M60050.000217
MCAS EL TORO
SSIC #5090.3

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

Oil/Water Separator Site 800F
Marine Corps Air Station
El Toro, California

SWDIV Contract No. N68711-93-D-1459 – Delivery Order No. 0112 – Revision 0
OHM Project No. 920242 – Document Control No. SW7022 – November 1, 1999

Site Assessment Report

Appendix A - Tentative Reuse Parcel Location of OWS Site 800F; Appendix B - JEG RFA Information; Appendix C - TCE in Groundwater; Appendix D - Excerpts from Law/Crandall Report for OWS Site 800F; Appendix E - Station Drawings; Appendix F - Site Photographs; Appendix G - Site Inspection Log; Appendix H - Geophysical Survey Data; Appendix I - Field Soil Boring Logs; Appendix J - Laboratory Analytical Reports; Appendix K - Land Survey Data; Appendix L - OWS Contents Waste Manifest

OHM Remediation Services Corp.
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OHM TRANSMITTAL/DELIVERABLE RECEIPT

CONTRACT N68711-93-D-1459 **DOCUMENT CONTROL NO: SW7022**

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Southwest Division
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San Diego, California 92132-5190

Date: 04-Nov-99

D.O.: 112

Location: MCAS EL TORO

FROM: James Franklin FOR
Stewart Bornhoft, Program Manager

Edwin G. Bond, Contracts Manager

DESCRIPTION OF ENCLOSURE: *Site Assessment Report, Oil/Water Separator Site 800F, dated November 1, 1999*

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Site Assessment Report

Oil/Water Separator Site 800F
Marine Corps Air Station
El Toro, California

SWDIV Contract No. N68711-93-D-1459, Delivery Order No. 0112
OHM Project No. 920242
Document Control No. SW7022
Revision 0
November 1, 1999

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Abbreviations and Acronyms

bgs	below ground surface
BRAC	Base Realignment and Closure Act
BTEX	benzene, toluene, ethylbenzene and total xylenes
CA LUFT	California leaking underground fuel tank
CDM	Camp, Dresser & McKee, Inc.
DCN	Document Control Number
DO	Delivery Order
EPA	U.S. Environmental Protection Agency
ft	foot
ft/ft	feet per foot
gpm	gallons per minute
GPR	ground penetrating radar
JEG	Jacobs Engineering Group Inc.
MCAS	Marine Corps Air Station
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
msl	mean sea level
MTBE	methyl tert-butyl ether
OHM	OHM Remediation Services Corp.
OWS	oil/water separator
ROICC	Resident Officer In Charge of Construction
Station	Marine Corps Air Station El Toro
SWDIV	Southwest Division Naval Facilities Engineering Command
TPH	total petroleum hydrocarbons
UST	underground storage tank
VOC	volatile organic compound
µg/kg	micrograms per kilogram
µg/L	micrograms per liter

Section 1
Introduction

This report describes the site verification and contents removal and disposal activities conducted at oil/water separator (OWS) 800F at the Marine Corps Air Station El Toro, California (herein after referred to as the Station). OHM Remediation Services Corp. (OHM) performed the work under Delivery Order (DO) 0112 for the Southwest Division Naval Facilities Engineering Command (SWDIV) under Remedial Action Contract No. N68711-93-D-1459.

OHM conducted verification drilling and sampling activities in the vicinity of OWS Site 800F, to evaluate the subsurface conditions and to ascertain whether or not a release had occurred. OWS 800F was out of service for approximately a year, and was not in service during field verification activities. Verification drilling activities did not indicate that a release had occurred. The OWS contents were sampled and analyzed, and subsequently identified as non-hazardous. Based on these results, the OWS contents were removed and disposed at an offsite facility. As a result of these activities, no further action is recommended for OWS Site 800F.

The Station is located in Orange County, California, approximately 45 miles southeast of the City of Los Angeles, and 1 mile north of the intersection of Interstate 5 (Santa Ana Freeway) and Interstate 405 (San Diego Freeway). The City of Lake Forest is less than 2 miles southeast, and East Irvine is approximately 1 mile to the northwest. The Station covers approximately 4,700 acres. The location of the Station is shown on Figure 1-1.

The Station officially closed on July 2, 1999 in accordance with the Base Closure and Realignment Act of 1993 (BRAC III). According to the El Toro Community Reuse Plan (County of Orange, 1997), OWS Site 800F is located within an area that has been tentatively identified as part of the Transportation Center. The County of Orange issued the Airport and Open Space Plan Year 2020 (also known as Concept C) in August 1998; and that plan identified the OWS 800F area as part of the Airport Transportation Center. The El Toro Community Reuse Plan working maps are provided in Appendix A.

1.1 Site Description and Background

The OWS 800F is located in the Southwest quadrant of the Station, west of runway 34 L and northwest of the Augua Chinon Wash. The OWS is located on the southwest side of Building 800, as shown on Figure 1-2.

The OWS 800F was a concrete separator with an estimated total capacity of 1500 gallons and an estimated flow capacity of 50 gallons per minute (gpm). The OWS collected wash water from the drains associated with Building 800, separated oil and grease from the wash water, and then discharged it to the sanitary sewer.

1.2 RCRA Facility Assessment

In 1991, JEG performed an initial Preliminary Review (PR) and a Visual Site Inspection (VSI) of 307 solid waste management units (SWMUs) within the Station as part of the Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA). JEG conducted site visits to observe conditions at the SWMUs identified in the RFA, and limited site sampling at selected sites, including SWMU 232. OHM Reviewed the JEG RFA report and identified a discrepancy in the site designated as SWMU 232. Although OWS 800F was identified as SWMU 232 in the text, maps and photographs indicate that OWS Site 802 was actually the site JEG visited and sampled as SWMU 232.

As a result, no soil sampling was conducted by JEG at the OWS Site 800F. Therefore, SWMU 232 should be designated as OWS Site 802, and the appropriate changes made to Tables 3-1a and 3-14 in the Base Realignment and Cleanup Plan (BCP) (SWDIV, 1999). In support of this discussion, excerpts from the JEG RFA have been included in Appendix B.

Section 2
Environmental Setting

This section summarizes the general physiography, geology, and hydrogeology in the vicinity of the Station and OWS Site 800F.

The Station is located on the southeastern edge of the Tustin Plain and extends into the Santa Ana Mountains. The Tustin Plain slopes gently toward the west-southwest with land surface elevations ranging from approximately 215 feet above mean sea level (msl) at the western corner to approximately 410 feet msl at the eastern edge of the Station. Elevations within the portion of the Station in the Santa Ana Mountains extend upward to 800Feet msl near the northeast corner of the Station. OWS Site 800F is situated on the Tustin Plain, topography is relatively flat, with an elevation of 272 feet above mean sea level (msl) datum.

2.1 Regional Geology

The Station is situated on alluvial materials derived mainly from the Santa Ana Mountains. These Holocene materials consist of coarse-grained stream channel deposits and fine-grained overbank deposits that are up to 300 feet thick (Herndon and Reilly, 1989).

The Holocene alluvial materials conformably overlie Pleistocene sediments predominantly composed of interlayered fine-grained lagoonal and near-shore marine deposits. These materials become increasingly mixed with beach sands, terrace deposits, and stream channel deposits in the eastern portion of the Tustin Plain and along the eastern plain edges. The Quaternary deposits form a heterogeneous mixture of silts and clays, with interbedded sands and fine gravels up to 500 feet thick in the western portion of the Tustin Plain (Singer, 1973).

2.2 Regional Hydrogeology

The Station is situated within the Irvine Groundwater Subbasin, which comprises the southeast segment of the Main Orange County Groundwater Basin. Regional groundwater flow in the Subbasin has been to the west and northwest since the 1940s and is controlled locally by large groundwater withdrawal depressions. From 1969 to 1982, an average gradient of 0.0046 feet per foot (ft/ft) to the northwest was reported in the principal aquifer zone of the Irvine area (Banks, 1984). Phase I remedial investigation data indicated a similar groundwater flow direction in the shallower groundwater zone, with a slightly higher gradient of 0.008 ft/ft (JEG, 1993).

The depth to groundwater beneath the Station ranges from approximately 45 feet below ground surface (bgs) in the foothills to 240 feet bgs in the deepest portion of the Irvine Subbasin. Groundwater depth in the vicinity of OWS Site 800F is estimated to be 83 feet bgs, based on available water-level data from nearby well 08_UGMW29 and 18_BGMW05D, presented in the

Groundwater Monitoring Report (Camp Dresser & McKee, Inc. [CDM] Federal Programs, 1997). These well locations are shown in Figure 1-2.

Analyses of groundwater samples collected from well 08_UGMW29 and 18_BGMW05D did not indicate the presence of TPH extractable or purgable constituents, or of the volatile organic compounds (VOCs) benzene, toluene, ethylbenzene, or total xylenes (BTEX). However, trichloroethene (TCE) was detected in the July 1997 groundwater samples from these wells, indicating that the OWS 800F Site is situated over the IRP Site 24 VOC plume. A map of TCE in groundwater is provided in Appendix C.

Section 3
Record Search

OHM reviewed available background documents and drawings pertaining to OWS Site 800F prior to starting fieldwork.

The Base Realignment and Closure (BRAC) Cleanup Plan (SWDIV, 1999) and the *Oil/Water Separator Survey Report* (Law/Crandall, Inc., 1993) listed OWS 800F as an inactive 1500-gallon capacity concrete OWS in sound condition. The BRAC Cleanup Plan also identifies the OWS 800F as SWMU 232. However, this designation may actually indicate the OWS Site 802 as indicated in RFA Drawing Number 69.

The OWS Separator Survey (Law/Crandall, June 1993) described OWS 800F as a concrete two-stage separator with total capacity of 1500 gallons and an estimated flow capacity of 50 gallons per minute (gpm). The OWS was reported to have been installed in 1984. No automatic shutoff/diversion valves or controls were indicated in the drawings or observed in the field.

The separator received wash water from the floor drains associated with nearby Building 800; separated oil and grease from the wash water; and discharged the water into the sanitary sewer. The OWS construction appeared sound during the 1993 survey and was listed in active service. Excerpts from the Law/Crandall report pertaining to OWS 800F are included in Appendix D.

OHM obtained information from the Station's Resident Officer In Charge of Construction (ROICC) regarding construction as-built drawings of OWS Site 800F. ROICC provided the following drawings:

- Site Plan, Drawing Number C-3, 6148088
- Utility Plan, Drawing Number C-5, 6148090
- Construction Details, Drawing Number P-9, 6148158
- Sanitary Sewer Profiles, Drawing, C-6, 6148091.

Copies of these drawings are included in Appendix E.

Section 4
Field Activities

OHM performed field activities at OWS Site 800F to evaluate the possible occurrence of a petroleum hydrocarbon release from use of the OWS, and to implement an in-place closure of the OWS. Field activities included a site inspection; a geophysical survey; sampling, removal, and disposal of the OWS contents; collection and analyses of soil samples from two verification soil borings; and a land survey. Photographs of the field activities are included in Appendix F.

Fieldwork was performed in accordance with the following approved Preliminary Draft DO 0024 documents: Work Plan, Contractor Quality Control Plan Addendum, Waste Management Plan, Chemical Data Acquisition Plan (OHM, 1995a), and Site-Specific Health and Safety Plan (OHM, 1995b).

4.1 Site Inspection

OHM personnel conducted a site inspection on June 14, 1999, to identify the location of OWS 800F using as-built drawings. No evidence of releases or spills near the OWS area was observed. Based on the existing landmarks, OHM proposed the location of the soil borings adjacent to the southwest and northwest sides of the OWS, see Figure 4-1 Site Map for soil boring locations. A copy of the Site Inspection Log is included in Appendix G.

4.2 Utility Clearance and Geophysical Survey

The utility clearance consisted of reviewing site-specific utility maps obtained from the Station, reviewing the site inspection log, performing a geophysical survey of the site, and notifying Underground Service Alert of the intent to drill.

On June 14, 1999, Spectrum-Gasch conducted a geophysical survey, using a utility locator and ground-penetrating radar (GPR), to locate the presence of underground utilities in the vicinity of proposed drilling areas. The results of the analog utility locator and GPR surveys indicated the presence of electrical lines and sewer line. A copy of the geophysical survey report is included in Appendix H.

4.3 Verification Drilling Activities

On June 16, 1999, OHM advanced two soil borings (800F SB-01and 800F SB-02) to a depth of 30 feet below ground surface (bgs) in close proximity to the OWS 800F, Figure 4-1. The soil boring locations were selected based on a review of as-built drawings and the geophysical survey. These borings were advanced using hollow-stem auger techniques with a CME

75 drilling rig mounted on a limited-access tractor provided by BC^2 Environmental Corporation (an OHM subcontractor). The soil boring locations are shown on Figure 4-1.

Sampling

A total of 7 soil samples (including a duplicate sample) were collected from the soil borings using a California-modified split-spoon sampler. Samples were collected at nominal depth intervals approximately 10, 20, and 30 feet bgs. The split spoon sampler and sleeve inserts were decontaminated with a soap and water wash and potable water rinse before each use to avoid potential cross-contamination between sample intervals. Soil samples and duplicates collected from the borings were submitted for laboratory analyses. Following the completion of sampling activities, the soil borings were backfilled with cement-bentonite grout to the surface.

Borings were logged in accordance with the United Soil Classification (USCS) by an OHM field geologist under the supervision of a California Registered Geologist. The field boring logs describing soil lithology are presented in Appendix I. These boring logs indicate that the subsurface soil in the vicinity of the OWS Site 800F is predominantly composed of sandy clay and clayey sand.

Analyses

Sampling, including sample handling and packaging, was conducted in accordance with the procedures described in the approved Draft Work Plan (OHM, 1995a). The soil samples were analyzed for total petroleum hydrocarbons (TPH) extractable and TPH purgeable using California Leaking Underground Fuel Tank (CA LUFT) Manual Method 8015 modified; and for volatile organic compounds (VOCs), including methyl tert-butyl ether (MTBE), using U.S. Environmental Protection Agency Method 8260A.

Results

Concentrations of TPH (extractable and purgeable) and VOC analytes (including MTBE) were not detected at or above laboratory reporting limits in the soil samples from borings 800F SB-01and 800F SB-02. The analytical results of the soil samples collected from the verification borings are presented in Table 4-1 and summarized in Figure 4-1. Chain-of-custody and laboratory analytical reports are provided in Appendix J.

Cuttings Disposal

Soil cuttings generated during drilling operations were drummed, labeled, and stored at the Station's Central Treatment Facility compound (operated by OHM) pending analytical results. Analyses of the boring samples indicated that the soils were non-hazardous. The drummed soils were placed in the clean soil stockpile.

4.4 Land Surveying

After completing the verification drilling, the soil boring locations were surveyed on June 26, 1999 by Cal Vada 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 msl elevation. The land surveying data for former OWS Site 800F are presented as Appendix K.

4.5 OWS Contents Sampling, Removal, and Disposal

On July 2, 1999, OHM inspected OWS 800F and observed the separator contents to have a slight sheen. An OWS liquid contents sample (20242-969) was collected from the primary chamber of the separator using a Teflon™ bailer. The contents sample was submitted for laboratory analysis of petroleum hydrocarbons (CA LUFT 8015M), metals (EPA 6010A), mercury (7470A), pesticides (8081), and volatile organic compounds (EPA 8260A).

The analytical results of the OWS contents sample indicated that the liquid would be deemed non-hazardous waste. The results of the analyses are presented in Table 4-2. Laboratory analytical reports are provided in Appendix J.

On October 5 and 6, 1999, OHM removed and disposed of the OWS contents using the following procedure. Ecology Control Industries (ECI), under subcontract to OHM, removed 900 gallons of liquid contents with a vacuum truck on October 5, 1999. After removal of the liquid contents, on October 6, 1999 the inside of the separator was rinsed with approximately 100 gallons of clean water and the rinsate was removed by ECI vacuum truck. A total of approximately 1,000 gallons of OWS liquid and rinse water were removed. ECI transported the liquid contents and rinsate offsite, with non-hazardous liquid contents and rinsate from OWS sites 802 and 845, to the Crosby & Overton treatment and disposal facility in Long Beach, California. Copies of the Waste Manifests (2) are provided in Appendix L.

Section 5
Conclusions and Recommendations

The following conclusions are based upon information from surveys, existing records, field OWS closure activities and OHM soil sampling data from verification soil borings:

- OWS 800F was used to separate oil and grease from wastewater prior to discharge to the sanitary sewer. Oil and grease have relatively limited mobility in the vadose zone when compared with gasoline.
- The OWS was inspected by Law/Crandall during the 1993 survey and reported to be in apparently sound condition.
- The depth to groundwater is estimated to be approximately 83 feet below ground surface based on historical data from local monitoring wells 08_UGMW29 and 18_BGMW05D.
- OWS 800F was not in service for approximately a year prior to field verification activities.
- OWS 800F was evaluated for a potential release of petroleum hydrocarbons. Two verification soil borings were advanced at the site, and soil samples were collected. Analyses of these soil samples did not detect the presence of TPH extractable, TPH purgeable, BTEX and MTBE analytes in any of these soil samples.
- The OWS tank contents was sampled and analyzed. Analyses of this sample indicated that the liquid contained in the OWS was non-hazardous. As a result, the contents were removed, the separator was rinsed, and the OWS contents and rinse water were disposed offsite.

Based on the information provided in this report, there is no evidence of a release of petroleum hydrocarbons to the vadose zone at OWS Site 800F. OWS 800F contents were removed and disposed offsite. Therefore, on behalf of the Station, OHM recommends that this report be submitted to the California Regional Water Quality Control Board, Santa Ana Region, and that "No Further Action" status be requested for OWS Site 800F.

OHM also recommends that the BCP (SWDIV, 1999) be modified to indicate that OWS 802 is SWMU 232, and that references to SWMU 232 under OWS Site 800F be deleted.

Section 6
References

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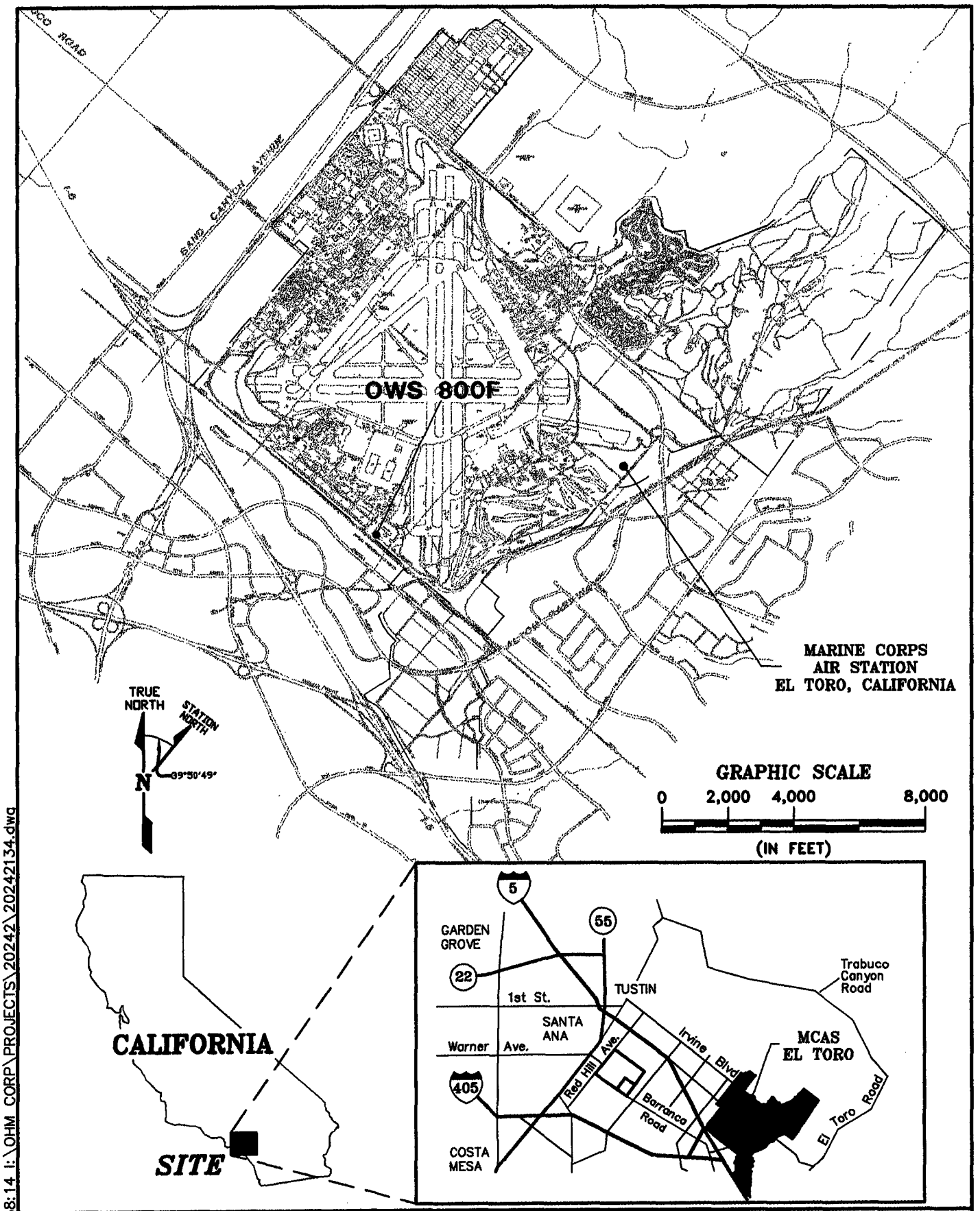
SWDIV, see Southwest Division Naval Facilities Engineering Command.

Figures



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

CONTRACT NAME: SWDIV

DRAWN BY: R. PIRMORADIAN	DATE: 10/06/99	
CHECKED BY: DR	DATE: 10/7/99	
APPROVED BY: [signature]	DATE: 4-2-99	
PROJECT MANAGER: [signature]	DATE: 4/3/99	

FACILITY LOCATION MAP
OWS 800F

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

AUTOCAD FILE No.	PLOT SCALE	SHEET	OF	SCALE	DOCUMENT CONTROL No.	OHM PROJECT No.	FIGURE No.	REVISION
20242134.DWG	1=1	1	1	1"=4,000'	SW7022	20242	FIG 1-1	0

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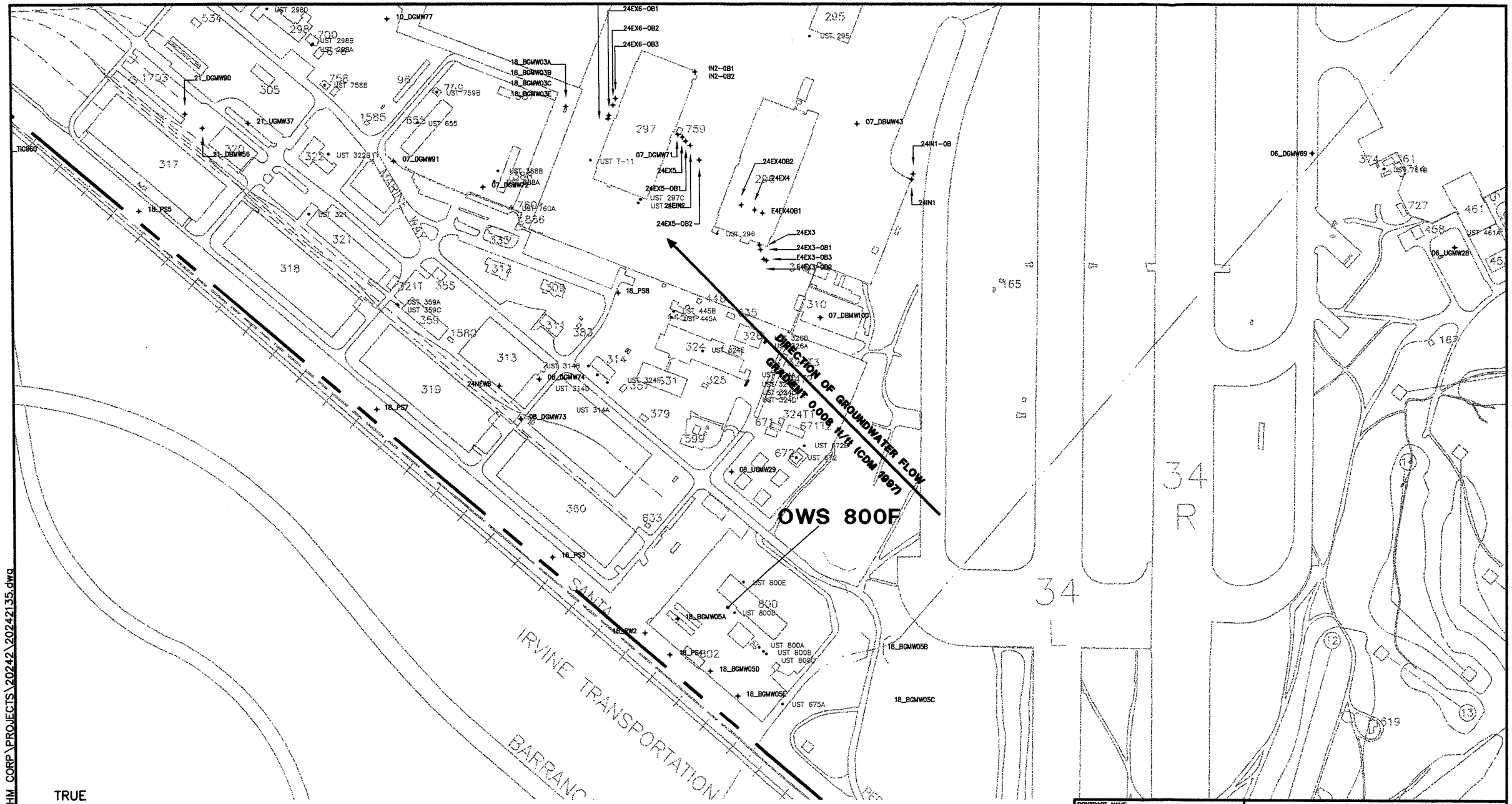

EXPLANATION:

- • UNDERGROUND STORAGE TANKS
- ✦ GROUNDWATER MONITORING WELL

REVISIONS			
REV. No.	DESCRIPTION	DATE	APPROVED

CONTRACT NAME	SWDIV
DRAWN BY R. PIRMORADIAN	DATE 11/01/99
CHECKED BY DR	DATE 11/2/99
APPROVED BY	DATE 11/2/99
PROJECT MANAGER	DATE 11/3/99
AUTOCAD FILE No. 20242135.DWG	

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IRVINE, CA

LOCATION MAP
OWS 800F

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.
1"=400'	1	1	SW7022	20242	FIG 1-2

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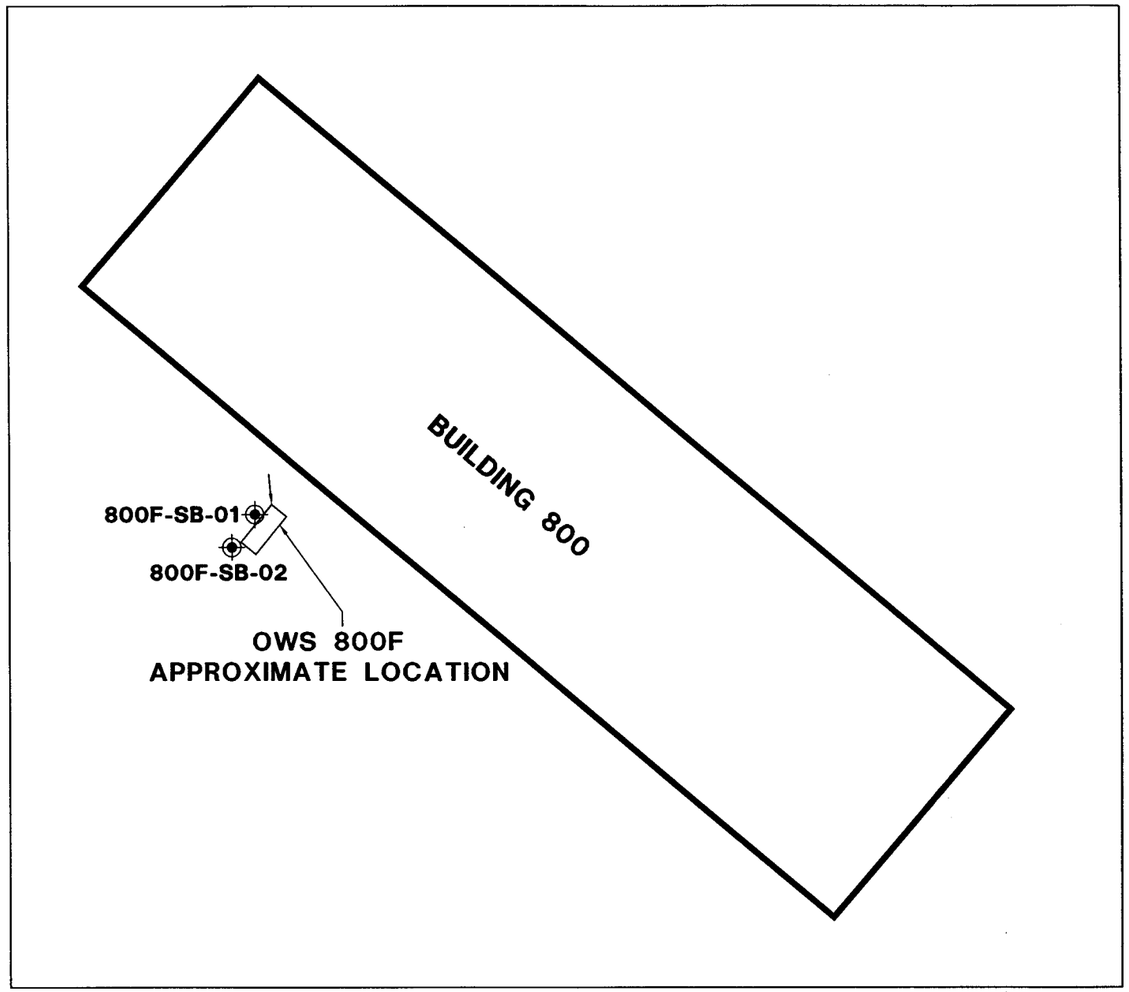

SAMPLE LOCATION AND DATA SUMMARY

Boring Number	Location Northing (NAD 83)	Easting (NAD 83)	Elevation (ft amsl)	Sample Number	Depth (ft bgs)	*CA LUFT 8015M* TPH as: Diesel mg/kg	Gasoline mg/kg	Motor Oil mg/kg	*EPA 8260A* VOCs: Benzene µg/kg	Ethylbenzene µg/kg	Methyl tert-butyl ether µg/kg	Toluene µg/kg	Xylenes (total) µg/kg
OWS-800F-SB01													
	2186750.32	6110133.36	272.68										
				20242-930	9.5	12 U	1.2 U	12 U	5.8 U	5.8 U	12 U	5.8 U	17 U
				20242-931	20.5	12 U	1.2 U	12 U	6.1 U	6.1 U	12 U	6.1 U	18 U
				20242-932	30.5	12 U	1.2 U	12 U	6.0 U	6.0 U	12 U	6.0 U	18 U
OWS-800F-SB02													
	2186739.47	6110125.69	272.54										
				20242-933	11.0	12 U	1.2 U	12 U	5.8 U	5.8 U	12 U	5.8 U	17 U
				20242-934	20.5	12 U	1.2 U	12 U	5.9 U	5.9 U	12 U	5.9 U	18 U
				20242-935	30.5	11 U	1.1 U	11 U	5.7 U	5.7 U	11 U	5.7 U	17 U
				20242-936	31.0	12 U	1.2 U	12 U	5.8 U	5.8 U	12 U	5.8 U	17 U

N

EXPLANATION:

800F-SB-01 SOIL BORING

DATE OF SURVEY: 06-26-99

GRAPHIC SCALE

0 25 50 100

(IN FEET)

REVISIONS

REV. No.	DESCRIPTION	DATE	APPROVED
01	97102-142.DWG BY CALVADA SURVEYING, INC.	6/26/99	

CONTRACT NAME: SWDIV

OHM Remediation Services Corp.
A Subsidiary of OHM Corporation
IRVINE, CA

DRAWN BY: R. PIRMORADIAN DATE: 11/01/99
CHECKED BY: DR DATE: 11/2/99
APPROVED BY: DATE: 11-2-99
PROJECT MANAGER: DATE: 11/1/99
AUTOCAD FILE No.: 20242133.DWG

SITE PLAN
OWS 800F

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.
1"=50'	1	1	SW7022	20242	FIG 4-1

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Tables

Table 4 - 1
Summary of Analytical Results for Soil Boring Samples — OWS 800F

Sample Identification		20242-930	20242-931	20242-932	20242-933	20242-934	20242-935	20242-936
Location Code		OWS-800F-SB01	OWS-800F-SB01	OWS-800F-SB01	OWS-800F-SB02	OWS-800F-SB02	OWS-800F-SB02	OWS-800F-SB02
Date Sampled		06/16/99	06/16/99	06/16/99	06/16/99	06/16/99	06/16/99	06/16/99
Depth (feet below ground surface)		9.5	20.5	30.5	11.0	20.5	30.5	31.0
	Unit							
CA LUFT 8015M								
TPH as Diesel	mg/kg	12 U	12 U	12 U	12 U	12 U	11 U	12 U
TPH as Gasoline	mg/kg	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U
TPH as Motor Oil	mg/kg	12 U	12 U	12 U	12 U	12 U	11 U	12 U
EPA 8260A								
1,1,1-Trichloroethane	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
1,1,2,2-Tetrachloroethane	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
1,1,2-Trichloroethane	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
1,1-Dichloroethane	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
1,1-Dichloroethene	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
1,2-Dichloroethane	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
1,2-Dichloropropane	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
2-Butanone (MEK)	µg/kg	58 UJ	61 UJ	60 UJ	58 UJ	59 U	57 UJ	58 U
2-Chloroethyl vinyl ether	µg/kg	58 UJ	61 UJ	60 UJ	58 UJ	59 UJ	57 UJ	58 UJ
2-Hexanone	µg/kg	58 UJ	61 UJ	60 UJ	58 UJ	59 UJ	57 UJ	58 UJ
4-Methyl-2-pentanone (MIBK)	µg/kg	58 U	61 U	60 U	58 U	59 U	57 U	58 U
Acetone	µg/kg	58 UJ	61 UJ	60 UJ	58 UJ	59 UJ	57 UJ	58 UJ
Benzene	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
Bromodichloromethane	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
Bromoform	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
Bromomethane	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
Carbon disulfide	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
Carbon tetrachloride	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
Chlorobenzene	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
Chloroethane	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
Chloroform	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
Chloromethane	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
cis-1,2-Dichloroethene	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
cis-1,3-Dichloropropene	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
Dibromochloromethane	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
Ethylbenzene	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
Methyl tert-butyl ether (MTBE)	µg/kg	12 U	12 U	12 U	12 U	12 U	11 U	12 U
Methylene chloride	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U

Table 4 - 1
Summary of Analytical Results for Soil Boring Samples — OWS 800F

Sample Identification		20242-930	20242-931	20242-932	20242-933	20242-934	20242-935	20242-936
Location Code		OWS-800F-SB01	OWS-800F-SB01	OWS-800F-SB01	OWS-800F-SB02	OWS-800F-SB02	OWS-800F-SB02	OWS-800F-SB02
Date Sampled		06/16/99	06/16/99	06/16/99	06/16/99	06/16/99	06/16/99	06/16/99
Depth (feet below ground surface)		9.5	20.5	30.5	11.0	20.5	30.5	31.0
	Unit							
Styrene	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
Tetrachloroethene	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
Toluene	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
trans-1,2-Dichloroethene	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
trans-1,3-Dichloropropene	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
Trichloroethene	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
Vinyl acetate	µg/kg	58 UJ	61 UJ	60 UJ	58 UJ	59 UJ	57 UJ	58 UJ
Vinyl chloride	µg/kg	5.8 U	6.1 U	6.0 U	5.8 U	5.9 U	5.7 U	5.8 U
Xylenes (total)	µg/kg	17 U	18 U	18 U	17 U	18 U	17 U	17 U

Table 4 - 1
Summary of Analytical Results for Soil Boring Samples — OWS 800F

CA LUFT - California leaking underground fuel tank
EPA - US Environmental Protection Agency
J - estimated value
M - modified
mg/kg - milligrams per kilogram
OHM - OHM Remediation Services Corp.
OWS - oil water separator
SB - soil boring
TPH - total petroleum hydrocarbons
U - not detected at or above the stated reporting limit
µg/kg - micrograms per kilogram

