M60050.002518
MCAS EL TORO
SSIC #5090.3

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

Underground Storage Tanks 9001 and 9002
Marine Corps Air Station
El Toro, California

SWDIV Contract No. N68711-93-D-1459 – Delivery Order No. 0070 – Revision 0
OHM Project No. 18609 – Document Control No. SW3407 – May 23, 1997

Tank Removal and Site Closure Report

Appendix A - Orange County Health Care Agency Modification Application and Approval Forms; Appendix B - Laboratory Analytical Reports
Appendix C - Land Surveying Report and Soil Sample Locations; Appendix D - Site Photographs; Appendix E - Tank Disposal Waste Manifest

Tank Removal and Site Closure Report

Underground Storage Tanks 9001 and 9002
Marine Corps Air Station
El Toro, California

SWDIV Contract No. N68711-93-D-1459, Delivery Order No. 0070
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Document Control No. SW3407
Revision 0
May 23, 1997

OHM Remediation Services Corp.

1202 Kettner Boulevard
San Diego, California 92101

Prepared by:

Thomas W. Chadwell for Dhananjay Rawal
Dhananjay B. Rawal
Project Engineer

Approved by:

William L. Sedlak, P.E.
Senior Project Manager

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OHM Remediation Services Corp.

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To: Kelly Even FAX (619) 239-1238
San Diego PMO Office

Date: MAY 22, 1997

Submitted by: TOM CHADWELL

Office Location: ☑ Irvine ☐ San Diego ☐ Pleasanton ☐ Other

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U.S.T. 9001 and 9002, MARINE CORPS AIR STATION, EL TORO, CA.

☐ Preliminary Draft ☑ Draft ☐ Final ☐ Other:

Contractual Delivery Date: (SOW dictated) 23 MAY, 1997

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☐ Project Plans ☐ Letter Report ☐ Meeting Minutes ☐ Separate Drawings
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Naval Facilities Engineering Command
Southwest Division
Mr. Dave Jespersen, Code 57CS1.DJ
Building 131
1220 Pacific Highway
San Diego, California 92132-5187

Date: 27-May-97

D.O.: 70

Location: MCAS EL TORO

FROM: Jam Franklin FOR
Stewart Bornhoft, Program Manager

Ginger James, Contracts Manager

DESCRIPTION OF ENCLOSURE: **Tank Removal and Site Closure Report, Underground Storage Tanks 9001 and 9002, dated May 23, 1997.**

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

VERSION: DRAFT **REVISION** 0

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Acronyms and Abbreviations

BTEX	benzene, toluene, ethylbenzene, and total xylenes
CA LUFT	California Leaking Underground Fuel Tank
DCN	document control number
DO	Delivery Order
EPA	United States Environmental Protection Agency
IRP	Installation Restoration Program
MCAS	Marine Corps Air Station
mg/kg	milligrams per kilogram
OCHCA	Orange County Health Care Agency
OHM	OHM Remediation Services Corp.
ppm	parts per million
Station	MCAS, El Toro, California
SWDIV	Southwest Division Naval Facilities Engineering Command
TPH	total petroleum hydrocarbons
UST	Underground Storage Tank

Section 1
Introduction

This closure report summarizes the field activities conducted and associated with the removal of two underground storage tanks (USTs), designated as USTs 9001 and 9002, at Marine Corps Air Station (MCAS), El Toro, California (the Station). The report also summarizes the analytical results of samples collected at the UST site. This report is prepared by OHM Remediation Services Corp. (OHM) for Southwest Division Naval Facilities Engineering Command (SWDIV) under Contract No. N68711-93-D-1459, Delivery Order (DO) No. 0070. The OHM Project No. is 18609; the Document Control No. (DCN) is SW3407.

MCAS El Toro is located approximately 45 miles southeast of Los Angeles in Orange County, California, one mile north of the intersection of Interstate 5 (Santa Ana Freeway) and Interstate 405 (San Diego Freeway). The Station covers approximately 4,700 acres. The location of MCAS El Toro is shown on Figure 1-1, Facility Location Map - USTs 9001 and 9002.

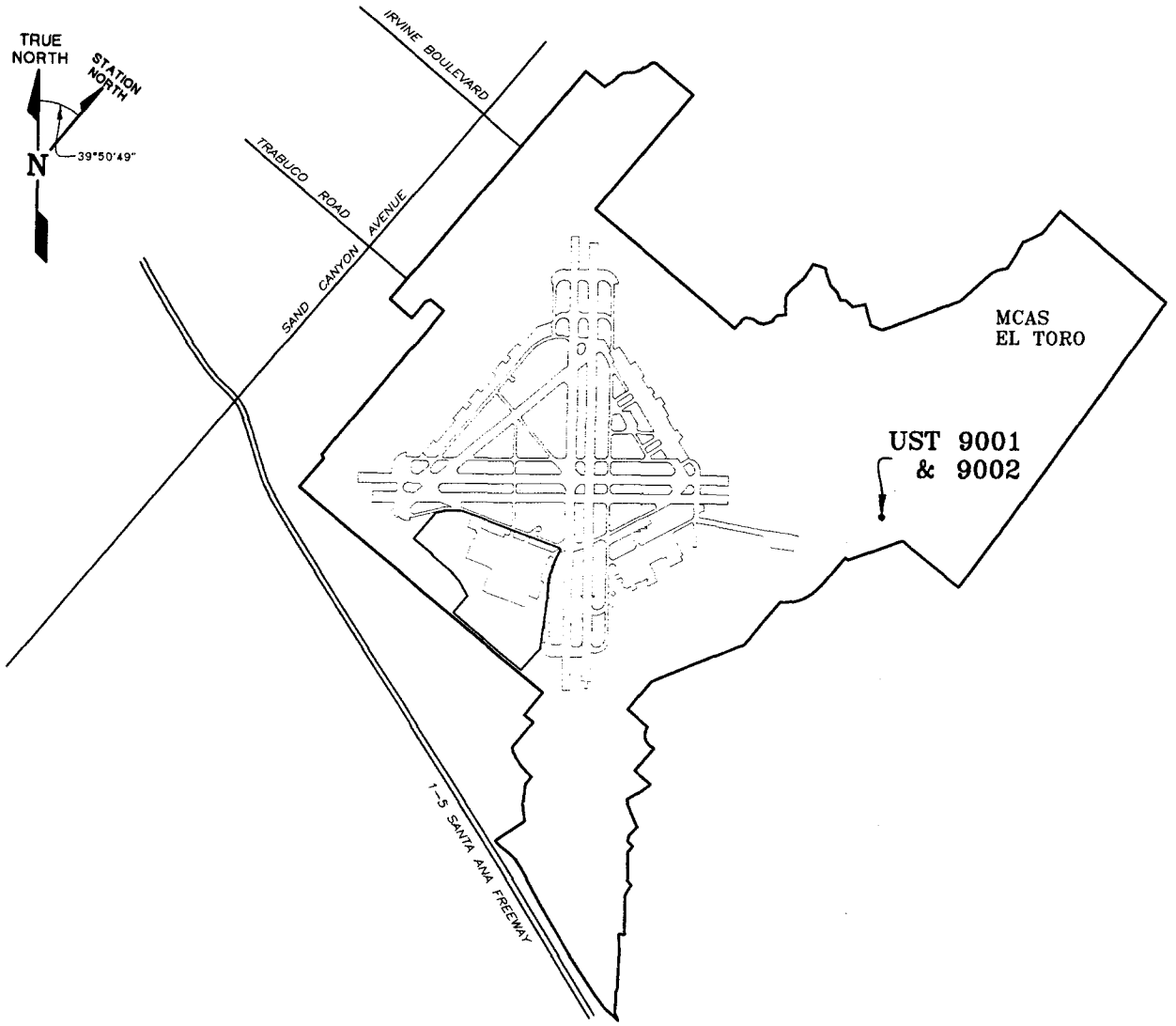
The depth to groundwater in the vicinity of USTs 9001 and 9002 is based on available water level data collected between January and March, 1996 from groundwater monitoring wells 02_DGMW60 and 02_DGMW61. The location of the two wells are shown in Figure 1-2, USTs 9001 and 9002 - Location Map. Based on this data the depth to groundwater at USTs 9001 and 9002 is approximately 51 feet (CDM, 1996).

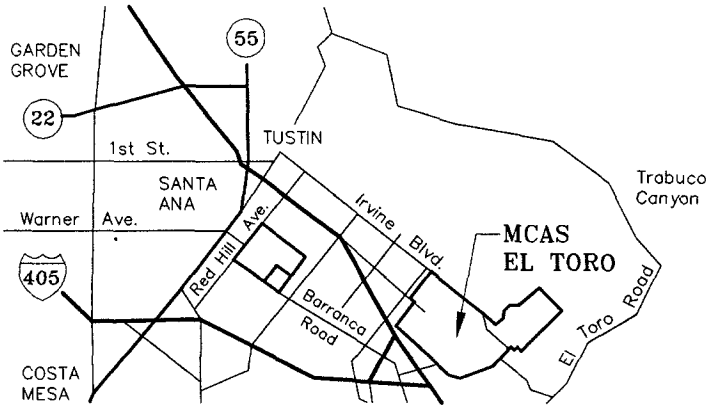
1.1 Site Background and Scope of Work

USTs 9001 and 9002 were discovered by OHM during the removal of debris from Area C2 in the Installation Restoration Program (IRP) Site 2, the Magazine Road Landfill, on February 11, 1997. The tanks were located approximately 150 feet east of Magazine Road. The Magazine Road Landfill is located in the southeast quadrant of the Station. The location of the USTs is shown on Figure 1-2.

