. ISHIDA	263-1146	263-1147			
PROJECT ADDRESS	**CITY, STATE AND ZIPCODE**	**CLIENT**	**CITY, STATE AND ZIPCODE**		**CITY, STATE AND ZIPCODE**
2031 MAIN ST.	IRVINE, CA.	SWDIV			
PROJECT MANAGER	**PROJECT MANAGER'S PHONE**	**PROJECT MANAGER'S FAX**			
BILL SEDLAK	263-1146	263-1147			

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	Analyses PCB'S ONLY-8081	VOC	Comments
1	18609-734	S	10/24/97	1300	—	1	C	5DAY	X		
2	18609-735	S	10/24/97	1320	—	1	C	5DAY	X		
3	18609-736	W	10/24/97	1330	—	1	C	5DAY	X		
4											
5											
6											
7											
8											
9											
10											

MB 10/24/97

SAMPLES COLLECTED BY: MB

COURIER AND AIR BILL NUMBER:

COOLER TEMPERATURE UPON RECEIPT:

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
	VOC	10/24/97	14:20	
		10/24/97	3:21	
		10/24/97	415	

Distribution: White - Laboratory (To be returned with Analytical Report); Goldenrod - Project File; Yellow - Project Data Manager

Our Quality Control Is Your Quality Assurance

January 15, 1998 LOG NO.: G97-10-497

OHM Remediation Services Corp.
Attn: Ms. Mary Schneider
2031 Main Street
Irvine, CA 92614

Reference: Client Project # 18609-002, El Toro DO# 0070

Dear Ms. Schneider,

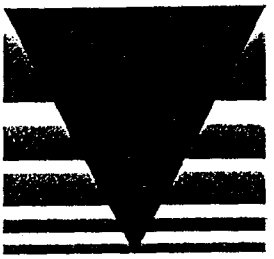
Enclosed is the analytical report for the chemical testing of samples collected in support of the above-referenced project. Samples were identified and tracked in the BCA/VOC system as log number **G97-10-497**. When making inquiries about this report, please provide the log number.

The contents of this package are based on the requirements specified in the BC Analytical, A Division of V.O.C. Analytical Laboratories, Inc. "Quality Assurance Management Plan". The case narrative addresses batch specific quality control as it pertains to this document.

If you have any questions, please do not hesitate to call me at (714) 978-0113.

Sincerely,

Cam Pham
Program Manager



Our Quality Control Is Your Quality Assurance

ANALYTICAL REPORT

000007

SAMPLE NO: 9710497*1

Received: 10.24.97

Mailed:

Ms. Mary Schneider
OHM Remediation Services Corp.
2031 Main Street
Irvine, CA 92614

P.O.#: 1040171
Req#: DO#0070
Project: 18609-002

DRY WEIGHT REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION, NON-AQUEOUS SAMPLE							DATE SAMPLED
9710497*1	18609-734						10.24.97
PARAMETER	METHOD	PREPED	ANALYZED	DIL	UNITS	RESULT	FLG
(Following results reported on the basis of 7.8% moisture)							
-Moisture/TNFR	D2216		10.27.97	1	Percent	7.8	

SAMPLE NO: 9710497*1

Received: 10.24.97

Ms. Mary Schneider
OHM Remediation Services Corp.
2031 Main Street
Irvine, CA 92614

P.O.#: 1040171
Req#: DO#0070
Project: 18609-002

DRY WEIGHT REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION, NON-AQUEOUS SAMPLE							DATE SAMPLED
9710497*1 18609-734							10.24.97
PARAMETER	METHOD	PREPED	ANALYZED	DIL	UNITS	RESULT	FLG
(Following results reported on the basis of 7.8% moisture)							
Polychlorinated Biphenyls							
Aroclor 1016	8081	10.27.97	10.28.97	1	ug/kg	43	U
Aroclor 1221	8081	10.27.97	10.28.97	1	ug/kg	43	U
Aroclor 1232	8081	10.27.97	10.28.97	1	ug/kg	43	U
Aroclor 1242	8081	10.27.97	10.28.97	1	ug/kg	43	U
Aroclor 1248	8081	10.27.97	10.28.97	1	ug/kg	43	U
Aroclor 1254	8081	10.27.97	10.28.97	1	ug/kg	43	U
Aroclor 1260	8081	10.27.97	10.28.97	1	ug/kg	43	U
Surrogates **							
Decachlorobiphenyl Reported	8081	10.27.97	10.28.97	1	Percent	111	
Tetrachloro-meta-xylene Rpt	8081	10.27.97	10.28.97	1	Percent	98	