Table 4 - 2
Summary of Analytical Results for Tank Contents Sample — OWS 800F

Sample Identification		20242-969
Location Code		OWS-800F-Tnk Content
Date Sampled		07/02/99
	Unit	
CA LUFT 8015M		
TPH as Diesel	mg/L	6.9
TPH as Gasoline	mg/L	0.03 J
TPH as Motor Oil	mg/L	11
EPA 1010		
Ignitability	°C	100 >
EPA 6010A		
Antimony	µg/L	20.4
Arsenic	µg/L	1.6 U
Barium	µg/L	170
Beryllium	µg/L	0.15 J
Cadmium	µg/L	132
Chromium	µg/L	34.8
Cobalt	µg/L	16.6
Copper	µg/L	552
Lead	µg/L	268
Molybdenum	µg/L	12.8
Nickel	µg/L	81.1
Selenium	µg/L	3.3 U
Silver	µg/L	0.93 U
Thallium	µg/L	2.0 U
Vanadium	µg/L	14.7
Zinc	µg/L	4550
EPA 7470A		
Mercury	µg/L	0.14 U
EPA 8081		
4,4'-DDD	µg/L	0.1 U
4,4'-DDE	µg/L	0.1 U
4,4'-DDT	µg/L	0.1 U
Aldrin	µg/L	0.05 U
alpha-BHC	µg/L	0.05 U
Aroclor-1016	µg/L	1 U
Aroclor-1221	µg/L	1 U
Aroclor-1232	µg/L	1 U

Table 4 - 2
Summary of Analytical Results for Tank Contents Sample — OWS 800F

Sample Identification		20242-969
Location Code		OWS-800F-Tnk Content
Date Sampled		07/02/99
	Unit	
Aroclor-1242	µg/L	1 U
Aroclor-1248	µg/L	1 U
Aroclor-1254	µg/L	1 U
Aroclor-1260	µg/L	1 U
Beta-BHC	µg/L	0.05 U
Chlordane	µg/L	2 U
Delta-BHC	µg/L	0.05 U
Dieldrin	µg/L	0.1 U
Endosulfan I	µg/L	0.05 U
Endosulfan II	µg/L	0.1 U
Endosulfan sulfate	µg/L	0.5 U
Endrin	µg/L	0.1 U
Endrin aldehyde	µg/L	0.1 U
Endrin ketone	µg/L	0.1 U
gamma-BHC	µg/L	0.05 U
Heptachlor	µg/L	0.05 U
Heptachlor epoxide	µg/L	0.05 U
Methoxychlor	µg/L	2 U
Toxaphene	µg/L	5 U
EPA 8260A		
1,1,1-Trichloroethane	µg/L	5 U
1,1,2,2-Tetrachloroethane	µg/L	5 U
1,1,2-Trichloroethane	µg/L	5 U
1,1-Dichloroethane	µg/L	5 U
1,1-Dichloroethene	µg/L	5 U
1,2-Dichloroethane	µg/L	5 U
1,2-Dichloropropane	µg/L	5 U
2-Butanone (MEK)	µg/L	50 U
2-Chloroethyl vinyl ether	µg/L	50 U
2-Hexanone	µg/L	50 U
4-Methyl-2-pentanone (MIBK)	µg/L	50 U
Acetone	µg/L	50 U
Benzene	µg/L	5 U
Bromodichloromethane	µg/L	5 U

Table 4 - 2
Summary of Analytical Results for Tank Contents Sample — OWS 800F

Sample Identification		20242-969
Location Code		OWS-800F-Tnk Content
Date Sampled		07/02/99
	Unit	
Bromoform	µg/L	5 U
Bromomethane	µg/L	5 U
Carbon disulfide	µg/L	5 U
Carbon tetrachloride	µg/L	5 U
Chlorobenzene	µg/L	5 U
Chloroethane	µg/L	5 U
Chloroform	µg/L	5 U
Chloromethane	µg/L	5 U
cis-1,2-Dichloroethene	µg/L	5 U
cis-1,3-Dichloropropene	µg/L	5 U
Dibromochloromethane	µg/L	5 U
Ethylbenzene	µg/L	5 U
Methyl tert-butyl ether (MTBE)	µg/L	0.9 J
Methylene chloride	µg/L	5 U
Styrene	µg/L	5 U
Tetrachloroethene	µg/L	5 U
Toluene	µg/L	1 J
trans-1,2-Dichloroethene	µg/L	5 U
trans-1,3-Dichloropropene	µg/L	5 U
Trichloroethene	µg/L	5 U
Vinyl acetate	µg/L	50 U
Vinyl chloride	µg/L	5 U
Xylenes (total)	µg/L	2 J
EPA 8270		
1,2,4-Trichlorobenzene	µg/L	10 U
1,2-Dichlorobenzene	µg/L	10 U
1,3-Dichlorobenzene	µg/L	10 U
1,4-Dichlorobenzene	µg/L	10 U
2,4,5-Trichlorophenol	µg/L	25 U
2,4,6-Trichlorophenol	µg/L	10 U
2,4-Dichlorophenol	µg/L	10 U
2,4-Dimethylphenol	µg/L	10 U
2,4-Dinitrophenol	µg/L	25 U
2,4-Dinitrotoluene	µg/L	10 U

Table 4 - 2
Summary of Analytical Results for Tank Contents Sample — OWS 800F

Sample Identification		20242-969
Location Code		OWS-800F-Tnk Content
Date Sampled		07/02/99
	Unit	
2,6-Dinitrotoluene	µg/L	10 U
2-Chloronaphthalene	µg/L	10 U
2-Chlorophenol	µg/L	10 U
2-Methyl-4,6-dinitrophenol	µg/L	25 U
2-Methylnaphthalene	µg/L	10 U
2-Methylphenol	µg/L	10 U
2-Nitroaniline	µg/L	25 U
2-Nitrophenol	µg/L	10 U
3,3'-Dichlorobenzidine	µg/L	10 U
3-Methyl-4-chlorophenol	µg/L	10 U
3-Nitroaniline	µg/L	25 U
4-Bromophenyl phenyl ether	µg/L	10 U
4-Chloroaniline	µg/L	10 U
4-Chlorophenyl phenyl ether	µg/L	10 U
4-Methylphenol	µg/L	10 U
4-Nitroaniline	µg/L	25 U
4-Nitrophenol	µg/L	25 U
Acenaphthene	µg/L	10 U
Acenaphthylene	µg/L	10 U
Anthracene	µg/L	10 U
Benzo[a]anthracene	µg/L	10 U
Benzo[a]pyrene	µg/L	10 U
Benzo[b]fluoranthene	µg/L	10 U
Benzo[ghi]perylene	µg/L	10 U
Benzo[k]fluoranthene	µg/L	10 U
Bis (2-chloroethoxy)methane	µg/L	10 U
Bis (2-chloroethyl)ether	µg/L	10 U
Bis (2-chloroisopropyl)ether	µg/L	10 U
Bis (2-ethylhexyl)phthalate	µg/L	8 J
Butyl benzyl phthalate	µg/L	7 J
Chrysene	µg/L	10 U
Di-n-butyl phthalate	µg/L	2 J
Di-n-octyl phthalate	µg/L	10 U
Dibenz[a,h]anthracene	µg/L	10 U

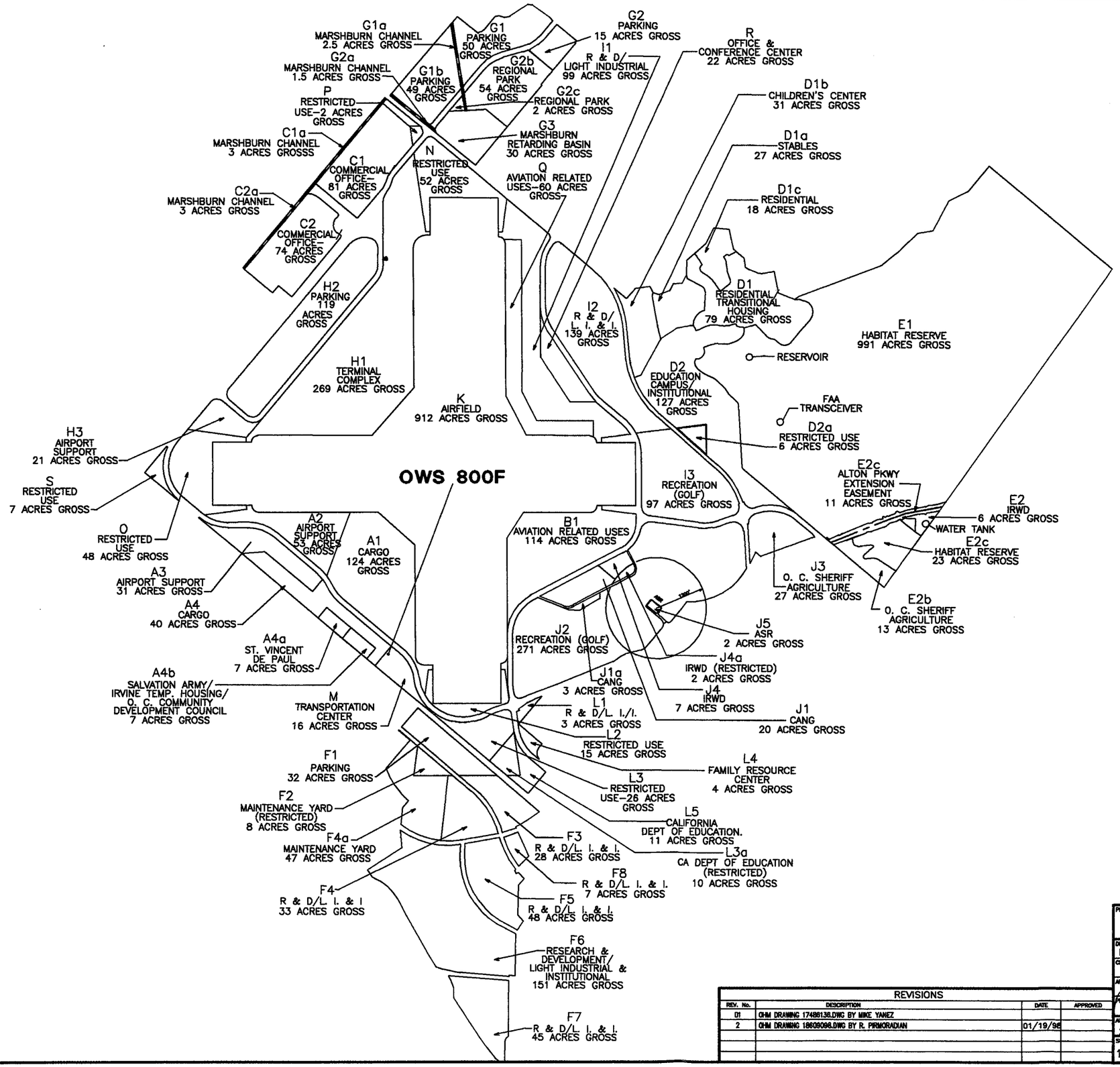
Table 4 - 2
Summary of Analytical Results for Tank Contents Sample — OWS 800F

Sample Identification		20242-969
Location Code		OWS-800F-Tnk Content
Date Sampled		07/02/99
	Unit	
Dibenzofuran	µg/L	10 U
Diethyl phthalate	µg/L	2 J
Dimethyl phthalate	µg/L	10 U
Fluoranthene	µg/L	10 U
Fluorene	µg/L	10 U
Hexachlorobenzene	µg/L	10 U
Hexachlorobutadiene	µg/L	10 U
Hexachlorocyclopentadiene	µg/L	10 U
Hexachloroethane	µg/L	10 U
Indeno[1,2,3-cd]pyrene	µg/L	10 U
N-Nitrosodi-n-propylamine	µg/L	10 U
N-Nitrosodiphenylamine	µg/L	10 U
Naphthalene	µg/L	10 U
Nitrobenzene	µg/L	10 U
Pentachlorophenol	µg/L	11 U
Phenanthrene	µg/L	10 U
Phenol	µg/L	10 U
Pyrene	µg/L	10 U

Table 4 - 2
Summary of Analytical Results for Tank Contents Sample — OWS 800F

CA LUFT - California leaking underground fuel tank
EPA - US Environmental Protection Agency
J - estimated value
M - modified
mg/L - milligrams per liter
OHM - OHM Remediation Services Corp.
OWS - oil water separator
TPH - total petroleum hydrocarbons
U - not detected at or above the stated reporting limit
µg/L - micrograms per liter
°C - degress Celsius

Appendix A
Tentative Reuse Parcel Location of OWS Site 800F



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 18609096.DWG BY R. PIRMORADIAN	01/19/98	

PROJECT: SWDIV

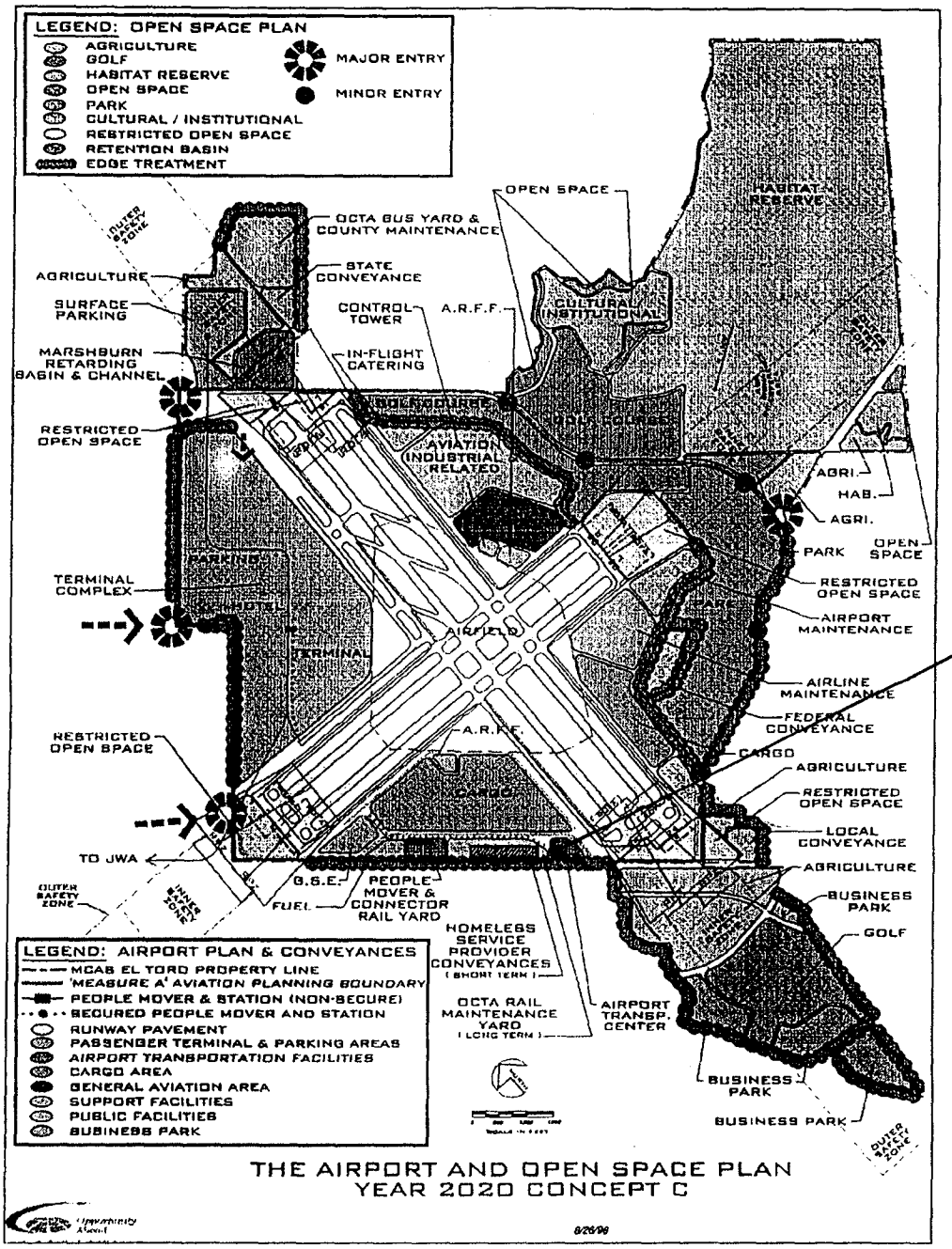
OHM Remediation Services Corp.
A Subsidiary of OHM Corporation
SAN DIEGO, CA

DRAWN BY: R. PIRMORADIAN — DATE: 10/06/99
CHECKED BY: DR — DATE: 11/2/99
APPROVED BY: — DATE: 11-2-99
PROJECT MANAGER: — DATE: 11/3/99
AUTOCAD FILE No.: 20242136.DWG

EL TORO COMMUNITY REUSE PLAN
1997 WORKING MAP LAND USES/
CONVEYANCES GROSS ACRES
OWS 800F
MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.
1"=2,400'	1	1	SW7022	20242	FIG A-1

Oct 06, 1999 — 11:10:19 I:\OHM_CORP\PROJECTS\20242\20242136.dwg



THE AIRPORT AND OPEN SPACE PLAN
YEAR 2020 CONCEPT C

OWS
800F

Appendix B
JEG RFA Information

MARINE CORPS AIR STATION EL TORO
EL TORO, CALIFORNIA
INSTALLATION RESTORATION PROGRAM
FINAL RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) FACILITY ASSESSMENT REPORT

PREPARED BY:
Southwest Division, Naval Facilities
Engineering Command
1220 Pacific Highway
San Diego, California 92132-5190

THROUGH:
CONTRACT #N68711-89-D-9296
CTO #193
DOCUMENT CONTROL NO:
CLE-C01-01F193-S2-0001

WITH:
Jacobs Engineering Group, Inc.
3655 Nobel Drive, Suite 200
San Diego, California 92122

In association with:
International Technology Corporation
CH2M HILL

M. W. Arends 7/16/93

Mike Arends, P.E.
CLEAN Project Manager
CH2M HILL, Inc.

Date

Raoul Portillo 15 July 1993

Raoul Portillo
CLEAN Technical Reviewer
Jacobs Engineering Group Inc.

Date

1002073B.SCO\93\MA

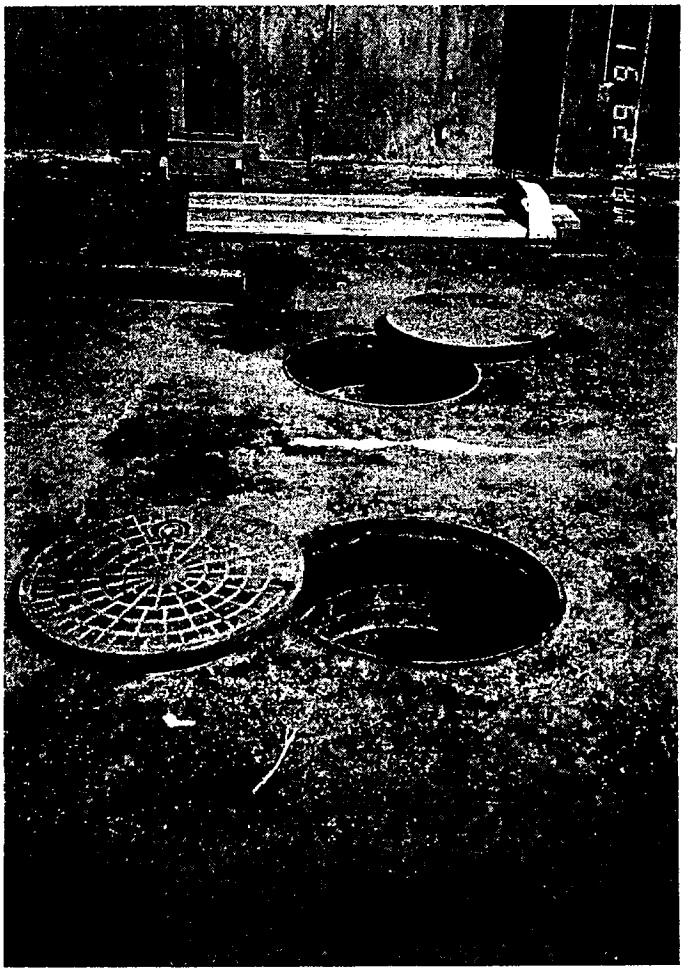
Evaluation Form
SWMU/Area of Concern
Number 232

Name: Oil/Water Separator 800-F

Location: Southwest of Building 800

Size: 1,500 gallons

Date of Site Visit: 25 April 1991



Period of Operation

Installed in 1984
Currently active

Evaluation Form
SWMU/Area of Concern
Number 232

Unit Characteristics

Tank 800-F is a 1,500-gallon, concrete-lined oil/water separator. The tank was installed in 1984 near the northern side of the washrack at Building 800 (SWMU/AOC Number 299). The oil/water separator has two 3-ft diameter manhole covers that lead to the two sections of the oil/water separator. There were no significant stains on the asphalt surface around the covers of the oil/water separator. Since the oil/water separator is located underground, its physical condition could not be visually observed.

Waste Characteristics

Oily water

Possible Migration Pathways

Subsurface soil

Evidence of Release

None observed

Exposure Potential

Authorized on-Station personnel

Recommendations

This UST has not been tank tested. Although no evidence of a release was indicated from the records review or the VSI, it is difficult to assess the potential for release from this underground SWMU/AOC. For this reason, a sampling visit is suggested for this UST.

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						
232	Oil/Water Separator (69)	B1	5	98	NA	NA	Methylene Chloride-16 B * Acetone-44 *	NA	NA	NA	NFA	TPH/TFH < 100 ppm VOCs < CRDL
			5 (Duplicate)	ND	NA	NA	Methylene Chloride-40 B * Acetone-53 *	NA	NA	NA		
			10	ND	NA	NA	Methylene Chloride-15 B * Acetone-35 *	NA	NA	NA		CRDL - Contract Required Detection Limit
			15	ND	NA	NA	Methylene Chloride-17 B * Acetone-33 *	NA	NA	NA		
			20	ND	NA	NA	Methylene Chloride-14 B * Acetone-53 *	NA	NA	NA		
			25	ND	NA	NA	Methylene Chloride-12 B * Acetone-39 *	NA	NA	NA		

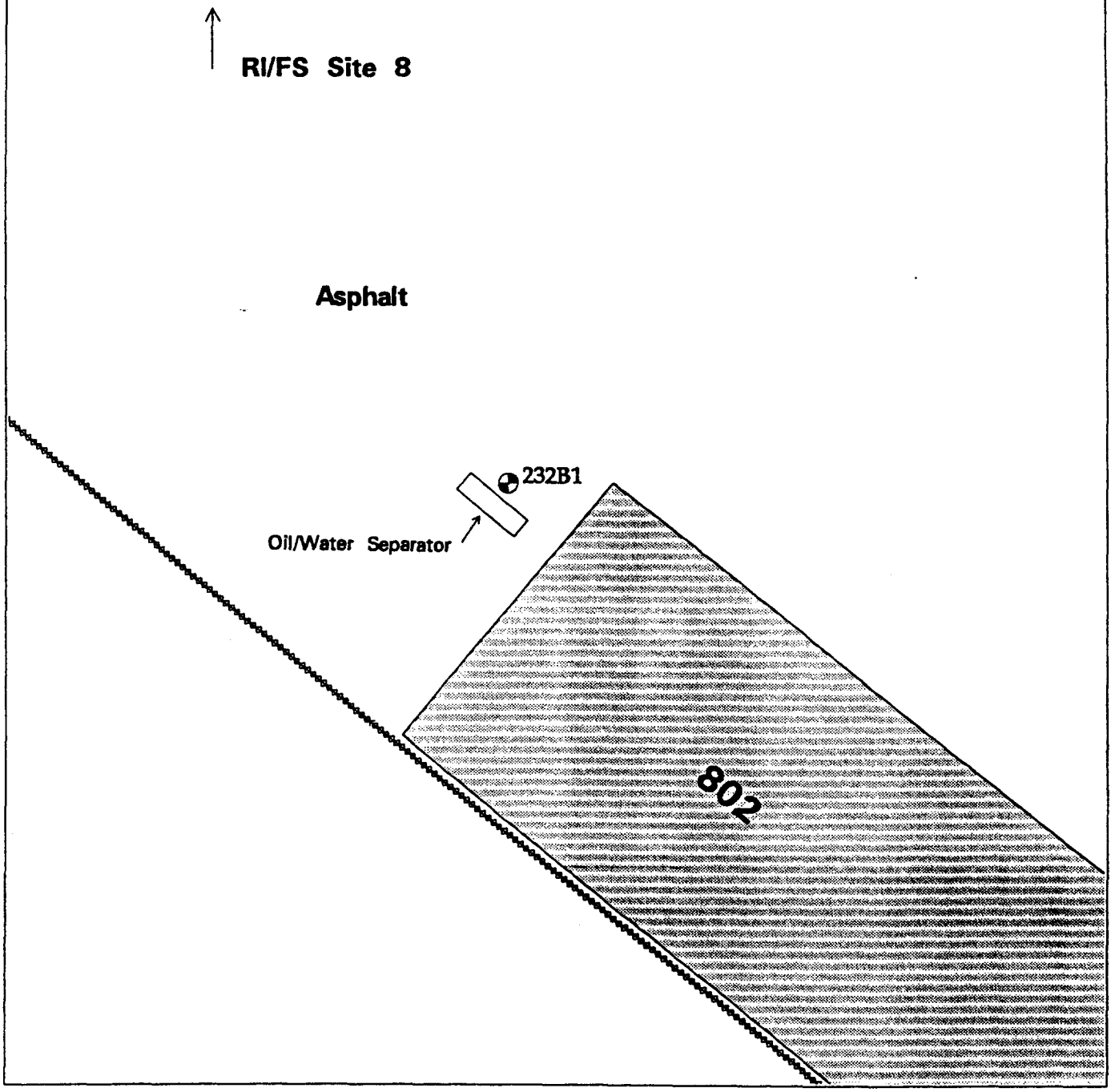


Figure 69 Sample Location Map

SWMU/AOC Number and Type:
232 - Oil/Water Separator

Boring Location and Number:

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

Features:

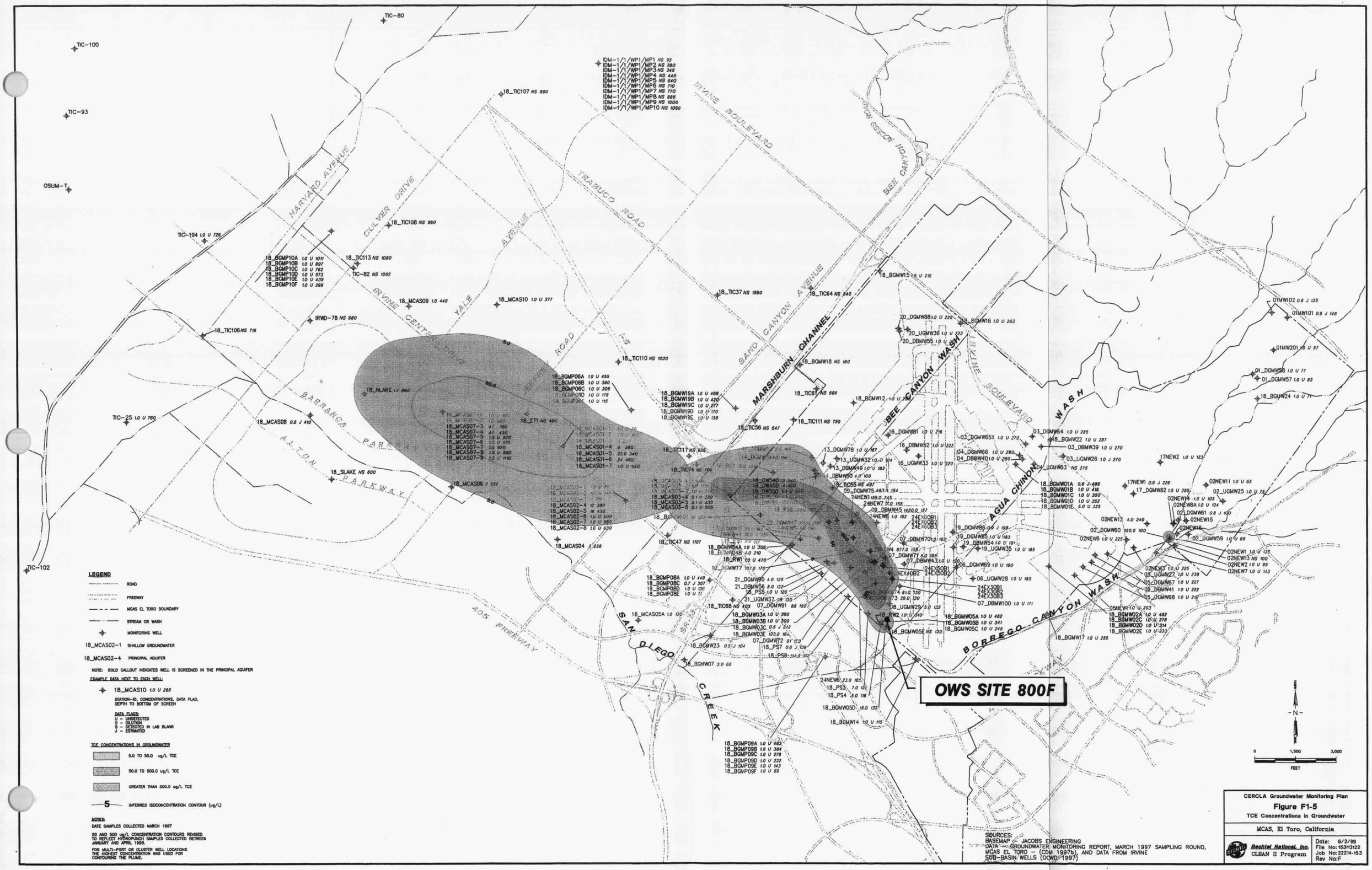
- Building
- Concrete
- Fence
- Railroad

Scale

0 10 20 40 Feet

MCAS El Toro
RCRA Facility Assessment

Appendix C
TCE in Groundwater


OWS SITE 800F
LEGEND
ROAD
FREEWAY
MCAS EL TORO BOUNDARY
STREAM OR WASH
MONITORING WELL
18_MCAS02-1 SHALLOW GROUNDWATER
18_MCAS02-4 PRINCIPAL AQUIFER
NOTE: BOLD CALLOUT INDICATES WELL IS SCREENED IN THE PRINCIPAL AQUIFER
EXAMPLE DATA NEXT TO EACH WELL:
18_MCAS10 1.0 U 285
STATION-ID, CONCENTRATIONS, DATA FLAG, DEPTH TO BOTTOM OF SCREEN
DATA FLAGS:
U - UNDETECTED
D - DILUTION
B - DETECTED IN LAB BLANK
J - ESTIMATED
TCE CONCENTRATIONS IN GROUNDWATER
5.0 TO 50.0 ug/L TCE
50.0 TO 500.0 ug/L TCE
GREATER THAN 500.0 ug/L TCE
5 INFERRED ISOCONCENTRATION CONTOUR (ug/L)
NOTES:
DATE SAMPLES COLLECTED MARCH 1997
50 AND 500 ug/L CONCENTRATION CONTOURS REVISED TO REFLECT HYDROPUNCH SAMPLES COLLECTED BETWEEN JANUARY AND APRIL 1995.
FOR MULTI-PORT OR CLUSTER WELL LOCATIONS THE HIGHEST CONCENTRATION WAS USED FOR CONTOURING THE PLUME.
SOURCES:
BASEMAP - JACOBS ENGINEERING
DATA - GROUNDWATER MONITORING REPORT, MARCH 1997 SAMPLING ROUND, MCAS EL TORO - (CDM 1997b), AND DATA FROM IRVINE SUB-BASIN WELLS (OCWD 1997)
N
0 1,500 3,000
FEET
CERCLA Groundwater Monitoring Plan
Figure F1-5
TCE Concentrations in Groundwater
MCAS, El Toro, California
Bechtel National, Inc.
CLEAN II Program
Date: 6/2/99
File No:153H3122
Job No:22214-153
Rev No:F

Appendix D
Excerpts from Law/Crandall Report for OWS Site 800F

OHM- Ethan File

OIL/WATER SEPARATOR SURVEY

EL TORO MARINE CORPS AIR STATION

EL TORO, CALIFORNIA

FOR

DEPARTMENT OF THE NAVY

SOUTHWEST DIVISION

NAVAL FACILITIES ENGINEERING COMMAND

IQ Contract No. N68711-92-D-4652, Delivery Order No. 001

Prepared by Law/Crandall, Incoporated (LCI)

(LCI Project No. S92174.FB)

April 1, 1993

LAW/CRANDALL, INC.