The scope of work for this project included the following:

- removal of two steel USTs and the contents
- collection of soil samples from the tank excavation and the stockpiles
- sample analysis for site-specific potential contaminants based on past and current contents of the USTs
- chemical analysis of collected samples by an off-site State of California Department of Health Services-certified and Naval Facilities Engineering Service Center-approved laboratory





OHM Remediation Services Corp. A Subsidiary of OHM Corporation SAN DIEGO, CA				DRAWN BY R. PIRMORADIAN	DATE 05/20/97	FACILITY LOCATION MAP USTs 9001 AND 9002		
				CHECKED BY	DATE			
				APPROVED BY	DATE			
CONTRACT NAME SWDIV				PROJECT MANAGER	DATE	MARINE CORPS AIR STATION EL TORO, CALIFORNIA		
AUTOCAD FILE No. 18609007.DWG	PLOT SCALE 1=1	SHEET 1	OF 1	SCALE NONE	DOCUMENT CONTROL No. SW3407	OHM PROJECT No. 18609	FIGURE No. FIG 1-1	REVISION 0

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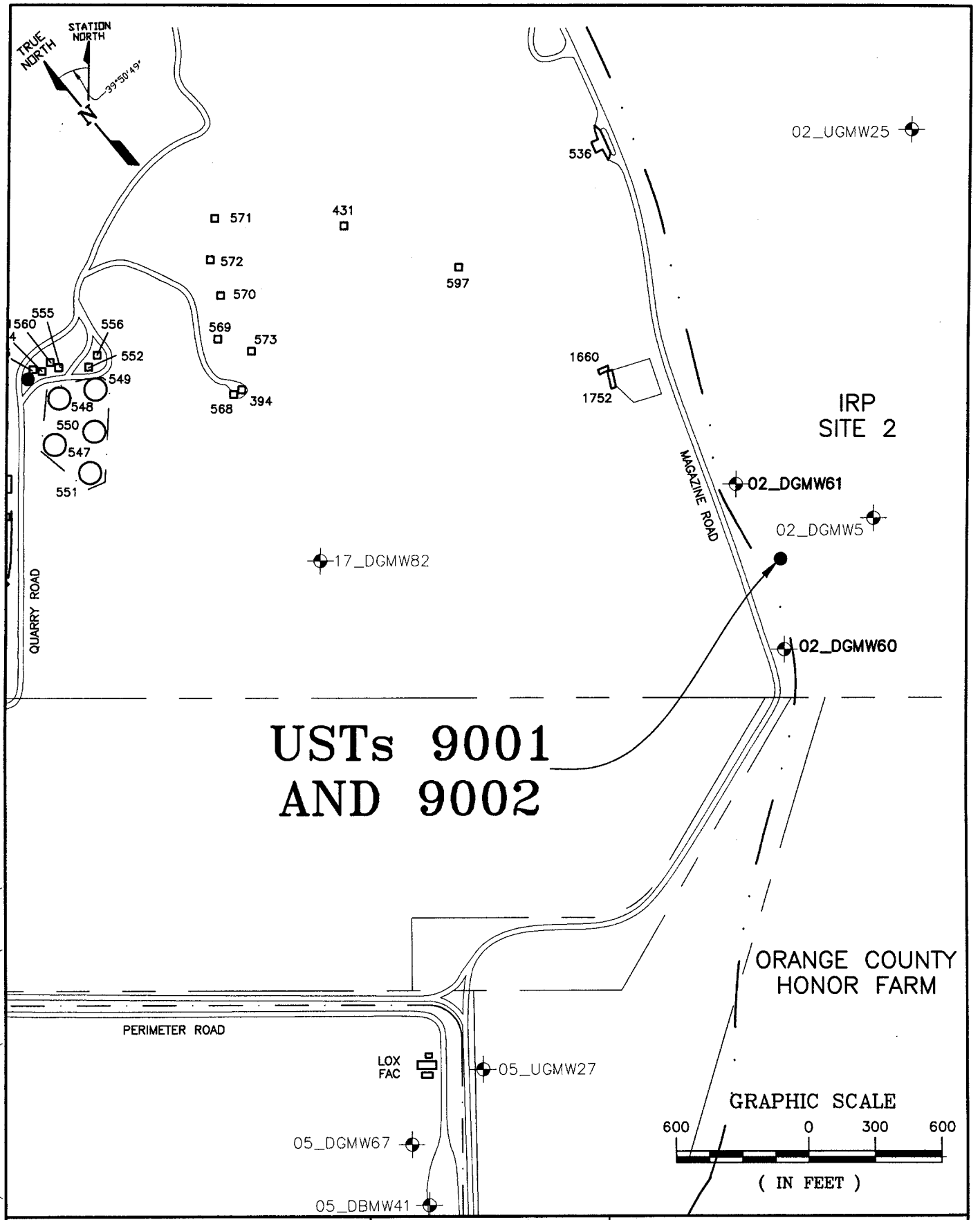

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OHM Remediation Services Corp. A Subsidiary of OHM Corporation SAN DIEGO, CA	DRAWN BY R. PIRMORADIAN	DATE 05/22/97	USTs 9001 AND 9002 LOCATION MAP
	CHECKED BY	DATE	
	APPROVED BY	DATE	
CONTRACT NAME SWDIV	PROJECT MANAGER	DATE	MCAS, EL TORO EL TORO, CALIFORNIA

AUTOCAD FILE No.	PLOT SCALE	SHEET	OF	SCALE	DOCUMENT CONTROL No.	OHM PROJECT No.	FIGURE No.	REVISION
18609016.DWG	1=1	1	1	AS NOTED	SW3407	18609	FIG 1-2	0

- grading and restoration of the UST area in accordance with the approved OHM Work Plan for the Magazine Road Landfill

The soil cleanup levels at the site are based on the Leaching Potential Analysis in the California Leaking Underground Fuel Tank (CA LUFT) Field Manual (State Water Resources Control Board, 1989). Table 1-1, Soil Cleanup Levels for USTs 9001 and 9002 using Leaching Potential Analysis from CA LUFT Field Manual, summarizes the evaluation results and cleanup levels for USTs 9001 and 9002.

Table 1-1
Soil Cleanup Levels for USTs 9001 and 9002 using Leaching Potential Analysis from CA LUFT Field Manual

Site Feature	Score	Score 10 pts if Condition is Met	Score	Score 9 pts if Condition is Met	Score	Score 5 pts if Condition is Met
Minimum depth to groundwater from the soil sample (feet)[1, 2]	--	>100[4]	--	51 - 100	5	25 - 50
Fractures in subsurface (applies to foothills or mountain ranges)	10	None	--	Unknown	--	Present
Average annual precipitation (inches)[3]	--	<10	9	10 - 25	--	26 - 40
Manmade conduits which increase vertical migration of leachate	10	None	--	Unknown	--	Present
Unique site features: recharge area, coarse soil, nearby wells, etc.	10	None	--	At lease one	--	More than one
Column Totals Total Points	30	+	9	+	5	= 44
Range of Total Points	49 pts or more		41 - 48 pts		40 pts or less	
Maximum Allowable BTEX Levels (ppm)	1/50/50/50		.3/.3/1/1		Not applicable[4]	
Maximum Allowable TPH Levels (ppm)	Gasoline	1,000	100		10	
	Diesel	10,000	1,000		100	

Explanation:
[1] - If depth is greater than 5 feet and less than 25 feet, score 0 points. If depth is 5 feet or less, this table should not be used.
[2] - Monitoring wells 02_DGMW60 and 02_DGMW61 groundwater depth 51 feet was used as reference for the depth to groundwater at this site.
[3] - If precipitation is over 40 inches, score 0 points.
[4] - Levels for BTEX are not applicable at a TPH concentration of 10 ppm (gasoline) or 100 ppm (diesel). (For explanation, see Step 6, page 27 of California Leaking Underground Fuel Tank (CA LUFT) Manual.
BTEX - benzene, toluene, ethylbenzene, and total xylenes
ppm - parts per million
pts - points
TPH - total petroleum hydrocarbons
Source: California Leaking Underground Fuel Tank (CA LUFT) Manual, October, 1989

Based upon the CA LUFT Field Manual, this site falls within the category of medium leaching potential. The maximum allowable levels of petroleum hydrocarbon compounds which may be left at this site are as follows:

- benzene - .3 parts per million (ppm)
- toluene - .3 ppm
- ethylbenzene - 1 ppm
- total xylenes - 1 ppm
- total petroleum hydrocarbons (TPH) as gasoline - 100 ppm
- TPH as diesel - 1,000 ppm

Note: 1 ppm is equivalent to 1 milligram per kilogram.

Section 2
Summary of Field Activities

Field activities conducted at USTs 9001 and 9002 included a physical utility investigation, tank gauging and sampling, tank removal and disposal, confirmation sampling, surveying, soil transportation, backfilling, and site restoration. Field activities were conducted in accordance with the OHM Draft Work Plan, Remediation of Various Underground Storage Tanks (OHM, 1995).

2.1 Permitting and Utility Investigation

Following the UST discovery, but prior to initiating field activities, OHM completed an Orange County Health Care Agency (OCHCA) facility modification application and received approval (Permit No. 97PC41) for the removal of USTs 9001 and 9002. The OCHCA facility modification application and approval forms are provided as Appendix A, Orange County Health Care Agency Facility Modification Application and Approval Forms.

A physical survey of the USTs area was conducted following the discovery and removal of the USTs to assess if underground fuel piping was present. This survey was conducted by OHM personnel and equipment, and uncovered no evidence of any underground piping in the vicinity of these USTs.

2.2 Tank Gauging and Sampling

The steel USTs 9001 and 9002 were discovered and gauged on February 11, 1997. Approximately 500 gallons of liquid product and possibly water were present in the tanks at the time of gauging. The liquid product was pumped out of the tanks and two samples from each UST (Sample Identification Nos. 18793-209, 18793-210, 18609-117, 18609-118) were collected on February 12 and 14, 1997, for laboratory analysis. Each sample was analyzed for TPH using CA LUFT Method 8015 modified, benzene, toluene, ethylbenzene, and total xylenes (BTEX) compounds using United States Environmental Protection Agency (EPA) Method 8240, pesticides and polychlorinated biphenyls using EPA Method 8080, total metals using EPA Method 6010 and EPA Method 7470, and ignitability using EPA Method 1010.