ANALYTICAL REPORT

000009

SAMPLE NO: 9710497*2

Received: 10.24.97

Mailed:

Ms. Mary Schneider
OHM Remediation Services Corp.
2031 Main Street
Irvine, CA 92614

P.O.#: 1040171
Req#: DO#0070
Project: 18609-002

DRY WEIGHT REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION, NON-AQUEOUS SAMPLE							DATE SAMPLED
9710497*2	18609-735						10.24.97
PARAMETER	METHOD	PREPED	ANALYZED	DIL	UNITS	RESULT	FLG
(Following results reported on the basis of 7.7% moisture)							
-Moisture/TNFR	D2216		10.27.97	1	Percent	7.7	

SAMPLE NO: 9710497*2

Received: 10.24.97

Ms. Mary Schneider
OHM Remediation Services Corp.
2031 Main Street
Irvine, CA 92614

P.O.#: 1040171
Req#: DO#0070
Project: 18609-002

DRY WEIGHT REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION, NON-AQUEOUS SAMPLE							DATE SAMPLED
9710497*2	18609-735						10.24.97
PARAMETER	METHOD	PREPED	ANALYZED	DIL	UNITS	RESULT	FLG
(Following results reported on the basis of 7.7% moisture)							
Polychlorinated Biphenyls							
Aroclor 1016	8081	10.27.97	10.28.97	1	ug/kg	43	U
Aroclor 1221	8081	10.27.97	10.28.97	1	ug/kg	43	U
Aroclor 1232	8081	10.27.97	10.28.97	1	ug/kg	43	U
Aroclor 1242	8081	10.27.97	10.28.97	1	ug/kg	43	U
Aroclor 1248	8081	10.27.97	10.28.97	1	ug/kg	43	U
Aroclor 1254	8081	10.27.97	10.28.97	1	ug/kg	43	U
Aroclor 1260	8081	10.27.97	10.28.97	1	ug/kg	43	U
Surrogates **							
Decachlorobiphenyl Reported	8081	10.27.97	10.28.97	1	Percent	100	
Tetrachloro-meta-xylene Rpt	8081	10.27.97	10.28.97	1	Percent	106	

ANALYTICAL REPORT
000011

SAMPLE NO: 9710497*3

Received: 10.24.97

Mailed:

Ms. Mary Schneider
OHM Remediation Services Corp.
2031 Main Street
Irvine, CA 92614

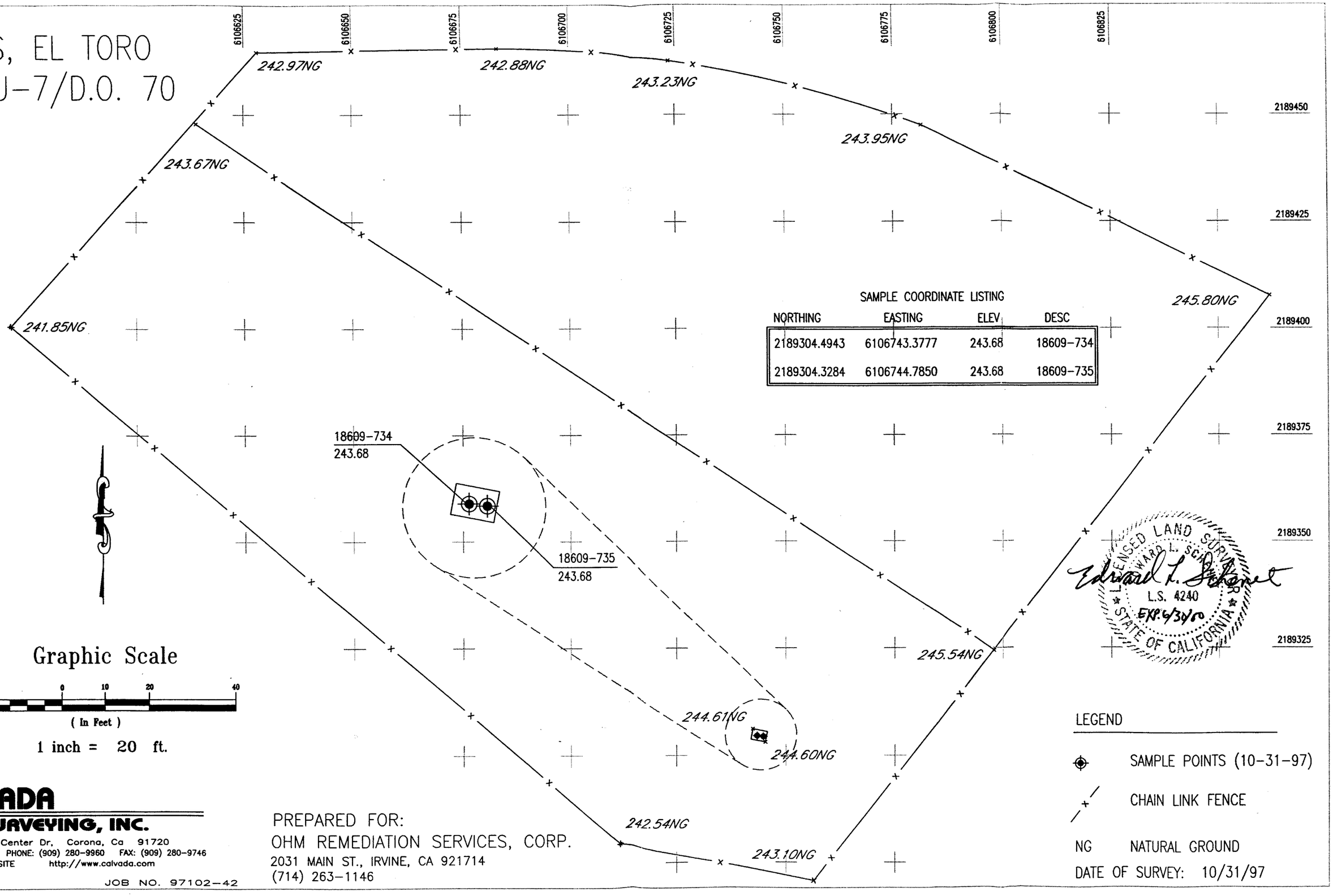
P.O.#: 1040171
Req#: DO#0070
Project: 18609-002