ENGINEERING AND ENVIRONMENTAL SERVICES

ONE OF THE LAW COMPANIES

5.34 OIL/WATER (O/W) SEPARATOR DATA SHEETS

MARINE CORPS AIR STATION: El Toro Marine Corp Air Station

DATE OF SURVEY: January 1993

SURVEY TEAM: Chris Sandall/Mac Mehta

CONTRACT NO: N68711-92-D-4652

PHYSICAL CHARACTERISTICS

O/W Separator I.D.: 802

Location: Northwest of Building No. 802

Inlet Pipe Size(s)/Slope(s)/Run(s): 6 inches, slope = 1/8 inch per foot, run = 10 feet

Outlet Pipe Size(s)/Slopes(s)/Run(s): 6 inches, slope unknown, run approximately 15 feet to manhole

O/W Separator Constructed of: Precast concrete

O/W Separator Type: 2-Stage Gravity Separator

Interior Dimensions: 7 feet x 4 feet 11 inches x 4 feet 10 inches (l x w x d)

Estimated Capacity: 1000 gal

Monitoring/Leak Detection Devices: none observed

Discharge Point: sewer

Discharge Point verified by (document reference): Naval Facilities Drawing No. 6148090 and visual observations

Lateral Connections between the Discharge Point and Oil/Water Separator: None

O/W SEPARATOR CONDITION AT TIME OF SURVEY

In Use? Yes

Depth of Solids: First chamber 6 feet sludge- sludge above inlet pipe. Second chamber 2.5 feet sludge

Depth of Liquid: None observed in first chamber- all sludge

Floating Material Depth: Sludge

Other (e.g., odor): Slight detergent odor

Structural Condition: Appears sound- needs cleaning

Run-off Into Oil/Water Separator/Port: negligible

TANKS/AUTOMATIC VALVES/APPURTENANCES

Is Tank Associated with the Oil/Water Separator? None reported/observed

Automatic Shutoff/Diversion Valves associated with Oil/Water Separator: None reported/observed

Other:

MAINTENANCE/INSPECTION FREQUENCIES AND WASTE DISPOSAL

Written Maintenance/Inspection Schedules? None observed

Location of written schedules: not applicable

Frequency of Maintenance/Inspection Activities: As needed

Maintenance/Inspection Performed by: FMD

Sediment Removal/Disposal: FMD

Water Removal/Disposal: FMD

Oil Removal/Disposal: ENRMO

Written History of Problems? none observed

O/W SEPARATOR USES

Activities (e.g. truck washing) Discharging to O/W Separator: Heavy off-road vehicles with muddy "dirt" tires

Chemicals used in activities tributary to Oil/Water Separator: Fuels, sediments, oil, grease, antifreeze, detergent

Are special management activities employed to control sedimentation or other materials: None observed

Estimated frequency of activity/volume of waste produced: Appears as though daily, 5 - 50 gpm

Upstream inlets open to run-off? No

Square footage of area open to run-off: not applicable

Estimated run-off coefficient: not applicable

Materials Storage Areas Upstream of inlet and contacting storm water: not applicable

Potential Pollutants from Upstream Storage Areas: na

AS-BUILT DRAWINGS/SPECIFICATIONS/ENGINEERING REPORTS

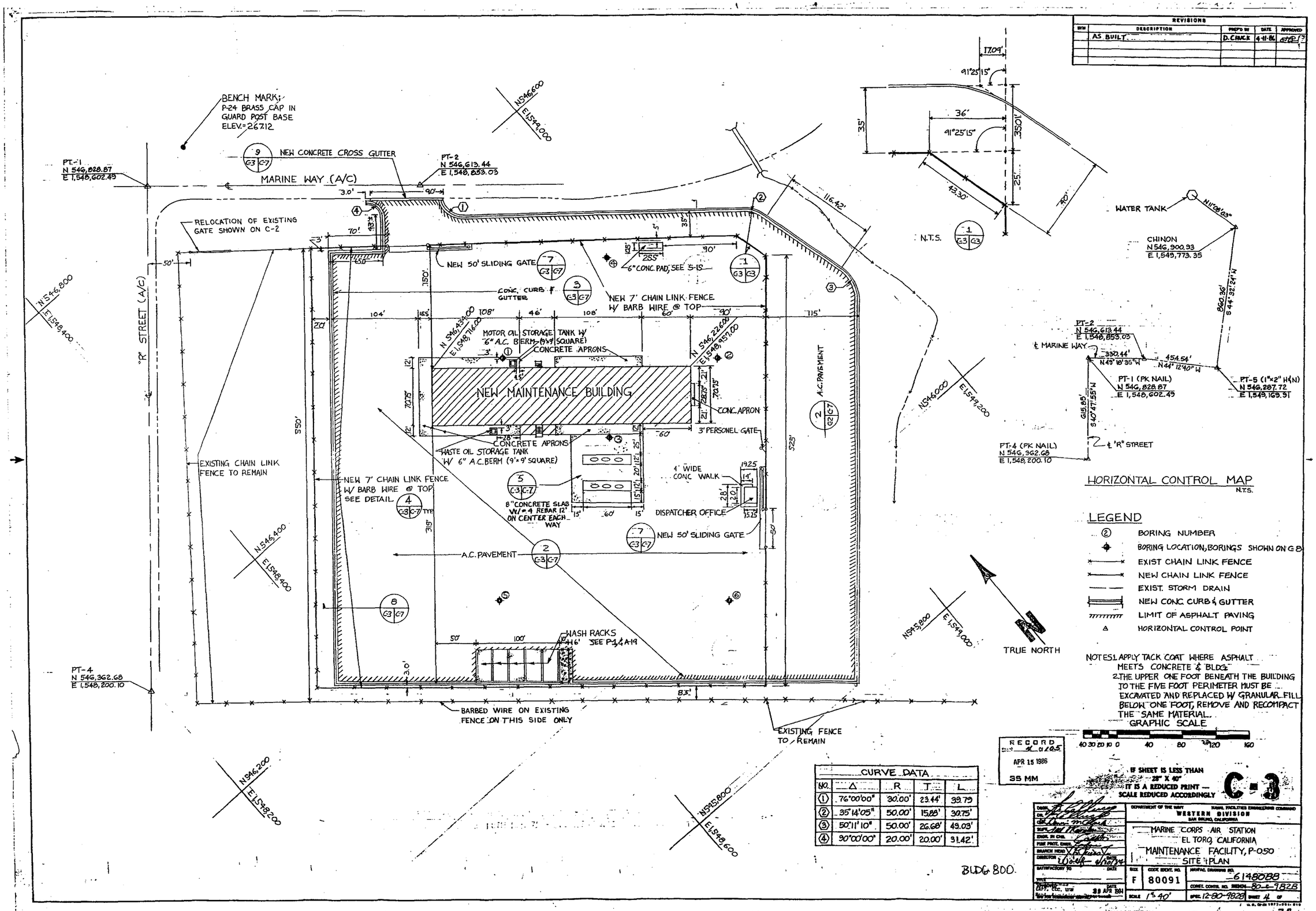
The following documents are available for this oil/water separator and are maintained

in the location indicated:

What appear to be bid drawings under contract 80-C-9828 located in the reproduction room, 2nd floor Building No. 368, El Toro MCAS

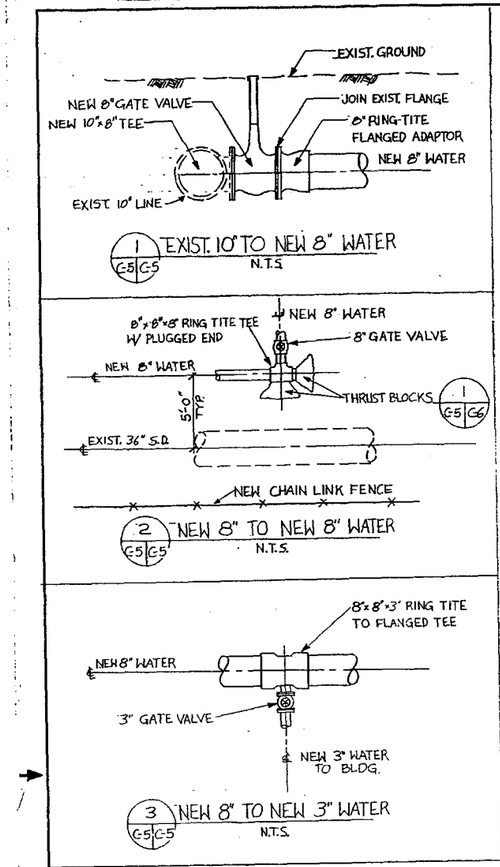
Appendix E
Station Drawings

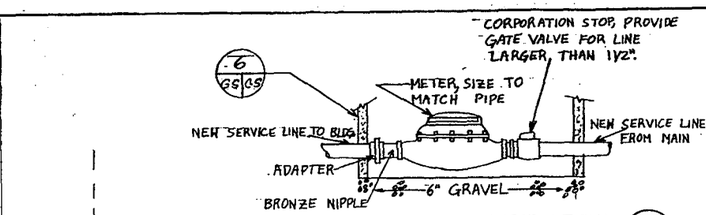
REVISIONS				
SYM	DESCRIPTION	PREP'D BY	DATE	APPROVED
	AS BUILT	D. CHACK	4-11-86	



CURVE DATA				
NO.	Δ	R	T	L
1	76°00'00"	30.00'	23.44'	39.79
2	35°14'05"	50.00'	15.88'	30.75'
3	50°11'10"	50.00'	26.68'	49.03'
4	90°00'00"	20.00'	20.00'	31.42'

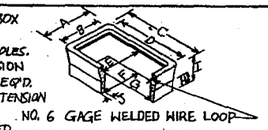
REVISIONS				
SYM	DESCRIPTION	PREPD BY	DATE	APPROVED
	AS BUILT CONDITIONS SHOWN	D. CHICK	4-11-84	STD





TYPICAL SERVICE METER DETAIL 9

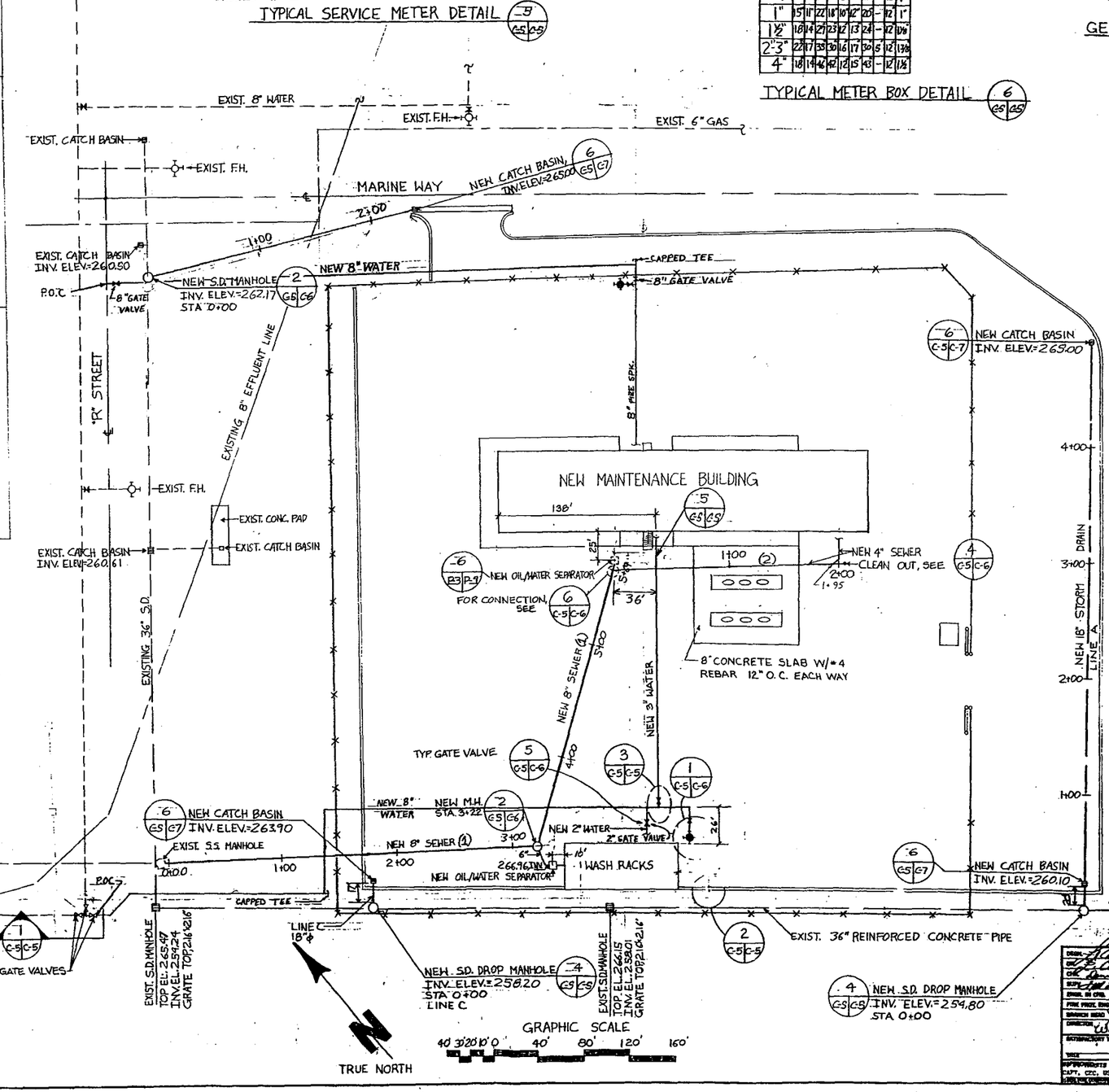
NOTES FOR WATER METER BOX
1. PROVIDE 1/4" STEEL PLATE TRAFFIC COVER W/ FINGER HOLES.
2. PROVIDE CONCRETE EXTENSION WITH THE METER BOX AS REQ'D.
3. PROVIDE KNOCKOUTS ON EXTENSION AS REQ'D FOR PIPES.
4. COVER SHALL BE STAMPED "WATER METER".
5. PROVIDE 7" Ø LID IN STD. COVER OF 4" VALVE.



MINIMUM DIMENSIONS

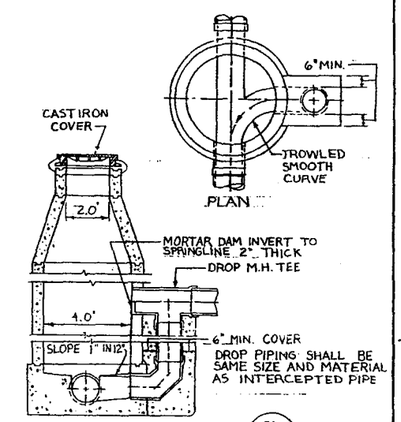
MAX. METER SIZE	A	B	C	D	E	F	G	H	I	J
3/4"	14"	10"	19"	14"	8"	11"	17	-	12	1"
1"	15"	11"	22"	18"	10"	12"	20	-	12	1"
1½"	18"	14"	27"	23"	12"	13	24	-	12	1⅛"
2"-3"	22"	17"	33"	30"	16"	17	30	5	12	1⅜"
4"	18"	14"	46"	42"	12"	15	43	-	12	1½"

TYPICAL METER BOX DETAIL 6



GENERAL UTILITY NOTES

1. CONNECTION TO EXISTING WATER, SEWER, AND GAS LINES SHALL BE ACCOMPLISHED IN A MANNER WHICH WILL MAINTAIN THE STRUCTURAL INTEGRITY OF THE EXISTING LINES TO A LEVEL IN KEEPING WITH THEIR DESIGN FUNCTION. DIFFERENTIAL SETTLING AT POINTS OF CONNECTIONS BETWEEN NEW AND EXISTING PIPES SHALL BE PREVENTED THROUGH PROPER GRADING TECHNIQUES. IN ALL CASES, PIPE ELEVATIONS AT THE POINT OF CONNECTION TO EXISTING SEWER AND WATER LINES MUST BE VERIFIED BEFORE START OF CONSTRUCTION.



DROP MANHOLE 4

LEGEND

- NEW STORM DRAIN & CATCHBASIN
- EXIST. STORM DRAIN & CATCHBASIN
- EXIST. WATER SERVICE W/ GATE VALVE
- EXISTING GAS
- EXIST. SANITARY SEWER & MANHOLE
- EXISTING EFFLUENT LINE
- NEW LINES
- NEW GATE VALVE
- NEW SEWER MANHOLE
- EXISTING FIRE HYDRANT
- NEW FIRE HYDRANT
- P.O.C. POINT OF CONNECTION

NOTE: FOR TYPICAL TRENCH SECTION FOR BOTH WATER AND SEWER LINES SEE 3

RECORD 6 of 105 APR 15 1983

IF SHEET IS LESS THAN 28" X 40" IT IS A REDUCED PRINT — SCALE REDUCED ACCORDINGLY

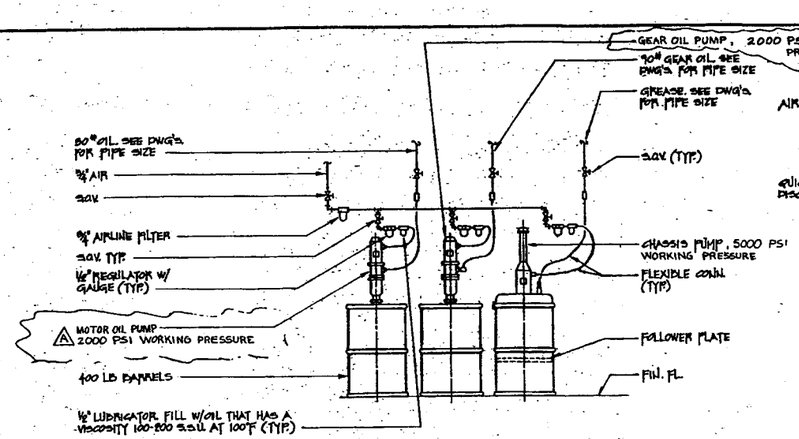
C-5

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND — WESTERN DIVISION, SAN BRUNO, CALIFORNIA

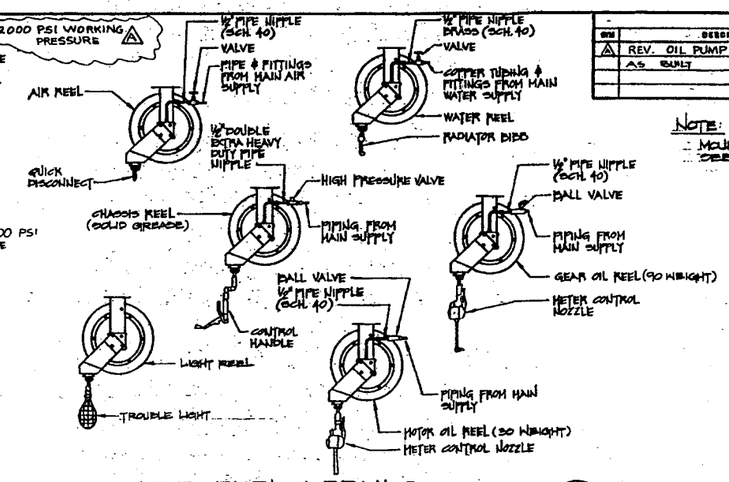
MARINE CORPS AIR STATION
EL TORO, CALIFORNIA
MAINTENANCE FACILITY, P-050
UTILITY PLAN

SIZE	CODE IDENT. NO.	RAWING NO.
F	80091	6148090
SCALE 1"=40'		CONST. CONTR. NO. 80-C-9828
		SPEC. 12-80-9828 SHEET 6 OF

REVISIONS				
SYM	DESCRIPTION	PREP'D BY	DATE	APPROVED
1	REV. OIL PUMP SIZES (CON'T)	R. Yee	10-1-84	
	AS BUILT	C.HO	4-9-86	

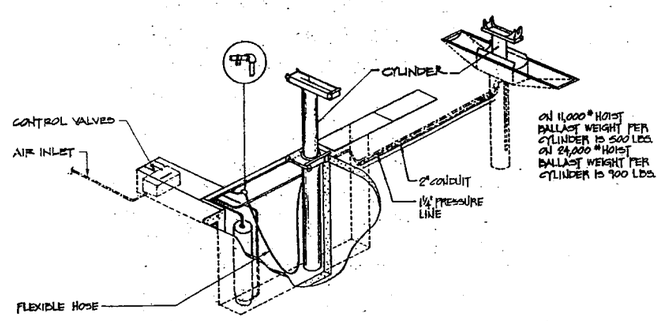


TYP. AIR PUMP HOOK-UP DETAIL (2) P-7 | P-9
NO SCALE

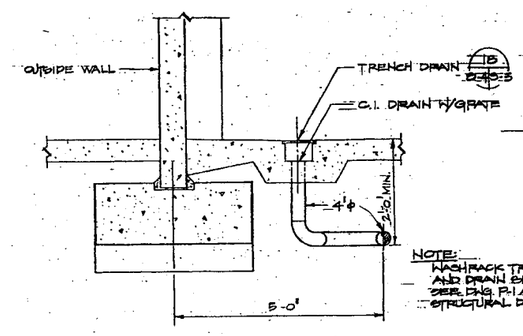


NOTE:
MOUNT HOSE REELS TO ROOF BEAM SEE STRUCTURAL DWGS. S-8, S-9

HOSE REEL DETAILS (3) P-3, P-4 | P-9
NO SCALE

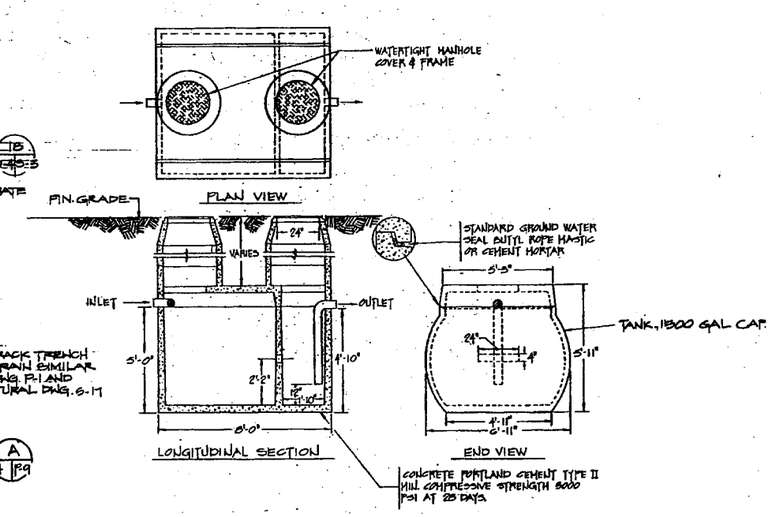


HYDRAULIC HOIST DETAIL (4) P-3, P-4 | P-9
NO SCALE



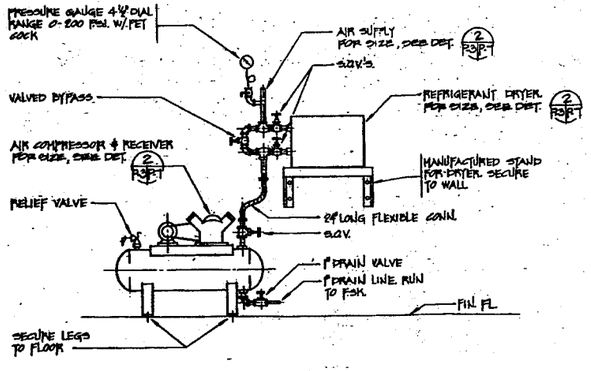
NOTE:
WASHRACK TRENCH AND DRAIN SIMILAR SEE DWG. P-1 AND STRUCTURAL DWG. S-17

SECTION (A) P-3, P-4 | P-9
NO SCALE



OIL / WATER SEPARATOR (6) P-1, P-3 | P-9
NO SCALE

OIL-/ WATER SEPARATOR	INLET INV EL.	OUTLET INV. EL.
MAINTENANCE FACILITY	268.91	266.41
WASH RACKS	267.46	266.96



AIR COMPRESSOR DETAIL (7) P-7 | P-9
NO SCALE

RECORD
APR 15 1988
35 MM

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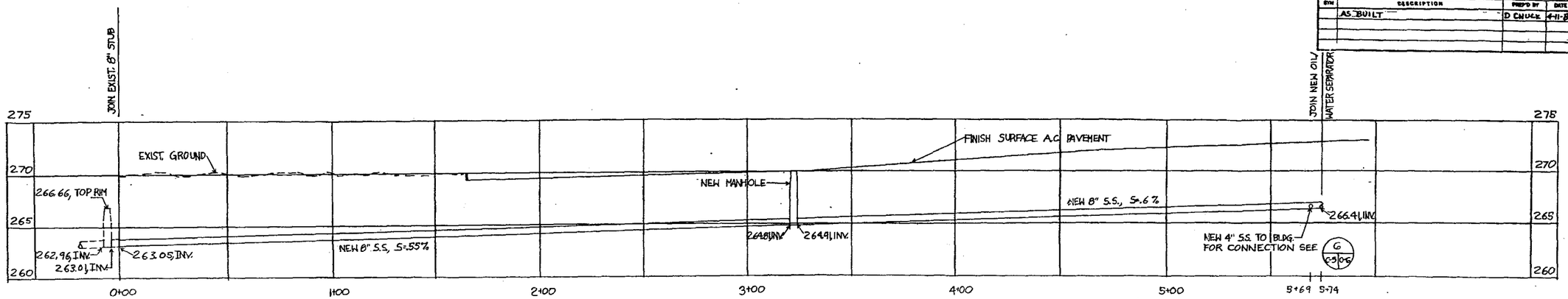
P-9

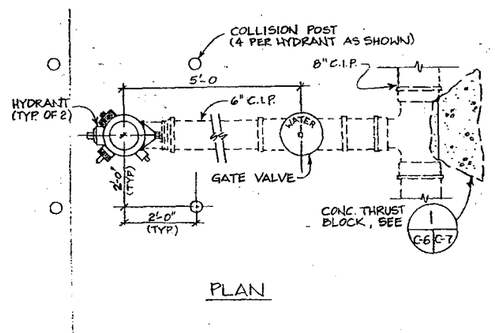
DESIGN R. Lee/NHC/F.S.K.	DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND — WESTERN DIVISION — SAN BRUNO, CALIFORNIA
DR. F.S.K.	MARINE CORPS AIR STATION EL TORO CALIF
CHK. SSC	MAINTENANCE FACILITY P-050 FY 1984
SUPV. Eng.	HOIST, COMPRESSOR & MISC. DETAILS
SENIOR EN CHIEF	SIZE F — CODE IDENT. NO. 80091 — DRAWING NO. 6148158
FIRE PROT. SENIOR	CONST. CONTR. NO. 80-0-3828
BRANCH HEAD	SCALE AS NOTED — SPEC. 12-80-3828 — SHEET 74 of 99
DIRECTOR	
SUBMITTED TO / DATE	
TITLE	
APPROVED / DATE 30 APR 1984	

REVISIONS				
SYM	DESCRIPTION	PREP'D BY	DATE	APPROVED
	AS BUILT	D CHUCK	4-11-84	

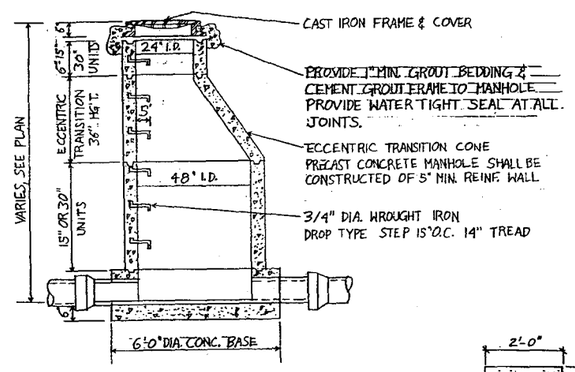


SEWER PROFILE (1)

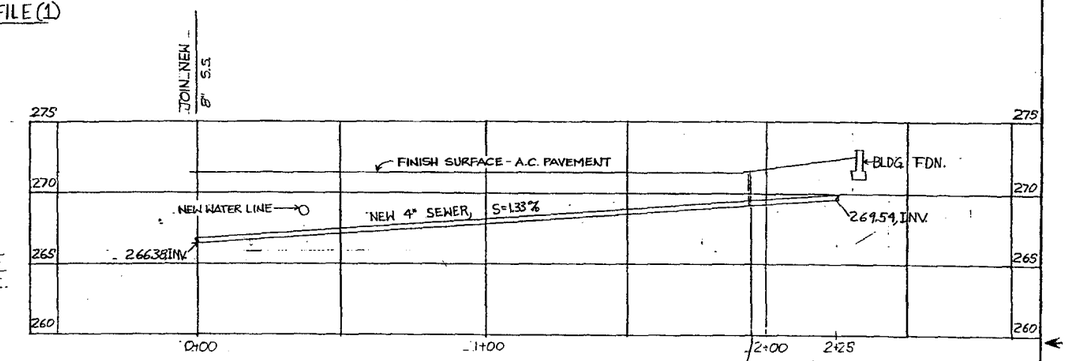
HORIZ. 1"=20'
VERT. 1"= 4'



PLAN

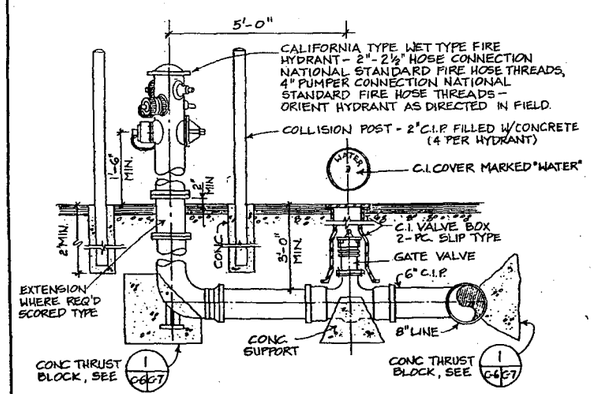


MANHOLE DETAIL 2 C-5 C-6



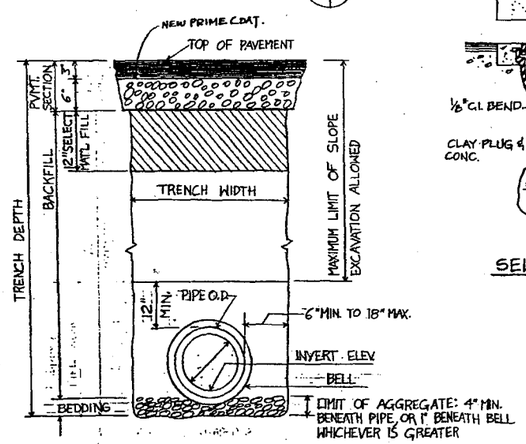
SEWER PROFILE (2)

HORIZ. 1"=20'
VERT. 1"= 4'

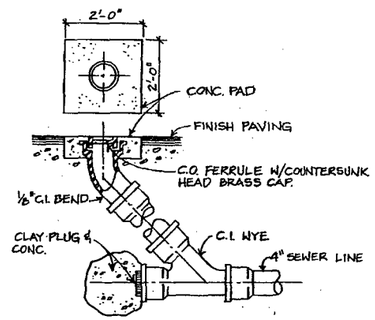


SECTION

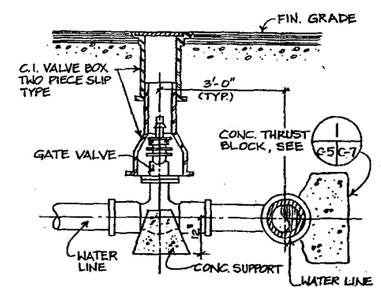
FIRE HYDRANT DETAIL 1 NO SCALE C-5 C-6



3 TYPICAL TRENCH SECTION C-6 C-6

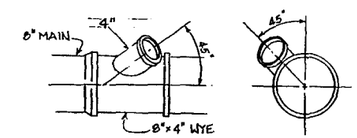


SEWER CLEAN-OUT 4 NO SCALE C-5 C-6



GATE VALVE AND BOX 5 NO SCALE C-5 C-6

NOTE: ORIENT WYE AS SHOWN.



SEWER CONNECTION 6 NO SCALE C-5 C-6

RECORD
7 of 105
APR 15 1985
35 MM

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C-6

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
WESTERN DIVISION
SAN BRUNO, CALIFORNIA

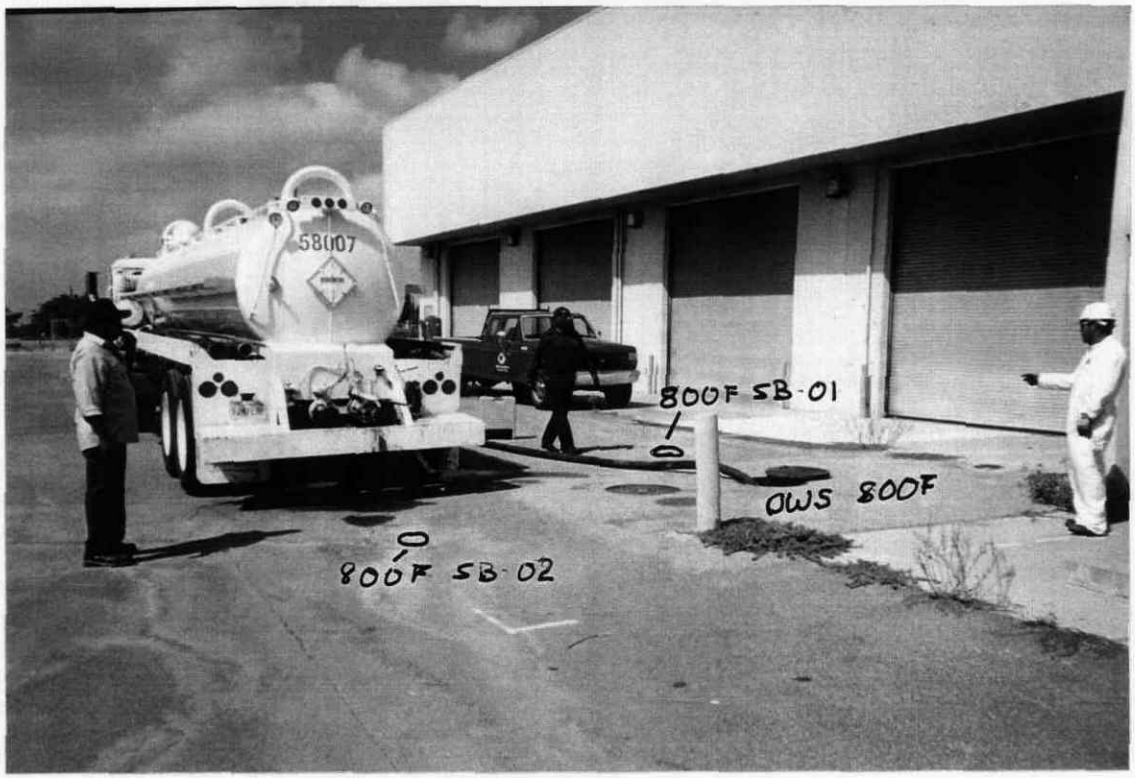
MARINE CORPS AIR STATION
EL TORO, CALIFORNIA
MAINTENANCE FACILITY, P-050
SANITARY SEWER PROFILE & DETAILS

SIZE F	IDENT. NO. 80091
MANFAC. DRAWING NO. 6148091	
CONST. CONTR. NO. N68894-80-C-9828	
SCALE AS SHOWN	SPEC. 12-BD-9828 SHEET 7 OF

DSGN. DR. CHK. SUPV. ENGR. IN CHG. FIRE PROT. ENGR. BRANCH HEAD DIRECTOR — DATE 4-30-84
SATISFACTORY TO — DATE
TITLE
APPROVED BY CAPT., CEC, USN — DATE 30 APR 1984

U.S. GPO 1977-791-010

Appendix F
Site Photographs



Photograph No. 1: Oil/water separator (OWS) 800F, soil boring locations SB-01 and SB-02, and Building 800

Photograph No. 2: OWS 800F, vacuum truck staged to remove separator contents.

Appendix G
Site Inspection Log

SITE ASSESSMENT LOG
MCAS El Toro
REMEDIATION OF VARIOUS UST SITES/OWS.
20242, D.O. 112

OWS
~~UST~~ SITE: 800F

Field Observations by: D. Rawal **Date:** June 14, 1999

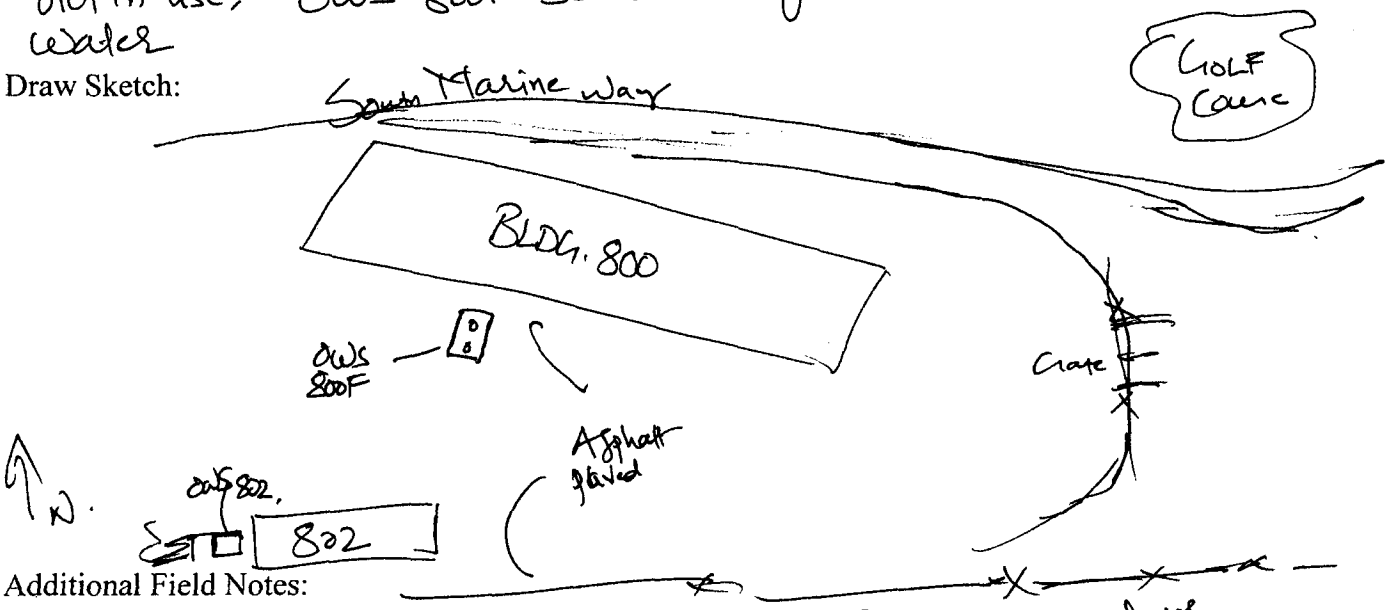
~~**Former UST**~~ OWS **area** Paved or Unpaved Building 800, used OWS 800F, for Seperation of Oil & Water, no UST associated with this OWS. Sanitary Sewer for wastewater
Paved: Concrete or Asphalt
Unpaved: Open dirt area No,
Any Visible Sprinkler System: Yes / No

-Nearest Building or Structure Distance: Building 800. Appx, 10' feet Northwest.

-Any Underground Piping/Lines, or Transformer Observed: None, Some Water & Electric lines,
-Overhead Utility Lines/Poles: No,

-Site Setup Constrains: None, Open Asphalt Paved area Building 800 Not in Use, OWS 800F Seems to be inactive Full of Product & water

Draw Sketch:



Additional Field Notes:

OWS 800F, Concrete OWS Capacity of 1500 gallons, Per Review of dwgs. No Visible Stains, Spills were observed around OWS 800F, OWS 800F has Product in it in both two Stage Compartment.