The analytical results of the liquid product sample indicate that both USTs were last used for diesel fuel storage. Polychlorinated biphenyls were not detected in the samples. Certified laboratory analytical reports, provided by Applied Physics and Chemistry Laboratory, are included as Appendix B, Laboratory Analytical Reports.

2.3 Tank Removal

Both USTs 9001 and 9002 were excavated on February 26, 1997, using a track excavator. The tanks were exposed and removed in the presence of the OCHCA Inspector. No noticeable stains or odors were observed upon tank exposure and removal. The bottom of the tanks were at a depth of approximately 10 feet below ground surface. Approximately 400 cubic yards of soil were excavated to remove the USTs and piping between tanks.

The excavated USTs had no visible leaks and no tie down concrete pad was discovered during the tank removals.

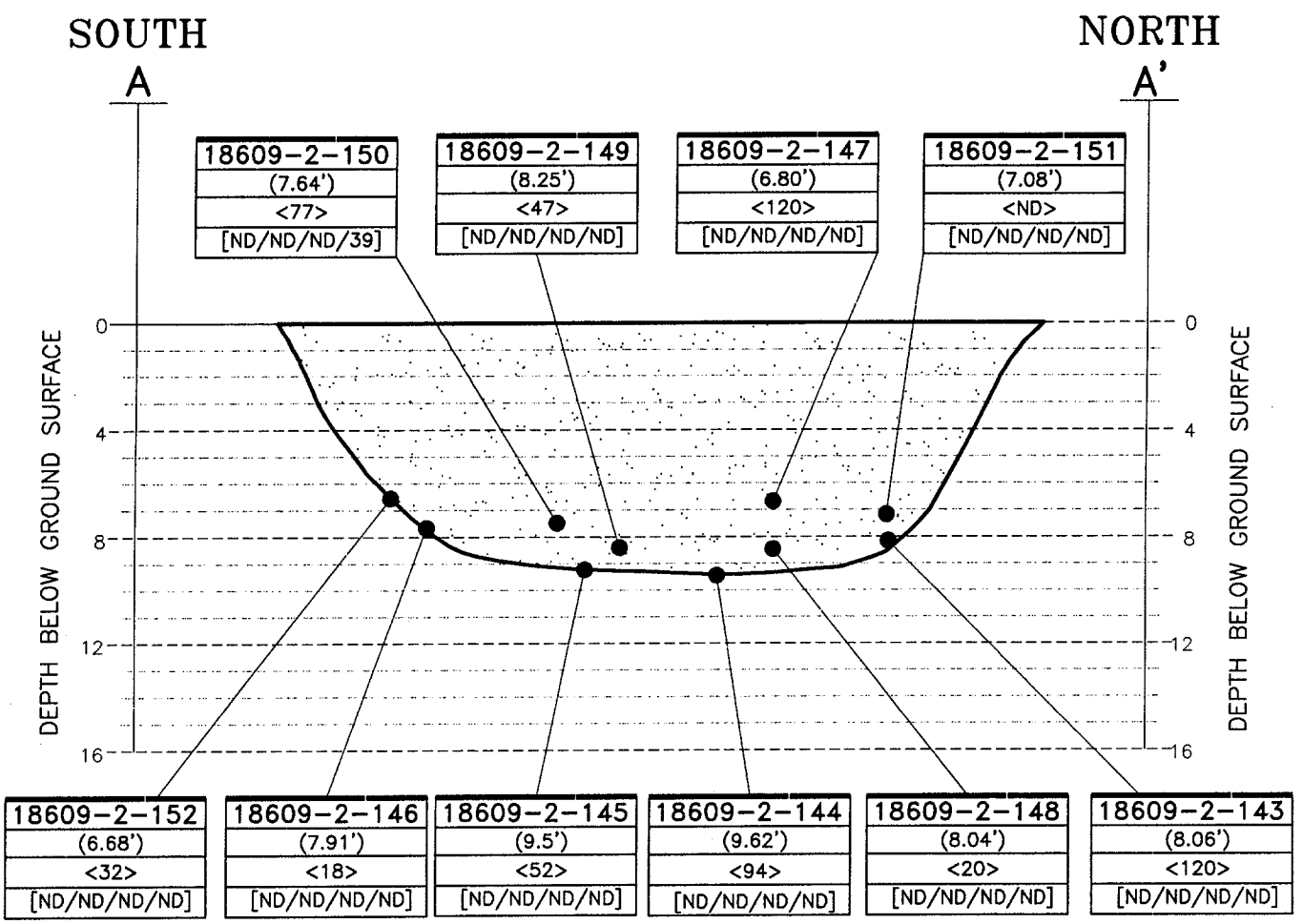
2.4 Soil Sampling, Analyses, and Results

Following the excavation of USTs 9001 and 9002, a total of four confirmation soil samples (two per tank) were collected from the bottom of the UST excavation (Sample Identification Nos. 18609-2-143, 18609-2-144, 18609-2-145 and 18609-2-146). Additionally, six confirmation soil samples (three per tank) were collected from the side walls of the excavation (Sample Identification Nos. 18609-2-147, 18609-2-148, 18609-2-149, 18609-2-150, 18609-2-151 and 18609-2-152). The confirmation soil sampling locations are shown in Appendix C, Land Surveying and Soil Sample Locations. A schematic cross-section of the excavation showing analytical results and depths of the soil samples collected is presented in Figure 2-1, USTs 9001 and 9002 Excavation Cross Section.

Sampling, including sample handling and packaging, was conducted in accordance with the procedures described in the approved Work Plan for remediation of various USTs, MCAS El Toro (OHM, 1995). Soil samples were collected in 2- by 6-inch brass sleeves directly from the excavator bucket, with no tools, to minimize the need for decontamination. The soil samples were analyzed for BTEX compounds using EPA Method 8020, and TPH full range using CA LUFT Method 8015 Modified.

The analytical results of the soil samples collected from the excavation pit are presented in Table 2-1, USTs 9001 and 9002 Confirmation Soil Sample Analytical Results. The analytical results indicate low concentrations of TPH as diesel (from <11 milligrams per kilogram [mg/kg] to 120 mg/kg), TPH as motor oil (from 78 mg/kg to 223 mg/kg), and low concentrations of BTEX compounds (total xylenes at .039 mg/kg) in the soil samples. Based on review of analytical results of the soil samples and the observed clean excavated soil condition, no further excavation was required.

Photographs of the field activities are provided in Appendix D, Site Photographs.



A / A' CROSS SECTION

EXPLANATION:

18609-2-151	SAMPLE IDENTIFIER
(7.08')	(SAMPLE DEPTH IN FEET)
<ND>	<TPH-DIESEL CONCENTRATION IN mg/kg>
[ND/ND/ND/ND]	[BTEX CONCENTRATION in μg/kg]
●	CONFIRMATION SOIL SAMPLE LOCATION
TPH-D	TOTAL PETROLEUM HYDROCARBON AS DIESEL
BTEX	BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
mg/kg	MILLIGRAMS PER KILOGRAM
ND	NOT DETECTED ABOVE LABORATORY REPORTING LIMITS, AS SHOWN IN TABLE 2-1
μg/kg	MICROGRAMS PER KILOGRAM
▒	APPROXIMATE LIMITS OF USTs 9001 & 9002 EXCAVATION

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

CONTRACT NAME: SWDIV

DRAWN BY: R. PIRMORADIAN DATE: 05/20/97
CHECKED BY: DATE:
APPROVED BY: DATE:
PROJECT MANAGER: DATE:

USTs 9001 AND 9002
EXCAVATION CROSS SECTION

MCAS EL TORO
EL TORO, CALIFORNIA

AUTOCAD FILE No.	PLOT SCALE	SHEET	OF	SCALE	DOCUMENT CONTROL No.	OHM PROJECT No.	FIGURE No.	REVISION
18609021.DWG	1=1	1	1	NONE	SW3407	18609	FIG 2-1	0

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2.5 Waste Management

The tanks were decontaminated on February 28, 1997 using steam with alconox. Dry ice was placed in both tanks to displace any flammable vapors. The tanks were transported off-base for disposal by Delso Transpo. Tank disposal waste manifests are included as Appendix E, Tank Disposal Waste Manifests.

The two steel tanks contained a total of approximately 500 gallons of product which was sampled on February 12, 1997 and identified as diesel fuel. The contents were pumped out of the tanks on February 20 and 21, 1997 and delivered to the Station Central Treatment Facility for treatment. The rinse water generated by the decontamination process was also delivered to the Central Treatment Facility for treatment and disposal.

2.6 Land Surveying

After completing the confirmation soil sampling activities, the sample locations and limits of excavation were surveyed by a State of California-registered land surveyor, Towill Inc. The surveyed locations were measured to ±0.1 feet horizontally and tied to the California State Plane Coordinate Systems, North American Datum 1983. The surveyed elevations were measured to ±0.01 feet vertically and tied to mean sea level elevation. The land surveying data for USTs 9001 and 9002 is presented in Appendix C.

2.7 Site Restoration

Following receipt of the confirmation soil sample analytical results and with the concurrence of the Resident Officer in Charge of Construction, the Navy Technical Representative, the UST area was further graded in accordance with ongoing OHM field activities related to IRP Site 2.