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION, AQUEOUS SAMPLE							DATE SAMPLED
9710497*3	18609-736						10.24.97
PARAMETER	METHOD	PREPED	ANALYZED	DIL	UNITS	RESULT	FLG
Polychlorinated Biphenyls							
Aroclor 1016	8081	10.29.97	10.30.97	1	ug/L	1	U
Aroclor 1221	8081	10.29.97	10.30.97	1	ug/L	1	U
Aroclor 1232	8081	10.29.97	10.30.97	1	ug/L	1	U
Aroclor 1242	8081	10.29.97	10.30.97	1	ug/L	1	U
Aroclor 1248	8081	10.29.97	10.30.97	1	ug/L	1	U
Aroclor 1254	8081	10.29.97	10.30.97	1	ug/L	1	U
Aroclor 1260	8081	10.29.97	10.30.97	1	ug/L	1	U
Surrogates **							
Decachlorobiphenyl Reported	8081	10.29.97	10.30.97	1	Percent	68	
Tetrachloro-meta-xylene Rpt	8081	10.29.97	10.30.97	1	Percent	105	

Appendix G
Land Survey Data

MCAS, EL TORO
SWMU-7/D.O. 70



SAMPLE COORDINATE LISTING

NORTHING	EASTING	ELEV	DESC
2189304.4943	6106743.3777	243.68	18609-734
2189304.3284	6106744.7850	243.68	18609-735

LICENSED LAND SURVEYOR
EDWARD L. SCHARET
STATE OF CALIFORNIA

Edward L. Scharet
L.S. 4240
EXP. 6/30/00

Graphic Scale

20 0 10 20 40
(In Feet)

1 inch = 20 ft.

LEGEND

- SAMPLE POINTS (10-31-97)
- CHAIN LINK FENCE
- NG NATURAL GROUND
- DATE OF SURVEY: 10/31/97

CAL VADA SURVEYING, INC.
Business Center Dr, Corona, Ca 91720
1 800 CALVADA PHONE: (909) 280-9960 FAX: (909) 280-9746
WEB SITE http://www.calvada.com

JOB NO. 97102-42

PREPARED FOR:
OHM REMEDIATION SERVICES, CORP.
2031 MAIN ST., IRVINE, CA 921714
(714) 263-1146

Appendix H
Waste Manifest

State of California—Environmental Protection Agency
Form Approved OMB No. 2050-0039 (Expires 9-30-99)
Please print or type. *Form designed for use on elite (12-pitch) typewriter.*

See Instructions on back of page 6.