Appendix H
Geophysical Survey Data

SPECTRUM

GASCH
• GEOPHYSICS •

Results of Subsurface Investigation

Buildings 800 and 802
Marine Corps Air Station El Toro
Irvine, California

Prepared for: **OHM Remediation Corporation**
Irvine, California

Date of Investigation: June 14, 1999

Prepared by:

Jim Pfoser
Project Manager
Spectrum-Gasch Geophysics
15260 Sky High Road
Escondido, CA 92025

REGISTERED GEOPHYSICIST
LAURA L. CATHCART
No. 1017
Exp. 12/99
STATE OF CALIFORNIA

Laura Cathcart
Registered Geophysicist No. 1017

Warranty:

Spectrum-Gasch Geophysics was retained to conduct a subsurface investigation of the above facility to characterize the shallow subsurface. Our findings are subject to certain limitations due to site conditions and the instruments employed. We conducted this investigation in a manner consistent with our profession using similar methods. No other warranty as to the performance or deliverables is expressed or implied.

Contents

Introduction

Methods

Results and Conclusions

Figure 1	Area of Subsurface Investigation, Building 802, MCAS El Toro, Irvine, California
Figure 2	Area of Subsurface Investigation, Building 800, MCAS El Toro, Irvine, California
Appendix A	Base Utility Maps for Buildings 802 and 800

Results of Subsurface Investigation
Buildings 802 and 800
MCAS El Toro
Irvine, California

Introduction

On June 14, 1999 Spectrum-Gasch Geophysics conducted a subsurface investigation at Buildings 802 and 800 at MCAS El Toro in Irvine, California. The purpose was to investigate one area at each building for detectable subsurface utilities. An area approximately 32 by 31 feet was investigated at Building 802 and an area approximately 27 by 24 feet was investigated at Building 800.

Methods

The equipment used in this investigation consisted of a Fisher TW-6 shallow-focus terrain conductivity meter, Dynatel 500A cable locator, Radiodetection RD400 utility locator, and a GSSI SIR-3 ground penetrating radar (GPR) unit coupled to a 500-MHz antenna.

GPR and EM utility-locating methods were used in the areas of interest to delineate the surface trace of detectable conduits and to identify buried objects having no surface expression. The following paragraphs discuss the methods used.

1.) The areas were investigated for detectable subsurface utilities or other buried features. Utilities which were exposed above ground in the vicinity of each area were directly connected to, traced out, and mapped on a site map (Figures 1 and 2).

2.) The areas were investigated with a passive electromagnetic receiver tuned to 50/60 Hz, radio, and audio frequencies to detect buried utilities that might reradiate an electromagnetic field.

3.) The areas were investigated with two crew members operating a matched frequency transmitter and receiver. We conducted bi-directional traverses to detect increases in signal strength which might suggest subsurface utilities. Each suspected signal increase was further investigated to discern a signal-propagating utility.

4.) GPR data from seven traverses at Building 802 and seven traverses at Building 800 were collected. A map of these traverses is presented in Figures 1 and 2, respectively. GPR data were produced in the form of vertical cross sections and interpreted in the field for anomalies whose signatures might indicate the presence of subsurface conduits or other features of interest.

Results and Conclusions

Building 802

The surface trace of detected utilities was marked on the ground with spray paint using a color code established by the American Public Works Association. A site map with geophysical interpretation of the proposed boring locations is presented in Figure 1. Drilling and excavation activities should be kept a minimum of two feet away from detected utilities.

The penetration depth of the GPR signal was approximately 1 foot in the areas investigated. As a consequence, some subsurface utilities may not have been detected due to the shallow penetration of the GPR. Because of this limitation, Spectrum cannot guarantee that all nonmetallic conduits, such as sewers and pvc water lines, have been identified within the area of investigation.

Base utility maps for this area are included in Appendix A.

Building 800

The surface trace of detected utilities was marked on the ground with spray paint using a color code established by the American Public Works Association. A site map with geophysical interpretation of the area investigated is presented in Figure 2. Drilling and excavation activities should be kept a minimum of two feet away from detected utilities.

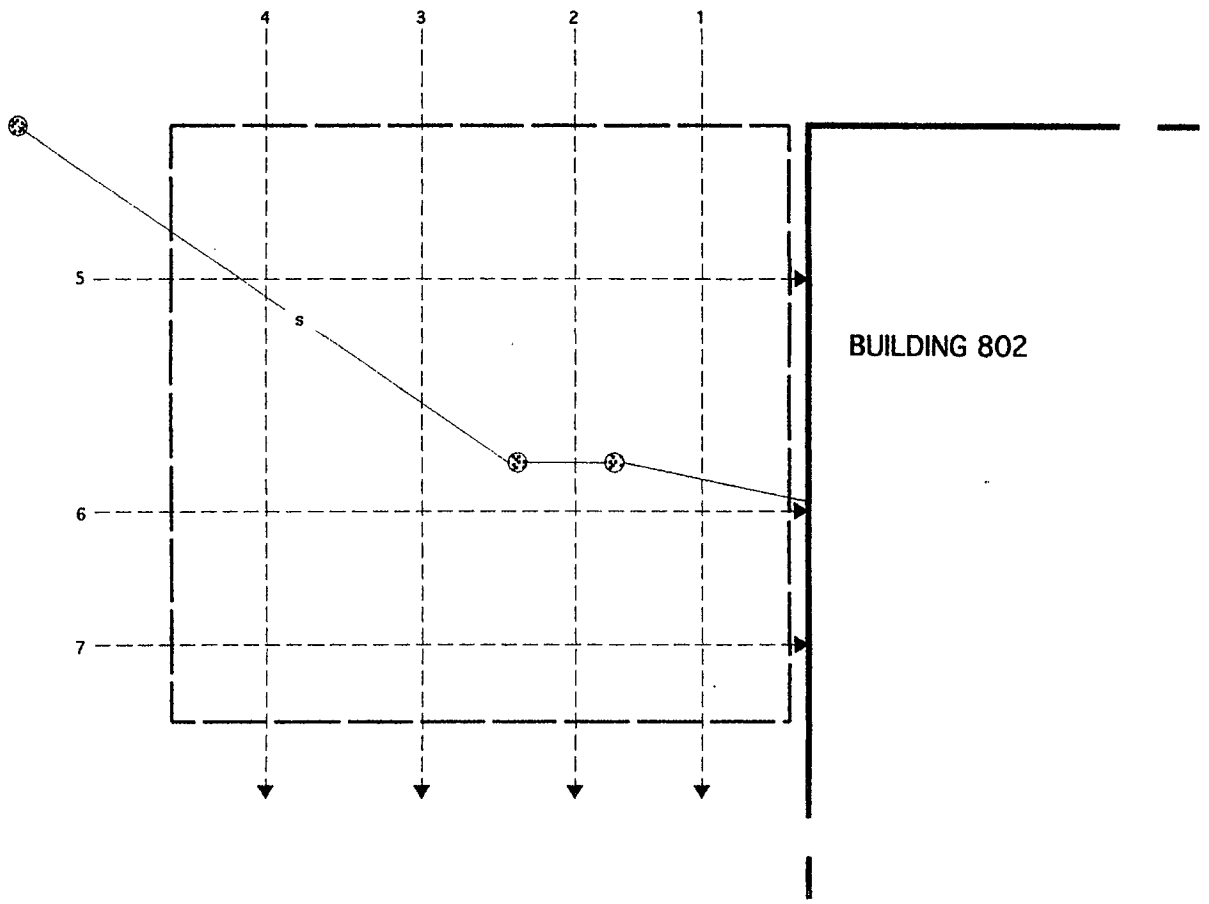
The penetration depth of the GPR signal was approximately 1 foot in the area investigated. As a consequence, some subsurface utilities may not have been detected due to the shallow penetration of the GPR. Because of this limitation, Spectrum cannot guarantee that all nonmetallic conduits, such as sewers and pvc water lines, have been identified within the area of investigation.

One technique that allows for higher resolution of the GPR signal as well as deeper penetration involves the use of a GSSI SIR-10A GPR unit coupled to a bi-static antenna array. This arrangement uses two coupled antennas to achieve greater resolution and deeper penetration depending on the near-surface soils. Although more expensive, this system is ideal for areas where deeper penetration is needed to locate utilities or USTs.

Base utility maps for this area are included in Appendix A.

FIGURE 1
AREA OF SUBSURFACE INVESTIGATION
BUILDING 802
MCAS EL TORO
IRVINE, CALIFORNIA

SPECTRUM-GASCH
GEOPHYSICS
15260 Sky High Road, Escondido, CA 92025



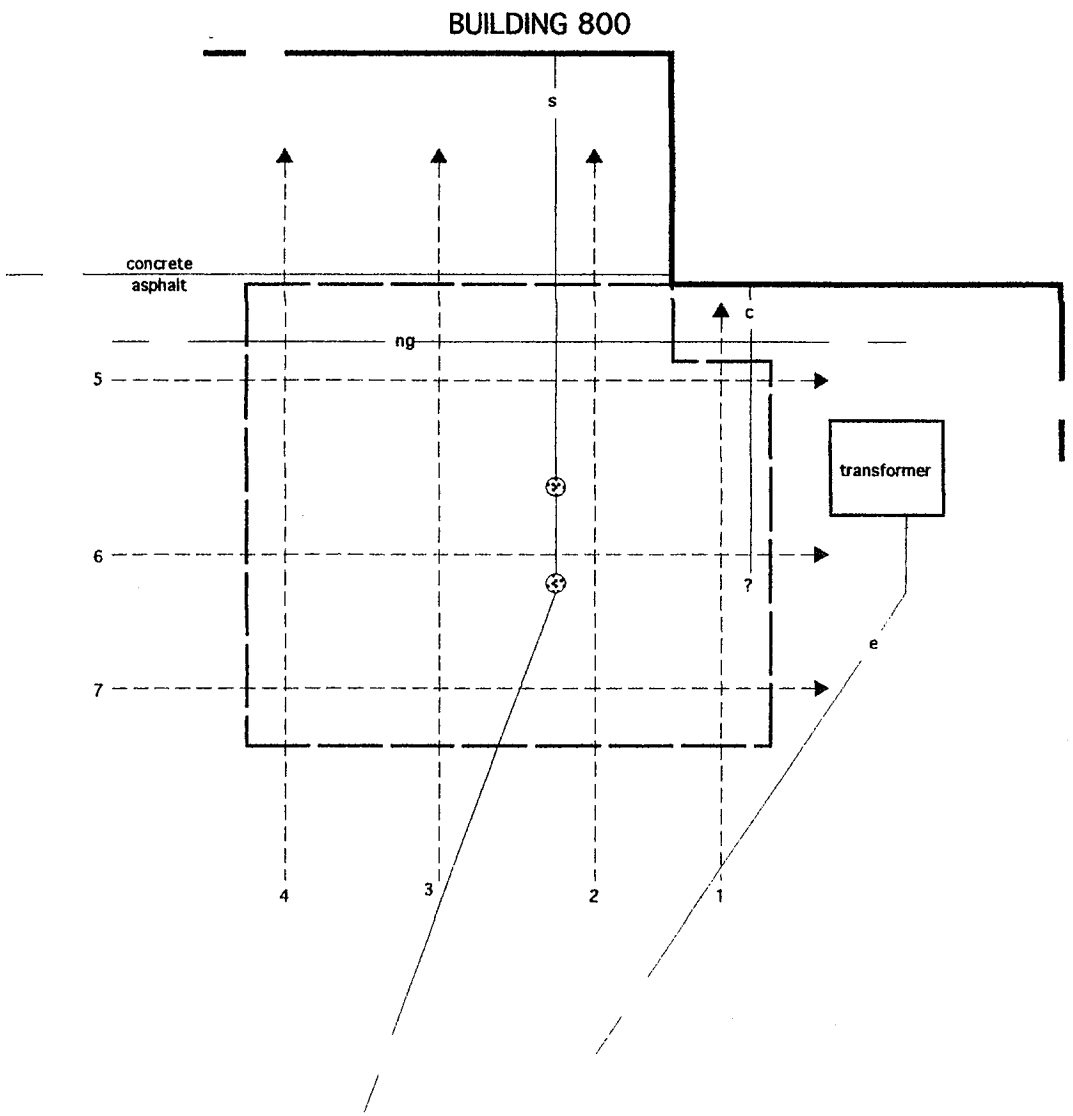
EXPLANATION

Area of subsurface investigation	CONDUITS		N	0 5 10	Project Number: 9906142M
Sewer lid	— s —	Sewer		One inch equals approximately 10 feet	Date of Investigation: June 14, 1999
2 GPR traverse with number		Trend continues			Map by J. Pfoser

Not all below ground facilities may be represented on this map

FIGURE 2
AREA OF SUBSURFACE INVESTIGATION
BUILDING 800
MCAS EL TORO
IRVINE, CALIFORNIA

SPECTRUM-GASCH
GEOPHYSICS
15260 Sky High Road, Escondido, CA 92025



EXPLANATION

Area of subsurface investigation	CONDUITS		
Sewer lid	s	Sewer	
2 GPR traverse with number	ng	Natural gas	
	e	Electric	
	c	Conduit	
		Trend continues	

N

0 5 10
One inch equals approximately 10 feet

Project Number: 9906142M
Date of Investigation: June 14, 1999
Map by J. Pfoser

Not all below ground facilities may be represented on this map

Appendix I
Field Soil Boring Logs

800F-SB-01

OHM REMEDIATION SERVICES CORP.

Geologic Log

BOREHOLE NUMBER: SB01
SHEET 1 OF ___

PROJECT NO.	920242	DATE: 6-16-99	
CLIENT:	SWDIV	DRILLNG CO.:	BC2
LOCATION:	MCAS, EL TORO	DRILL RIG MODEL:	LAR-CME 75
LOGGED BY:	G.Berger	DRILLER:	Ramon Zepeda
		DRILLING METHOD	HSA
		HOLE DIAMETE	8-inch

BORING COMPLETION DATA:

DEPTH TO WATER:				
TIME				
DATE				

TIME	DEPTH	PID/FID HNU OVA (PPM)	BLOWS/ 6 IN PRESSURE (PSI)	RECOVERY	SAMPLE NUMBER	SAMPLE INTERVAL	WELL DETAIL	SOIL/ROCK SYMBOL	GRAPHIC LOG	
	0									Hand Auger to 10' 2-5' then 1 to 10'
	5							CL		Cuttings (CL handauger) Sandy CLAY: very dark grayish brown (10YR3/2): mod. dense - low to mod plast.; 60% 70% silty CLAY - 30% fine sand. Moist - no odor.
		0.0						SC		Clay & SAND (SC): strong brown 7.5YR5/6; 60% fine sand 40% silt & clay
0915	10	14 / 2 / 30	14 / 21 / 30		20242 930					9-10.5 v. sandy CLAY (CL-SC): drk. yell. brn. 10YR4/4; 60% silty CLAY 30-40% fine SAND. NO ODOR - dense low-mod Plasticity hand - some apparent mottle. Note - caliche on bedding planes.
	15									<note this sample is actually 10-11.5" mistake on my part -GB>
0930	20									

800F-SB-01

<C:/EXCEL/ElToroBOREL0G.xls>

14 26 27

OHM REMEDIATION SERVICES CORP.

LOCATION: 800F

DATE: 6-16-99

BOREHOLE NUMBER: SB01

SHEET ___ OF ___

800F- SB-01

TIME	DEPTH	PID/FID HNU OVA (PPM)	BLOWS/ 6 IN PRESSURE (PSI)	RECOVERY	SAMPLE NUMBER	SAMPLE INTERVAL	WELL DETAIL	SOIL/ROCK SYSMBOL	GRAPHIC LOG	FIELD SOIL DESCRIPTION
930	20	0.0	14 26 27		20242 931			SL-SC		Sandy CLAY (CL-SC): yell brn 10YR5/4; dense and hard, low plast; 70% silty clay; 30% fine sand. No odor. 0.0 PID 0.0 - then very wet - suspect pid
	25									
	30									
0945			19 24 40					CL-SC		Sandy CLAY (CL-SC): yell. brn 10YR5/4; similar to above dense hard - 70%+ silty clay - 30% fine sand. No odor PID 0.0 - then
	35									Boring ENDs here. HSA - 30' Sample 31.5' Note problems extracting augers because of swelling clay?! Consider this in eval. site (ie - high AEC).
	40									
	45									

<C:/EXCEL/ElToroBORELOG.xls>

OHM REMEDIATION SERVICES CORP.

Geologic Log

BOREHOLE NUMBER: SB02
SHEET 1 OF ___

PROJECT NO.	920242	DATE: 6-16-99	DRILLNG CO.: BC2
CLIENT:	SWDIV		DRILL RIG MODEL: LAR - CME 75
LOCATION:	MCAS, EL TORO		DRILLER: Ramon Zepeda
LOGGED BY:	G.Berger		DRILLING METHOD HSA — HOLE DIAMETE 8-inch

BORING COMPLETION DATA:

DEPTH TO WATER:				
TIME				
DATE				

TIME	DEPTH	PID/FID HNU OVA (PPM)	BLOWS/ 6 IN PRESSURE (PSI)	RECOVERY	SAMPLE NUMBER	SAMPLE INTERVAL	WELL DETAIL	SOIL/ROCK SYMBOL	GRAPHIC LOG	
								CL-SC		Hand Auger to 10' (2-5' & 1-10'). cuttings 0-5' sandy CLAY (CL-SC): v. drk brn 10YR 2/2; 70% silt & CLAY 30% fine. Stiff hard - low to med plast. No odor - No stain.
	5									5-10 SAA hand auger
	10									10-11.5
1100		0.0	13 16 21		933					Sandy Clay (CL-SC): drk. yell. brn. 10YR 4/4; stiff dense; 70% silt CLAY 30% fine SAND; No ODOR
	15									
	20									

800F SB02

<C:/EXCEL/ElToroBORELOG.xls>

OHM REMEDIATION SERVICES CORP.

LOCATION: 800F
DATE: 6-16-99

BOREHOLE NUMBER: SB-02
SHEET 2 OF ___

800F-SB-02

TIME	DEPTH	PID/FID HNU OVA (PPM)	BLOWS/ 6 IN PRESSURE (PSI)	RECOVERY	SAMPLE NUMBER	SAMPLE INTERVAL	WELL DETAIL	SOIL/ROCK SYSMBOL	GRAPHIC LOG	FIELD SOIL DESCRIPTION
										25-26.5
1110	20		19 24 40		934			CL-SC		Sandy Clay (CL-SC): dkb-10YR4/4 60-70% silty Clay; 30-40% fine sand. NO ODOR
										PID appears disfunctional
	25									
										30-31.5
	30									
1120			31 50		935 936			SC		clayey SAND (SC): brown 10YR5/3; 60-80% fine SAND; 20-40% silt and clay: NO ODOR, Have low plast.
										Boring Ends at 30'
	35									
	40									
	45									

<C:/EXCEL/ElToroBORELOG.xls>

800F-SB02

Appendix J
Laboratory Analytical Reports

COMPLETED (BW 7/27)

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

Tank Contents – 800F, 802, 845 218442

FORM 0019 REV. 2-97

OHM's LAB COORDINATOR: L. Bienkowski	LAB COORDINATOR'S PHONE: 949-660-7537	LAB COORDINATOR'S FAX: 949-475-5433	LABORATORY SERVICE ID: 994621	LABORATORY CONTACT: APCL	MAIL REPORT (COMPANY NAME): IT
PROJECT NAME: El Toro	PROJECT LOCATION: MCAS El Toro – DO 112	PROJECT NUMBER: 20242	LABORATORY PHONE: 909-590-1828	LABORATORY FAX:	RECIPIENT NAME: Dwayne Ishida
PROJECT CONTACT: L. Bienkowski	PROJECT PHONE NUMBER: 949-451-1665	PROJECT FAX: —	LABORATORY ADDRESS: 13760 Magnolia		ADDRESS: 3349 Michelson, Suite 200
PROJECT ADDRESS: —	CITY, STATE AND ZIPCODE: —	CLIENT: SWDIV	CITY, STATE AND ZIPCODE: Chino, CA		CITY, STATE, AND ZIPCODE: Irvine, CA 92612
PROJECT MANAGER: B. Seellak	PROJECT MANAGER'S PHONE: 949-261-1061	PROJECT MANAGER'S FAX:			

Item	Sample Identifier	Matrix	Date 1999	Time	Preserved	# of Cont.	QC Level	T.A.T	EPA 8260 +MTBE	TPH-Purgeable	TPH-Extractable	EPA 8081 Pest	EPA 1010-Metals	Flashpoint	EPA 9070	Comments
1	20242-967	W	7-2	0700	HCL	2	III	5DA	X							
2	20242-968	PRODUCT	7-2	0845	4°C	3	III	5DA	X	X	X	X	X	X	X	☆ PRODUCT
3	20242-969	W	7-2	1030	4°C	9	III	5DA	X	X	X	X	X	X	X	
4	20242-970	W	7-2	1130	4°C	9	III	5DA	X	X	X	X	X	X	X	
5	20242-971	PRODUCT	7-2	1215	4°C	3	III	5DA	X	X	X	X	X	X	X	☆ PRODUCT
6																
7																
8																
9																
10																

SAMPLES COLLECTED BY: C. PARRISH

COURIER AND AIR BILL NUMBER: COURIER

COOLER TEMPERATURE UPON RECEIPT:

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
Gary Perrott	[illegible signature]	7-2-99	1700	

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

Tank Contents 800F, 802, 845

Sample Point Location	Sample Type G	C	F	QC
1. TRIP BLANK	X			X
2. ~~BLDG 845~~	X			
UST ~~TANK~~ 845B (D)				
3. ~~BLDG 800~~	X			
UST ~~TANK~~ 800F				
4. ~~BLDG 800~~	X			
UST ~~TANK~~ 802				
5 ~~BLDG 845~~				
UST ~~TANK~~ 845A (D)	X			

Comments

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

994621

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

217054

BORING 802

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)
L. BIENKOWSKI	949-660-7537	949-475-5433	994234	APCL	IT GROUP
PROJECT NAME	**PROJECT LOCATION**	**PROJECT NUMBER**	**LABORATORY PHONE**	**LABORATORY FAX**	**RECIPIENT NAME**
EL TORO MCAS	EL TORO BLDG 800	20242	909-590-1828		DWAYNE ISHIDA
PROJECT CONTACT	**PROJECT PHONE NUMBER**	**PROJECT FAX**	**LABORATORY ADDRESS**		**ADDRESS**
L. BIENKOWSKI	—	—	13760 MAGNOLIA		3347 MICHELSON STE 200
PROJECT ADDRESS	**CITY, STATE AND ZIPCODE**	**CLIENT**	**CITY, STATE AND ZIPCODE**		**CITY, STATE, AND ZIPCODE**
—	—	SWDIV	CHINO CA.		IRVINE, CA.
PROJECT MANAGER	**PROJECT MANAGER'S PHONE**	**PROJECT MANAGER'S FAX**			
B. SEOLAK	949-261-6441	—			

Item	Sample Identifier	Matrix	Date 1997	Time	Preserved	# of Cont.	QC Level	T.A.T.	Analyses: EPA 8015 TPH-D	EPA 8015 TPH-G	EPA 8260-MTBE						Comments
1	20242-937	W	6-16	1230	HCL	1	III	5DA			X						
2	20242-938	W	6-16	1245	4°C	5	III	5DA	X	X	X						
3	20242-939	S	6-16	1300	4°C	1	III	5DA	X	X	X						
4	20242-940	S	6-16	1305	4°C	1	III	5DA	X	X	X						
5	20242-941	S	6-16	1315	4°C	1	III	5DA	X	X	X						
6	20242-942	S	6-16	1350	4°C	1	III	5DA	X	X	X						
7	20242-943	S	6-16	1355	4°C	1	III	5DA	X	X	X						
8	20242-944	S	6-16	1405	4°C	1	III	5DA	X	X	X						
9	20242-945	S	6-16	1420	4°C	1	III	5DA	X	X	X						
10																	

SAMPLES COLLECTED BY: C. PARRISH

COURIER AND AIR BILL NUMBER: COURIER

COOLER TEMPERATURE UPON RECEIPT:

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
Cheryl Parrish	Adam Nowic	6-16-97	1510	

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

OWS
~~BORING~~ 802

Sample Point Location	Sample Type G	C	F	QC
1. TRIP BLANK	X			X
2. EQ RINSATE	X			X
BLDG 800				
3. 802-SB-01 10½-11 BGS	X			
4. 802 F-SB01 20.5-21.0	X			
5. 802-SB01 30.5-31.0	X			
6. 802-SB02 10½-11	X			
7. 802-SB02 10½-11 DUPLICATE	X			X
8. 802-SB02 20½-21	X			
9. 802-SB02 30½-31	X			

Comments

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

99423

Applied P & Ch Laboratory

Organic Analysis Results for Method SW8081

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/02/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99-4621-3	Received Date:	07/02/1999
Sample ID:	**20242-969**	Sample Matrix	Water	Moisture %:	-
Sample Type:	Field Sample	Prep. Method:	3510	Instrument ID:	GC: R
Anal. Method:	SW8081	Prep. Date:	07/08/99	Anal. Date:	07/09/99
Batch No:	99G3438	Prep. No:	1 of 1	Anal. Time:	14:25
Data File Name:	4621.003	Sample Amount:	1000 mL	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ALDRIN	309-00-2	µg/L	0.05	<0.05	U
2	BETA-BHC	319-85-7	µg/L	0.05	<0.05	U
3	ALPHA-BHC	319-84-6	µg/L	0.05	<0.05	U
4	DELTA-BHC	319-86-8	µg/L	0.05	<0.05	U
5	GAMMA-BHC	58-89-9	µg/L	0.05	<0.05	U
6	CHLORDANE	57-74-9	µg/L	2	<2	U
7	4,4'-DDD	72-54-8	µg/L	0.1	<0.1	U
8	4,4'-DDE	72-55-9	µg/L	0.1	<0.1	U
9	4,4'-DDT	50-29-3	µg/L	0.1	<0.1	U
10	DIELDRIN	60-57-1	µg/L	0.1	<0.1	U
11	ENDOSULFAN I	959-98-8	µg/L	0.05	<0.05	U
12	ENDOSULFAN II	33213-65-9	µg/L	0.1	<0.1	U
13	ENDOSULFAN SULFATE	1031-07-8	µg/L	0.5	<0.5	U
14	ENDRIN	72-20-8	µg/L	0.1	<0.1	U
15	ENDRIN ALDEHYDE	7421-93-4	µg/L	0.1	<0.1	U
16	ENDRIN KETONE	53494-70-5	µg/L	0.1	<0.1	U
17	HEPTACHLOR	76-44-8	µg/L	0.05	<0.05	U
18	HEPTACHLOR EPOXIDE	1024-57-3	µg/L	0.05	<0.05	U
19	METHOXYCHLOR	72-43-5	µg/L	2	<2	U
20	TOXAPHENE	8001-35-2	µg/L	5	<5	U
21	AROCLOR-1016	12674-11-2	µg/L	1	<1	U
22	AROCLOR-1221	11104-28-2	µg/L	1	<1	U
23	AROCLOR-1232	11141-16-5	µg/L	1	<1	U
24	AROCLOR-1242	53469-21-9	µg/L	1	<1	U
25	AROCLOR-1248	12672-29-6	µg/L	1	<1	U
26	AROCLOR-1254	11097-69-1	µg/L	1	<1	U
27	AROCLOR-1260	11096-82-5	µg/L	1	<1	U

Surrogates			Control Limit, %	Surro. Rec.%
1	DECACHLOROBIPHENYL (DCB)	2051-24-3	31-147	110
2	2,4,5,6-TETRACHLORO-M-XYLENE	877-09-8	33-146	125
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	DIBUTYLCHLORENDATE (DBC)	1770-80-5	50-200	67
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

135158

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/02/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99-4621-3	Received Date:	07/02/1999
Sample ID:	**20242-969**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC: N
Anal. Method:	M8015V	Prep. Date:	07/07/99	Anal. Date:	07/07/99
Batch No:	99G3410	Prep. No:	–	Anal. Time:	20:27
Data File Name:	4621.003	Sample Amount:	5.0 mL	Dilution Factor:	1
Methanol Vol.	-				
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N) N	

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	GASOLINE	8006-61-9	mg/L	0.1	0.03	J

Surrogates		Control Limit, %	Surro. Rec.%
1 4-BROMO-FLUOROBENZENE (FID)	460-00-4	74-138	94
# of out-of-control			0

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

135289

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/02/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99-4621-3	Received Date:	07/02/1999
Sample ID:	**20242-969**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	3510	Instrument ID:	GC: H
Anal. Method:	M8015E	Prep. Date:	07/07/99	Anal. Date:	07/10/99
Batch No:	99G3402	Prep. No:	1 of 1	Anal. Time:	03:27
Data File Name:	4621.003	Sample Amount:	1000 mL	Dilution Factor:	10
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	TPH AS DIESEL	68334-30-5	mg/L	1	6.9 [a]	
2	TPH AS MOTOR OIL	TBD-0002	mg/L	5	11	

Surrogates			Control Limit, %	Surro. Rec.%
1	OCTACOSANE, C_{28}	630-02-4	26-152	73
# of out-of-control				0

[a] Mixture in Diesel/Motor Oil range.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

135317

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/02/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99-4621-3	Received Date:	07/02/1999
Sample ID:	**20242-969**	Sample Matrix	Water	Moisture %:	-
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ANTIMONY	7440-36-0	µg/L	10	20.4		P		99M2118L	07/07/99	07/07/99	1	6010
ARSENIC	7440-38-2	µg/L	5	<1.6	U	P		99M2118L	07/07/99	07/07/99	1	6010
BARIUM	7440-39-3	µg/L	10	170		P		99M2118L	07/07/99	07/07/99	1	6010
BERYLLIUM	7440-41-7	µg/L	2	0.15	B	P		99M2118L	07/07/99	07/07/99	1	6010
CADMIUM	7440-43-9	µg/L	2	132		P		99M2118L	07/07/99	07/07/99	1	6010
CHROMIUM	7440-47-3	µg/L	5	34.8		P		99M2118L	07/07/99	07/07/99	1	6010
COBALT	7440-48-4	µg/L	5	16.6		P		99M2118L	07/07/99	07/07/99	1	6010
COPPER	7440-50-8	µg/L	10	552		P		99M2118L	07/07/99	07/07/99	1	6010
LEAD	7439-92-1	µg/L	5	268		P		99M2118L	07/07/99	07/07/99	1	6010
MERCURY	7439-97-6	µg/L	0.5	<0.14	U	CV		99M2123N	07/07/99	07/07/99	1	7470
MOLYBDENUM	7439-98-7	µg/L	5	12.8		P		99M2118L	07/07/99	07/07/99	1	6010
NICKEL	7440-02-0	µg/L	5	81.1		P		99M2118L	07/07/99	07/07/99	1	6010
SELENIUM	7782-49-2	µg/L	10	<3.3	U	P		99M2118L	07/07/99	07/07/99	1	6010
SILVER	7440-22-4	µg/L	10	<0.93	U	P		99M2118L	07/07/99	07/07/99	1	6010
THALLIUM	7440-28-0	µg/L	10	<2.0	U	P		99M2118L	07/07/99	07/07/99	1	6010
VANADIUM	7440-62-2	µg/L	10	14.7		P		99M2118L	07/07/99	07/07/99	1	6010
ZINC	7440-66-6	µg/L	5	4550		P		99M2118L	07/07/99	07/07/99	1	6010

Not Detected is shown as IDL moisture-corrected if applicable

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

135372

Applied P & Ch Laboratory

Organic Analysis Results for Method SW8260A

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/02/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99-4621-3	Received Date:	07/02/1999
Sample ID:	**20242-969**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: Q
Anal. Method:	SW8260A	Prep. Date:	07/14/99	Anal. Date:	07/14/99
Batch No:	99G3508	Prep. No:	–	Anal. Time:	13:59
Data File Name:	4621-03A	Sample Amount:	5 mL	Dilution Factor:	1
Methanol Vol.					
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACETONE	67-64-1	µg/L	50	< 50	U
2	BENZENE	71-43-2	µg/L	5	< 5	U
3	BROMODICHLOROMETHANE	75-27-4	µg/L	5	< 5	U
4	BROMOFORM	75-25-2	µg/L	5	< 5	U
5	BROMOMETHANE	74-83-9	µg/L	5	< 5	U
6	2-BUTANONE (MEK)	78-93-3	µg/L	50	< 50	U
7	CARBON DISULFIDE	75-15-0	µg/L	5	< 5	U
8	CARBON TETRACHLORIDE	56-23-5	µg/L	5	< 5	U
9	CHLOROBENZENE	108-90-7	µg/L	5	< 5	U
10	DIBROMOCHLOROMETHANE	124-48-1	µg/L	5	< 5	U
11	CHLOROETHANE	75-00-3	µg/L	5	< 5	U
12	2-CHLOROETHYLVINYLEHTER	110-75-8	µg/L	50	< 50	U
13	CHLOROFORM	67-66-3	µg/L	5	< 5	U
14	CHLOROMETHANE	74-87-3	µg/L	5	< 5	U
15	1,1-DICHLOROETHANE	75-34-3	µg/L	5	< 5	U
16	1,2-DICHLOROETHANE	107-06-2	µg/L	5	< 5	U
17	1,1-DICHLOROETHENE	75-35-4	µg/L	5	< 5	U
18	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	5	< 5	U
19	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	5	< 5	U
20	1,2-DICHLOROPROPANE	78-87-5	µg/L	5	< 5	U
21	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	5	< 5	U
22	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	5	< 5	U
23	ETHYLBENZENE	100-41-4	µg/L	5	< 5	U
24	2-HEXANONE	591-78-6	µg/L	50	< 50	U
25	METHYLENE CHLORIDE	75-09-2	µg/L	5	< 5	U
26	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	50	< 50	U
27	METHYL TERT-BUTYL ETHER	1634-04-4	µg/L	10	0.9	J
28	STYRENE	100-42-5	µg/L	5	< 5	U
29	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	5	< 5	U
30	TETRACHLOROETHENE	127-18-4	µg/L	5	< 5	U
31	TOLUENE	108-88-3	µg/L	5	1	J
32	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	5	< 5	U
33	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	5	< 5	U
34	TRICHLOROETHENE	79-01-6	µg/L	5	< 5	U
35	VINYL ACETATE	108-05-4	µg/L	50	< 50	U
36	VINYL CHLORIDE	75-01-4	µg/L	5	< 5	U
37	XYLENES (TOTAL)	1330-20-7	µg/L	15	2	J

Surrogates	Control Limit, %	Surro. Rec.%

135017

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	75-125	125
2	DIBROMOFLUOROMETHANE	1868-53-7	75-125	103
3	1,2-DICHLOROETHANE-D4	17060-07-0	62-139	134
4	TOLUENE-D8	2037-26-5	75-125	106
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	87
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	73
3	FLUOROBENZENE	462-06-6	50-200	88
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