Table 2-1
USTs 9001 and 9002 Confirmation Soil Sample Analytical Results

Sample Identification Matrix Date Sampled Sample Depth (feet, bgs)	18609-143 Soil 2/26/97 8	18609-144 Soil 2/26/97 9.5	18609-145 Soil 2/26/97 9.5	18609-146 Soil 2/26/97 8	18609-147 Soil 2/26/97 7	18609-148 Soil 2/26/97 8	18609-149 Soil 2/26/97 8	18609-150 Soil 2/26/97 7.5	18609-151 Soil 2/26/97 7	18609-152 Soil 2/26/97 6.5
Analytical Methods/Analytes (mg/kg)										
M8015 Gasoline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M8015 Diesel	120	94	52	18	120	20	47	77	ND (11)	32
TPH as Motor oil	180	190	130	78	223	110	200	210	180	130
BTEX Compounds (mg/kg)										
Benzene	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.006)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)
Toluene	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.006)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)
Ethylbenzene	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.006)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)
Total Xylenes	ND (0.016)	ND (0.016)	ND (0.016)	ND (0.016)	ND (0.017)	ND (0.016)	ND (0.016)	0.039	ND (0.016)	ND (0.016)

Note:
M8015 - California Leaking Underground Fuel Tank Method 8015 Modified
Explanation:
BTEX - benzene, toluene, ethylbenzene, and total xylenes
bgs - below ground surface
mg/kg - milligrams per kilogram
NA - not applicable (not tested)
ND - not detected at the stated reporting limit
TRPH - total recoverable petroleum hydrocarbons

Section 3
Conclusions and Recommendation

Based on the information presented in this report and a review of the analytical results, the following conclusions have been reached:

- Post removal investigation of the UST showed no deterioration in the material of the UST.
- There was no evidence of spillage or areas of heavy stains observed in the excavations or in the stockpiles.
- The depth to groundwater is estimated to be approximately 51 feet.
- There was no groundwater encountered in the excavation.
- The soil samples obtained from the excavation detected concentrations of diesel ranging from 10 mg/kg to 120 mg/kg and TPH as motor oil from 78 mg/kg to 223 mg/kg. One sample contained concentrations of BTEX at .039 mg/kg for total xylenes. All the sampling results are below the maximum allowable levels.
- Referring to Table 2-1 (CA LUFT-Field Manual) and from the data obtained during UST removal, USTs 9001 and 9002 can be categorized as having a *medium leaching potential.* The maximum allowable levels of petroleum hydrocarbons are: diesel (1,000 ppm); benzene (0.3 ppm); toluene (0.3 ppm); ethylbenzene (1.0 ppm); and total xylenes (1.0 ppm) for the referred category.

Based on the information provided in this report, OHM, on behalf of the MCAS, El Toro, recommends that no further action status be granted by OCHCA for USTs 9001 and 9002.

Section 4
References

Banks, H.O. 1984. *Groundwater Management, Irvine Area, Orange County, California.* Prepared for Orange County Water District. September.

CDM Federal Programs Corporation. 1996. *Groundwater Data Trends and Recommendations Report, Groundwater Monitoring Program for Marine Corps Air Station, El Toro, California.* Contract No. N68711-95-D-7530. DO 0009. June.

OHM. See OHM Remediation Services Corp.

OHM Remediation Services Corp. 1995. *Draft Work Plan, Remediation of Various Underground Storage Tanks at the Marine Corps Air Station El Toro, California.* Contract No. 68711-93-D-1459, DO 0024.

State Water Resources Control Board. 1989. *Leaking Underground Fuel Tank Field Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure.* October.

Appendix A
Orange County Health Care Agency Modification Application and Approval Forms

COUNTY OF ORANGE

TOM URAM
DIRECTOR

HUGH F. STALLWORTH, M.D.
HEALTH OFFICER

ENVIRONMENTAL HEALTH DIVISION
ROBERT E. MERRYMAN, REHS, MPH
DEPUTY DIRECTOR

HEALTH CARE AGENCY
PUBLIC HEALTH SERVICES
ENVIRONMENTAL HEALTH DIVISION
2009 E. EDINGER AVENUE
SANTA ANA, CALIFORNIA 92705
(714) 667-3700

ACILITY MODIFICATION
APPLICATION
ALLATION/REMOVAL/REPAIR)
OMPLETE PAGES 1 & 2)

DATE: 12/6/96

LITY INFORMATION

MARINE CORPS AIR STATION

ET ADDRESS: NEAR GATE NO. 2 (See attached Map)

ELTORO CA 92709

L NUMBER OF TANKS (AFTER INSTALLATION/REMOVAL)
S LOCATION: 0

OF BUSINESS:
☐ GASOLINE STATION ☐ FARM
GOVERNMENT ☐ OTHER

OWNER NAME (CORP., INDIVIDUAL, PUBLIC AGENCY):

MCAS ELTORO A/C ENVIRONMENTAL & SAFETY

ET ADDRESS: P O BOX 95001

SANTA ANA

E: CA ZIP 92709-5001

HONE NO: 714-726-6607

ING ADDRESS INFORMATION

O NAME: OHM REMEDIATION SERVICES CORP.

O ADDRESS: 2031 MAIN STREET

IRVINE

E: CA ZIP 92714

EPHONE NO.: 714-263-1146

TYPE OF CONSTRUCTION

INDICATE NO. OF TANK(S) BEING REMOVED/REPAIRED/INSTALLED BELOW: (COMPLETE PAGE 2 - INDICATING THE TANKS TO BE INSTALLED/REMOVED, OR AFFECTED BY THE REPAIR)

☐ INSTALLATION(S)
☐ REPAIR(S)/RELINE(S) TO USTs
☒ CLOSURE(S)/REMOVAL(S) 10+4 = 14
☐ SYSTEM MODIFICATION (E.G. REPIPE, REPAIR TO PIPING)
☐ OTHER (SPECIFY)

24 HOUR EMERGENCY CONTACT PERSON

DAYS: SCOTT KEHE 714-726-2506
NAME TELEPHONE

NIGHTS: OHM - 1-800-537-9540 (24HR)
ELTORO - 714-726-9911 | 2172
NAME TELEPHONE

APPLICANT

NAME: DHANANJAY RAWAL
PLEASE PRINT

SIGNATURE: [signature]

COMPANY NAME: OHM REMEDIATION SERVICES CORP

TELEPHONE NO: 714-263-9124 x 303

FACILITY OPERATOR (CONTACT PERSON)

NAME: LT HOPE KACHARIAN, MCAS ENV. DEPT.

BUSINESS TELEPHONE NO.: 714-726-3386

: NEW INSTALLATIONS, CLOSURES, REPAIRS AND SYSTEM MODIFICATIONS OF UNDERGROUND STORAGE TANKS REQUIRE THE SUBMITTAL OF (4) SETS OF PLANS TO THIS DIVISION. THESE PLANS MUST BE APPROVED PRIOR TO THE INITIATION OF ANY CONSTRUCTION OR MODIFICATION. ALL PLANS OR REPORTS REQUIRED MUST ACCOMPANY THIS FORM AT THE TIME OF SUBMITTAL.

PLAN APPROVAL AND FEES ARE VALID FOR ONE YEAR. IF TANKS HAVE NOT BEEN REMOVED, INSTALLED OR MODIFIED WITHIN ONE EAR OF THE APPROVAL DATE, NEW PLANS AND FEES MUST BE SUBMITTED.

12/9/96

OFFICE USE ONLY

HSO # 141000

CHECK NO.: 96-195 FEES PAID: 1024-1372 RCVD. BY: DJ CK # 836732/836733

APPROVAL DATE: 12/12/96 BY: AR

R OF TANKS TO RECEIVE A SURCHARGE BILL: NUMBER OF TANKS TO BE ADDED TO BILLING:

Fees of $372.00 12-16-96

PAID

HWMFORMS#2/UST/86

TANK INFORMATION

PROVIDE THE INFORMATION BELOW FOR ALL TANKS AND PIPING SYSTEMS TO BE INSTALLED, REMOVED OR REPAIRED. ALSO INDICATE THE UPGRADE/CHANGES TO BE MADE TO EACH TANK SYSTEM.

TANK I.D. SITE 2			T 9001 #1	T 9002 #2	#3	#4
MATERIAL STORED	MATERIAL OR WASTE STORED	CURRENTLY	Diesel	Diesel		
		PROPOSED	None	None		
		PREVIOUSLY	Diesel	Diesel		
	FUEL TYPE, I.E., UNLEADED		N/A	N/A		
TANK	TYPE (TANK, SUMP, OTHERS)		TANK	TANK		
	DOUBLE WALL/SINGLE WALL		SINGLE	SINGLE		
	UL NUMBER		N/A	N/A		
	YEAR INSTALLED		Unknown	Unknown		
	VAULTED/NOT VAULTED		NOT VAULTED	NOT VAULTED		
	PRIMARY	MANUFACTURER	N/A	N/A		
		CAPACITY (GALLONS)	6000 Appx	6000 Appx		
		CONSTRUCTION MATERIAL	STEEL	STEEL		
		THICKNESS (UNITS)	N/A	N/A		
		INTERIOR LINING	N/A	N/A		
	SECONDARY	MANUFACTURER				
		CAPACITY (GALLONS)				
		CONSTRUCTION MATERIAL	NONE			
		THICKNESS (UNITS)				
	CORROSION PROTECTION					
	TYPE OF LEAK DETECTION FOR USTs (LIQUID, PROBE, ETC.)		NONE			
	MANUFACTURER OF LEAK DETECTOR					
PIPING	LOCATION (UNDER/ABOVE GROUND)		Underground	Underground		
	SUCTION/PRESSURE GRAVITY/UNKNOWN		Unknown	Unknown		
	PRIMARY	CONSTRUCTION MATERIAL	Steel	Steel		
		MANUFACTURER	N/A	N/A		
	SECONDARY	CONSTRUCTION MATERIAL				
		MANUFACTURER	None	None		
	TYPE OF LEAK DETECTION FOR PIPING (PRESSURE LOSS DEVICE, ETC.)					
	MANUFACTURER OF LEAK DETECTOR		None	None		
OVERFILL PROTECTION (TYPE)			Unknown	Unknown		
SPILL CONTAINMENT (TYPE)			Unknown	Unknown		

APPROVED

ORANGE COUNTY [illegible] AGENCY
[illegible] DIVISION
HAZARDOUS MATERIALS MANAGEMENT SECTION
THIS APPROVAL [illegible] 12 MONTHS FROM
THE APPROVAL [illegible]