Department of Toxic Substances Control
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CA6170023208 — Manifest Document No.: 00018
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
Commanding General (IAW)
MCAS-El Toro, P.O. Box 95001
Santa Ana, CA 92709-5001
4. Generator's Phone (714) 726-2772

A. State Manifest Document Number: 96613459
B. State Generator's ID: CAH0360938916
C. State Transporter's ID:
D. Transporter's Phone: (800)8972011
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone: (800) 222-2964

5. Transporter 1 Company Name: AETS Advanced Envi tech Svcs — 6. US EPA ID Number: NJD080631369
7. Transporter 2 Company Name — 8. US EPA ID Number:
9. Designated Facility Name and Site Address
Chemical Waste Management
35251 Old Skyline Rd.
Kettleman City, CA 93239
10. US EPA ID Number: CAT000646117

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. Environmentally hazardous substances, solid, n.o.s. (polychlorinated biphenyls), 9, UN3077, PG III (PCB's)	021	DM	11500	P	State: 611, 261 EPA/Other: NONE
b.					State: EPA/Other:
c.					State: EPA/Other:
d.					State: EPA/Other:

J. Additional Descriptions for Materials Listed Above: soil contaminated with polychlorinated biphenyls (PCB's) and personnal protective equipment (PPE)

K. Handling Codes for Wastes Listed Above: a. Z b. c. d.

15. Special Handling Instructions and Additional Information: FAX facility signed manifest to ATN: Steve Chandler at fax number (714) 263-1147, Project #18609, DO#70, emergency number (714) 980-6333, ERG #171, CWM Profile #DZ4356

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment 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
Eddie Benavente		12	05	97

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Mark Jecis		12	05	97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. 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 EMERGENCY OR SPILL, CALL THE NATIONAL RESPO' CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

DO NOT WRITE BELOW THIS LINE.

DTSC 8022A (4/97)

Blue: GENERATOR SENDS THIS COPY TO DTSC WITHIN 30 DAYS.
To: P.O. Box 400, Sacramento, CA 95812-0400

Chemical Waste Management, Inc.

DZ 4356
Profile #

WASTE PROFILE

(Please carefully read the instructions before completing this form)

Sales #

TSDF requested _____ Technology requested _____

☐ Check here if this is a Recertification

XX Check here if a Certificate of Destruction or Disposal is required

GENERAL INFORMATION

1. GENERATOR NAME: Commanding General (IAW) Generator USEPA ID: CA6170023208
2. Generator Address MCAS - El Toro Billing Address: ☐ Same OHM Remediation Services
   P.O. Box 95001, Santa Ana, CA 92709-5001 5731 W. Las Positas Blvd.
3. Technical Contact/Phone Steve Chandler (OHM) (714) 263-1146x431 Pleasanton, CA 94588
4. Alternate Contact/Phone: _____ Billing Contact/Phone: Accounts Payable (510) 227-1100

PROPERTIES AND COMPOSITION

5. A. Process Generating Waste: site remediation
   B. Is the waste from a CERCLA or state mandated cleanup? Yes ☐ No XX Location Name: _____
6. Waste Name: Environmentally hazardous substances, solid, n.o.s., 9, UN3077, PGIII
7. A. Is this a USEPA hazardous waste (40 CFR Part 261)? Yes ☐ No XX
   B. If D001, D002, D003, D012-D043 do any underlying hazardous constituents (UHC's) apply? Yes ☐ No XX (if yes, attach UHC form)
   C. Does this waste contain debris (List size and type in chemical composition)? Yes XX No ☐
   D. Identify ALL USEPA listed and characteristic waste code numbers (D,F,K,P,U): n/a
   State Waste Codes: 261
   E. Does this waste contain any Class I or Class II ozone depleting substances? (List in chemical composition) none
8. Physical state @ 70°F: A. Solid XX Liquid ☐ Both ☐ Gas ☐ B. Single Layer ☐ Multilayer XX C. Free Liquid range _____ to Ø %
9. A. pH: Range _____ to _____ or Not applicable XX B. Strong Odor ☐: describe none
   Liquid Flash Point: < 73°F ☐ 73-99°F ☐ 100-139°F ☐ 140-199°F ☐ ≥ 200°F ☐ N.A. XX
10. CHEMICAL COMPOSITION: List ALL constituents (including halogenated organics and UHC's) present in any concentration and forward available analysis

Constituents	Range	Units	Constituents	Range	Units
soil	0-100	%			
PPE	0-100	%			
PCB's	0-50	ppm			
(TSCA hazardous due to source)					