135018

Applied P & Ch Laboratory

Organic Analysis Results for Method SW8270B

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/02/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99-4621-3	Received Date:	07/02/1999
Sample ID:	**20242-969**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	3510	Instrument ID:	GC/MS: D
Anal. Method:	SW8270B	Prep. Date:	07/07/99	Anal. Date:	07/10/99
Batch No:	99G3412	Prep. No:	1 of 1	Anal. Time:	18:20
Data File Name:	4621-03	Sample Amount:	1000 mL	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACENAPHTHENE	83-32-9	µg/L	10	<10	U
2	ACENAPHTHYLENE	208-96-8	µg/L	10	<10	U
3	ANTHRACENE	120-12-7	µg/L	10	<10	U
4	BENZO[A]ANTHRACENE	56-55-3	µg/L	10	<10	U
5	BENZO[A]PYRENE	50-32-8	µg/L	10	<10	U
6	BENZO[B]FLUORANTHENE	205-99-2	µg/L	10	<10	U
7	BENZO[G,H,I]PERYLENE	191-24-2	µg/L	10	<10	U
8	BENZO[K]FLUORANTHENE	207-08-9	µg/L	10	<10	U
9	BIS(2-CHLOROETHOXY)METHANE	111-91-1	µg/L	10	<10	U
10	BIS(2-CHLOROETHYL)ETHER	111-44-4	µg/L	10	<10	U
11	BIS(2-CHLOROISOPROPYL)ETHER	108-60-1	µg/L	10	<10	U
12	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	µg/L	10	8	J
13	4-BROMOPHENYL PHENYL ETHER	101-55-3	µg/L	10	<10	U
14	BUTYL BENZYL PHTHALATE	85-68-7	µg/L	10	7	J
15	3-METHYL-4-CHLOROPHENOL	59-50-7	µg/L	10	<10	U
16	4-CHLOROANILINE	106-47-8	µg/L	10	<10	U
17	2-CHLORONAPHTHALENE	91-58-7	µg/L	10	<10	U
18	2-CHLOROPHENOL	95-57-8	µg/L	10	<10	U
19	4-CHLOROPHENYL PHENYL ETHER	7005-72-3	µg/L	10	<10	U
20	CHRYSENE	218-01-9	µg/L	10	<10	U
21	DI-N-BUTYLPHTHALATE	84-74-2	µg/L	10	2	J
22	DI-N-OCTYLPHTHALATE	117-84-0	µg/L	10	<10	U
23	DIBENZ[A,H]ANTHRACENE	53-70-3	µg/L	10	<10	U
24	DIBENZOFURAN	132-64-9	µg/L	10	<10	U
25	1,2-DICHLOROBENZENE	95-50-1	µg/L	10	<10	U
26	1,3-DICHLOROBENZENE	541-73-1	µg/L	10	<10	U
27	1,4-DICHLOROBENZENE	106-46-7	µg/L	10	<10	U
28	3,3'-DICHLOROBENZIDINE	91-94-1	µg/L	10	<10	U
29	2,4-DICHLOROPHENOL	120-83-2	µg/L	10	<10	U
30	DIETHYL PHTHALATE	84-66-2	µg/L	10	2	J
31	DIMETHYL PHTHALATE	131-11-3	µg/L	10	<10	U
32	2,4-DIMETHYLPHENOL	105-67-9	µg/L	10	<10	U
33	2-METHYL-4,6-DINITROPHENOL	534-52-1	µg/L	25	<25	U
34	2,4-DINITROPHENOL	51-28-5	µg/L	25	<25	U
35	2,4-DINITROTOLUENE	121-14-2	µg/L	10	<10	U
36	2,6-DINITROTOLUENE	606-20-2	µg/L	10	<10	U
37	FLUORANTHENE	206-44-0	µg/L	10	<10	U
38	FLUORENE	86-73-7	µg/L	10	<10	U
39	HEXACHLOROBENZENE	118-74-1	µg/L	10	<10	U
40	HEXACHLOROBUTADIENE	87-68-3	µg/L	10	<10	U

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#	Component Name	CAS No	Unit	RL	Result	Qualifier
41	HEXACHLOROCYCLOPENTADIENE	77-47-4	µg/L	10	< 10	U
42	HEXACHLOROETHANE	67-72-1	µg/L	10	< 10	U
43	INDENO[1,2,3-CD]PYRENE	193-39-5	µg/L	10	< 10	U
44	2-METHYLNAPHTHALENE	91-57-6	µg/L	10	< 10	U
45	4-METHYLPHENOL	106-44-5	µg/L	10	< 10	U
46	2-METHYLPHENOL	95-48-7	µg/L	10	< 10	U
47	NAPHTHALENE	91-20-3	µg/L	10	< 10	U
48	2-NITROANILINE	88-74-4	µg/L	25	< 25	U
49	3-NITROANILINE	99-09-2	µg/L	25	< 25	U
50	4-NITROANILINE	100-01-6	µg/L	25	< 25	U
51	NITROBENZENE	98-95-3	µg/L	10	< 10	U
52	2-NITROPHENOL	88-75-5	µg/L	10	< 10	U
53	4-NITROPHENOL	100-02-7	µg/L	25	< 25	U
54	N-NITROSODI-N-PROPYLAMINE	621-64-7	µg/L	10	< 10	U
55	N-NITROSODIPHENYLAMINE	86-30-6	µg/L	10	< 10	U
56	PENTACHLOROPHENOL	87-86-5	µg/L	11 [a]	< 11	U
57	PHENANTHRENE	85-01-8	µg/L	10	< 10	U
58	PHENOL	108-95-2	µg/L	10	< 10	U
59	PYRENE	129-00-0	µg/L	10	< 10	U
60	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	10	< 10	U
61	2,4,5-TRICHLOROPHENOL	95-95-4	µg/L	25	< 25	U
62	2,4,6-TRICHLOROPHENOL	88-06-2	µg/L	10	< 10	U

Surrogates			Control Limit, %	Surro. Rec.%
1	2-FLUOROBIPHENYL	321-60-8	43-125	67
2	2-FLUOROPHENOL	367-12-4	25-125	40
3	NITROBENZENE-D5	4165-60-0	32-125	69
4	PHENOL-D5	4165-62-2	25-125	31
5	TERPHENYL-D14	1718-51-0	42-126	61
6	2,4,6-TRIBROMOPHENOL	118-79-6	25-134	70
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	ACENAPHTHENE-D10	15067-26-2	50-200	82
2	CHRYSENE-D12	1719-03-5	50-200	93
3	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	91
4	NAPHTHALENE-D8	1146-65-2	50-200	93
5	PERYLENE-D12	1520-96-3	50-200	61
6	PHENANTHRENE-D10	1517-22-2	50-200	77
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.
[a] MDL reported.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

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Applied P & Ch Laboratory

Organic Analysis Results for Method 8260

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-6	Received Date:	06/16/1999
Sample ID:	**20242-930**	Sample Matrix	Soil	Moisture %:	14.3
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: X
Anal. Method:	8260	Prep. Date:	06/22/99	Anal. Date:	06/22/99
Batch No:	99G3167	Prep. No:	–	Anal. Time:	14:33
Data File Name:	4234-06	Sample Amount:	5 g	Dilution Factor:	1
Methanol Vol.					
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACETONE	67-64-1	µg/kg	58	<58	U
2	BENZENE	71-43-2	µg/kg	5.8	<5.8	U
3	BROMODICHLOROMETHANE	75-27-4	µg/kg	5.8	<5.8	U
4	BROMOFORM	75-25-2	µg/kg	5.8	<5.8	U
5	BROMOMETHANE	74-83-9	µg/kg	5.8	<5.8	U
6	2-BUTANONE (MEK)	78-93-3	µg/kg	58	<58	U
7	CARBON DISULFIDE	75-15-0	µg/kg	5.8	<5.8	U
8	CARBON TETRACHLORIDE	56-23-5	µg/kg	5.8	<5.8	U
9	CHLOROBENZENE	108-90-7	µg/kg	5.8	<5.8	U
10	DIBROMOCHLOROMETHANE	124-48-1	µg/kg	5.8	<5.8	U
11	CHLOROETHANE	75-00-3	µg/kg	5.8	<5.8	U
12	CHLOROFORM	67-66-3	µg/kg	5.8	<5.8	U
13	CHLOROMETHANE	74-87-3	µg/kg	5.8	<5.8	U
14	2-CHLOROETHYL VINYL ETHER	110-75-8	µg/kg	58	<58	U
15	1,1-DICHLOROETHANE	75-34-3	µg/kg	5.8	<5.8	U
16	1,2-DICHLOROETHANE	107-06-2	µg/kg	5.8	<5.8	U
17	1,1-DICHLOROETHENE	75-35-4	µg/kg	5.8	<5.8	U
18	CIS-1,2-DICHLOROETHENE	156-59-2	µg/kg	5.8	<5.8	U
19	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/kg	5.8	<5.8	U
20	1,2-DICHLOROPROPANE	78-87-5	µg/kg	5.8	<5.8	U
21	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/kg	5.8	<5.8	U
22	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/kg	5.8	<5.8	U
23	ETHYLBENZENE	100-41-4	µg/kg	5.8	<5.8	U
24	2-HEXANONE	591-78-6	µg/kg	58	<58	U
25	METHYLENE CHLORIDE	75-09-2	µg/kg	5.8	<5.8	U
26	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/kg	58	<58	U
27	METHYL TERT-BUTYL ETHER	1634-04-4	µg/kg	12	<12	U
28	STYRENE	100-42-5	µg/kg	5.8	<5.8	U
29	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/kg	5.8	<5.8	U
30	TETRACHLOROETHENE	127-18-4	µg/kg	5.8	<5.8	U
31	TOLUENE	108-88-3	µg/kg	5.8	<5.8	U
32	1,1,1-TRICHLOROETHANE	71-55-6	µg/kg	5.8	<5.8	U
33	1,1,2-TRICHLOROETHANE	79-00-5	µg/kg	5.8	<5.8	U
34	TRICHLOROETHENE	79-01-6	µg/kg	5.8	<5.8	U
35	VINYL ACETATE	108-05-4	µg/kg	58	<58	U
36	VINYL CHLORIDE	75-01-4	µg/kg	5.8	<5.8	U
37	XYLENES (TOTAL)	1330-20-7	µg/kg	17	<17	U

Surrogates	Control Limit, %	Surro. Rec.%

115727

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	65-135	88
2	DIBROMOFLUOROMETHANE	1868-53-7	65-135	88
3	1,2-DICHLOROETHANE-D4	17060-07-0	52-149	108
4	TOLUENE-D8	2037-26-5	65-135	106
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	66
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	61
3	FLUOROBENZENE	462-06-6	50-200	74
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

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Organic Analysis Results for Method 8260

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-7	Received Date:	06/16/1999
Sample ID:	**20242-931**	Sample Matrix	Soil	Moisture %:	17.7
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: X
Anal. Method:	8260	Prep. Date:	06/22/99	Anal. Date:	06/22/99
Batch No:	99G3167	Prep. No:	–	Anal. Time:	15:03
Data File Name:	4234-07	Sample Amount:	5 g	Dilution Factor:	1
Methanol Vol.					
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACETONE	67-64-1	µg/kg	61	<61	U
2	BENZENE	71-43-2	µg/kg	6.1	<6.1	U
3	BROMODICHLOROMETHANE	75-27-4	µg/kg	6.1	<6.1	U
4	BROMOFORM	75-25-2	µg/kg	6.1	<6.1	U
5	BROMOMETHANE	74-83-9	µg/kg	6.1	<6.1	U
6	2-BUTANONE (MEK)	78-93-3	µg/kg	61	<61	U
7	CARBON DISULFIDE	75-15-0	µg/kg	6.1	<6.1	U
8	CARBON TETRACHLORIDE	56-23-5	µg/kg	6.1	<6.1	U
9	CHLOROBENZENE	108-90-7	µg/kg	6.1	<6.1	U
10	DIBROMOCHLOROMETHANE	124-48-1	µg/kg	6.1	<6.1	U
11	CHLOROETHANE	75-00-3	µg/kg	6.1	<6.1	U
12	CHLOROFORM	67-66-3	µg/kg	6.1	<6.1	U
13	CHLOROMETHANE	74-87-3	µg/kg	6.1	<6.1	U
14	2-CHLOROETHYL VINYL ETHER	110-75-8	µg/kg	61	<61	U
15	1,1-DICHLOROETHANE	75-34-3	µg/kg	6.1	<6.1	U
16	1,2-DICHLOROETHANE	107-06-2	µg/kg	6.1	<6.1	U
17	1,1-DICHLOROETHENE	75-35-4	µg/kg	6.1	<6.1	U
18	CIS-1,2-DICHLOROETHENE	156-59-2	µg/kg	6.1	<6.1	U
19	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/kg	6.1	<6.1	U
20	1,2-DICHLOROPROPANE	78-87-5	µg/kg	6.1	<6.1	U
21	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/kg	6.1	<6.1	U
22	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/kg	6.1	<6.1	U
23	ETHYLBENZENE	100-41-4	µg/kg	6.1	<6.1	U
24	2-HEXANONE	591-78-6	µg/kg	61	<61	U
25	METHYLENE CHLORIDE	75-09-2	µg/kg	6.1	<6.1	U
26	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/kg	61	<61	U
27	METHYL TERT-BUTYL ETHER	1634-04-4	µg/kg	12	<12	U
28	STYRENE	100-42-5	µg/kg	6.1	<6.1	U
29	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/kg	6.1	<6.1	U
30	TETRACHLOROETHENE	127-18-4	µg/kg	6.1	<6.1	U
31	TOLUENE	108-88-3	µg/kg	6.1	<6.1	U
32	1,1,1-TRICHLOROETHANE	71-55-6	µg/kg	6.1	<6.1	U
33	1,1,2-TRICHLOROETHANE	79-00-5	µg/kg	6.1	<6.1	U
34	TRICHLOROETHENE	79-01-6	µg/kg	6.1	<6.1	U
35	VINYL ACETATE	108-05-4	µg/kg	61	<61	U
36	VINYL CHLORIDE	75-01-4	µg/kg	6.1	<6.1	U
37	XYLENES (TOTAL)	1330-20-7	µg/kg	18	<18	U

Surrogates	Control Limit, %	Surro. Rec.%

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	65-135	91
2	DIBROMOFLUOROMETHANE	1868-53-7	65-135	87
3	1,2-DICHLOROETHANE-D4	17060-07-0	52-149	111
4	TOLUENE-D8	2037-26-5	65-135	107
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	58
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	52
3	FLUOROBENZENE	462-06-6	50-200	63
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115729

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Organic Analysis Results for Method 8260

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-8	Received Date:	06/16/1999
Sample ID:	**20242-932**	Sample Matrix	Soil	Moisture %:	17.3
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: X
Anal. Method:	8260	Prep. Date:	06/22/99	Anal. Date:	06/22/99
Batch No:	99G3167	Prep. No:	-	Anal. Time:	16:25
Data File Name:	4234-08	Sample Amount:	5 g	Dilution Factor:	1
Methanol Vol.					
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N) Y	

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACETONE	67-64-1	µg/kg	60	<60	U
2	BENZENE	71-43-2	µg/kg	6.0	<6.0	U
3	BROMODICHLOROMETHANE	75-27-4	µg/kg	6.0	<6.0	U
4	BROMOFORM	75-25-2	µg/kg	6.0	<6.0	U
5	BROMOMETHANE	74-83-9	µg/kg	6.0	<6.0	U
6	2-BUTANONE (MEK)	78-93-3	µg/kg	60	<60	U
7	CARBON DISULFIDE	75-15-0	µg/kg	6.0	<6.0	U
8	CARBON TETRACHLORIDE	56-23-5	µg/kg	6.0	<6.0	U
9	CHLOROBENZENE	108-90-7	µg/kg	6.0	<6.0	U
10	DIBROMOCHLOROMETHANE	124-48-1	µg/kg	6.0	<6.0	U
11	CHLOROETHANE	75-00-3	µg/kg	6.0	<6.0	U
12	CHLOROFORM	67-66-3	µg/kg	6.0	<6.0	U
13	CHLOROMETHANE	74-87-3	µg/kg	6.0	<6.0	U
14	2-CHLOROETHYL VINYL ETHER	110-75-8	µg/kg	60	<60	U
15	1,1-DICHLOROETHANE	75-34-3	µg/kg	6.0	<6.0	U
16	1,2-DICHLOROETHANE	107-06-2	µg/kg	6.0	<6.0	U
17	1,1-DICHLOROETHENE	75-35-4	µg/kg	6.0	<6.0	U
18	CIS-1,2-DICHLOROETHENE	156-59-2	µg/kg	6.0	<6.0	U
19	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/kg	6.0	<6.0	U
20	1,2-DICHLOROPROPANE	78-87-5	µg/kg	6.0	<6.0	U
21	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/kg	6.0	<6.0	U
22	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/kg	6.0	<6.0	U
23	ETHYLBENZENE	100-41-4	µg/kg	6.0	<6.0	U
24	2-HEXANONE	591-78-6	µg/kg	60	<60	U
25	METHYLENE CHLORIDE	75-09-2	µg/kg	6.0	<6.0	U
26	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/kg	60	<60	U
27	METHYL TERT-BUTYL ETHER	1634-04-4	µg/kg	12	<12	U
28	STYRENE	100-42-5	µg/kg	6.0	<6.0	U
29	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/kg	6.0	<6.0	U
30	TETRACHLOROETHENE	127-18-4	µg/kg	6.0	<6.0	U
31	TOLUENE	108-88-3	µg/kg	6.0	<6.0	U
32	1,1,1-TRICHLOROETHANE	71-55-6	µg/kg	6.0	<6.0	U
33	1,1,2-TRICHLOROETHANE	79-00-5	µg/kg	6.0	<6.0	U
34	TRICHLOROETHENE	79-01-6	µg/kg	6.0	<6.0	U
35	VINYL ACETATE	108-05-4	µg/kg	60	<60	U
36	VINYL CHLORIDE	75-01-4	µg/kg	6.0	<6.0	U
37	XYLENES (TOTAL)	1330-20-7	µg/kg	18	<18	U

Surrogates	Control Limit, %	Surro. Rec.%

115730

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	65-135	89
2	DIBROMOFLUOROMETHANE	1868-53-7	65-135	85
3	1,2-DICHLOROETHANE-D4	17060-07-0	52-149	117
4	TOLUENE-D8	2037-26-5	65-135	101
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	79
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	73
3	FLUOROBENZENE	462-06-6	50-200	82
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115731

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Organic Analysis Results for Method 8260

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-9	Received Date:	06/16/1999
Sample ID:	**20242-933**	Sample Matrix	Soil	Moisture %:	13.5
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: X
Anal. Method:	8260	Prep. Date:	06/22/99	Anal. Date:	06/22/99
Batch No:	99G3167	Prep. No:	–	Anal. Time:	15:34
Data File Name:	4234-09	Sample Amount:	5 g	Dilution Factor:	1
Methanol Vol.					
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACETONE	67-64-1	µg/kg	58	<58	U
2	BENZENE	71-43-2	µg/kg	5.8	<5.8	U
3	BROMODICHLOROMETHANE	75-27-4	µg/kg	5.8	<5.8	U
4	BROMOFORM	75-25-2	µg/kg	5.8	<5.8	U
5	BROMOMETHANE	74-83-9	µg/kg	5.8	<5.8	U
6	2-BUTANONE (MEK)	78-93-3	µg/kg	58	<58	U
7	CARBON DISULFIDE	75-15-0	µg/kg	5.8	<5.8	U
8	CARBON TETRACHLORIDE	56-23-5	µg/kg	5.8	<5.8	U
9	CHLOROBENZENE	108-90-7	µg/kg	5.8	<5.8	U
10	DIBROMOCHLOROMETHANE	124-48-1	µg/kg	5.8	<5.8	U
11	CHLOROETHANE	75-00-3	µg/kg	5.8	<5.8	U
12	CHLOROFORM	67-66-3	µg/kg	5.8	<5.8	U
13	CHLOROMETHANE	74-87-3	µg/kg	5.8	<5.8	U
14	2-CHLOROETHYL VINYL ETHER	110-75-8	µg/kg	58	<58	U
15	1,1-DICHLOROETHANE	75-34-3	µg/kg	5.8	<5.8	U
16	1,2-DICHLOROETHANE	107-06-2	µg/kg	5.8	<5.8	U
17	1,1-DICHLOROETHENE	75-35-4	µg/kg	5.8	<5.8	U
18	CIS-1,2-DICHLOROETHENE	156-59-2	µg/kg	5.8	<5.8	U
19	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/kg	5.8	<5.8	U
20	1,2-DICHLOROPROPANE	78-87-5	µg/kg	5.8	<5.8	U
21	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/kg	5.8	<5.8	U
22	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/kg	5.8	<5.8	U
23	ETHYLBENZENE	100-41-4	µg/kg	5.8	<5.8	U
24	2-HEXANONE	591-78-6	µg/kg	58	<58	U
25	METHYLENE CHLORIDE	75-09-2	µg/kg	5.8	<5.8	U
26	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/kg	58	<58	U
27	METHYL TERT-BUTYL ETHER	1634-04-4	µg/kg	12	<12	U
28	STYRENE	100-42-5	µg/kg	5.8	<5.8	U
29	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/kg	5.8	<5.8	U
30	TETRACHLOROETHENE	127-18-4	µg/kg	5.8	<5.8	U
31	TOLUENE	108-88-3	µg/kg	5.8	<5.8	U
32	1,1,1-TRICHLOROETHANE	71-55-6	µg/kg	5.8	<5.8	U
33	1,1,2-TRICHLOROETHANE	79-00-5	µg/kg	5.8	<5.8	U
34	TRICHLOROETHENE	79-01-6	µg/kg	5.8	<5.8	U
35	VINYL ACETATE	108-05-4	µg/kg	58	<58	U
36	VINYL CHLORIDE	75-01-4	µg/kg	5.8	<5.8	U
37	XYLENES (TOTAL)	1330-20-7	µg/kg	17	<17	U

Surrogates	Control Limit, %	Surro. Rec.%

115732

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	65-135	89
2	DIBROMOFLUOROMETHANE	1868-53-7	65-135	85
3	1,2-DICHLOROETHANE-D4	17060-07-0	52-149	112
4	TOLUENE-D8	2037-26-5	65-135	106
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	68
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	63
3	FLUOROBENZENE	462-06-6	50-200	73
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115733

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Organic Analysis Results for Method 8260

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-10	Received Date:	06/16/1999
Sample ID:	**20242-934**	Sample Matrix	Soil	Moisture %:	15.3
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: X
Anal. Method:	8260	Prep. Date:	06/22/99	Anal. Date:	06/22/99
Batch No:	99G3167	Prep. No:	–	Anal. Time:	20:49
Data File Name:	4234-10A	Sample Amount:	5 g	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACETONE	67-64-1	µg/kg	59	<59	U
2	BENZENE	71-43-2	µg/kg	5.9	<5.9	U
3	BROMODICHLOROMETHANE	75-27-4	µg/kg	5.9	<5.9	U
4	BROMOFORM	75-25-2	µg/kg	5.9	<5.9	U
5	BROMOMETHANE	74-83-9	µg/kg	5.9	<5.9	U
6	2-BUTANONE (MEK)	78-93-3	µg/kg	59	<59	U
7	CARBON DISULFIDE	75-15-0	µg/kg	5.9	<5.9	U
8	CARBON TETRACHLORIDE	56-23-5	µg/kg	5.9	<5.9	U
9	CHLOROBENZENE	108-90-7	µg/kg	5.9	<5.9	U
10	DIBROMOCHLOROMETHANE	124-48-1	µg/kg	5.9	<5.9	U
11	CHLOROETHANE	75-00-3	µg/kg	5.9	<5.9	U
12	CHLOROFORM	67-66-3	µg/kg	5.9	<5.9	U
13	CHLOROMETHANE	74-87-3	µg/kg	5.9	<5.9	U
14	2-CHLOROETHYL VINYL ETHER	110-75-8	µg/kg	59	<59	U
15	1,1-DICHLOROETHANE	75-34-3	µg/kg	5.9	<5.9	U
16	1,2-DICHLOROETHANE	107-06-2	µg/kg	5.9	<5.9	U
17	1,1-DICHLOROETHENE	75-35-4	µg/kg	5.9	<5.9	U
18	CIS-1,2-DICHLOROETHENE	156-59-2	µg/kg	5.9	<5.9	U
19	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/kg	5.9	<5.9	U
20	1,2-DICHLOROPROPANE	78-87-5	µg/kg	5.9	<5.9	U
21	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/kg	5.9	<5.9	U
22	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/kg	5.9	<5.9	U
23	ETHYLBENZENE	100-41-4	µg/kg	5.9	<5.9	U
24	2-HEXANONE	591-78-6	µg/kg	59	<59	U
25	METHYLENE CHLORIDE	75-09-2	µg/kg	5.9	<5.9	U
26	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/kg	59	<59	U
27	METHYL TERT-BUTYL ETHER	1634-04-4	µg/kg	12	<12	U
28	STYRENE	100-42-5	µg/kg	5.9	<5.9	U
29	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/kg	5.9	<5.9	U
30	TETRACHLOROETHENE	127-18-4	µg/kg	5.9	<5.9	U
31	TOLUENE	108-88-3	µg/kg	5.9	<5.9	U
32	1,1,1-TRICHLOROETHANE	71-55-6	µg/kg	5.9	<5.9	U
33	1,1,2-TRICHLOROETHANE	79-00-5	µg/kg	5.9	<5.9	U
34	TRICHLOROETHENE	79-01-6	µg/kg	5.9	<5.9	U
35	VINYL ACETATE	108-05-4	µg/kg	59	<59	U
36	VINYL CHLORIDE	75-01-4	µg/kg	5.9	<5.9	U
37	XYLENES (TOTAL)	1330-20-7	µg/kg	18	<18	U

Surrogates	Control Limit, %	Surro. Rec.%

115734

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	65-135	92
2	DIBROMOFLUOROMETHANE	1868-53-7	65-135	96
3	1,2-DICHLOROETHANE-D4	17060-07-0	52-149	106
4	TOLUENE-D8	2037-26-5	65-135	104
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	147
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	129
3	FLUOROBENZENE	462-06-6	50-200	166
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115735

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Organic Analysis Results for Method 8260

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-11	Received Date:	06/16/1999
Sample ID:	**20242-935**	Sample Matrix	Soil	Moisture %:	12.5
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: X
Anal. Method:	8260	Prep. Date:	06/22/99	Anal. Date:	06/22/99
Batch No:	99G3167	Prep. No:	–	Anal. Time:	17:26
Data File Name:	4234-11	Sample Amount:	5 g	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACETONE	67-64-1	µg/kg	57	<57	U
2	BENZENE	71-43-2	µg/kg	5.7	<5.7	U
3	BROMODICHLOROMETHANE	75-27-4	µg/kg	5.7	<5.7	U
4	BROMOFORM	75-25-2	µg/kg	5.7	<5.7	U
5	BROMOMETHANE	74-83-9	µg/kg	5.7	<5.7	U
6	2-BUTANONE (MEK)	78-93-3	µg/kg	57	<57	U
7	CARBON DISULFIDE	75-15-0	µg/kg	5.7	<5.7	U
8	CARBON TETRACHLORIDE	56-23-5	µg/kg	5.7	<5.7	U
9	CHLOROBENZENE	108-90-7	µg/kg	5.7	<5.7	U
10	DIBROMOCHLOROMETHANE	124-48-1	µg/kg	5.7	<5.7	U
11	CHLOROETHANE	75-00-3	µg/kg	5.7	<5.7	U
12	CHLOROFORM	67-66-3	µg/kg	5.7	<5.7	U
13	CHLOROMETHANE	74-87-3	µg/kg	5.7	<5.7	U
14	2-CHLOROETHYL VINYL ETHER	110-75-8	µg/kg	57	<57	U
15	1,1-DICHLOROETHANE	75-34-3	µg/kg	5.7	<5.7	U
16	1,2-DICHLOROETHANE	107-06-2	µg/kg	5.7	<5.7	U
17	1,1-DICHLOROETHENE	75-35-4	µg/kg	5.7	<5.7	U
18	CIS-1,2-DICHLOROETHENE	156-59-2	µg/kg	5.7	<5.7	U
19	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/kg	5.7	<5.7	U
20	1,2-DICHLOROPROPANE	78-87-5	µg/kg	5.7	<5.7	U
21	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/kg	5.7	<5.7	U
22	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/kg	5.7	<5.7	U
23	ETHYLBENZENE	100-41-4	µg/kg	5.7	<5.7	U
24	2-HEXANONE	591-78-6	µg/kg	57	<57	U
25	METHYLENE CHLORIDE	75-09-2	µg/kg	5.7	<5.7	U
26	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/kg	57	<57	U
27	METHYL TERT-BUTYL ETHER	1634-04-4	µg/kg	11	<11	U
28	STYRENE	100-42-5	µg/kg	5.7	<5.7	U
29	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/kg	5.7	<5.7	U
30	TETRACHLOROETHENE	127-18-4	µg/kg	5.7	<5.7	U
31	TOLUENE	108-88-3	µg/kg	5.7	<5.7	U
32	1,1,1-TRICHLOROETHANE	71-55-6	µg/kg	5.7	<5.7	U
33	1,1,2-TRICHLOROETHANE	79-00-5	µg/kg	5.7	<5.7	U
34	TRICHLOROETHENE	79-01-6	µg/kg	5.7	<5.7	U
35	VINYL ACETATE	108-05-4	µg/kg	57	<57	U
36	VINYL CHLORIDE	75-01-4	µg/kg	5.7	<5.7	U
37	XYLENES (TOTAL)	1330-20-7	µg/kg	17	<17	U

Surrogates	Control Limit, %	Surro. Rec.%

115736

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	65-135	89
2	DIBROMOFLUOROMETHANE	1868-53-7	65-135	88
3	1,2-DICHLOROETHANE-D4	17060-07-0	52-149	118
4	TOLUENE-D8	2037-26-5	65-135	106
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	54
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	51
3	FLUOROBENZENE	462-06-6	50-200	58
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115737

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Organic Analysis Results for Method 8260

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-12	Received Date:	06/16/1999
Sample ID:	**20242-936**	Sample Matrix	Soil	Moisture %:	13.5
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: X
Anal. Method:	8260	Prep. Date:	06/22/99	Anal. Date:	06/22/99
Batch No:	99G3167	Prep. No:	–	Anal. Time:	21:20
Data File Name:	4234-12	Sample Amount:	5 g	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACETONE	67-64-1	µg/kg	58	<58	U
2	BENZENE	71-43-2	µg/kg	5.8	<5.8	U
3	BROMODICHLOROMETHANE	75-27-4	µg/kg	5.8	<5.8	U
4	BROMOFORM	75-25-2	µg/kg	5.8	<5.8	U
5	BROMOMETHANE	74-83-9	µg/kg	5.8	<5.8	U
6	2-BUTANONE (MEK)	78-93-3	µg/kg	58	<58	U
7	CARBON DISULFIDE	75-15-0	µg/kg	5.8	<5.8	U
8	CARBON TETRACHLORIDE	56-23-5	µg/kg	5.8	<5.8	U
9	CHLOROBENZENE	108-90-7	µg/kg	5.8	<5.8	U
10	DIBROMOCHLOROMETHANE	124-48-1	µg/kg	5.8	<5.8	U
11	CHLOROETHANE	75-00-3	µg/kg	5.8	<5.8	U
12	CHLOROFORM	67-66-3	µg/kg	5.8	<5.8	U
13	CHLOROMETHANE	74-87-3	µg/kg	5.8	<5.8	U
14	2-CHLOROETHYL VINYL ETHER	110-75-8	µg/kg	58	<58	U
15	1,1-DICHLOROETHANE	75-34-3	µg/kg	5.8	<5.8	U
16	1,2-DICHLOROETHANE	107-06-2	µg/kg	5.8	<5.8	U
17	1,1-DICHLOROETHENE	75-35-4	µg/kg	5.8	<5.8	U
18	CIS-1,2-DICHLOROETHENE	156-59-2	µg/kg	5.8	<5.8	U
19	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/kg	5.8	<5.8	U
20	1,2-DICHLOROPROPANE	78-87-5	µg/kg	5.8	<5.8	U
21	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/kg	5.8	<5.8	U
22	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/kg	5.8	<5.8	U
23	ETHYLBENZENE	100-41-4	µg/kg	5.8	<5.8	U
24	2-HEXANONE	591-78-6	µg/kg	58	<58	U
25	METHYLENE CHLORIDE	75-09-2	µg/kg	5.8	<5.8	U
26	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/kg	58	<58	U
27	METHYL TERT-BUTYL ETHER	1634-04-4	µg/kg	12	<12	U
28	STYRENE	100-42-5	µg/kg	5.8	<5.8	U
29	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/kg	5.8	<5.8	U
30	TETRACHLOROETHENE	127-18-4	µg/kg	5.8	<5.8	U
31	TOLUENE	108-88-3	µg/kg	5.8	<5.8	U
32	1,1,1-TRICHLOROETHANE	71-55-6	µg/kg	5.8	<5.8	U
33	1,1,2-TRICHLOROETHANE	79-00-5	µg/kg	5.8	<5.8	U
34	TRICHLOROETHENE	79-01-6	µg/kg	5.8	<5.8	U
35	VINYL ACETATE	108-05-4	µg/kg	58	<58	U
36	VINYL CHLORIDE	75-01-4	µg/kg	5.8	<5.8	U
37	XYLENES (TOTAL)	1330-20-7	µg/kg	17	<17	U

Surrogates	Control Limit, %	Surro. Rec.%

115738

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	65-135	88
2	DIBROMOFLUOROMETHANE	1868-53-7	65-135	87
3	1,2-DICHLOROETHANE-D4	17060-07-0	52-149	104
4	TOLUENE-D8	2037-26-5	65-135	110
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	104
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	92
3	FLUOROBENZENE	462-06-6	50-200	118
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115739

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-6	Received Date:	06/16/1999
Sample ID:	**20242-930**	Sample Matrix	Soil	Moisture %:	14.3
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC: B
Anal. Method:	M8015V	Prep. Date:	06/23/99	Anal. Date:	06/23/99
Batch No:	99G3193	Prep. No:	–	Anal. Time:	12:26
Data File Name:	4234.006	Sample Amount:	5.0 g	Dilution Factor:	1
Methanol Vol.					
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	GASOLINE	8006-61-9	mg/kg	1.2	<1.2	U

Surrogates		Control Limit, %	Surro. Rec.%
1 4-BROMO-FLUOROBENZENE (FID)	460-00-4	64-148	83
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115860

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-7	Received Date:	06/16/1999
Sample ID:	**20242-931**	Sample Matrix	Soil	Moisture %:	17.7
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC: B
Anal. Method:	M8015V	Prep. Date:	06/23/99	Anal. Date:	06/23/99
Batch No:	99G3193	Prep. No:	–	Anal. Time:	12:48
Data File Name:	4234.007	Sample Amount:	5.0 g	Dilution Factor:	1
Methanol Vol.					
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	GASOLINE	8006-61-9	mg/kg	1.2	<1.2	U

Surrogates		Control Limit, %	Surro. Rec.%
1 4-BROMO-FLUOROBENZENE (FID)	460-00-4	64-148	95
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115861

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-8	Received Date:	06/16/1999
Sample ID:	**20242-932**	Sample Matrix	Soil	Moisture %:	17.3
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC: B
Anal. Method:	M8015V	Prep. Date:	06/23/99	Anal. Date:	06/23/99
Batch No:	99G3193	Prep. No:	–	Anal. Time:	13:11
Data File Name:	4234.008	Sample Amount:	5.0 g	Dilution Factor:	1
Methanol Vol.					
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	GASOLINE	8006-61-9	mg/kg	1.2	<1.2	U

Surrogates		Control Limit, %	Surro. Rec.%
1 4-BROMO-FLUOROBENZENE (FID)	460-00-4	64-148	97
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115862

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-9	Received Date:	06/16/1999
Sample ID:	**20242-933**	Sample Matrix	Soil	Moisture %:	13.5
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC: B
Anal. Method:	M8015V	Prep. Date:	06/23/99	Anal. Date:	06/23/99
Batch No:	99G3193	Prep. No:	–	Anal. Time:	13:33
Data File Name:	4234.009	Sample Amount:	5.0 g	Dilution Factor:	1
Methanol Vol.					
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	GASOLINE	8006-61-9	mg/kg	1.2	< 1.2	U

Surrogates		Control Limit, %	Surro. Rec.%
1 4-BROMO-FLUOROBENZENE (FID)	460-00-4	64-148	86
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115863

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-10	Received Date:	06/16/1999
Sample ID:	**20242-934**	Sample Matrix	Soil	Moisture %:	15.3
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC: B
Anal. Method:	M8015V	Prep. Date:	06/23/99	Anal. Date:	06/23/99
Batch No:	99G3193	Prep. No:	–	Anal. Time:	13:58
Data File Name:	4234.010	Sample Amount:	5.0 g	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	GASOLINE	8006-61-9	mg/kg	1.2	<1.2	U

Surrogates		Control Limit, %	Surro. Rec.%
1 4-BROMO-FLUOROBENZENE (FID)	460-00-4	64-148	92
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115864

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-11	Received Date:	06/16/1999
Sample ID:	**20242-935**	Sample Matrix	Soil	Moisture %:	12.5
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC: B
Anal. Method:	M8015V	Prep. Date:	06/23/99	Anal. Date:	06/23/99
Batch No:	99G3193	Prep. No:	–	Anal. Time:	16:25
Data File Name:	4234.011	Sample Amount:	5.0 g	Dilution Factor:	1
Methanol Vol.					
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	GASOLINE	8006-61-9	mg/kg	1.1	<1.1	U

Surrogates		Control Limit, %	Surro. Rec.%
1 4-BROMO-FLUOROBENZENE (FID)	460-00-4	64-148	77
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115865

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-12	Received Date:	06/16/1999
Sample ID:	**20242-936**	Sample Matrix	Soil	Moisture %:	13.5
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC: B
Anal. Method:	M8015V	Prep. Date:	06/23/99	Anal. Date:	06/23/99
Batch No:	99G3193	Prep. No:	–	Anal. Time:	16:48
Data File Name:	4234.012	Sample Amount:	5.0 g	Dilution Factor:	1
Methanol Vol.					
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	GASOLINE	8006-61-9	mg/kg	1.2	< 1.2	U