AR	12/12/96	96PC195
Plan Reviewed by	Date	Plan #

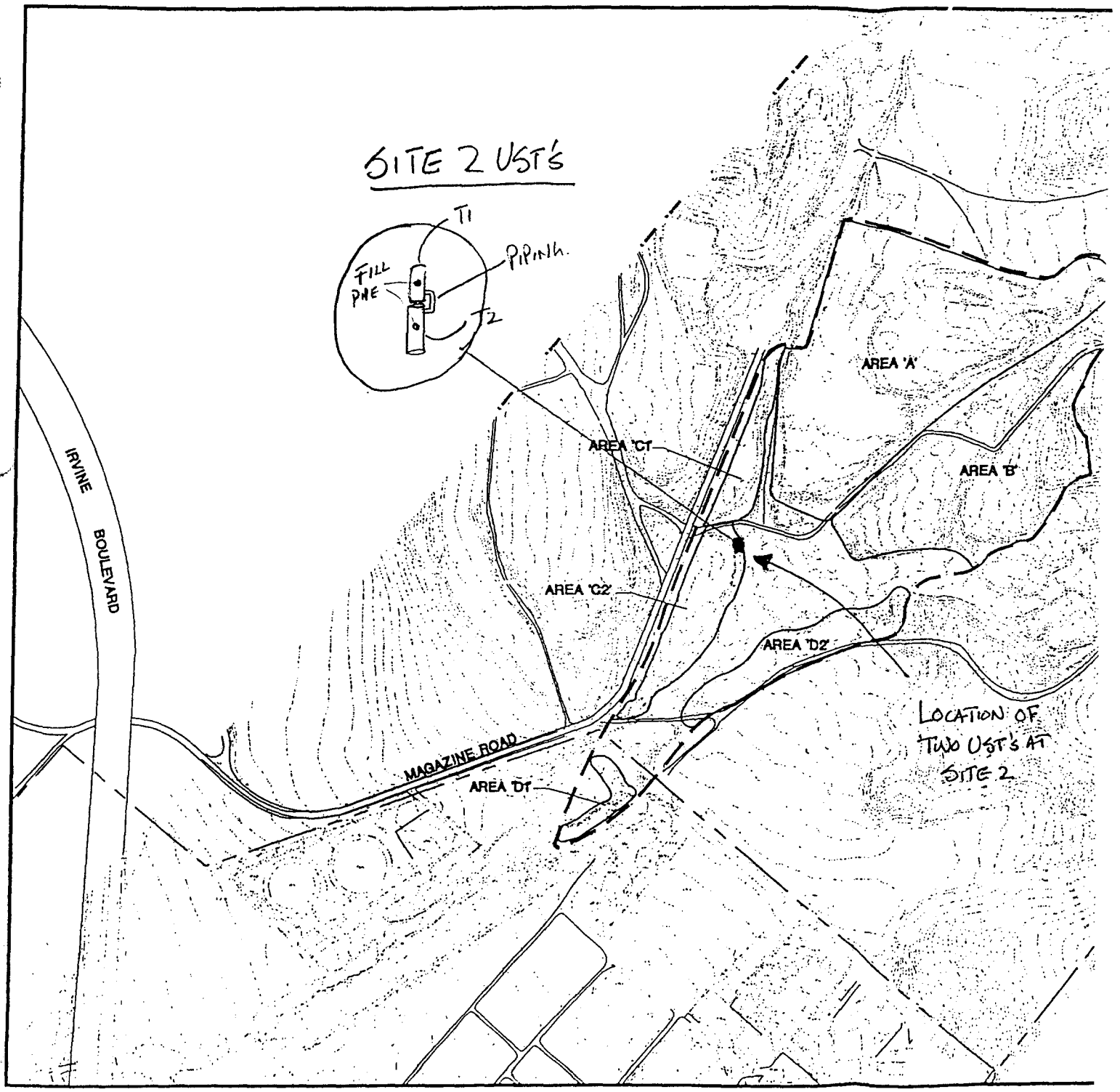
This approval shall not be construed to permit the violation of any law, nor does it prevent further correction of errors found on the plans. [illegible] resubmitted for approval if any additional changes are made by the applicant.

In addition to this approval, all applicable permits [illegible] the department, building department, and the Air Quality Management [illegible] obtained.

Under [illegible] tank in [illegible], removal, and [illegible] required [illegible] must be [illegible] in advance. Contact (714) [illegible] for an appointment.

A copy of these approved plans must be available at the site at all times.

All piping associated with underground storage [illegible] removed
storage tanks shall be removed and properly disposed of.


SITE 2 UST'S
T1
PIPING
FILL PIPE
T2
AREA 'A'
AREA 'B'
AREA 'C1'
AREA 'C2'
AREA 'D1'
AREA 'D2'
IRVINE BOULEVARD
MAGAZINE ROAD
LOCATION OF TWO UST'S AT SITE 2

Appendix B
Laboratory Analytical Reports

OHM Remediation Services Corp.

CHAIN-OF-CUSTODY RECORD

LAB COPY
Form 0019
Field Technical Services
Rev. 08/89

186585

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526

PROJECT NAME: LANDfill Site 2
PROJECT LOCATION: M.C.A.S. EL TORO.
PROJ. NO.: 18793
PROJECT CONTACT: THIZAR TINtut-Williams
PROJECT TELEPHONE NO.: (714) 263-1146x620
CLIENT'S REPRESENTATIVE: LYNN HORNECKER-SWDIV
PROJECT MANAGER/SUPERVISOR: Bill SEDLAK-OHM

ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS): M8015G/BTEX/MTBE; M8015D full RANGE; IgnitABility

A.P.C.L. CHINO Hills, CA.

ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	M8015G/BTEX/MTBE	M8015D full RANGE	IgnitABility					REMARKS
1	18793-209		1315		X	Sample from UST @ site 2	3	X	X	X					
2	18793-210		1335		X	Sample from UST @ Site 2	3	X	X	X					
3	18793-211		1250		X	TRIP BLANK for	1	X							14 DAY T.A.T.

Mark Bennil 2/12/97

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1	000602 TO 3	Mark Bennil	Jose J Moreno	2/12/97	2:06
2					
3					
4					

REMARKS
1.) WBS #0200900 LAB CHarge Code
2.) 24 hr T.A.T.

SAMPLER'S SIGNATURE: Mark L Bennil

.l Remediation
Services Corp.

CHAIN-OF-CUSTODY RECORD

LAB COPY
Form 0019
Field Technical Services
Rev. 08/89

186591

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526

PROJECT NAME	PROJECT LOCATION
LAND fill UST site #2	M.C.A.S. EL TORO

PROJ. NO.	PROJECT CONTACT	PROJECT TELEPHONE NO.
18609	THIZAR TINTUT-Williams	714 2603-1146 x 1020

CLIENT'S REPRESENTATIVE	PROJECT MANAGER/SUPERVISOR
LYNN HORNECKER - SWDIV	Bill SEDLAK - OHM

ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS)

ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	Metals	Total Pesticides / PCBs							REMARKS
1	18609-117	2/14/97	0720		X	Contens of Tank #1	2	X	X							A.P.C.L. Chino Hills
2	18609-118	2/14/97	0730		X	Contens of Tank #2	2	X	X							
3																
4																
5																
6																
7																
8																
9																
10																

Mark Bommel 2/14/97

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1	1 to 2	Mark Bommel	Juan Carlos Rodriguez	2/14/97	8:16
2					
3					
4					

REMARKS
1) 24 hr. T.A.T.

SAMPLER'S SIGNATURE Mark A Bommel

Applied P & Ch Laboratory

Organic Analysis Results for Method 8240

Client Name:	OHM Remediation Services (Irvine)	Project No:	18609	Collection Date:	02/12/97
Project ID:	Landfill Site 2, MCAS El Toro	Service ID:	971449	Collected by:	Mark Banuellos
		Lab Sample ID:	97-1449-1	Received Date:	02/12/97
Sample ID:	**18609-209**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: C
Anal. Method:	8240	Prep. Date:	02/12/97	Anal. Date:	02/12/97
Batch No:	97G1331	Prep. No:	–	Anal. Time:	23:34
Data File Name:	1449-01	Sample Amount:	0.1 mL	Dilution Factor:	10000
				Sparge Size:	5 mL

Heated Purge: (Y/N) N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACETONE	67-64-1	µg/L	1000000	<1000000	U
2	ACROLEIN	107-02-8	µg/L	1000000	<1000000	U
3	ACRYLONITRILE	107-13-1	µg/L	500000	<500000	U
4	BENZENE	71-43-2	µg/L	50000	<50000	U
5	BROMODICHLOROMETHANE	75-27-4	µg/L	50000	<50000	U
6	BROMOFORM	75-25-2	µg/L	50000	<50000	U
7	BROMOMETHANE	74-83-9	µg/L	100000	<100000	U
8	2-BUTANONE (MEK)	78-93-3	µg/L	1000000	<1000000	U
9	CARBON DISULFIDE	75-15-0	µg/L	50000	<50000	U
10	CARBON TETRACHLORIDE	56-23-5	µg/L	50000	<50000	U
11	CHLOROBENZENE	108-90-7	µg/L	50000	<50000	U
12	DIBROMOCHLOROMETHANE	124-48-1	µg/L	50000	<50000	U
13	CHLOROETHANE	75-00-3	µg/L	100000	<100000	U
14	2-CHLOROETHYL VINYL ETHER	110-75-8	µg/L	500000	<500000	U
15	CHLOROFORM	67-66-3	µg/L	50000	<50000	U
16	CHLOROMETHANE	74-87-3	µg/L	100000	<100000	U
17	DIBROMOMETHANE	74-95-3	µg/L	50000	<50000	U
18	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	50000	<50000	U
19	1,1-DICHLOROETHANE	75-34-3	µg/L	50000	<50000	U
20	1,2-DICHLOROETHANE	107-06-2	µg/L	50000	<50000	U
21	1,1-DICHLOROETHENE	75-35-4	µg/L	50000	<50000	U
22	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	50000	<50000	U
23	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	50000	<50000	U
24	1,2-DICHLOROETHENE (TOTAL)	540-59-0	µg/L	50000	<50000	U
25	1,2-DICHLOROPROPANE	78-87-5	µg/L	50000	<50000	U
26	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	50000	<50000	U
27	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	50000	<50000	U
28	ETHYL METHACRYLATE	97-63-2	µg/L	100000	<100000	U
29	ETHYLBENZENE	100-41-4	µg/L	50000	<50000	U
30	2-HEXANONE	591-78-6	µg/L	500000	<500000	U
31	IODOMETHANE	74-88-4	µg/L	50000	<50000	U
32	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	500000	<500000	U
33	METHYLENE CHLORIDE	75-09-2	µg/L	100000	<100000	U
34	STYRENE	100-42-5	µg/L	50000	<50000	U
35	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	50000	<50000	U
36	TETRACHLOROETHENE	127-18-4	µg/L	50000	<50000	U
37	TOLUENE	108-88-3	µg/L	50000	38000	J
38	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	50000	<50000	U
39	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	50000	<50000	U