TOTAL COMPOSITION MUST EQUAL OR EXCEED 100%

12. OTHER: PCBs if yes, concentration 0-50 ppm, PCB's regulated by 40 CFR 761 XX Pyrophoric ☐ Explosive ☐ Radioactive ☐ Water Reactive ☐ Shock Sensitive ☐ Oxidizer ☐ Carcinogen ☐ Infectious ☐ Other _____
13. If Benzene, concentration Ø ppm. Is the waste subject to the Benzene Waste Operation NESHAP? Yes ☐ No ☐ Unknown ☐
14. Is the waste subject to RCRA subpart CC controls? Yes ☐ No XX Volatile organic concentration, if known none ppmw.
15. If the waste is subject to the land ban and meets the treatment standards, check here: ___ and supply analytical results where applicable.

SHIPPING INFORMATION

16. PACKAGING: Bulk Solid ☐ Type/Size: _____ Bulk Liquid ☐ Type/Size: _____ Drum XX Type/Size 1A2 55 gal. Other _____
17. SHIPPING FREQUENCY: Units 13 Per: ☐ Month ☐ Qtr. ☐ Year XX One Time ☐ Other _____

SAMPLING INFORMATION

18. A. Sample source (drum, lagoon, pond, tank, vat, etc.) _____
    Date Sampled: _____ Sampler's Name/Company: _____
    B. Generator's Agent Supervision Sampling: _____ 19. No sample required (See instructions.)

GENERATOR'S CERTIFICATION

I hereby certify that all information submitted in this and all attached documents contains true and accurate descriptions of this waste. Any sample submitted is representative as d in 40 CFR 261 - Appendix I or by using an equivalent method. All relevant information regarding known or suspected hazards in the possession of the generator has been sed. I authorize CWM to obtain a sample from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs as authorized ent of the generator and has confirmed the information contained in this Profile Sheet from information provided by the generator and additional information as it has determined to oe reasonably necessary.

Signature	E. BENAVENTE, EPS	11-7-97
	Printed (or typed) name and title	Date

If the waste profile is approved, Chemical Waste Management, Inc. has the appropriate permits and will accept the waste pursuant to our agreement.

CWM Form 6000 D replaces

nsportation
Motor Avenue
usa, CA 91702
Driver (1): M. Jeris
Driver (2):

Trip Ticket: 000222723 RUN: 0181686 PAGE: 1
Requested by: MM0353CAH
Requested On: 12/04/97
A

Load/Unload: 96613459

Generator Information:	Manifest Document Number(s)
US EPA ID No. CA6170023209	
L TORO MCAS	State EPA ID No. NO STATE EPA
LDG 319	
AST IRVINE, CA 92650-0021	Phone: (714) 726-6606
ickup: 12/05/97 08:00	
4 HR EMERGENCY AND SPILL ASSISTANCE NUMBERS:	( ) -
Transporter Information:	US EPA ID No. NJD080631369
ETS	
MOBILE AVE	State EPA ID No. NO STATE EPA
AUGET, IL 61027-1280	
	Phone: (618) 255-6655
esignated Facility Information	US EPA ID No. CAT000646117
HEMICAL WASTE MGMT INC 1	
5251 OLD SKYLINE RD	State EPA ID No. NO STATE EPA
ETTLEMAN CITY, CA 93239-0471	
ISP: 12/05/97 08:00 SC: DLFR	Phone: (209) 386-9711

nformation: Service Request No.: 0405727 Activity No. 001
Master Service Request No.: 0269375 UN/NA: UN3077 Pkg Grp: III
ROFILE 004356 ENVIRONMENTALLY HAZARDOUS SUBS Hazard class: 9 HM: Y
OT Proper Shipping Name: P.O.#:
RQ, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N
.O.S
(POLYCHLORINATED BIPHENOLS)
ustomer Contact: STEVE CHANDLER CHM (000) 000-0000 EXT: 0000

Containers No.	Type	Total Quantity	UOM	DESCRIPTION	Waste Codes
021	DM	2			
				(Shipped)	

LOADING DEMURRAGE ADDITIONAL UNLOADING DEMURRAGE
PART DATE/TIME _____ CUSTOMER/SITE DEPART DATE/TIME _____

Time Summary	Requirements	Time Summary
Start	Box In #	Start
End	Box Out #	End
	Wash Yes / No	
Total	Prtng	Total
	Liner 8/1/2/3	
TE/TIME		ARRIVAL DATE/TIME

OAD COMMENTS
ONAL COMMENTS/REMARKS:

Shipper Signature / / Date
Transportation Signature 12/5/97 Date
/ /

NO PAPER WORK