Surrogates		Control Limit, %	Surro. Rec.%
1 4-BROMO-FLUOROBENZENE (FID)	460-00-4	64-148	93
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115866

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-6	Received Date:	06/16/1999
Sample ID:	**20242-930**	Sample Matrix	Soil	Moisture %:	14.3
Sample Type:	Field Sample	Prep. Method:	3550	Instrument ID:	GC: W
Anal. Method:	M8015E	Prep. Date:	06/18/99	Anal. Date:	06/20/99
Batch No:	99G3128	Prep. No:	1 of 1	Anal. Time:	05:57
Data File Name:	4234.006	Sample Amount:	20.0 g	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	TPH AS DIESEL	68334-30-5	mg/kg	12	<12	U
2	TPH AS MOTOR OIL	TBD-0002	mg/kg	12	<12	U

Surrogates			Control Limit, %	Surro. Rec.%
1	OCTACOSANE, C_{28}	630-02-4	25-162	62
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115941

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-7	Received Date:	06/16/1999
Sample ID:	**20242-931**	Sample Matrix	Soil	Moisture %:	17.7
Sample Type:	Field Sample	Prep. Method:	3550	Instrument ID:	GC: W
Anal. Method:	M8015E	Prep. Date:	06/18/99	Anal. Date:	06/20/99
Batch No:	99G3128	Prep. No:	1 of 1	Anal. Time:	06:22
Data File Name:	4234.007	Sample Amount:	20.0 g	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	TPH AS DIESEL	68334-30-5	mg/kg	12	<12	U
2	TPH AS MOTOR OIL	TBD-0002	mg/kg	12	<12	U

Surrogates			Control Limit, %	Surro. Rec.%
1	OCTACOSANE, C_{28}	630-02-4	25-162	53
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115942

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-8	Received Date:	06/16/1999
Sample ID:	**20242-932**	Sample Matrix	Soil	Moisture %:	17.3
Sample Type:	Field Sample	Prep. Method:	3550	Instrument ID:	GC: W
Anal. Method:	M8015E	Prep. Date:	06/18/99	Anal. Date:	06/20/99
Batch No:	99G3128	Prep. No:	1 of 1	Anal. Time:	06:47
Data File Name:	4234.008	Sample Amount:	20.0 g	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	TPH AS DIESEL	68334-30-5	mg/kg	12	<12	U
2	TPH AS MOTOR OIL	TBD-0002	mg/kg	12	<12	U

Surrogates			Control Limit, %	Surro. Rec.%
1	OCTACOSANE, C_{28}	630-02-4	25-162	64
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115943

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-9	Received Date:	06/16/1999
Sample ID:	**20242-933**	Sample Matrix	Soil	Moisture %:	13.5
Sample Type:	Field Sample	Prep. Method:	3550	Instrument ID:	GC: W
Anal. Method:	M8015E	Prep. Date:	06/18/99	Anal. Date:	06/20/99
Batch No:	99G3128	Prep. No:	1 of 1	Anal. Time:	07:13
Data File Name:	4234.009	Sample Amount:	20.0 g	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	TPH AS DIESEL	68334-30-5	mg/kg	12	<12	U
2	TPH AS MOTOR OIL	TBD-0002	mg/kg	12	<12	U

Surrogates			Control Limit, %	Surro. Rec.%
1	OCTACOSANE, C_{28}	630-02-4	25-162	55
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115944

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-10	Received Date:	06/16/1999
Sample ID:	**20242-934**	Sample Matrix	Soil	Moisture %:	15.3
Sample Type:	Field Sample	Prep. Method:	3550	Instrument ID:	GC: W
Anal. Method:	M8015E	Prep. Date:	06/18/99	Anal. Date:	06/20/99
Batch No:	99G3128	Prep. No:	1 of 1	Anal. Time:	07:38
Data File Name:	4234.010	Sample Amount:	20.0 g	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	TPH AS DIESEL	68334-30-5	mg/kg	12	<12	U
2	TPH AS MOTOR OIL	TBD-0002	mg/kg	12	<12	U

Surrogates			Control Limit, %	Surro. Rec.%
1	OCTACOSANE, C_{28}	630-02-4	25-162	60
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115945

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-11	Received Date:	06/16/1999
Sample ID:	**20242-935**	Sample Matrix	Soil	Moisture %:	12.5
Sample Type:	Field Sample	Prep. Method:	3550	Instrument ID:	GC: W
Anal. Method:	M8015E	Prep. Date:	06/18/99	Anal. Date:	06/20/99
Batch No:	99G3128	Prep. No:	1 of 1	Anal. Time:	08:53
Data File Name:	4234.011	Sample Amount:	20.0 g	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	TPH AS DIESEL	68334-30-5	mg/kg	11	<11	U
2	TPH AS MOTOR OIL	TBD-0002	mg/kg	11	<11	U

Surrogates			Control Limit, %	Surro. Rec.%
1	OCTACOSANE, C_{28}	630-02-4	25-162	65
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115946

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/16/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	C.Parrish
		Lab Sample ID:	99-4234-12	Received Date:	06/16/1999
Sample ID:	**20242-936**	Sample Matrix	Soil	Moisture %:	13.5
Sample Type:	Field Sample	Prep. Method:	3550	Instrument ID:	GC: W
Anal. Method:	M8015E	Prep. Date:	06/18/99	Anal. Date:	06/20/99
Batch No:	99G3128	Prep. No:	1 of 1	Anal. Time:	09:18
Data File Name:	4234.012	Sample Amount:	20.0 g	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	TPH AS DIESEL	68334-30-5	mg/kg	12	<12	U
2	TPH AS MOTOR OIL	TBD-0002	mg/kg	12	<12	U

Surrogates			Control Limit, %	Surro. Rec.%
1	OCTACOSANE, C_{28}	630-02-4	25-162	61
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115947

Applied P & Ch Laboratory

Organic Analysis Results for Method SW8081

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/08/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99G3438-MB-01	Received Date:	07/08/1999
Sample ID:	**99G3438-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	3510	Instrument ID:	GC: R
Anal. Method:	SW8081	Prep. Date:	07/08/99	Anal. Date:	07/09/99
Batch No:	99G3438	Prep. No:	1 of 1	Anal. Time:	12:31
Data File Name:	3438G.K01	Sample Amount:	1000 mL	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ALDRIN	309-00-2	μg/L	0.05	<0.05	U
2	BETA-BHC	319-85-7	μg/L	0.05	<0.05	U
3	ALPHA-BHC	319-84-6	μg/L	0.05	<0.05	U
4	DELTA-BHC	319-86-8	μg/L	0.05	<0.05	U
5	GAMMA-BHC	58-89-9	μg/L	0.05	<0.05	U
6	CHLORDANE	57-74-9	μg/L	2	<2	U
7	4,4'-DDD	72-54-8	μg/L	0.1	<0.1	U
8	4,4'-DDE	72-55-9	μg/L	0.1	<0.1	U
9	4,4'-DDT	50-29-3	μg/L	0.1	<0.1	U
10	DIELDRIN	60-57-1	μg/L	0.1	<0.1	U
11	ENDOSULFAN I	959-98-8	μg/L	0.05	<0.05	U
12	ENDOSULFAN II	33213-65-9	μg/L	0.1	<0.1	U
13	ENDOSULFAN SULFATE	1031-07-8	μg/L	0.5	<0.5	U
14	ENDRIN	72-20-8	μg/L	0.1	<0.1	U
15	ENDRIN ALDEHYDE	7421-93-4	μg/L	0.1	<0.1	U
16	ENDRIN KETONE	53494-70-5	μg/L	0.1	<0.1	U
17	HEPTACHLOR	76-44-8	μg/L	0.05	<0.05	U
18	HEPTACHLOR EPOXIDE	1024-57-3	μg/L	0.05	<0.05	U
19	METHOXYCHLOR	72-43-5	μg/L	2	<2	U
20	TOXAPHENE	8001-35-2	μg/L	5	<5	U
21	AROCLOR-1016	12674-11-2	μg/L	1	<1	U
22	AROCLOR-1221	11104-28-2	μg/L	1	<1	U
23	AROCLOR-1232	11141-16-5	μg/L	1	<1	U
24	AROCLOR-1242	53469-21-9	μg/L	1	<1	U
25	AROCLOR-1248	12672-29-6	μg/L	1	<1	U
26	AROCLOR-1254	11097-69-1	μg/L	1	<1	U
27	AROCLOR-1260	11096-82-5	μg/L	1	<1	U

Surrogates			Control Limit, %	Surro. Rec.%
1	DECACHLOROBIPHENYL (DCB)	2051-24-3	31-147	85
2	2,4,5,6-TETRACHLORO-M-XYLENE	877-09-8	33-146	84
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	DIBUTYLCHLORENDATE (DBC)	1770-80-5	50-200	97
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

135155

Applied P & Ch Laboratory

Organic Analysis Results for Method SW8081

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/07/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99G3401-MB-01	Received Date:	07/07/1999
Sample ID:	**99G3401-MB-01**	Sample Matrix	Soil	Moisture %:	-
Sample Type:	Method Blank	Prep. Method:	3550	Instrument ID:	GC: R
Anal. Method:	SW8081	Prep. Date:	07/07/99	Anal. Date:	07/09/99
Batch No:	99G3401	Prep. No:	1 of 1	Anal. Time:	17:40
Data File Name:	3401G.K01	Sample Amount:	30.0 g	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ALDRIN	309-00-2	µg/kg	1	<1	U
2	BETA-BHC	319-85-7	µg/kg	1	<1	U
3	ALPHA-BHC	319-84-6	µg/kg	1	<1	U
4	DELTA-BHC	319-86-8	µg/kg	1	<1	U
5	GAMMA-BHC	58-89-9	µg/kg	1	<1	U
6	CHLORDANE	57-74-9	µg/kg	50	<50	U
7	4,4'-DDD	72-54-8	µg/kg	2	<2	U
8	4,4'-DDE	72-55-9	µg/kg	2	<2	U
9	4,4'-DDT	50-29-3	µg/kg	2	<2	U
10	DIELDRIN	60-57-1	µg/kg	2	<2	U
11	ENDOSULFAN I	959-98-8	µg/kg	1	<1	U
12	ENDOSULFAN II	33213-65-9	µg/kg	2	<2	U
13	ENDOSULFAN SULFATE	1031-07-8	µg/kg	5	<5	U
14	ENDRIN	72-20-8	µg/kg	2	<2	U
15	ENDRIN ALDEHYDE	7421-93-4	µg/kg	2	<2	U
16	ENDRIN KETONE	53494-70-5	µg/kg	2	<2	U
17	HEPTACHLOR	76-44-8	µg/kg	1	<1	U
18	HEPTACHLOR EPOXIDE	1024-57-3	µg/kg	1	<1	U
19	METHOXYCHLOR	72-43-5	µg/kg	10	<10	U
20	TOXAPHENE	8001-35-2	µg/kg	100	<100	U
21	AROCLOR-1016	12674-11-2	µg/kg	50	<50	U
22	AROCLOR-1221	11104-28-2	µg/kg	50	<50	U
23	AROCLOR-1232	11141-16-5	µg/kg	50	<50	U
24	AROCLOR-1242	53469-21-9	µg/kg	25	<25	U
25	AROCLOR-1248	12672-29-6	µg/kg	25	<25	U
26	AROCLOR-1254	11097-69-1	µg/kg	25	<25	U
27	AROCLOR-1260	11096-82-5	µg/kg	25	<25	U

Surrogates			Control Limit, %	Surro. Rec.%
1	DECACHLOROBIPHENYL (DCB)	2051-24-3	30-149	85
2	2,4,5,6-TETRACHLORO-M-XYLENE	877-09-8	30-149	87
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	DIBUTYLCHLORENDATE (DBC)	1770-80-5	50-200	96
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

135156

FORM-3D

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method SW8081

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Soil
		Batch No:	99G3401		
LCS Filename:	3401G.L01	Date Analyzed:	070999	Time Analyzed:	18:05
LCSD Filename:	3401G.J01	Date Analyzed:	070999	Time Analyzed:	18:30

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
ALDRIN	µg/kg	16.7	0	13.2	79	58-125
GAMMA-BHC	µg/kg	16.7	0	13.6	81	58-125
4,4'-DDT	µg/kg	16.7	0	11.8	71	50-150
DIELDRIN	µg/kg	16.7	0	13.7	82	59-121
ENDRIN	µg/kg	16.7	0	13.6	81	56-122
HEPTACHLOR	µg/kg	16.7	0	12.6	75	57-117
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
ALDRIN	µg/kg	16.7	13.1	78	1	34	58-125
GAMMA-BHC	µg/kg	16.7	13.6	81	0	34	58-125
4,4'-DDT	µg/kg	16.7	11.8	71	0	30	50-150
DIELDRIN	µg/kg	16.7	13.5	81	1	31	59-121
ENDRIN	µg/kg	16.7	13.5	81	0	33	56-122
HEPTACHLOR	µg/kg	16.7	12.7	76	1	30	57-117
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135163

FORM-3D

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method SW8081

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Soil
		Batch No:	99G3401		
MS Filename:	3401G.M01	Date Analyzed:	070999	Time Analyzed:	18:55
MSD Filename:	3401G.N01	Date Analyzed:	070999	Time Analyzed:	19:23
MS Sample No:	**CS0027-SO-061-NS**	Sample Lab ID:	99-4555-16	Moisture, %	11.8

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
ALDRIN	µg/kg	18.9	2	14.6	67	35-134
GAMMA-BHC	µg/kg	18.9	0	11.0	58	35-133
4,4'-DDT	µg/kg	18.9	281	215	-348 *	50-150
DIELDRIN	µg/kg	18.9	29.3	69.5	213 *	35-134
ENDRIN	µg/kg	18.9	21.4	40.7	102	39-134
HEPTACHLOR	µg/kg	18.9	0	10.8	65	35-134
# of Out-of-control					3	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
ALDRIN	µg/kg	18.9	15.0	69	3	50	35-134
GAMMA-BHC	µg/kg	18.9	12.1	64	10	49	35-133
4,4'-DDT	µg/kg	18.9	198	-438 *	-22	50	50-150
DIELDRIN	µg/kg	18.9	76.0	247 *	15	50	35-134
ENDRIN	µg/kg	18.9	41.6	107 *	5	48	39-134
HEPTACHLOR	µg/kg	18.9	9.88	59	10	50	35-134
# of Out-of-control				3	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135164

FORM-3C

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method SW8081

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Water
		Batch No:	99G3438		
LCS Filename:	3438G.L01	Date Analyzed:	070999	Time Analyzed:	12:56
LCSD Filename:	3438G.J01	Date Analyzed:	070999	Time Analyzed:	13:21

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
ALDRIN	µg/L	0.50	0	0.387	77	37-131
GAMMA-BHC	µg/L	0.50	0	0.392	78	38-134
4,4'-DDT	µg/L	0.50	0	0.321	64	35-134
DIELDRIN	µg/L	0.50	0	0.405	81	40-130
ENDRIN	µg/L	0.50	0	0.406	81	36-133
HEPTACHLOR	µg/L	0.50	0	0.384	77	36-129
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
ALDRIN	µg/L	0.50	0.386	77	0	32	37-131
GAMMA-BHC	µg/L	0.50	0.388	78	0	48	38-134
4,4'-DDT	µg/L	0.50	0.319	64	0	31	35-134
DIELDRIN	µg/L	0.50	0.399	80	1	44	40-130
ENDRIN	µg/L	0.50	0.402	80	1	46	36-133
HEPTACHLOR	µg/L	0.50	0.382	76	1	49	36-129
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135165

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/07/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99G3410-MB-01	Received Date:	07/07/1999
Sample ID:	**99G3410-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC: N
Anal. Method:	M8015V	Prep. Date:	07/07/99	Anal. Date:	07/07/99
Batch No:	99G3410	Prep. No:	–	Anal. Time:	15:29
Data File Name:	3410G.K01	Sample Amount:	5.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	GASOLINE	8006-61-9	mg/L	0.1	<0.1	U

Surrogates		Control Limit, %	Surro. Rec.%
1 4-BROMO-FLUOROBENZENE (FID)	460-00-4	74-138	94
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

135285

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/08/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99G3413-MB-01	Received Date:	07/08/1999
Sample ID:	**99G3413-MB-01**	Sample Matrix	Soil	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC: N
Anal. Method:	M8015V	Prep. Date:	07/08/99	Anal. Date:	07/08/99
Batch No:	99G3413	Prep. No:	–	Anal. Time:	04:01
Data File Name:	3413G.K01	Sample Amount:	5.0 g	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N) N	

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	GASOLINE	8006-61-9	µg/kg	0.5	<0.5	U

Surrogates		Control Limit, %	Surro. Rec.%
1 4-BROMO-FLUOROBENZENE (FID)	460-00-4	52-149	92
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

135286

FORM-3B

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Soil
		Batch No:	99G3413		
LCS Filename:	3413G.L01	Date Analyzed:	070899	Time Analyzed:	04:26
LCSD Filename:	3413G.J01	Date Analyzed:	070899	Time Analyzed:	04:51

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
GASOLINE	mg/kg	100	0	100	100	72-124
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
GASOLINE	mg/kg	100	101	101	1	28	72-124
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* - Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3B

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Oil
		Batch No:	99G3413		
MS Filename:	3413G.M01	Date Analyzed:	070899	Time Analyzed:	12:49
MSD Filename:	3413G.N01	Date Analyzed:	070899	Time Analyzed:	13:41
MS Sample No:	**20242-968**	Sample Lab ID:	99-4621-2	Moisture, %	–

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
GASOLINE	mg/kg	50000	99800	139000	78	71-127
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
GASOLINE	mg/kg	50000	146000	92	16	28	71-127
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* - Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135297

FORM-3A

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Water
		Batch No:	99G3410		
LCS Filename:	3410G.L01	Date Analyzed:	070799	Time Analyzed:	22:59
LCSD Filename:	3410G.J01	Date Analyzed:	070799	Time Analyzed:	23:25

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
GASOLINE	mg/L	1	0	1.01	101	67-136
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
GASOLINE	mg/L	1	1.13	113	11	30	67-136
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135298

FORM-3A

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Water
		Batch No:	99G3410		
MS Filename:	3410G.M01	Date Analyzed:	070799	Time Analyzed:	17:51
MSD Filename:	3410G.N01	Date Analyzed:	070799	Time Analyzed:	19:36
MS Sample No:	**20242-970**	Sample Lab ID:	99-4621-4		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
GASOLINE	mg/L	1	0	0.978	98	67-136
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
GASOLINE	mg/L	1	0.865	87	12	30	67-136
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/07/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99G3402-MB-01	Received Date:	07/07/1999
Sample ID:	**99G3402-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	3510	Instrument ID:	GC: H
Anal. Method:	M8015E	Prep. Date:	07/07/99	Anal. Date:	07/09/99
Batch No:	99G3402	Prep. No:	1 of 1	Anal. Time:	16:41
Data File Name:	3402G.K01	Sample Amount:	1000 mL	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	TPH AS DIESEL	68334-30-5	mg/L	0.1	<0.1	U
2	TPH AS MOTOR OIL	TBD-0002	mg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	OCTACOSANE, C28	630-02-4	26-152	84
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

135313

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/06/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99G3388-MB-01	Received Date:	07/06/1999
Sample ID:	**99G3388-MB-01**	Sample Matrix	soil	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	3550	Instrument ID:	GC: W
Anal. Method:	M8015E	Prep. Date:	07/06/99	Anal. Date:	07/09/99
Batch No:	99G3388	Prep. No:	1 of 1	Anal. Time:	19:40
Data File Name:	3388G.K01	Sample Amount:	20.0 g	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	TPH AS DIESEL	68334-30-5	mg/kg	10	<10	U
2	TPH AS MOTOR OIL	TBD-0002	mg/kg	10	<10	U

Surrogates			Control Limit, %	Surro. Rec.%
1	OCTACOSANE, C_{28}	630-02-4	50-149	112
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

135314

FORM-3D

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Soil
		Batch No:	99G3388		
LCS Filename:	3388G.L01	Date Analyzed:	070999	Time Analyzed:	20:06
LCSD Filename:	3388G.J01	Date Analyzed:	070999	Time Analyzed:	20:31

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
TPH AS DIESEL	mg/kg	50.0	0	52.0	104	51-134
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
TPH AS DIESEL	mg/kg	50.0	48.1	96	8	50	51-134
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* - Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135325

FORM-3D

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Soil
		Batch No:	99G3388		
MS Filename:	3388G.M01	Date Analyzed:	070999	Time Analyzed:	20:56
MSD Filename:	3388G.N01	Date Analyzed:	070999	Time Analyzed:	21:22
MS Sample No:	**777806-140**	Sample Lab ID:	99-4546-23	Moisture, %	7.6

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
TPH AS DIESEL	mg/kg	50.0	0	56.7	113	50-149
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
TPH AS DIESEL	mg/kg	50.0	52.0	104	8	50	50-149
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* - Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135326

FORM-3C

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Water
		Batch No:	99G3402		
LCS Filename:	3402G.L01	Date Analyzed:	070999	Time Analyzed:	17:08
LCSD Filename:	3402G.J01	Date Analyzed:	070999	Time Analyzed:	17:35

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
TPH AS DIESEL	mg/L	1	0	1.03	103	61-143
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
TPH AS DIESEL	mg/L	1	0.988	99	4	30	61-143
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135327

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/07/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99M2119-MB-01	Received Date:	07/07/1999
Sample ID:	**99M2119-MB-01**	Sample Matrix	Soil	Moisture %:	–
Sample Type:	Method Blank				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ANTIMONY	7440-36-0	mg/kg	5	<0.11	U	P		99M2119L	07/07/99	07/07/99	1	6010
ARSENIC	7440-38-2	mg/kg	0.3	<0.080	U	P		99M2119L	07/07/99	07/07/99	1	6010
BARIUM	7440-39-3	mg/kg	1	<0.023	U	P		99M2119L	07/07/99	07/07/99	1	6010
BERYLLIUM	7440-41-7	mg/kg	0.2	0.0045	B	P		99M2119L	07/07/99	07/07/99	1	6010
CADMIUM	7440-43-9	mg/kg	0.2	<0.011	U	P		99M2119L	07/07/99	07/07/99	1	6010
CHROMIUM	7440-47-3	mg/kg	0.5	<0.022	U	P		99M2119L	07/07/99	07/07/99	1	6010
COBALT	7440-48-4	mg/kg	0.5	<0.017	U	P		99M2119L	07/07/99	07/07/99	1	6010
COPPER	7440-50-8	mg/kg	0.5	<0.049	U	P		99M2119L	07/07/99	07/07/99	1	6010
LEAD	7439-92-1	mg/kg	0.3	<0.065	U	P		99M2119L	07/07/99	07/07/99	1	6010
MERCURY	7439-97-6	mg/kg	0.2	<0.070	U	CV		99M2126N	07/07/99	07/07/99	1	7470
MOLYBDENUM	7439-98-7	mg/kg	0.2	<0.040	U	P		99M2119L	07/07/99	07/07/99	1	6010
NICKEL	7440-02-0	mg/kg	0.3	<0.024	U	P		99M2119L	07/07/99	07/07/99	1	6010
SELENIUM	7782-49-2	mg/kg	0.5	<0.17	U	P		99M2119L	07/07/99	07/07/99	1	6010
SILVER	7440-22-4	mg/kg	0.5	<0.047	U	P		99M2119L	07/07/99	07/07/99	1	6010
THALLIUM	7440-28-0	mg/kg	5	<0.10	U	P		99M2119L	07/07/99	07/07/99	1	6010
VANADIUM	7440-62-2	mg/kg	0.5	<0.033	U	P		99M2119L	07/07/99	07/07/99	1	6010
ZINC	7440-66-6	mg/kg	0.5	<0.019	U	P		99M2119L	07/07/99	07/07/99	1	6010

Not Detected is shown as IDL moisture-corrected if applicable

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

135369

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/07/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99M2118-MB-01	Received Date:	07/07/1999
Sample ID:	**99M2118-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ANTIMONY	7440-36-0	μg/L	10	<2.2	U	P		99M2118L	07/07/99	07/07/99	1	6010
ARSENIC	7440-38-2	μg/L	5	<1.6	U	P		99M2118L	07/07/99	07/07/99	1	6010
BARIUM	7440-39-3	μg/L	10	<0.46	U	P		99M2118L	07/07/99	07/07/99	1	6010
BERYLLIUM	7440-41-7	μg/L	2	121		P		99M2118L	07/07/99	07/07/99	1	6010
CADMIUM	7440-43-9	μg/L	2	452		P		99M2118L	07/07/99	07/07/99	1	6010
CHROMIUM	7440-47-3	μg/L	5	<0.44	U	P		99M2118L	07/07/99	07/07/99	1	6010
COBALT	7440-48-4	μg/L	5	<0.34	U	P		99M2118L	07/07/99	07/07/99	1	6010
COPPER	7440-50-8	μg/L	10	2.4	B	P		99M2118L	07/07/99	07/07/99	1	6010
LEAD	7439-92-1	μg/L	5	<1.3	U	P		99M2118L	07/07/99	07/07/99	1	6010
MERCURY	7439-97-6	μg/L	0.5	<0.14	U	CV		99M2123N	07/07/99	07/07/99	1	7470
MOLYBDENUM	7439-98-7	μg/L	5	<0.79	U	P		99M2118L	07/07/99	07/07/99	1	6010
NICKEL	7440-02-0	μg/L	5	<0.48	U	P		99M2118L	07/07/99	07/07/99	1	6010
SELENIUM	7782-49-2	μg/L	10	<3.3	U	P		99M2118L	07/07/99	07/07/99	1	6010
SILVER	7440-22-4	μg/L	10	<0.93	U	P		99M2118L	07/07/99	07/07/99	1	6010
THALLIUM	7440-28-0	μg/L	10	<2.0	U	P		99M2118L	07/07/99	07/07/99	1	6010
VANADIUM	7440-62-2	μg/L	10	<0.65	U	P		99M2118L	07/07/99	07/07/99	1	6010
ZINC	7440-66-6	μg/L	5	<0.38	U	P		99M2118L	07/07/99	07/07/99	1	6010

Not Detected is shown as IDL moisture-corrected if applicable

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

135370

FORM-5A Metal

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 7470

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Water
		Batch No:	99M2123N		
MS Filename:	-	Date Analyzed:	070799	Time Analyzed:	12:07
MSD Filename:	-	Date Analyzed:	070799	Time Analyzed:	12:13
MS Sample No:	**SW-26**	Sample Lab ID:	99-4574-1		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
MERCURY	μg/L	5.0	0	5.22	104	75-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
MERCURY	μg/L	5.0	5.26	105	1	20	75-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* - Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135387

FORM-5A Metal

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 7470

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Oil
		Batch No:	99M2126N		
MS Filename:	-	Date Analyzed:	070799	Time Analyzed:	13:49
MSD Filename:	-	Date Analyzed:	070799	Time Analyzed:	13:51
MS Sample No:	**20242-968**	Sample Lab ID:	99-4621-2	Moisture, %	–

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
MERCURY	mg/kg	0.833	0	0.880	106	75-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
MERCURY	mg/kg	0.833	0.885	106	0	20	75-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135388

FORM-5A Metal

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 6010

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Soil
		Batch No:	99M2119L		
MS Filename:	-	Date Analyzed:	070799	Time Analyzed:	15:23
MSD Filename:	-	Date Analyzed:	070799	Time Analyzed:	15:25
MS Sample No:	**WP26SBL6(208.0-208.5**	Sample Lab ID:	99-4610-4	Moisture, %	24.3

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
ANTIMONY	mg/kg	25	0	11.6	98	75-125
ARSENIC	mg/kg	25	5.3	29.5	97	75-125
BARIUM	mg/kg	200	156	347	96	75-125
BERYLLIUM	mg/kg	10	1.3	11.1	98	75-125
CADMIUM	mg/kg	12.5	0	12.3	98	75-125
CHROMIUM	mg/kg	150	18.9	168	99	75-120
COBALT	mg/kg	50	8.3	52.4	88	75-125
COPPER	mg/kg	50	16.7	67.4	101	75-125
LEAD	mg/kg	150	13.4	152	92	75-125
MOLYBDENUM	mg/kg	100	0	85.7	86	75-125
NICKEL	mg/kg	50	17.6	63.1	91	75-125
SELENIUM	mg/kg	25	0	23.4	94	75-125
SILVER	mg/kg	50	0	49.4	99	75-125
THALLIUM	mg/kg	200	0.75	178	89	75-125
VANADIUM	mg/kg	100	33.8	135	101	75-125
ZINC	mg/kg	25	62.2	88.6	106	75-125
# of Out-of-control					1	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
ANTIMONY	mg/kg	25	12.3	98	6	20	75-125
ARSENIC	mg/kg	25	30.1	99	2	20	75-125
BARIUM	mg/kg	200	345	95	1	20	75-125
BERYLLIUM	mg/kg	10	11.0	97	1	20	75-125
CADMIUM	mg/kg	12.5	12.4	99	1	20	75-125
CHROMIUM	mg/kg	150	173	103	4	20	75-120
COBALT	mg/kg	50	53.2	90	2	20	75-125
COPPER	mg/kg	50	66.9	100	1	20	75-125
LEAD	mg/kg	150	154	94	2	20	75-125
MOLYBDENUM	mg/kg	100	86.6	87	1	20	75-125
NICKEL	mg/kg	50	64.1	93	2	20	75-125
SELENIUM	mg/kg	25	23.3	93	1	20	75-125
SILVER	mg/kg	50	49.9	100	1	20	75-125
THALLIUM	mg/kg	200	187	93	4	20	75-125

FORM-5A Metal

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 6010

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Soil
		Batch No:	99M2119L		
MS Filename:	-	Date Analyzed:	070799	Time Analyzed:	15:23
MSD Filename:	-	Date Analyzed:	070799	Time Analyzed:	15:25
MS Sample No:	**WP26SBL6(208.0-208.5**	Sample Lab ID:	99-4610-4	Moisture, %	24.3

Continued *Batch No.: 99M2119L Method: 6010 Page: 2*

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
VANADIUM	mg/kg	100	134	100	1	20	75-125
ZINC	mg/kg	25	90.8	114	7	20	75-125
# of Out-of-control				1	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135390

FORM-5A Metal

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 6010

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Water
		Batch No:	99M2118L		
MS Filename:	-	Date Analyzed:	070799	Time Analyzed:	11:13
MSD Filename:	-	Date Analyzed:	070799	Time Analyzed:	11:16
MS Sample No:	**B-1**	Sample Lab ID:	99-4613-2		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
ANTIMONY	μg/L	500	0	464	93	75-125
ARSENIC	μg/L	500	0	464	93	75-125
BARIUM	μg/L	4000	20.5	4010	100	75-125
BERYLLIUM	μg/L	200	0	205	103	75-125
CADMIUM	μg/L	250	0	259	104	75-125
CHROMIUM	μg/L	3000	0	2970	99	75-125
COBALT	μg/L	1000	0	944	94	75-125
COPPER	μg/L	1000	11.7	1050	104	75-125
LEAD	μg/L	3000	0	2850	95	75-125
MOLYBDENUM	μg/L	2000	8.5	1910	95	75-125
NICKEL	μg/L	1000	10.6	975	96	75-125
SELENIUM	μg/L	500	76.8	582	101	75-125
SILVER	μg/L	1000	0	1010	101	75-125
THALLIUM	μg/L	4000	0	3830	96	75-125
VANADIUM	μg/L	2000	0	1980	99	75-125
ZINC	μg/L	500	0	502	100	75-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
ANTIMONY	μg/L	500	461	92	1	20	75-125
ARSENIC	μg/L	500	462	92	1	20	75-125
BARIUM	μg/L	4000	3930	98	2	20	75-125
BERYLLIUM	μg/L	200	201	101	2	20	75-125
CADMIUM	μg/L	250	260	104	0	20	75-125
CHROMIUM	μg/L	3000	2960	99	0	20	75-125
COBALT	μg/L	1000	944	94	0	20	75-125
COPPER	μg/L	1000	1030	102	2	20	75-125
LEAD	μg/L	3000	2860	95	0	20	75-125
MOLYBDENUM	μg/L	2000	1900	95	0	20	75-125
NICKEL	μg/L	1000	973	96	0	20	75-125
SELENIUM	μg/L	500	576	100	1	20	75-125
SILVER	μg/L	1000	994	99	2	20	75-125
THALLIUM	μg/L	4000	3660	92	4	20	75-125

135392

FORM-5A Metal

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 6010

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Water
		Batch No:	99M2118L		
MS Filename:	-	Date Analyzed:	070799	Time Analyzed:	11:13
MSD Filename:	-	Date Analyzed:	070799	Time Analyzed:	11:16
MS Sample No:	**B-1**	Sample Lab ID:	99-4613-2		

Continued *Batch No.: 99M2118L* *Method: 6010* *Page: 2*

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
VANADIUM	μg/L	2000	1950	98	1	20	75-125
ZINC	μg/L	500	501	100	0	20	75-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135393

FORM-7 Metal

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 6010

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Oil
		Batch No:	99M2119L		
LCS Filename:	-	Date Analyzed:	070799	Time Analyzed:	15:09
LCSD Filename:	-	Date Analyzed:	070799	Time Analyzed:	15:12

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
ANTIMONY	mg/kg	25	0	24.8	99	80-120
ARSENIC	mg/kg	25	0	25.9	104	80-120
BARIUM	mg/kg	200	0	204	102	80-120
BERYLLIUM	mg/kg	10	0	10.0	100	80-120
CADMIUM	mg/kg	12.5	0	12.7	102	80-120
CHROMIUM	mg/kg	150	0	150	100	80-120
COBALT	mg/kg	50	0	50.5	101	80-120
COPPER	mg/kg	50	0	49.1	98	80-120
LEAD	mg/kg	150	0	154	103	80-120
MOLYBDENUM	mg/kg	100	0	101	101	80-120
NICKEL	mg/kg	50	0	50.3	101	80-120
SELENIUM	mg/kg	25	0	25.4	102	80-120
SILVER	mg/kg	50	0	48.0	96	80-120
THALLIUM	mg/kg	200	0	203	102	80-120
VANADIUM	mg/kg	100	0	99.4	99	80-120
ZINC	mg/kg	25	0	25.1	100	80-120
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
ANTIMONY	mg/kg	25	24.7	99	0	20	80-120
ARSENIC	mg/kg	25	26.0	104	0	20	80-120
BARIUM	mg/kg	200	205	103	1	20	80-120
BERYLLIUM	mg/kg	10	10.1	101	1	20	80-120
CADMIUM	mg/kg	12.5	12.7	102	0	20	80-120
CHROMIUM	mg/kg	150	152	101	1	20	80-120
COBALT	mg/kg	50	51.2	102	1	20	80-120
COPPER	mg/kg	50	49.7	99	1	20	80-120
LEAD	mg/kg	150	156	104	1	20	80-120
MOLYBDENUM	mg/kg	100	102	102	1	20	80-120
NICKEL	mg/kg	50	50.9	102	1	20	80-120
SELENIUM	mg/kg	25	25.5	102	0	20	80-120
SILVER	mg/kg	50	48.9	98	2	20	80-120
THALLIUM	mg/kg	200	202	101	1	20	80-120

135399

FORM-7 Metal

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 6010

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Oil
		Batch No:	99M2119L		
LCS Filename:	-	Date Analyzed:	070799	Time Analyzed:	15:09
LCSD Filename:	-	Date Analyzed:	070799	Time Analyzed:	15:12

Continued *Batch No.: 99M2119L* *Method: 6010* *Page: 2*

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
VANADIUM	mg/kg	100	101	101	2	20	80-120
ZINC	mg/kg	25	25.5	102	2	20	80-120
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135400

FORM-7 Metal

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 7470

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Oil
		Batch No:	99M2126N		
LCS Filename:	-	Date Analyzed:	070799	Time Analyzed:	13:39
LCSD Filename:	-	Date Analyzed:	070799	Time Analyzed:	13:41

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
MERCURY	mg/kg	0.83	0	0.88	107	80-120
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
MERCURY	mg/kg	0.83	0.9	108	1	20	80-120
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* - Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135401

FORM-7 Metal

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 6010

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Water
		Batch No:	99M2118L		
LCS Filename:	-	Date Analyzed:	070799	Time Analyzed:	10:55
LCSD Filename:	-	Date Analyzed:	070799	Time Analyzed:	10:59