000608

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	TRICHLOROETHENE	79-01-6	µg/L	50000	< 50000	U
41	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	50000	< 50000	U
42	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	50000	< 50000	U
43	VINYL ACETATE	108-05-4	µg/L	500000	< 500000	U
44	VINYL CHLORIDE	75-01-4	µg/L	100000	< 100000	U
45	O-XYLENE	95-47-6	µg/L	50000	200000	
46	M/P-XYLENE	108-38-3	µg/L	50000	400000	

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	86-114	87
2	1,2-DICHLOROETHANE-D4	17060-07-0	79-113	86
3	TOLUENE-D8	2037-26-5	89-109	97
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	BROMOCHLOROMETHANE-D2		50-200	106
2	CHLOROBENZENE-D5	3114-55-4	50-200	103
3	1,4-DIFLUOROBENZENE	540-36-3	50-200	98
# of out-of-control				0

Not Detected (N.D.) 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

000609

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Project No:	18609	Collection Date:	02/12/97
Project ID:	Landfill Site 2, MCAS El Toro	Service ID:	971449	Collected by:	Mark Banuellos
		Lab Sample ID:	97-1449-1	Received Date:	02/12/97
Sample ID:	**18609-209**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC: N
Anal. Method:	M8015V	Prep. Date:	02/13/97	Anal. Date:	02/13/97
Batch No:	97G1333	Prep. No:	–	Anal. Time:	11:44
Data File Name:	1449.001	Sample Amount:	0.1 ML	Dilution Factor:	21500
				Sparge Size:	5 mL

Heated Purge: (Y/N) N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	GASOLINE	8006-61-9	mg/L	1100	31400 [a]	

Surrogates		Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB) 460-00-4	68-124	118
# of out-of-control			0 -

[a]Not a typical gas pattern. Most of the peaks in the chromatogram correspond to the heavier portion of the chain.

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

Applied P & Ch Laboratory
Gasoline/BTXE, GC analysis by FID/PID (System N)

File : C:\DATA\9702\97G1333\1449.001
Method : c:\ezchrom\methods\Luft-013.n00
Sample ID : 1449-1 F=21500 ← 50 x 430
Acquired : Feb 13, 1997 11:44:06
Printed : Feb 13, 1997 12:01:02

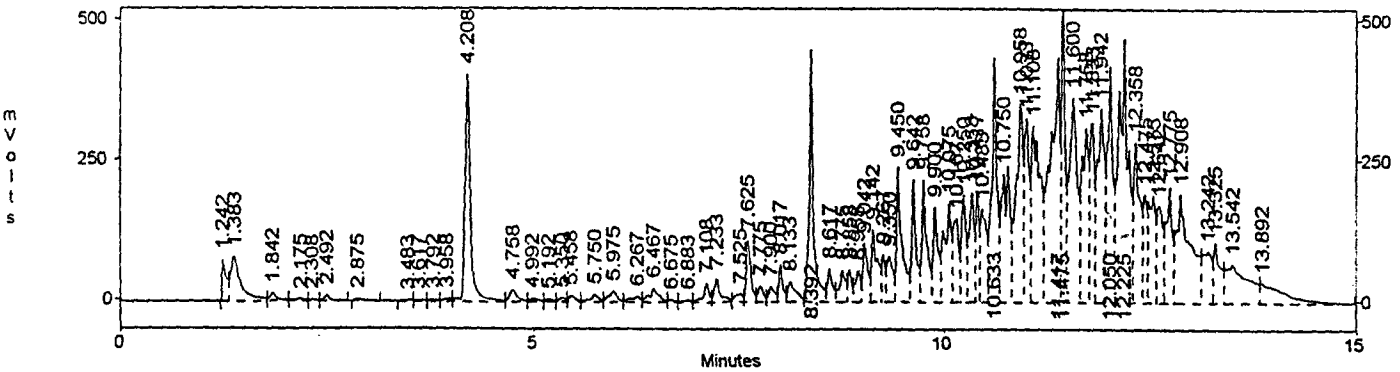
Channel A Results

No.	Name	RT,min	Area	H, V	Ave RF	ESTD (ppb)
12	2. TFT	4.21	1865577	405713	22398.76172	83.3
32	7. BFB	8.39	1628163	450865	13824.55762	117.8
G1	1. Gasoline		20978560		14350.89648	1461.8

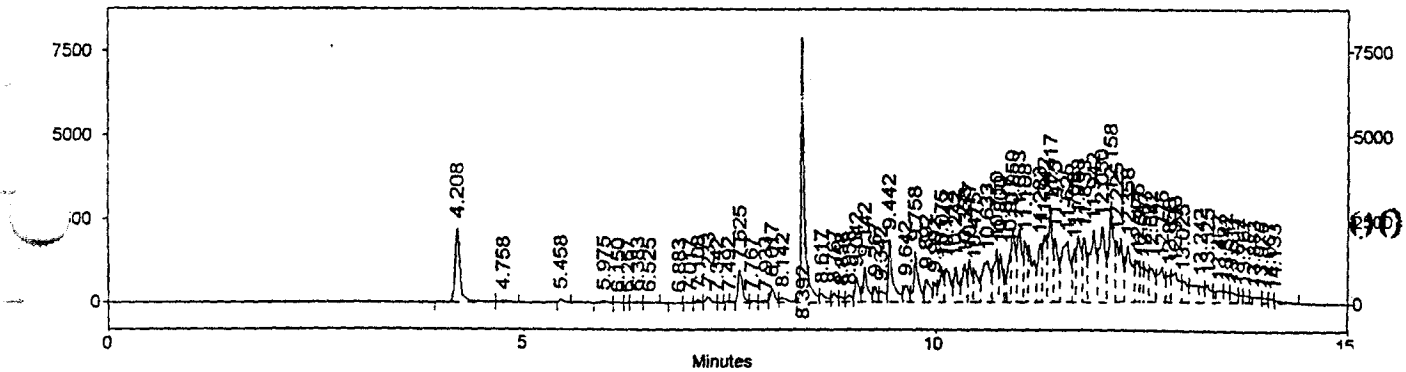
Channel B Results

No.	Name	Rt. min	Area	H, V	Ave. Rf	ISTD (ppb)
--	9. MTBE	2.15	0	0	0.00000	0.00
--	1. Benzene W 20	3.24	0	0	0.00000	0.00
1	2. TFT (Int.)	4.21	9864213	2224490	1.00000	100.00
3	3. Toluene W 80	5.46	322319	87037	1.89728	1.67
14	5. Et-Bz W 19	7.49	90254	36245	1.46974	0.61
15	6. P/M xylene W 82	7.63	3556444	973698	1.88206	18.90
18	7. O-xylene W 27	8.02	1597029	487229	1.65186	9.38
20	8. BFB (Surr.)	8.39	24224380	7896539	2.22493	110.35

C:\DATA\9702\97G1333\1449.001 – Channel A



C:\DATA\9702\97G1333\1449.001 – Channel B



Applied P & Ch Laboratory

Organic Analysis Results for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Project No:	18609	Collection Date:	02/12/97
Project ID:	Landfill Site 2, MCAS El Toro	Service ID:	971449	Collected by:	Mark Banuellos
		Lab Sample ID:	97-1449-1	Received Date:	02/12/97
Sample ID:	18609-209	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	3520	Instrument ID:	GC: H
Anal. Method:	M8015E	Prep. Date:	02/13/97	Anal. Date:	02/13/34
Batch No:	97G1334	Prep. No:	1 of 1	Anal. Time:	11:22
Data File Name:	1449.101	Sample Amount:	0.1 mL	Dilution Factor:	100

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	TPH AS DIESEL	68334-30-5	mg/L	50	987000	

Surrogates			Control Limit, %	Surro. Rec.%
1	HEXACOSANE, C_{26}	630-01-3	50-149	121
# 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

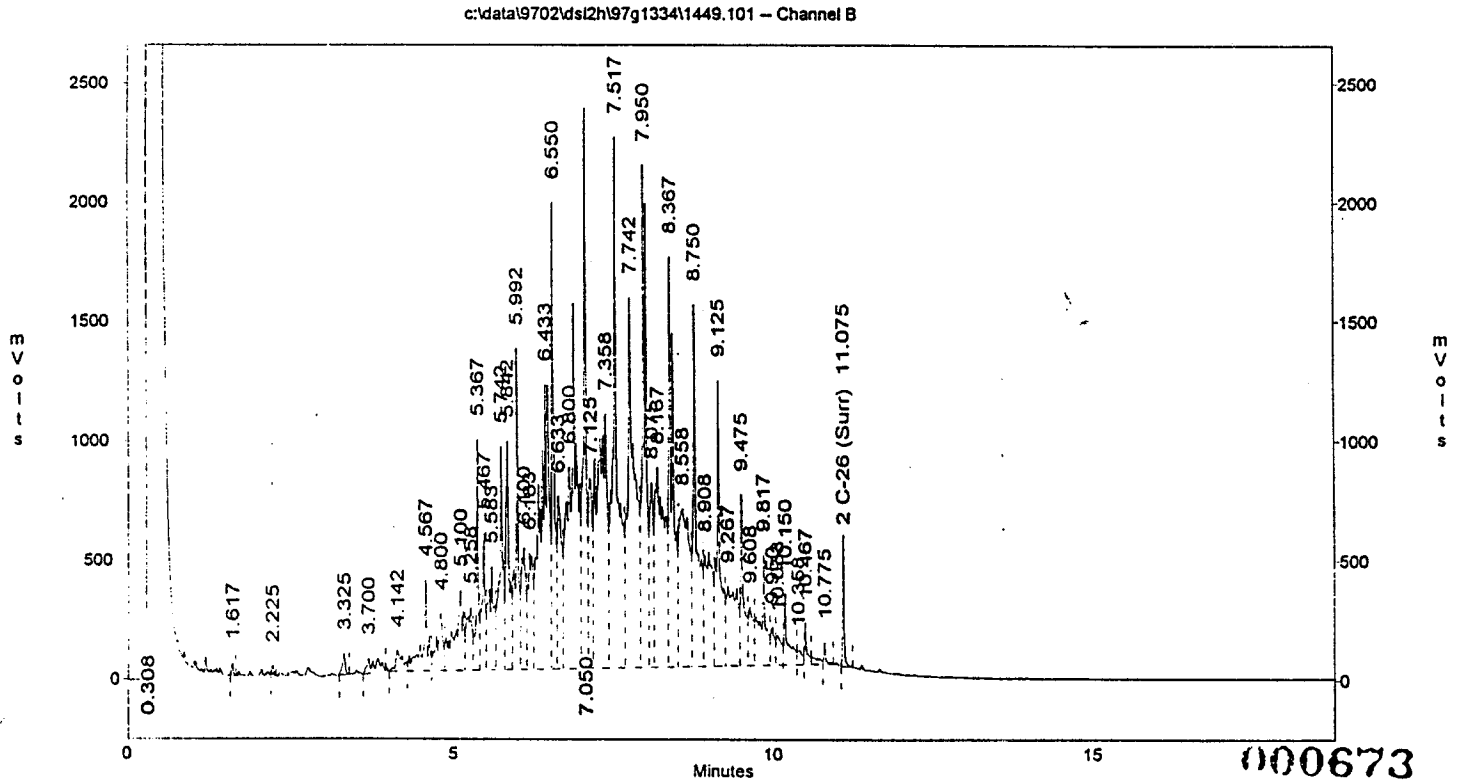
000672

Applied P & Ch Lab
Total Extractable Petroleum Hydrocarbon Analysis by GC-FID
Instrument ID: GC-H, Column: DB-1 (0.32mm x 15m x 0.25 um), 1ul

File : c:\data\9702\dsl2h\97g1334\1449.101
Method : C:\EZCHROM\METHODS\dsl2-022.h00
Sample ID : 1449-1 F=100
Vial : 4
Volume : 1
Acquired : Feb 15, 1997 11:22:37
Printed : Feb 21, 1997 09:10:37
User : System

Channel B Results

Name	Time	Area	Conc (ppm)
2 C-26 (Surr)	11.07	964805	60.664
1 DIESEL		168165072	9878.645



Applied P & Ch Laboratory

Organic Analysis Results for Method 8240

Client Name:	OHM Remediation Services (Irvine)	Project No:	18609	Collection Date:	02/12/97
Project ID:	Landfill Site 2, MCAS El Toro	Service ID:	971449	Collected by:	Mark Banuellos
		Lab Sample ID:	97-1449-2	Received Date:	02/12/97
Sample ID:	**18609-210**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: C
Anal. Method:	8240	Prep. Date:	02/13/97	Anal. Date:	02/13/97
Batch No:	97G1331	Prep. No:	–	Anal. Time:	00:12
Data File Name:	1449-02	Sample Amount:	0.1 mL	Dilution Factor:	10000
				Sparge Size:	5 mL
		Heated Purge: (Y/N) N			

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACETONE	67-64-1	µg/L	1000000	< 1000000	U
2	ACROLEIN	107-02-8	µg/L	1000000	< 1000000	U
3	ACRYLONITRILE	107-13-1	µg/L	500000	< 500000	U
4	BENZENE	71-43-2	µg/L	50000	< 50000	U
5	BROMODICHLOROMETHANE	75-27-4	µg/L	50000	< 50000	U
6	BROMOFORM	75-25-2	µg/L	50000	< 50000	U
7	BROMOMETHANE	74-83-9	µg/L	100000	< 100000	U
8	2-BUTANONE (MEK)	78-93-3	µg/L	1000000	< 1000000	U
9	CARBON DISULFIDE	75-15-0	µg/L	50000	< 50000	U
10	CARBON TETRACHLORIDE	56-23-5	µg/L	50000	< 50000	U
11	CHLOROBENZENE	108-90-7	µg/L	50000	< 50000	U
12	DIBROMOCHLOROMETHANE	124-48-1	µg/L	50000	< 50000	U
13	CHLOROETHANE	75-00-3	µg/L	100000	< 100000	U
14	2-CHLOROETHYL VINYL ETHER	110-75-8	µg/L	500000	< 500000	U
15	CHLOROFORM	67-66-3	µg/L	50000	< 50000	U
16	CHLOROMETHANE	74-87-3	µg/L	100000	< 100000	U
17	DIBROMOMETHANE	74-95-3	µg/L	50000	< 50000	U
18	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	50000	< 50000	U
19	1,1-DICHLOROETHANE	75-34-3	µg/L	50000	< 50000	U
20	1,2-DICHLOROETHANE	107-06-2	µg/L	50000	< 50000	U
21	1,1-DICHLOROETHENE	75-35-4	µg/L	50000	< 50000	U
22	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	50000	< 50000	U
23	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	50000	< 50000	U
24	1,2-DICHLOROETHENE (TOTAL)	540-59-0	µg/L	50000	< 50000	U
25	1,2-DICHLOROPROPANE	78-87-5	µg/L	50000	< 50000	U
26	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	50000	< 50000	U
27	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	50000	< 50000	U
28	ETHYL METHACRYLATE	97-63-2	µg/L	100000	< 100000	U
29	ETHYLBENZENE	100-41-4	µg/L	50000	8200	J
30	2-HEXANONE	591-78-6	µg/L	500000	< 500000	U
31	IODOMETHANE	74-88-4	µg/L	50000	< 50000	U
32	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	500000	< 500000	U
33	METHYLENE CHLORIDE	75-09-2	µg/L	100000	< 100000	U
34	STYRENE	100-42-5	µg/L	50000	< 50000	U
35	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	50000	< 50000	U
36	TETRACHLOROETHENE	127-18-4	µg/L	50000	< 50000	U
37	TOLUENE	108-88-3	µg/L	50000	< 50000	U
38	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	50000	< 50000	U
39	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	50000	< 50000	U

000612

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	TRICHLOROETHENE	79-01-6	µg/L	50000	< 50000	U
41	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	50000	< 50000	U
42	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	50000	< 50000	U
43	VINYL ACETATE	108-05-4	µg/L	500000	< 500000	U
44	VINYL CHLORIDE	75-01-4	µg/L	100000	< 100000	U
45	O-XYLENE	95-47-6	µg/L	50000	200000	
46	M/P-XYLENE	108-38-3	µg/L	50000	300000	

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	86-114	106
2	1,2-DICHLOROETHANE-D4	17060-07-0	79-113	105
3	TOLUENE-D8	2037-26-5	89-109	102
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	BROMOCHLOROMETHANE-D2		50-200	78
2	CHLOROBENZENE-D5	3114-55-4	50-200	104
3	1,4-DIFLUOROBENZENE	540-36-3	50-200	91
# of out-of-control				0

Not Detected (N.D.) 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

000613

Applied P & Ch Laboratory

Organic Analysis Results for Method M8015V

Client Name:	OHM Remediation Services (Irvine)	Project No:	18609	Collection Date:	02/12/97
Project ID:	Landfill Site 2, MCAS El Toro	Service ID:	971449	Collected by:	Mark Banuellos
		Lab Sample ID:	97-1449-2	Received Date:	02/12/97
Sample ID:	**18609-210**	Sample Matrix	Water	Moisture %:	-
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC: N
Anal. Method:	M8015V	Prep. Date:	02/13/97	Anal. Date:	02/13/97
Batch No:	97G1333	Prep. No:	-	Anal. Time:	12:19
Data File Name:	1449.002	Sample Amount:	0.1 ML	Dilution Factor:	21500
				Sparge Size:	5 mL

Heated Purge: (Y/N) N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	GASOLINE	8006-61-9	mg/L	1100	44400 [a]	

Surrogates		Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB) 460-00-4	68-124	101
# of out-of-control			0

[a] Not a typical gas pattern. Most of the peaks in the chromatogram correspond to the heavier portion of the chain.