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
ANTIMONY	µg/L	500	0	483	97	80-120
ARSENIC	µg/L	500	0	464	93	80-120
BARIUM	µg/L	4000	0	4190	105	80-120
BERYLLIUM	µg/L	200	0	206	103	80-120
CADMIUM	µg/L	250	0	262	105	80-120
CHROMIUM	µg/L	3000	0	3090	103	80-120
COBALT	µg/L	1000	0	1040	104	80-120
COPPER	µg/L	1000	0	1000	100	80-120
LEAD	µg/L	3000	0	3050	102	80-120
MOLYBDENUM	µg/L	2000	0	2010	101	80-120
NICKEL	µg/L	1000	0	1030	103	80-120
SELENIUM	µg/L	500	0	508	102	80-120
SILVER	µg/L	1000	0	979	98	80-120
THALLIUM	µg/L	4000	0	3950	99	80-120
VANADIUM	µg/L	2000	0	2040	102	80-120
ZINC	µg/L	500	0	519	104	80-120
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
ANTIMONY	µg/L	500	483	97	0	20	80-120
ARSENIC	µg/L	500	462	92	1	20	80-120
BARIUM	µg/L	4000	4170	104	1	20	80-120
BERYLLIUM	µg/L	200	204	102	1	20	80-120
CADMIUM	µg/L	250	261	104	1	20	80-120
CHROMIUM	µg/L	3000	3040	101	2	20	80-120
COBALT	µg/L	1000	1030	103	1	20	80-120
COPPER	µg/L	1000	991	99	1	20	80-120
LEAD	µg/L	3000	3020	101	1	20	80-120
MOLYBDENUM	µg/L	2000	2000	100	1	20	80-120
NICKEL	µg/L	1000	1020	102	1	20	80-120
SELENIUM	µg/L	500	506	101	1	20	80-120
SILVER	µg/L	1000	966	97	1	20	80-120
THALLIUM	µg/L	4000	3940	99	0	20	80-120

135402

FORM-7 Metal

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 6010

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Water
		Batch No:	99M2118L		
LCS Filename:	-	Date Analyzed:	070799	Time Analyzed:	10:55
LCSD Filename:	-	Date Analyzed:	070799	Time Analyzed:	10:59

Continued *Batch No.: 99M2118L Method: 6010 Page: 2*

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
VANADIUM	μg/L	2000	2020	101	1	20	80-120
ZINC	μg/L	500	513	103	1	20	80-120
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* - Values outside of contract required QC Limits D - Spiked components diluted out

Comments: _____

135403

FORM-7 Metal

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 7470

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Water
		Batch No:	99M2123N		
LCS Filename:	-	Date Analyzed:	070799	Time Analyzed:	11:57
LCSD Filename:	-	Date Analyzed:	070799	Time Analyzed:	11:59

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
MERCURY	μg/L	5.0	0	4.91	98	80-120
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
MERCURY	μg/L	5.0	4.95	99	1	20	80-120
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135404

FORM-3A

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method SW8260A

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Water
		Batch No:	99G3470		
MS Filename:	G3470M01	Date Analyzed:	071299	Time Analyzed:	16:33
MSD Filename:	G3470N01	Date Analyzed:	071299	Time Analyzed:	17:00
MS Sample No:	**GF-008**	Sample Lab ID:	99-4562-1		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec%	#	QC Limit, % REC
BENZENE	µg/L	5000	2400	5170	55	*	72-126
CHLOROBENZENE	µg/L	5000	0	5010	100		69-131
1,1-DICHLOROETHENE	µg/L	5000	0	4690	94		66-133
TOLUENE	µg/L	5000	18100	24000	118		70-129
TRICHLOROETHENE	µg/L	5000	0	4810	96		65-133
# of Out-of-control					1		

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec%	#	RPD%	#	QC Limit, % RPD	QC Limit, % REC
BENZENE	µg/L	5000	6820	88		46	*	27	72-126
CHLOROBENZENE	µg/L	5000	4970	99		1		31	69-131
1,1-DICHLOROETHENE	µg/L	5000	4570	91		3		34	66-133
TOLUENE	µg/L	5000	36500	368	*	103	*	30	70-129
TRICHLOROETHENE	µg/L	5000	4850	97		1		35	65-133
# of Out-of-control				1		2			

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3A

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method SW8260A

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Water
		Batch No:	99G3508		
LCS Filename:	G3508L01	Date Analyzed:	071499	Time Analyzed:	11:18
LCSD Filename:	–	Date Analyzed:	–	Time Analyzed:	–

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
BENZENE	μg/L	50	0	53.6	107	75-125
CHLOROBENZENE	μg/L	50	0	44.9	90	75-125
1,1-DICHLOROETHENE	μg/L	50	0	51.5	103	75-125
TOLUENE	μg/L	50	0	50.0	100	74-125
TRICHLOROETHENE	μg/L	50	0	41.8	84	71-125
# of Out-of-control					0	

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135028

FORM-3A

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method SW8260A

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Water
		Batch No:	99G3508		
MS Filename:	G3508M01	Date Analyzed:	071499	Time Analyzed:	11:45
MSD Filename:	G3508N01	Date Analyzed:	071499	Time Analyzed:	12:12
MS Sample No:	**0007-025**	Sample Lab ID:	99-4635-8		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
BENZENE	μg/L	50	0	55.5	111	75-125
CHLOROBENZENE	μg/L	50	0	46.8	94	75-125
1,1-DICHLOROETHENE	μg/L	50	0	55.6	111	75-125
TOLUENE	μg/L	50	0	53.7	107	74-125
TRICHLOROETHENE	μg/L	50	0	43.8	88	71-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
BENZENE	μg/L	50	54.5	109	2	20	75-125
CHLOROBENZENE	μg/L	50	46.3	93	1	20	75-125
1,1-DICHLOROETHENE	μg/L	50	56.1	112	1	20	75-125
TOLUENE	μg/L	50	53.0	106	1	20	74-125
TRICHLOROETHENE	μg/L	50	44.6	89	1	20	71-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135029

FORM-3A

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method SW8260A

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Water
		Batch No:	99G3485		
LCS Filename:	G3485L01	Date Analyzed:	071399	Time Analyzed:	10:43
LCSD Filename:	–	Date Analyzed:	–	Time Analyzed:	–

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
BENZENE	μg/L	50	0	51.8	104	75-125
CHLOROBENZENE	μg/L	50	0	48.5	97	75-125
1,1-DICHLOROETHENE	μg/L	50	0	48.6	97	75-125
TOLUENE	μg/L	50	0	52.5	105	74-125
TRICHLOROETHENE	μg/L	50	0	47.0	94	71-125
# of Out-of-control					0	

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135030

FORM-3A

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method SW8260A

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Water
		Batch No:	99G3485		
MS Filename:	G3485M01	Date Analyzed:	071399	Time Analyzed:	11:23
MSD Filename:	G3485N01	Date Analyzed:	071399	Time Analyzed:	11:50
MS Sample No:	**20242-970**	Sample Lab ID:	99-4621-4		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
BENZENE	μg/L	5000	0	4700	94	75-125
CHLOROBENZENE	μg/L	5000	0	4850	97	75-125
1,1-DICHLOROETHENE	μg/L	5000	0	4950	99	75-125
TOLUENE	μg/L	5000	0	5000	100	74-125
TRICHLOROETHENE	μg/L	5000	0	4800	96	71-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
BENZENE	μg/L	5000	4750	95	1	20	75-125
CHLOROBENZENE	μg/L	5000	4850	97	0	20	75-125
1,1-DICHLOROETHENE	μg/L	5000	5000	100	1	20	75-125
TOLUENE	μg/L	5000	5000	100	0	20	74-125
TRICHLOROETHENE	μg/L	5000	4650	93	3	20	71-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* - Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135031

Applied P & Ch Laboratory

Organic Analysis Results for Method SW8260A

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/13/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99G3485-MB-01	Received Date:	07/13/1999
Sample ID:	**99G3485-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC/MS: Q
Anal. Method:	SW8260A	Prep. Date:	07/13/99	Anal. Date:	07/13/99
Batch No:	99G3485	Prep. No:	–	Anal. Time:	12:43
Data File Name:	G3485K01	Sample Amount:	5 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACETONE	67-64-1	µg/L	50	< 50	U
2	BENZENE	71-43-2	µg/L	5	< 5	U
3	BROMODICHLOROMETHANE	75-27-4	µg/L	5	< 5	U
4	BROMOFORM	75-25-2	µg/L	5	< 5	U
5	BROMOMETHANE	74-83-9	µg/L	5	< 5	U
6	2-BUTANONE (MEK)	78-93-3	µg/L	50	< 50	U
7	CARBON DISULFIDE	75-15-0	µg/L	5	< 5	U
8	CARBON TETRACHLORIDE	56-23-5	µg/L	5	< 5	U
9	CHLOROBENZENE	108-90-7	µg/L	5	< 5	U
10	DIBROMOCHLOROMETHANE	124-48-1	µg/L	5	< 5	U
11	CHLOROETHANE	75-00-3	µg/L	5	< 5	U
12	2-CHLOROETHYLVINYLEHTER	110-75-8	µg/L	50	< 50	U
13	CHLOROFORM	67-66-3	µg/L	5	< 5	U
14	CHLOROMETHANE	74-87-3	µg/L	5	< 5	U
15	1,1-DICHLOROETHANE	75-34-3	µg/L	5	< 5	U
16	1,2-DICHLOROETHANE	107-06-2	µg/L	5	< 5	U
17	1,1-DICHLOROETHENE	75-35-4	µg/L	5	< 5	U
18	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	5	< 5	U
19	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	5	< 5	U
20	1,2-DICHLOROPROPANE	78-87-5	µg/L	5	< 5	U
21	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	5	< 5	U
22	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	5	< 5	U
23	ETHYLBENZENE	100-41-4	µg/L	5	< 5	U
24	2-HEXANONE	591-78-6	µg/L	50	< 50	U
25	METHYLENE CHLORIDE	75-09-2	µg/L	5	< 5	U
26	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	50	< 50	U
27	METHYL TERT-BUTYL ETHER	1634-04-4	µg/L	10	< 10	U
28	STYRENE	100-42-5	µg/L	5	< 5	U
29	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	5	< 5	U
30	TETRACHLOROETHENE	127-18-4	µg/L	5	< 5	U
31	TOLUENE	108-88-3	µg/L	5	< 5	U
32	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	5	< 5	U
33	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	5	< 5	U
34	TRICHLOROETHENE	79-01-6	µg/L	5	< 5	U
35	VINYL ACETATE	108-05-4	µg/L	50	< 50	U
36	VINYL CHLORIDE	75-01-4	µg/L	5	< 5	U
37	XYLENES (TOTAL)	1330-20-7	µg/L	15	< 15	U

Surrogates	Control Limit, %	Surro. Rec.%

135007

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	75-125	107
2	DIBROMOFLUOROMETHANE	1868-53-7	75-125	95
3	1,2-DICHLOROETHANE-D4	17060-07-0	62-139	109
4	TOLUENE-D8	2037-26-5	75-125	100
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	91
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	78
3	FLUOROBENZENE	462-06-6	50-200	89
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

135008

Applied P & Ch Laboratory

Organic Analysis Results for Method SW8260A

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/14/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99G3508-MB-01	Received Date:	07/14/1999
Sample ID:	**99G3508-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC/MS: Q
Anal. Method:	SW8260A	Prep. Date:	07/14/99	Anal. Date:	07/14/99
Batch No:	99G3508	Prep. No:	–	Anal. Time:	13:05
Data File Name:	G3508K01	Sample Amount:	5 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N) Y	

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACETONE	67-64-1	µg/L	50	< 50	U
2	BENZENE	71-43-2	µg/L	5	< 5	U
3	BROMODICHLOROMETHANE	75-27-4	µg/L	5	< 5	U
4	BROMOFORM	75-25-2	µg/L	5	< 5	U
5	BROMOMETHANE	74-83-9	µg/L	5	< 5	U
6	2-BUTANONE (MEK)	78-93-3	µg/L	50	< 50	U
7	CARBON DISULFIDE	75-15-0	µg/L	5	< 5	U
8	CARBON TETRACHLORIDE	56-23-5	µg/L	5	< 5	U
9	CHLOROBENZENE	108-90-7	µg/L	5	< 5	U
10	DIBROMOCHLOROMETHANE	124-48-1	µg/L	5	< 5	U
11	CHLOROETHANE	75-00-3	µg/L	5	< 5	U
12	2-CHLOROETHYLVINYLEHTER	110-75-8	µg/L	50	< 50	U
13	CHLOROFORM	67-66-3	µg/L	5	< 5	U
14	CHLOROMETHANE	74-87-3	µg/L	5	< 5	U
15	1,1-DICHLOROETHANE	75-34-3	µg/L	5	< 5	U
16	1,2-DICHLOROETHANE	107-06-2	µg/L	5	< 5	U
17	1,1-DICHLOROETHENE	75-35-4	µg/L	5	< 5	U
18	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	5	< 5	U
19	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	5	< 5	U
20	1,2-DICHLOROPROPANE	78-87-5	µg/L	5	< 5	U
21	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	5	< 5	U
22	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	5	< 5	U
23	ETHYLBENZENE	100-41-4	µg/L	5	< 5	U
24	2-HEXANONE	591-78-6	µg/L	50	< 50	U
25	METHYLENE CHLORIDE	75-09-2	µg/L	5	< 5	U
26	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	50	< 50	U
27	METHYL TERT-BUTYL ETHER	1634-04-4	µg/L	10	< 10	U
28	STYRENE	100-42-5	µg/L	5	< 5	U
29	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	5	< 5	U
30	TETRACHLOROETHENE	127-18-4	µg/L	5	< 5	U
31	TOLUENE	108-88-3	µg/L	5	< 5	U
32	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	5	< 5	U
33	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	5	< 5	U
34	TRICHLOROETHENE	79-01-6	µg/L	5	< 5	U
35	VINYL ACETATE	108-05-4	µg/L	50	< 50	U
36	VINYL CHLORIDE	75-01-4	µg/L	5	< 5	U
37	XYLENES (TOTAL)	1330-20-7	µg/L	15	< 15	U

Surrogates	Control Limit, %	Surro. Rec.%

135009

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	75-125	125
2	DIBROMOFLUOROMETHANE	1868-53-7	75-125	102
3	1,2-DICHLOROETHANE-D4	17060-07-0	62-139	133
4	TOLUENE-D8	2037-26-5	75-125	99
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	103
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	81
3	FLUOROBENZENE	462-06-6	50-200	101
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

135010

Applied P & Ch Laboratory

Organic Analysis Results for Method SW8260A

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/12/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99G3470-MB-01	Received Date:	07/12/1999
Sample ID:	**99G3470-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC/MS: Q
Anal. Method:	SW8260A	Prep. Date:	07/12/99	Anal. Date:	07/12/99
Batch No:	99G3470	Prep. No:	–	Anal. Time:	17:54
Data File Name:	G3470K01	Sample Amount:	5 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N) Y	

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACETONE	67-64-1	µg/L	50	< 50	U
2	BENZENE	71-43-2	µg/L	5	< 5	U
3	BROMODICHLOROMETHANE	75-27-4	µg/L	5	< 5	U
4	BROMOFORM	75-25-2	µg/L	5	< 5	U
5	BROMOMETHANE	74-83-9	µg/L	5	< 5	U
6	2-BUTANONE (MEK)	78-93-3	µg/L	50	< 50	U
7	CARBON DISULFIDE	75-15-0	µg/L	5	< 5	U
8	CARBON TETRACHLORIDE	56-23-5	µg/L	5	< 5	U
9	CHLOROBENZENE	108-90-7	µg/L	5	< 5	U
10	DIBROMOCHLOROMETHANE	124-48-1	µg/L	5	< 5	U
11	CHLOROETHANE	75-00-3	µg/L	5	< 5	U
12	2-CHLOROETHYLVINYLEHTER	110-75-8	µg/L	50	< 50	U
13	CHLOROFORM	67-66-3	µg/L	5	< 5	U
14	CHLOROMETHANE	74-87-3	µg/L	5	< 5	U
15	1,1-DICHLOROETHANE	75-34-3	µg/L	5	< 5	U
16	1,2-DICHLOROETHANE	107-06-2	µg/L	5	< 5	U
17	1,1-DICHLOROETHENE	75-35-4	µg/L	5	< 5	U
18	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	5	< 5	U
19	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	5	< 5	U
20	1,2-DICHLOROPROPANE	78-87-5	µg/L	5	< 5	U
21	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	5	< 5	U
22	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	5	< 5	U
23	ETHYLBENZENE	100-41-4	µg/L	5	< 5	U
24	2-HEXANONE	591-78-6	µg/L	50	< 50	U
25	METHYLENE CHLORIDE	75-09-2	µg/L	5	< 5	U
26	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	50	< 50	U
27	METHYL TERT-BUTYL ETHER	1634-04-4	µg/L	10	< 10	U
28	STYRENE	100-42-5	µg/L	5	< 5	U
29	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	5	< 5	U
30	TETRACHLOROETHENE	127-18-4	µg/L	5	< 5	U
31	TOLUENE	108-88-3	µg/L	5	< 5	U
32	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	5	< 5	U
33	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	5	< 5	U
34	TRICHLOROETHENE	79-01-6	µg/L	5	< 5	U
35	VINYL ACETATE	108-05-4	µg/L	50	< 50	U
36	VINYL CHLORIDE	75-01-4	µg/L	5	< 5	U
37	XYLENES (TOTAL)	1330-20-7	µg/L	15	< 15	U

Surrogates	Control Limit, %	Surro. Rec.%

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Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	75-125	104
2	DIBROMOFLUOROMETHANE	1868-53-7	75-125	95
3	1,2-DICHLOROETHANE-D4	17060-07-0	62-139	103
4	TOLUENE-D8	2037-26-5	75-125	103
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	103
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	88
3	FLUOROBENZENE	462-06-6	50-200	97
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

135012

Applied P & Ch Laboratory

Organic Analysis Results for Method SW8270B

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/07/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99G3412-MB-01	Received Date:	07/07/1999
Sample ID:	**99G3412-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	3510	Instrument ID:	GC/MS: D
Anal. Method:	SW8270B	Prep. Date:	07/07/99	Anal. Date:	07/10/99
Batch No:	99G3412	Prep. No:	1 of 1	Anal. Time:	13:08
Data File Name:	G3412K01	Sample Amount:	1000 mL	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACENAPHTHENE	83-32-9	µg/L	10	<10	U
2	ACENAPHTHYLENE	208-96-8	µg/L	10	<10	U
3	ANTHRACENE	120-12-7	µg/L	10	<10	U
4	BENZO[A]ANTHRACENE	56-55-3	µg/L	10	<10	U
5	BENZO[A]PYRENE	50-32-8	µg/L	10	<10	U
6	BENZO[B]FLUORANTHENE	205-99-2	µg/L	10	<10	U
7	BENZO[G,H,I]PERYLENE	191-24-2	µg/L	10	<10	U
8	BENZO[K]FLUORANTHENE	207-08-9	µg/L	10	<10	U
9	BIS(2-CHLOROETHOXY)METHANE	111-91-1	µg/L	10	<10	U
10	BIS(2-CHLOROETHYL)ETHER	111-44-4	µg/L	10	<10	U
11	BIS(2-CHLOROISOPROPYL)ETHER	108-60-1	µg/L	10	<10	U
12	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	µg/L	10	<10	U
13	4-BROMOPHENYL PHENYL ETHER	101-55-3	µg/L	10	<10	U
14	BUTYL BENZYL PHTHALATE	85-68-7	µg/L	10	<10	U
15	3-METHYL-4-CHLOROPHENOL	59-50-7	µg/L	10	<10	U
16	4-CHLOROANILINE	106-47-8	µg/L	10	<10	U
17	2-CHLORONAPHTHALENE	91-58-7	µg/L	10	<10	U
18	2-CHLOROPHENOL	95-57-8	µg/L	10	<10	U
19	4-CHLOROPHENYL PHENYL ETHER	7005-72-3	µg/L	10	<10	U
20	CHRYSENE	218-01-9	µg/L	10	<10	U
21	DI-N-BUTYLPHTHALATE	84-74-2	µg/L	10	<10	U
22	DI-N-OCTYLPHTHALATE	117-84-0	µg/L	10	<10	U
23	DIBENZ[A,H]ANTHRACENE	53-70-3	µg/L	10	<10	U
24	DIBENZOFURAN	132-64-9	µg/L	10	<10	U
25	1,2-DICHLOROBENZENE	95-50-1	µg/L	10	<10	U
26	1,3-DICHLOROBENZENE	541-73-1	µg/L	10	<10	U
27	1,4-DICHLOROBENZENE	106-46-7	µg/L	10	<10	U
28	3,3'-DICHLOROBENZIDINE	91-94-1	µg/L	10	<10	U
29	2,4-DICHLOROPHENOL	120-83-2	µg/L	10	<10	U
30	DIETHYL PHTHALATE	84-66-2	µg/L	10	<10	U
31	DIMETHYL PHTHALATE	131-11-3	µg/L	10	<10	U
32	2,4-DIMETHYLPHENOL	105-67-9	µg/L	10	<10	U
33	2-METHYL-4,6-DINITROPHENOL	534-52-1	µg/L	25	<25	U
34	2,4-DINITROPHENOL	51-28-5	µg/L	25	<25	U
35	2,4-DINITROTOLUENE	121-14-2	µg/L	10	<10	U
36	2,6-DINITROTOLUENE	606-20-2	µg/L	10	<10	U
37	FLUORANTHENE	206-44-0	µg/L	10	<10	U
38	FLUORENE	86-73-7	µg/L	10	<10	U
39	HEXACHLOROBENZENE	118-74-1	µg/L	10	<10	U
40	HEXACHLOROBUTADIENE	87-68-3	µg/L	10	<10	U

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#	Component Name	CAS No	Unit	RL	Result	Qualifier
41	HEXACHLOROCYCLOPENTADIENE	77-47-4	µg/L	10	< 10	U
42	HEXACHLOROETHANE	67-72-1	µg/L	10	< 10	U
43	INDENO[1,2,3-CD]PYRENE	193-39-5	µg/L	10	< 10	U
44	2-METHYLNAPHTHALENE	91-57-6	µg/L	10	< 10	U
45	4-METHYLPHENOL	106-44-5	µg/L	10	< 10	U
46	2-METHYLPHENOL	95-48-7	µg/L	10	< 10	U
47	NAPHTHALENE	91-20-3	µg/L	10	< 10	U
48	2-NITROANILINE	88-74-4	µg/L	25	< 25	U
49	3-NITROANILINE	99-09-2	µg/L	25	< 25	U
50	4-NITROANILINE	100-01-6	µg/L	25	< 25	U
51	NITROBENZENE	98-95-3	µg/L	10	< 10	U
52	2-NITROPHENOL	88-75-5	µg/L	10	< 10	U
53	4-NITROPHENOL	100-02-7	µg/L	25	< 25	U
54	N-NITROSODI-N-PROPYLAMINE	621-64-7	µg/L	10	< 10	U
55	N-NITROSODIPHENYLAMINE	86-30-6	µg/L	10	< 10	U
56	PENTACHLOROPHENOL	87-86-5	µg/L	11	< 11	U
57	PHENANTHRENE	85-01-8	µg/L	10	< 10	U
58	PHENOL	108-95-2	µg/L	10	< 10	U
59	PYRENE	129-00-0	µg/L	10	< 10	U
60	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	10	< 10	U
61	2,4,5-TRICHLOROPHENOL	95-95-4	µg/L	25	< 25	U
62	2,4,6-TRICHLOROPHENOL	88-06-2	µg/L	10	< 10	U

Surrogates			Control Limit, %	Surro. Rec.%
1	2-FLUOROBIPHENYL	321-60-8	43-125	89
2	2-FLUOROPHENOL	367-12-4	25-125	96
3	NITROBENZENE-D5	4165-60-0	32-125	96
4	PHENOL-D5	4165-62-2	25-125	93
5	TERPHENYL-D14	1718-51-0	42-126	71
6	2,4,6-TRIBROMOPHENOL	118-79-6	25-134	74
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	ACENAPHTHENE-D10	15067-26-2	50-200	81
2	CHRYSENE-D12	1719-03-5	50-200	113
3	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	93
4	NAPHTHALENE-D8	1146-65-2	50-200	95
5	PERYLENE-D12	1520-96-3	50-200	78
6	PHENANTHRENE-D10	1517-22-2	50-200	79
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

135077

Applied P & Ch Laboratory

Organic Analysis Results for Method SW8270B

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	07/08/1999
Project ID:	El Toro	Service ID:	994621	Collected by:	
		Lab Sample ID:	99G3422-MB-01	Received Date:	07/08/1999
Sample ID:	**99G3422-MB-01**	Sample Matrix	Soil	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	3550	Instrument ID:	GC/MS: Y
Anal. Method:	SW8270B	Prep. Date:	07/08/99	Anal. Date:	07/13/99
Batch No:	99G3422	Prep. No:	1 of 1	Anal. Time:	21:39
Data File Name:	G3422K02	Sample Amount:	30.0 g	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACENAPHTHENE	83-32-9	µg/kg	500	< 500	U
2	ACENAPHTHYLENE	208-96-8	µg/kg	500	< 500	U
3	ANTHRACENE	120-12-7	µg/kg	500	< 500	U
4	BENZO[A]ANTHRACENE	56-55-3	µg/kg	500	< 500	U
5	BENZO[A]PYRENE	50-32-8	µg/kg	500	< 500	U
6	BENZO[B]FLUORANTHENE	205-99-2	µg/kg	500	< 500	U
7	BENZO[G,H,I]PERYLENE	191-24-2	µg/kg	500	< 500	U
8	BENZO[K]FLUORANTHENE	207-08-9	µg/kg	500	< 500	U
9	BIS(2-CHLOROETHOXY)METHANE	111-91-1	µg/kg	500	< 500	U
10	BIS(2-CHLOROETHYL)ETHER	111-44-4	µg/kg	500	< 500	U
11	BIS(2-CHLOROISOPROPYL)ETHER	108-60-1	µg/kg	500	< 500	U
12	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	µg/kg	500	< 500	U
13	4-BROMOPHENYL PHENYL ETHER	101-55-3	µg/kg	500	< 500	U
14	BUTYL BENZYL PHTHALATE	85-68-7	µg/kg	500	< 500	U
15	3-METHYL-4-CHLOROPHENOL	59-50-7	µg/kg	1000	< 1000	U
16	4-CHLOROANILINE	106-47-8	µg/kg	1000	< 100	U
17	2-CHLORONAPHTHALENE	91-58-7	µg/kg	500	< 500	U
18	2-CHLOROPHENOL	95-57-8	µg/kg	500	< 500	U
19	4-CHLOROPHENYL PHENYL ETHER	7005-72-3	µg/kg	500	< 500	U
20	CHRYSENE	218-01-9	µg/kg	500	< 500	U
21	DI-N-BUTYLPHTHALATE	84-74-2	µg/kg	500	< 500	U
22	DI-N-OCTYLPHTHALATE	117-84-0	µg/kg	500	< 500	U
23	DIBENZ[A,H]ANTHRACENE	53-70-3	µg/kg	500	< 500	U
24	DIBENZOFURAN	132-64-9	µg/kg	500	< 500	U
25	1,2-DICHLOROBENZENE	95-50-1	µg/kg	500	< 500	U
26	1,3-DICHLOROBENZENE	541-73-1	µg/kg	500	< 500	U
27	1,4-DICHLOROBENZENE	106-46-7	µg/kg	500	< 500	U
28	3,3'-DICHLOROBENZIDINE	91-94-1	µg/kg	1000	< 1000	U
29	2,4-DICHLOROPHENOL	120-83-2	µg/kg	500	< 500	U
30	DIETHYL PHTHALATE	84-66-2	µg/kg	500	< 500	U
31	DIMETHYL PHTHALATE	131-11-3	µg/kg	500	< 500	U
32	2,4-DIMETHYLPHENOL	105-67-9	µg/kg	500	< 500	U
33	2-METHYL-4,6-DINITROPHENOL	534-52-1	µg/kg	2500	< 2500	U
34	2,4-DINITROPHENOL	51-28-5	µg/kg	2500	< 2500	U
35	2,4-DINITROTOLUENE	121-14-2	µg/kg	500	< 500	U
36	2,6-DINITROTOLUENE	606-20-2	µg/kg	500	< 500	U
37	FLUORANTHENE	206-44-0	µg/kg	500	< 500	U
38	FLUORENE	86-73-7	µg/kg	500	< 500	U
39	HEXACHLOROBENZENE	118-74-1	µg/kg	500	< 500	U
40	HEXACHLOROBUTADIENE	87-68-3	µg/kg	500	< 500	U

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#	Component Name	CAS No	Unit	RL	Result	Qualifier
41	HEXACHLOROCYCLOPENTADIENE	77-47-4	µg/kg	500	< 500	U
42	HEXACHLOROETHANE	67-72-1	µg/kg	500	< 500	U
43	INDENO[1,2,3-CD]PYRENE	193-39-5	µg/kg	500	< 500	U
44	2-METHYLNAPHTHALENE	91-57-6	µg/kg	500	< 500	U
45	4-METHYLPHENOL	106-44-5	µg/kg	500	< 500	U
46	2-METHYLPHENOL	95-48-7	µg/kg	500	< 500	U
47	NAPHTHALENE	91-20-3	µg/kg	500	< 500	U
48	2-NITROANILINE	88-74-4	µg/kg	2500	< 2500	U
49	3-NITROANILINE	99-09-2	µg/kg	2500	< 2500	U
50	4-NITROANILINE	100-01-6	µg/kg	2500	< 7500	U
51	NITROBENZENE	98-95-3	µg/kg	500	< 500	U
52	2-NITROPHENOL	88-75-5	µg/kg	500	< 500	U
53	4-NITROPHENOL	100-02-7	µg/kg	7500	< 750 0	U
54	N-NITROSODI-N-PROPYLAMINE	621-64-7	µg/kg	500	< 500	U
55	N-NITROSODIPHENYLAMINE	86-30-6	µg/kg	500	< 500	U
56	PENTACHLOROPHENOL	87-86-5	µg/kg	2500	< 2500	U
57	PHENANTHRENE	85-01-8	µg/kg	500	< 500	U
58	PHENOL	108-95-2	µg/kg	500	< 500	U
59	PYRENE	129-00-0	µg/kg	500	< 500	U
60	1,2,4-TRICHLOROBENZENE	120-82-1	µg/kg	500	< 500	U
61	2,4,5-TRICHLOROPHENOL	95-95-4	µg/kg	500	< 500	U
62	2,4,6-TRICHLOROPHENOL	88-06-2	µg/kg	500	< 500	U
63	ISOPHORONE	78-59-1	µg/kg	500	< 500	U

Surrogates			Control Limit, %	Surro. Rec.%
1	2-FLUOROBIPHENYL	321-60-8	30-114	68
2	2-FLUOROPHENOL	367-12-4	25-103	55
3	NITROBENZENE-D5	4165-60-0	23-119	62
4	PHENOL-D5	4165-62-2	24-112	57
5	TERPHENYL-D14	1718-51-0	18-136	82
6	2,4,6-TRIBROMOPHENOL	118-79-6	20-119	57
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	ACENAPHTHENE-D10	15067-26-2	50-200	98
2	CHRYSENE-D12	1719-03-5	50-200	72
3	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	100
4	NAPHTHALENE-D8	1146-65-2	50-200	96
5	PERYLENE-D12	1520-96-3	50-200	82
6	PHENANTHRENE-D10	1517-22-2	50-200	98
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

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FORM-3D

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method SW8270B

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Soil
		Batch No:	99G3422		
LCS Filename:	G3422L01	Date Analyzed:	071399	Time Analyzed:	22:20
LCSD Filename:	G3422J01	Date Analyzed:	071399	Time Analyzed:	23:03

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
PENTACHLOROPHENOL	µg/kg	3330	0	1250	38	30-140
ACENAPHTHENE	µg/kg	1670	0	819	49	41-118
3-METHYL-4-CHLOROPHENOL	µg/kg	3330	0	1630	49	37-113
2-CHLOROPHENOL	µg/kg	3330	0	1830	55	35-113
1,4-DICHLOROBENZENE	µg/kg	1670	0	837	50	38-116
2,4-DINITROTOLUENE	µg/kg	1670	0	845	51	38-118
4-NITROPHENOL	µg/kg	3330	0	978	29	15-128
N-NITROSODI-N-PROPYLAMINE	µg/kg	1670	0	918	55	32-122
PHENOL	µg/kg	3330	0	1460	44	30-111
PYRENE	µg/kg	1670	0	1160	69	38-130
1,2,4-TRICHLOROBENZENE	µg/kg	1670	0	817	49	40-116
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
PENTACHLOROPHENOL	µg/kg	3330	1250	38	0	40	30-140
ACENAPHTHENE	µg/kg	1670	817	49	0	59	41-118
3-METHYL-4-CHLOROPHENOL	µg/kg	3330	1640	49	0	58	37-113
2-CHLOROPHENOL	µg/kg	3330	180	54	2	54	35-113
1,4-DICHLOROBENZENE	µg/kg	1670	805	48	4	57	38-116
2,4-DINITROTOLUENE	µg/kg	1670	724	43	17	61	38-118
4-NITROPHENOL	µg/kg	3330	1050	32	10	60	15-128
N-NITROSODI-N-PROPYLAMINE	µg/kg	1670	763	46	18	62	32-122
PHENOL	µg/kg	3330	1280	38	15	53	30-111
PYRENE	µg/kg	1670	1090	65	6	56	38-130
1,2,4-TRICHLOROBENZENE	µg/kg	1670	8040	48	2	61	40-116
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135090

FORM-3D

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method SW8270B

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Soil
		Batch No:	99G3422		
MS Filename:	G3422M01	Date Analyzed:	071399	Time Analyzed:	23:45
MSD Filename:	G3422N01	Date Analyzed:	071499	Time Analyzed:	00:26
MS Sample No:	**DP0044-SO-012-NS**	Sample Lab ID:	99-4463-4	Moisture, %	17.0

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
PENTACHLOROPHENOL	µg/kg	3330	0	1100	33	30-140
ACENAPHTHENE	µg/kg	1670	0	963	58	16-134
3-METHYL-4-CHLOROPHENOL	µg/kg	3330	0	1590	48	10-126
2-CHLOROPHENOL	µg/kg	3330	0	2170	65	12-120
1,4-DICHLOROBENZENE	µg/kg	1670	0	986	59	15-128
2,4-DINITROTOLUENE	µg/kg	1670	0	1040	62	12-134
4-NITROPHENOL	µg/kg	3330	0	1510	45	12-132
N-NITROSODI-N-PROPYLAMINE	µg/kg	1670	0	810	49	10-134
PHENOL	µg/kg	3330	0	1380	41	10-116
PYRENE	µg/kg	1670	0	1190	71	22-134
1,2,4-TRICHLOROBENZENE	µg/kg	1670	0	1010	60	10-132
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
PENTACHLOROPHENOL	µg/kg	3330	1200	36	9	40	30-140
ACENAPHTHENE	µg/kg	1670	1010	60	3	59	16-134
3-METHYL-4-CHLOROPHENOL	µg/kg	3330	1880	56	15	58	10-126
2-CHLOROPHENOL	µg/kg	3330	2380	71	9	54	12-120
1,4-DICHLOROBENZENE	µg/kg	1670	1060	63	7	57	15-128
2,4-DINITROTOLUENE	µg/kg	1670	998	60	3	61	12-134
4-NITROPHENOL	µg/kg	3330	1340	40	12	60	12-132
N-NITROSODI-N-PROPYLAMINE	µg/kg	1670	925	55	12	62	10-134
PHENOL	µg/kg	3330	1560	47	14	53	10-116
PYRENE	µg/kg	1670	1410	84	17	56	22-134
1,2,4-TRICHLOROBENZENE	µg/kg	1670	1060	63	5	61	10-132
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D - Spiked components diluted out

Comments: _____

135091

FORM-3C

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method SW8270B

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994621
Project ID:	El Toro	Project No:	20242	Sample Matrix:	Water
		Batch No:	99G3412		
LCS Filename:	G3412L01	Date Analyzed:	071099	Time Analyzed:	13:47
LCSD Filename:	G3412J01	Date Analyzed:	071099	Time Analyzed:	14:26

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
PENTACHLOROPHENOL	μg/L	100	0	83.3	83	28-136
ACENAPHTHENE	μg/L	50	0	32.1	64	49-125
3-METHYL-4-CHLOROPHENOL	μg/L	100	0	75.4	75	44-125
2-CHLOROPHENOL	μg/L	100	0	66.5	67	41-125
1,4-DICHLOROBENZENE	μg/L	50	0	34.6	69	30-125
2,4-DINITROTOLUENE	μg/L	50	0	40.7	81	39-139
4-NITROPHENOL	μg/L	100	0	72.9	73	25-131
N-NITROSODI-N-PROPYLAMINE	μg/L	50	0	38.2	76	37-125
PHENOL	μg/L	100	0	78.2	78	25-125
PYRENE	μg/L	50	0	36.4	73	47-136
1,2,4-TRICHLOROBENZENE	μg/L	50	0	34.3	69	44-142
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
PENTACHLOROPHENOL	μg/L	100	85.7	86	4	20	28-136
ACENAPHTHENE	μg/L	50	31.6	63	2	20	49-125
3-METHYL-4-CHLOROPHENOL	μg/L	100	80.6	81	8	20	44-125
2-CHLOROPHENOL	μg/L	100	67.4	67	0	20	41-125
1,4-DICHLOROBENZENE	μg/L	50	34.6	69	0	20	30-125
2,4-DINITROTOLUENE	μg/L	50	41.8	84	4	20	39-139
4-NITROPHENOL	μg/L	100	72.9	73	0	20	25-131
N-NITROSODI-N-PROPYLAMINE	μg/L	50	44.2	88	15	20	37-125
PHENOL	μg/L	100	78.4	78	0	20	25-125
PYRENE	μg/L	50	36.4	73	0	20	47-136
1,2,4-TRICHLOROBENZENE	μg/L	50	33.9	68	1	20	44-142
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

135092

Applied P & Ch Laboratory

Organic Analysis Results for Method 8260

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/24/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	
		Lab Sample ID:	99G3216-MB-01	Received Date:	06/24/1999
Sample ID:	**99G3216-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC/MS: C
Anal. Method:	8260	Prep. Date:	06/24/99	Anal. Date:	06/24/99
Batch No:	99G3216	Prep. No:	–	Anal. Time:	12:08
Data File Name:	G3216K01	Sample Amount:	5 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACETONE	67-64-1	µg/L	50	< 50	U
2	BENZENE	71-43-2	µg/L	5	< 5	U
3	BROMODICHLOROMETHANE	75-27-4	µg/L	5	< 5	U
4	BROMOFORM	75-25-2	µg/L	5	< 5	U
5	BROMOMETHANE	74-83-9	µg/L	5	< 5	U
6	2-BUTANONE (MEK)	78-93-3	µg/L	50	< 50	U
7	CARBON DISULFIDE	75-15-0	µg/L	5	< 5	U
8	CARBON TETRACHLORIDE	56-23-5	µg/L	5	< 5	U
9	CHLOROBENZENE	108-90-7	µg/L	5	< 5	U
10	DIBROMOCHLOROMETHANE	124-48-1	µg/L	5	< 5	U
11	CHLOROETHANE	75-00-3	µg/L	5	< 5	U
12	CHLOROFORM	67-66-3	µg/L	5	< 5	U
13	CHLOROMETHANE	74-87-3	µg/L	5	< 5	U
14	2-CHLOROETHYL VINYL ETHER	110-75-8	µg/L	50	< 50	U
15	1,1-DICHLOROETHANE	75-34-3	µg/L	5	< 5	U
16	1,2-DICHLOROETHANE	107-06-2	µg/L	5	< 5	U
17	1,1-DICHLOROETHENE	75-35-4	µg/L	5	< 5	U
18	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	5	< 5	U
19	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	5	< 5	U
20	1,2-DICHLOROPROPANE	78-87-5	µg/L	5	< 5	U
21	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	5	< 5	U
22	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	5	< 5	U
23	ETHYLBENZENE	100-41-4	µg/L	5	< 5	U
24	2-HEXANONE	591-78-6	µg/L	50	< 50	U
25	METHYLENE CHLORIDE	75-09-2	µg/L	5	< 5	U
26	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	50	< 50	U
27	METHYL TERT-BUTYL ETHER	1634-04-4	µg/L	10	< 10	U
28	STYRENE	100-42-5	µg/L	5	< 5	U
29	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	5	< 5	U
30	TETRACHLOROETHENE	127-18-4	µg/L	5	< 5	U
31	TOLUENE	108-88-3	µg/L	5	< 5	U
32	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	5	< 5	U
33	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	5	< 5	U
34	TRICHLOROETHENE	79-01-6	µg/L	5	< 5	U
35	VINYL ACETATE	108-05-4	µg/L	50	< 50	U
36	VINYL CHLORIDE	75-01-4	µg/L	5	< 5	U
37	XYLENES (TOTAL)	1330-20-7	µg/L	15	< 15	U

Surrogates	Control Limit, %	Surro. Rec.%

115708

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	75-125	95
2	DIBROMOFLUOROMETHANE	1868-53-7	75-125	90
3	1,2-DICHLOROETHANE-D4	17060-07-0	62-139	90
4	TOLUENE-D8	2037-26-5	75-125	99
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	87
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	80
3	FLUOROBENZENE	462-06-6	50-200	83
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115709

Applied P & Ch Laboratory

Organic Analysis Results for Method 8260

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/22/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	
		Lab Sample ID:	99G3167-MB-01	Received Date:	06/22/1999
Sample ID:	**99G3167-MB-01**	Sample Matrix	Soil	Moisture %:	
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC/MS: X
Anal. Method:	8260	Prep. Date:	06/22/99	Anal. Date:	06/22/99
Batch No:	99G3167	Prep. No:	–	Anal. Time:	10:55
Data File Name:	G3167K01	Sample Amount:	5 g	Dilution Factor:	1
Methanol Vol.					
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACETONE	67-64-1	µg/kg	50	<50	U
2	BENZENE	71-43-2	µg/kg	5	<5	U
3	BROMODICHLOROMETHANE	75-27-4	µg/kg	5	<5	U
4	BROMOFORM	75-25-2	µg/kg	5	<5	U
5	BROMOMETHANE	74-83-9	µg/kg	5	<5	U
6	2-BUTANONE (MEK)	78-93-3	µg/kg	50	<50	U
7	CARBON DISULFIDE	75-15-0	µg/kg	5	<5	U
8	CARBON TETRACHLORIDE	56-23-5	µg/kg	5	<5	U
9	CHLOROBENZENE	108-90-7	µg/kg	5	<5	U
10	DIBROMOCHLOROMETHANE	124-48-1	µg/kg	5	<5	U
11	CHLOROETHANE	75-00-3	µg/kg	5	<5	U
12	CHLOROFORM	67-66-3	µg/kg	5	<5	U
13	CHLOROMETHANE	74-87-3	µg/kg	5	<5	U
14	2-CHLOROETHYL VINYL ETHER	110-75-8	µg/kg	50	<50	U
15	1,1-DICHLOROETHANE	75-34-3	µg/kg	5	<5	U
16	1,2-DICHLOROETHANE	107-06-2	µg/kg	5	<5	U
17	1,1-DICHLOROETHENE	75-35-4	µg/kg	5	<5	U
18	CIS-1,2-DICHLOROETHENE	156-59-2	µg/kg	5	<5	U
19	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/kg	5	<5	U
20	1,2-DICHLOROPROPANE	78-87-5	µg/kg	5	<5	U
21	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/kg	5	<5	U
22	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/kg	5	<5	U
23	ETHYLBENZENE	100-41-4	µg/kg	5	<5	U
24	2-HEXANONE	591-78-6	µg/kg	50	<50	U
25	METHYLENE CHLORIDE	75-09-2	µg/kg	5	<5	U
26	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/kg	50	<50	U
27	METHYL TERT-BUTYL ETHER	1634-04-4	µg/kg	10	<10	U
28	STYRENE	100-42-5	µg/kg	5	<5	U
29	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/kg	5	<5	U
30	TETRACHLOROETHENE	127-18-4	µg/kg	5	<5	U
31	TOLUENE	108-88-3	µg/kg	5	<5	U
32	1,1,1-TRICHLOROETHANE	71-55-6	µg/kg	5	<5	U
33	1,1,2-TRICHLOROETHANE	79-00-5	µg/kg	5	<5	U
34	TRICHLOROETHENE	79-01-6	µg/kg	5	<5	U
35	VINYL ACETATE	108-05-4	µg/kg	50	<50	U
36	VINYL CHLORIDE	75-01-4	µg/kg	5	<5	U
37	XYLENES (TOTAL)	1330-20-7	µg/kg	15	<15	U

Surrogates	Control Limit, %	Surro. Rec.%

115710

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	65-135	93
2	DIBROMOFLUOROMETHANE	1868-53-7	65-135	94
3	1,2-DICHLOROETHANE-D4	17060-07-0	52-149	103
4	TOLUENE-D8	2037-26-5	65-135	102
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	134
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	121
3	FLUOROBENZENE	462-06-6	50-200	152
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115711

Applied P & Ch Laboratory

Organic Analysis Results for Method 8260

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/22/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	
		Lab Sample ID:	99G3167-MB-02	Received Date:	06/22/1999
Sample ID:	**99G3167-MB-02**	Sample Matrix	Soil	Moisture %:	
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC/MS: X
Anal. Method:	8260	Prep. Date:	06/22/99	Anal. Date:	06/22/99
Batch No:	99G3167	Prep. No:	–	Anal. Time:	19:16
Data File Name:	G3167K02	Sample Amount:	5 g	Dilution Factor:	1
Methanol Vol.					
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACETONE	67-64-1	µg/kg	50	<50	U
2	BENZENE	71-43-2	µg/kg	5	<5	U
3	BROMODICHLOROMETHANE	75-27-4	µg/kg	5	<5	U
4	BROMOFORM	75-25-2	µg/kg	5	<5	U
5	BROMOMETHANE	74-83-9	µg/kg	5	<5	U
6	2-BUTANONE (MEK)	78-93-3	µg/kg	50	<50	U
7	CARBON DISULFIDE	75-15-0	µg/kg	5	<5	U
8	CARBON TETRACHLORIDE	56-23-5	µg/kg	5	<5	U
9	CHLOROBENZENE	108-90-7	µg/kg	5	<5	U
10	DIBROMOCHLOROMETHANE	124-48-1	µg/kg	5	<5	U
11	CHLOROETHANE	75-00-3	µg/kg	5	<5	U
12	CHLOROFORM	67-66-3	µg/kg	5	<5	U
13	CHLOROMETHANE	74-87-3	µg/kg	5	<5	U
14	2-CHLOROETHYL VINYL ETHER	110-75-8	µg/kg	50	<50	U
15	1,1-DICHLOROETHANE	75-34-3	µg/kg	5	<5	U
16	1,2-DICHLOROETHANE	107-06-2	µg/kg	5	<5	U
17	1,1-DICHLOROETHENE	75-35-4	µg/kg	5	<5	U
18	CIS-1,2-DICHLOROETHENE	156-59-2	µg/kg	5	<5	U
19	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/kg	5	<5	U
20	1,2-DICHLOROPROPANE	78-87-5	µg/kg	5	<5	U
21	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/kg	5	<5	U
22	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/kg	5	<5	U
23	ETHYLBENZENE	100-41-4	µg/kg	5	<5	U
24	2-HEXANONE	591-78-6	µg/kg	50	<50	U
25	METHYLENE CHLORIDE	75-09-2	µg/kg	5	<5	U
26	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/kg	50	<50	U
27	METHYL TERT-BUTYL ETHER	1634-04-4	µg/kg	10	<10	U
28	STYRENE	100-42-5	µg/kg	5	<5	U
29	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/kg	5	<5	U
30	TETRACHLOROETHENE	127-18-4	µg/kg	5	<5	U
31	TOLUENE	108-88-3	µg/kg	5	<5	U
32	1,1,1-TRICHLOROETHANE	71-55-6	µg/kg	5	<5	U
33	1,1,2-TRICHLOROETHANE	79-00-5	µg/kg	5	<5	U
34	TRICHLOROETHENE	79-01-6	µg/kg	5	<5	U
35	VINYL ACETATE	108-05-4	µg/kg	50	<50	U
36	VINYL CHLORIDE	75-01-4	µg/kg	5	<5	U
37	XYLENES (TOTAL)	1330-20-7	µg/kg	15	<15	U

Surrogates	Control Limit, %	Surro. Rec.%

115714

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	65-135	93
2	DIBROMOFLUOROMETHANE	1868-53-7	65-135	87
3	1,2-DICHLOROETHANE-D4	17060-07-0	52-149	101
4	TOLUENE-D8	2037-26-5	65-135	109
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	98
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	83
3	FLUOROBENZENE	462-06-6	50-200	112
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115715

FORM-3B

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 8260

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994234
Project ID:	El Toro MCAS	Project No:	20242	Sample Matrix:	Soil
		Batch No:	99G3167		
LCS Filename:	G3167L01	Date Analyzed:	062299	Time Analyzed:	11:26
LCSD Filename:	G3167J01	Date Analyzed:	062299	Time Analyzed:	19:47

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
BENZENE	µg/kg	50	0	52.2	104	65-135
CHLOROBENZENE	µg/kg	50	0	52.9	106	65-135
1,1-DICHLOROETHENE	µg/kg	50	0	49.1	98	65-135
TOLUENE	µg/kg	50	0	50.5	101	64-135
TRICHLOROETHENE	µg/kg	50	0	43.3	87	61-135
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
BENZENE	µg/kg	50	49.7	99	5	30	65-135
CHLOROBENZENE	µg/kg	50	49.2	98	8	30	65-135
1,1-DICHLOROETHENE	µg/kg	50	46.8	94	4	30	65-135
TOLUENE	µg/kg	50	45.0	90	12	30	64-135
TRICHLOROETHENE	µg/kg	50	37.8	76	13	30	61-135
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

115770

FORM-3B

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 8260

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994234
Project ID:	El Toro MCAS	Project No:	20242	Sample Matrix:	Soil
		Batch No:	99G3167		
MS Filename:	G3167M01	Date Analyzed:	062299	Time Analyzed:	11:57
MSD Filename:	G3167N01	Date Analyzed:	062299	Time Analyzed:	12:29
MS Sample No:	**20242-930**	Sample Lab ID:	99-4234-6	Moisture, %	14.3

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
BENZENE	µg/kg	58.3	0	57.7	99	65-135
CHLOROBENZENE	µg/kg	58.3	0	58.8	101	65-135
1,1-DICHLOROETHENE	µg/kg	58.3	0	58.6	101	65-135
TOLUENE	µg/kg	58.3	0	61.6	106	64-135
TRICHLOROETHENE	µg/kg	58.3	0	52.2	90	61-135
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
BENZENE	µg/kg	58.3	58.0	99	0	30	65-135
CHLOROBENZENE	µg/kg	58.3	58.1	100	1	30	65-135
1,1-DICHLOROETHENE	µg/kg	58.3	58.2	100	1	30	65-135
TOLUENE	µg/kg	58.3	59.5	102	4	30	64-135
TRICHLOROETHENE	µg/kg	58.3	53.3	91	1	30	61-135
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3A

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 8260

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994234
Project ID:	El Toro MCAS	Project No:	20242	Sample Matrix:	Water
		Batch No:	99G3216		
LCS Filename:	G3216L01	Date Analyzed:	062499	Time Analyzed:	12:40
LCSD Filename:		Date Analyzed:	–	Time Analyzed:	–

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
BENZENE	μg/L	50	0	47.2	94	75-125
CHLOROBENZENE	μg/L	50	0	56.9	114	75-125
1,1-DICHLOROETHENE	μg/L	50	0	52.0	104	75-125
TOLUENE	μg/L	50	0	50.7	101	74-125
TRICHLOROETHENE	μg/L	50	0	47.9	96	71-125
# of Out-of-control					0	

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

115792

FORM-3A

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 8260

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994234
Project ID:	El Toro MCAS	Project No:	20242	Sample Matrix:	Water
		Batch No:	99G3216		
MS Filename:	G3216M01	Date Analyzed:	062499	Time Analyzed:	13:47
MSD Filename:	G3216N01	Date Analyzed:	062499	Time Analyzed:	14:20
MS Sample No:	**U4-308**	Sample Lab ID:	99-4270-4		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
BENZENE	μg/L	50	0	48.1	96	75-125
CHLOROBENZENE	μg/L	50	0	57.3	115	75-125
1,1-DICHLOROETHENE	μg/L	50	0	51.9	104	75-125
TOLUENE	μg/L	50	0	52.6	105	74-125
TRICHLOROETHENE	μg/L	50	12	58.9	94	71-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
BENZENE	μg/L	50	49.0	98	2	20	75-125
CHLOROBENZENE	μg/L	50	57.3	115	0	20	75-125
1,1-DICHLOROETHENE	μg/L	50	54.9	110	6	20	75-125
TOLUENE	μg/L	50	52.6	105	0	20	74-125
TRICHLOROETHENE	μg/L	50	58.5	93	1	20	71-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

115793

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/21/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	
		Lab Sample ID:	99G3151-MB-01	Received Date:	06/21/1999
Sample ID:	**99G3151-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC: N
Anal. Method:	M8015V	Prep. Date:	06/21/99	Anal. Date:	06/21/99
Batch No:	99G3151	Prep. No:	–	Anal. Time:	11:06
Data File Name:	3151GLK01	Sample Amount:	5.0 mL	Dilution Factor:	1
Methanol Vol.					
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N) N	

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	GASOLINE	8006-61-9	mg/L	0.05	<0.05	U

Surrogates		Control Limit, %	Surro. Rec.%
1 4-BROMO-FLUOROBENZENE (FID)	460-00-4	74-138	95
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115852

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/18/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	
		Lab Sample ID:	99G3136-MB-01	Received Date:	06/18/1999
Sample ID:	**99G3136-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC: N
Anal. Method:	M8015V	Prep. Date:	06/18/99	Anal. Date:	06/18/99
Batch No:	99G3136	Prep. No:	–	Anal. Time:	18:24
Data File Name:	3136G.K01	Sample Amount:	5.0 mL	Dilution Factor:	1
Methanol Vol.	-				
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	GASOLINE	8006-61-9	mg/L	0.05	<0.05	U

Surrogates		Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (FID) 460-00-4	74-138	93
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115853

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/23/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	
		Lab Sample ID:	99G3193-MB-01	Received Date:	06/23/1999
Sample ID:	**99G3193-MB-01**	Sample Matrix	Soil	Moisture %:	
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC: B
Anal. Method:	M8015V	Prep. Date:	06/23/99	Anal. Date:	06/23/99
Batch No:	99G3193	Prep. No:	–	Anal. Time:	10:32
Data File Name:	3193G.K01	Sample Amount:	5.0 g	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	GASOLINE	8006-61-9	mg/kg	1	<1	U

Surrogates		Control Limit, %	Surro. Rec.%
1 4-BROMO-FLUOROBENZENE (FID)	460-00-4	64-148	81
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115854

FORM-3A

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994234
Project ID:	El Toro MCAS	Project No:	20242	Sample Matrix:	Water
		Batch No:	99G3151		
LCS Filename:	3151G.L01	Date Analyzed:	062199	Time Analyzed:	11:31
LCSD Filename:	3151G.J01	Date Analyzed:	062199	Time Analyzed:	11:56

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
GASOLINE	mg/L	1	0	1.04	104	67-136
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
GASOLINE	mg/L	1	1.04	104	0	30	67-136
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

115882

FORM-3A

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994234
Project ID:	El Toro MCAS	Project No:	20242	Sample Matrix:	Water
		Batch No:	99G3151		
MS Filename:	3151G.M02	Date Analyzed:	062199	Time Analyzed:	13:13
MSD Filename:	3151G.N02	Date Analyzed:	062199	Time Analyzed:	13:38
MS Sample No:	**777806-064**	Sample Lab ID:	99-4283-1		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
GASOLINE	mg/L	1	0	0.993	99	67-136
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
GASOLINE	mg/L	1	1.04	104	5	30	67-136
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

115883

FORM-3B

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994234
Project ID:	El Toro MCAS	Project No:	20242	Sample Matrix:	Soil
		Batch No:	99G3193		
LCS Filename:	3193G.L01	Date Analyzed:	062399	Time Analyzed:	10:57
LCSD Filename:	3193G.J01	Date Analyzed:	062399	Time Analyzed:	11:19

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
GASOLINE	mg/kg	1	0	0.972	97	57-146
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
GASOLINE	mg/kg	1	0.941	94	3	50	57-146
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

115884

FORM-3B

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994234
Project ID:	El Toro MCAS	Project No:	20242	Sample Matrix:	Soil
		Batch No:	99G3193		
MS Filename:	3193G.M01	Date Analyzed:	062399	Time Analyzed:	14:20
MSD Filename:	3193G.N01	Date Analyzed:	062399	Time Analyzed:	14:44
MS Sample No:	**20242-930**	Sample Lab ID:	99-4234-6	Moisture, %	14.3

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
GASOLINE	mg/kg	1.17	0	0.977	84	57-146
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
GASOLINE	mg/kg	1.17	1.00	85	1	50	57-146
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* - Values outside of contract required QC Limits D - Spiked components diluted out

Comments: _____

FORM-3A

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994234
Project ID:	El Toro MCAS	Project No:	20242	Sample Matrix:	Water
		Batch No:	99G3136		
LCS Filename:	3136G.L01	Date Analyzed:	061899	Time Analyzed:	18:48
LCSD Filename:	3136G.J01	Date Analyzed:	061899	Time Analyzed:	19:14

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
GASOLINE	mg/L	1	0	0.999	100	67-136
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
GASOLINE	mg/L	1	0.976	98	2	30	67-136
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

115890

FORM-3A

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994234
Project ID:	El Toro MCAS	Project No:	20242	Sample Matrix:	Water
		Batch No:	99G3136		
MS Filename:	3136G.M01	Date Analyzed:	061899	Time Analyzed:	19:38
MSD Filename:	3136G.N01	Date Analyzed:	061899	Time Analyzed:	20:03
MS Sample No:	**20242-912**	Sample Lab ID:	99-4234-2		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
GASOLINE	mg/L	1	0	0.939	94	67-136
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
GASOLINE	mg/L	1	0.997	100	6	30	67-136
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

115891

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/18/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	
		Lab Sample ID:	99G3129-MB-01	Received Date:	06/18/1999
Sample ID:	**99G3129-MB-01**	Sample Matrix	Soil	Moisture %:	
Sample Type:	Method Blank	Prep. Method:	3550	Instrument ID:	GC: H
Anal. Method:	M8015E	Prep. Date:	06/18/99	Anal. Date:	06/18/99
Batch No:	99G3129	Prep. No:	1 of 1	Anal. Time:	21:17
Data File Name:	3129G.K01	Sample Amount:	20.0 g	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	TPH AS DIESEL	68334-30-5	mg/kg	10	<10	U
2	TPH AS MOTOR OIL	TBD-0002	mg/kg	10	<10	U

Surrogates			Control Limit, %	Surro. Rec.%
1	OCTACOSANE, C28	630-02-4	25-162	87
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115932

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/21/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	
		Lab Sample ID:	99G3162-MB-01	Received Date:	06/21/1999
Sample ID:	**99G3162-MB-01**	Sample Matrix	Water	Moisture %:	-
Sample Type:	Method Blank	Prep. Method:	3510	Instrument ID:	GC: H
Anal. Method:	M8015E	Prep. Date:	06/21/99	Anal. Date:	06/21/99
Batch No:	99G3162	Prep. No:	1 of 1	Anal. Time:	18:06
Data File Name:	3162G.K01	Sample Amount:	1000 mL	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	TPH AS DIESEL	68334-30-5	mg/L	0.5	<0.5	U
2	TPH AS MOTOR OIL	TBD-0002	mg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	OCTACOSANE, C28	630-02-4	26-152	92
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115933

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Project No:	20242	Collection Date:	06/18/1999
Project ID:	El Toro MCAS	Service ID:	994234	Collected by:	
		Lab Sample ID:	99G3128-MB-01	Received Date:	06/18/1999
Sample ID:	**99G3128-MB-01**	Sample Matrix	Soil	Moisture %:	
Sample Type:	Method Blank	Prep. Method:	3550	Instrument ID:	GC: W
Anal. Method:	M8015E	Prep. Date:	06/18/99	Anal. Date:	06/20/99
Batch No:	99G3128	Prep. No:	1 of 1	Anal. Time:	00:55
Data File Name:	3128G.K01	Sample Amount:	20.0 g	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	TPH AS DIESEL	68334-30-5	mg/kg	10	<10	U
2	TPH AS MOTOR OIL	TBD-0002	mg/kg	10	<10	U

Surrogates			Control Limit, %	Surro. Rec.%
1	OCTACOSANE, C28	630-02-4	25-162	99
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

115934

FORM-3D

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994234
Project ID:	El Toro MCAS	Project No:	20242	Sample Matrix:	Soil
		Batch No:	99G3129		
LCS Filename:	3129G.L01	Date Analyzed:	061899	Time Analyzed:	21:44
LCSD Filename:	3129G.J01	Date Analyzed:	061899	Time Analyzed:	22:10

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
TPH AS DIESEL	mg/kg	50	0	47.1	94	51-153
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
TPH AS DIESEL	mg/kg	50	45.5	91	3	50	51-153
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

115967

FORM-3D

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994234
Project ID:	El Toro MCAS	Project No:	20242	Sample Matrix:	Soil
		Batch No:	99G3129		
MS Filename:	3129G.M01	Date Analyzed:	061899	Time Analyzed:	22:37
MSD Filename:	3129G.N01	Date Analyzed:	061899	Time Analyzed:	23:04
MS Sample No:	**20242-947**	Sample Lab ID:	99-4234-23	Moisture, %	3.4

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
TPH AS DIESEL	mg/kg	51.8	0	52.2	101	51-153
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
TPH AS DIESEL	mg/kg	51.8	46.5	90	12	50	51-153
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

115968

FORM-3D

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994234
Project ID:	El Toro MCAS	Project No:	20242	Sample Matrix:	Soil
		Batch No:	99G3128		
LCS Filename:	3128G.L01	Date Analyzed:	062099	Time Analyzed:	01:20
LCSD Filename:	3128G.J01	Date Analyzed:	062099	Time Analyzed:	01:46

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
TPH AS DIESEL	mg/kg	50	0	53.6	107	51-153
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
TPH AS DIESEL	mg/kg	50	44.0	88	19	50	51-153
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

115969

FORM-3D

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994234
Project ID:	El Toro MCAS	Project No:	20242	Sample Matrix:	Soil
		Batch No:	99G3128		
MS Filename:	3128G.M01	Date Analyzed:	062099	Time Analyzed:	02:11
MSD Filename:	3128G.N01	Date Analyzed:	062099	Time Analyzed:	02:36
MS Sample No:	**777806-0063**	Sample Lab ID:	99-4203-37	Moisture, %	6.2

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
TPH AS DIESEL	mg/kg	53.3	6	52.7	88	51-153
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
TPH AS DIESEL	mg/kg	53.3	57.8	97	10	50	51-153
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3C

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994234
Project ID:	El Toro MCAS	Project No:	20242	Sample Matrix:	Water
		Batch No:	99G3162		
LCS Filename:	3162G.L01	Date Analyzed:	062199	Time Analyzed:	18:34
LCSD Filename:	3162G.J01	Date Analyzed:	062199	Time Analyzed:	19:01

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
TPH AS DIESEL	mg/L	1	0	1.08	108	61-143
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
TPH AS DIESEL	mg/L	1	1.09	109	1	30	61-143
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

115975

FORM-3C

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	994234
Project ID:	El Toro MCAS	Project No:	20242	Sample Matrix:	Water
		Batch No:	99G3162		
MS Filename:	3162G.M01	Date Analyzed:	062199	Time Analyzed:	19:28
MSD Filename:	3162G.N01	Date Analyzed:	062199	Time Analyzed:	19:55
MS Sample No:	**20242-915**	Sample Lab ID:	99-4234-5		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
TPH AS DIESEL	mg/L	1	0	0.976	98	61-143
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
TPH AS DIESEL	mg/L	1	0.968	97	1	30	61-143
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

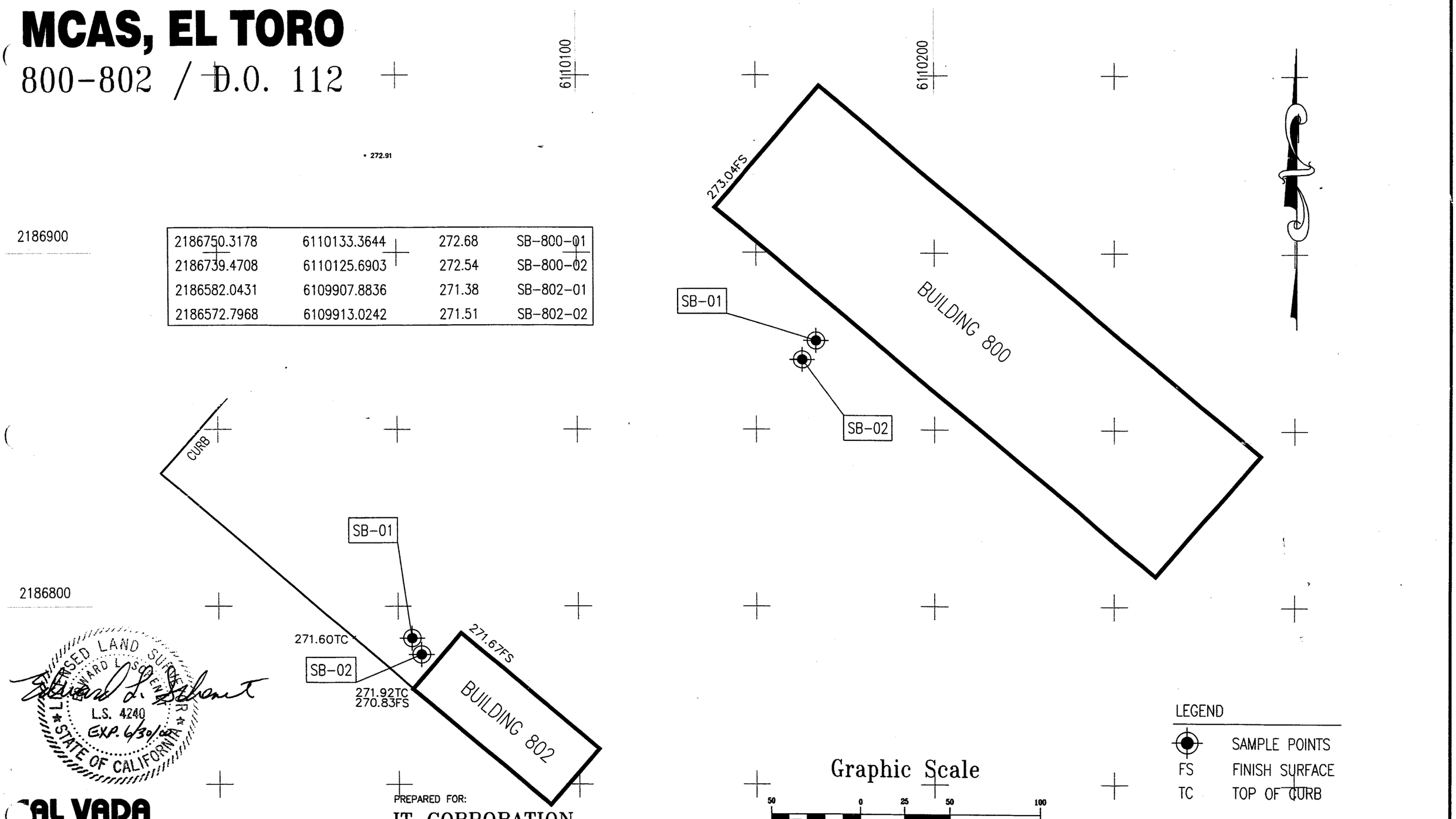
115976

Appendix K
Land Survey Data

MCAS, EL TORO

800-802 / D.O. 112

2186750.3178	6110133.3644	272.68	SB-800-01
2186739.4708	6110125.6903	272.54	SB-800-02
2186582.0431	6109907.8836	271.38	SB-802-01
2186572.7968	6109913.0242	271.51	SB-802-02



LICENSED LAND SURVEYOR EDWARD L. SCHENK L.S. 4240 EXP. 6/30/00 STATE OF CALIFORNIA

CAL VADA SURVEYING, INC.
108 Business Center Dr, Corona, Ca 92880-1720
PHONE: (909) 280-9960 FAX: (909) 280-9746

JOB NO. 97102-142

PREPARED FOR:
IT CORPORATION
3347 MICHELSON DR., SUITE 200
IRVINE, CA 92612-1692
(949) 660-7594

DATE OF SURVEY: 6-26-99

Appendix L
OWS Contents Waste Manifest

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CA8170023208

Manifest Document No.: 20242-OWS 1

2. Page 1 of 1

3. Generator's Name and Mailing Address
MCAF El Toro
Carmelter Site Office, P.O. Box 444 East Irvine CA 92650

4. Generator's Phone ((619) 672-1407 Attn:

5. Transporter 1 Company Name: Ecology Control Industries, Inc.

6. US EPA ID Number: CAD982030173

A. State Transporter's ID: HAHO360389 1

B. Transporter 1 Phone: (510) 235-1393

7. Transporter 2 Company Name:

8. US EPA ID Number:

C. State Transporter's ID:

D. Transporter 2 Phone:

9. Designated Facility Name and Site Address
Crosby & Overton, Inc.
1630 W. 17th St.
Long Beach CA 90813

10. US EPA ID Number: CAD028409019

E. State Facility's ID:

F. Facility's Phone: (310) 432-5445

11. WASTE DESCRIPTION	12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.
a. Non-regulated waste	001	TT	4500	G
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above
Ex. Profile# 6746 (If in imported waste from oil/water separators, send copy of State signed manifest and weight ticket to: Attn. Steve Chandler 3347 Michelson Dr., Suite 100 Irvine CA 92612
*All Quantities are Estimates
OWS 845, 800F, & 802 Liquid Product

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Caution: Wear appropriate protective clothing and respiratory protection when handling.
IN CASE OF EMERGENCY CONTACT: Chem-Tel, Inc. at 1-800-255-3924
Site pick up address: MCAF El Toro

GENERATOR

16. **GENERATOR'S CERTIFICATION:** I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name | Signature | Date: Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Date: Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name | Signature | Date: Month Day Year

NON-HAZARDOUS WASTE

PRINTED ON RECYCLED PAPER USING SOYBEAN INK PRINTED WITH SOY INK

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CA6170023208

Manifest Document No.: [illegible]

2. Page 1 of 1

3. Generator's Name and Mailing Address
MCAF El Toro
Caretaker Site Office, P.O. Box 446 East Irvine CA 92650
Attn:

4. Generator's Phone ( ) (949) 572-1493

5. Transporter 1 Company Name: Evergreen Earth Industries, Inc.

6. US EPA ID Number: CAD982826673

7. Transporter 2 Company Name:

8. US EPA ID Number:

9. Designated Facility Name and Site Address
Crosby & Overton, Inc.
1630 W. 17th St.
Long Beach, CA 90813

10. US EPA ID Number: CAD028409016

A. State Transporter's ID: [illegible]
B. Transporter 1 Phone
C. State Transporter's ID: (510) 238-1393
D. Transporter 2 Phone
E. State Facility's ID
F. Facility's Phone: (310) 432-5446

GENERATOR

11. WASTE DESCRIPTION	12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.
a. Non-regulated waste	001	TT	1800	G
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above
Rinsate With Water
Profile No. 46. TPH impacted rinsate from oil/water separators, send copy of FINAL signed manifest and weight ticket to ATTN: Steve Chandler, 3347 Michelson Dr., Suite 100, Irvine, CA 92612
All Quantities are Estimated OWS 1702 OWS 802, OWS 800F OWS 845

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Caution: Wear appropriate protective clothing and respiratory protection when handling.
IN CASE OF EMERGENCY CONTACT: Chem-Tel, Inc. at 1-800-255-3924
Site pick up address: MCAS El Toro

16. **GENERATOR'S CERTIFICATION:** *I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.*

Printed/Typed Name: [illegible] | Signature | Date: Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: SANDY DAVIS | Signature: Sandy Davis | Date: Month 10 Day 06 Year 99

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.
Printed/Typed Name | Signature | Date: Month Day Year

NON-HAZARDOUS WASTE

PRINTED ON RECYCLED PAPER USING SOYBEAN INK
PRINTED WITH SOY INK