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

000630

Applied P & Ch Laboratory
Gasoline/BTXE, GC analysis by FID/PID (System N)

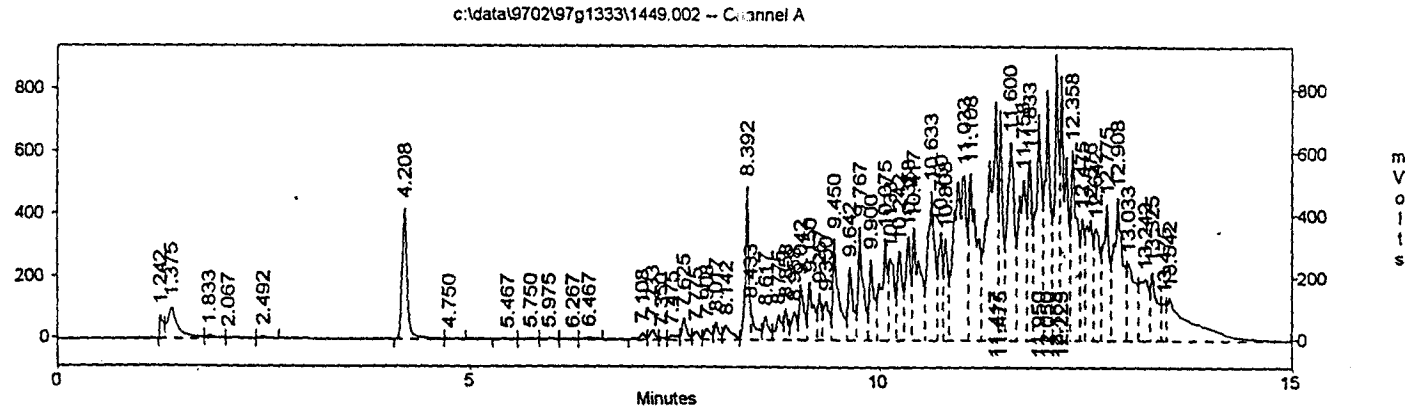
File : c:\data\9702\97g1333\1449.002
Method : c:\ezchrom\methods\luft-013.n00
Sample ID : 1449-2 F=21500 50 X 430
Acquired : Feb 13, 1997 12:19:04
Printed : Feb 13, 1997 12:35:19

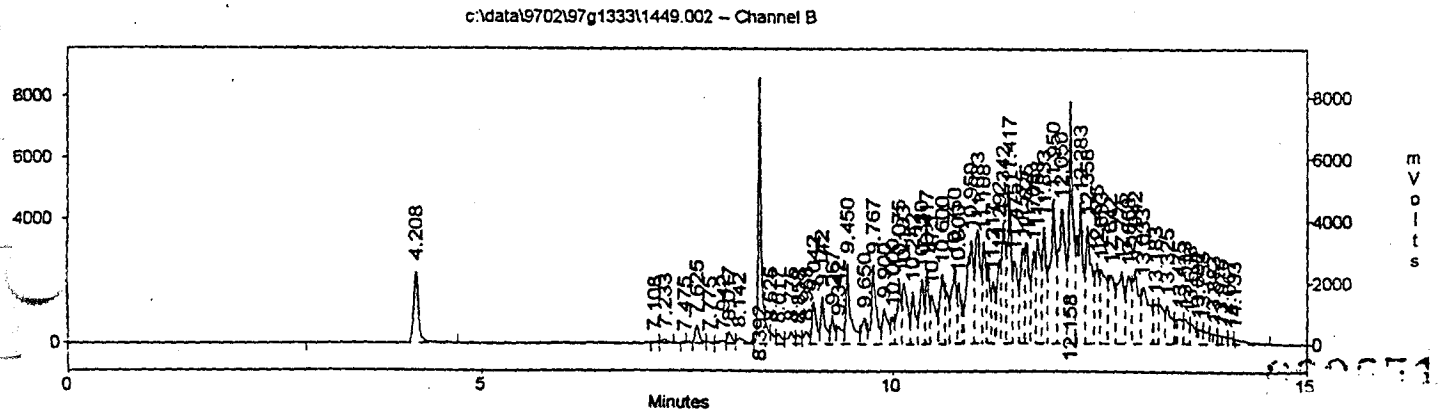
Channel A Results

No.	Name	RT,min	Area	H, V	Ave RF	ESTD (ppb)
6	2. TFT	4.21	1836286	419035	22398.76172	82.0
22	7. BFB	8.39	1396500	492991	13824.55762	101.0
G1	1. Gasoline		29658500		14350.89648	2066.7

Channel B Results

No.	Name	Rt. min	Area	H, V	Ave. Rf	ISTD (ppb)
--	9. MTBE	2.15	0	0	0.00000	0.00
--	1. Benzene W 20	3.24	0	0	0.00000	0.00
1	2. TFT (Int.)	4.21	9806670	2295998	1.00000	100.00
--	3. Toluene W 80	5.43	0	0	0.00000	0.00
4	5. Et-Bz W 19	7.47	111722	38765	1.46974	0.76
5	6. P/M xylene W 82	7.63	2049690	569390	1.88206	10.96
8	7. O-xylene W 27	8.02	1297722	384097	1.65186	7.67
10	8. BFB (Surr.)	8.39	24822188	8627398	2.22493	113.73





Applied P & Ch Laboratory

Organic Analysis Results for Method M8015E

Client Name:	OHM Remediation Services (Irvine)	Project No:	18609	Collection Date:	02/12/97
Project ID:	Landfill Site 2, MCAS El Toro	Service ID:	971449	Collected by:	Mark Banuellos
		Lab Sample ID:	97-1449-2	Received Date:	02/12/97
Sample ID:	**18609-210**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	Dilu	Instrument ID:	GC: H
Anal. Method:	M8015E	Prep. Date:	02/13/97	Anal. Date:	02/13/34
Batch No:	97G1334	Prep. No:	1 of 1	Anal. Time:	11:49
Data File Name:	1449.102	Sample Amount:	0.1 mL	Dilution Factor:	100

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	TPH AS DIESEL	68334-30-5	mg/L	50	990000	

Surrogates			Control Limit, %	Surro. Rec.%
1	HEXACOSANE, C_{26}	630-01-3	50-149	112
# 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

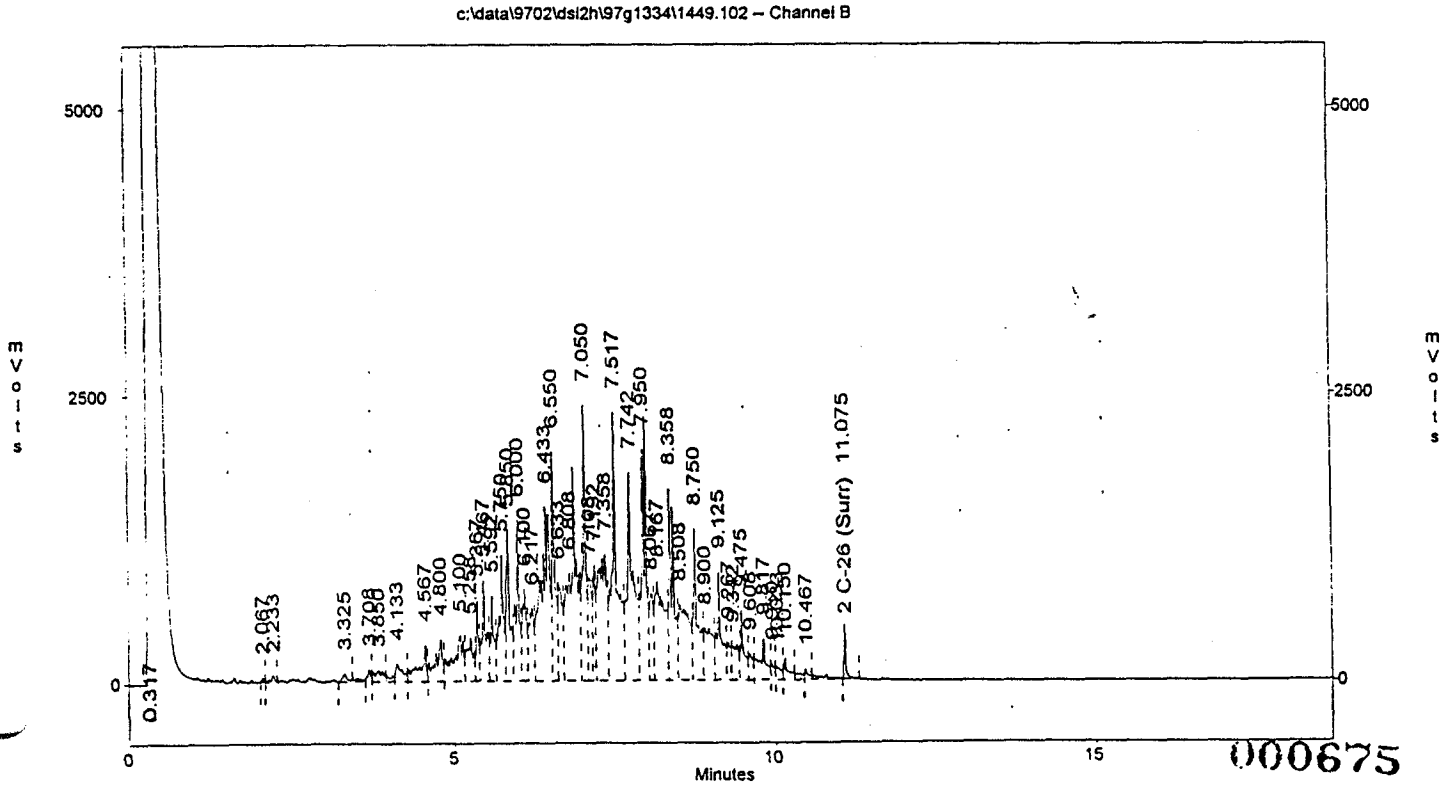
000674

Applied P & Ch Lab
Total Extractable Petroleum Hydrocarbon Analysis by GC-FID
Instrument ID: GC-H, Column: DB-1 (0.32mm x 15m x 0.25 um), 1ul

File	: c:\data\9702\dsl2h\97g1334\1449.102
Method	: c:\ezchrom\methods\dsl2-022.h00
Sample ID	: 1449-2 F=100
Vial	: 5
Volume	: 1
Acquired	: Feb 15, 1997 11:49:14
Printed	: Feb 21, 1997 15:33:12
User	: System

Channel B Results

Name	Time	Area	Conc (ppm)
2 C-26 (Surr)	11.07	927496	58.318
1 DIESEL		168691344	9909.560



Applied P & Ch Laboratory

Wet Analysis Results for Method 1010

Client Name:	OHM Remediation Services (Irvine)	Project No:	18609	Anal. Method	1010
Project ID:	Landfill Site 2, MCAS El Toro	Service ID:	971449	Collected by:	Mark Banuellos

Component Name: Ignitability (Flashpoint)
CAS No: 9999-97

Lab ID	Sample ID	Matix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
97-1449-1	18609-209	Water	02/12/97	02/12/97	02/13/97	97W1583	°C	0.5[a]	95.0	
97-1449-2	18609-210	Water	02/12/97	02/12/97	02/13/97	97W1583	°C	0.5[a]	95.0	

[a]Corresponds to the minimum reading of the thermometer used.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Organic Analysis Results for Method 8240

Client Name:	OHM Remediation Services (Irvine)	Project No:	18609	Collection Date:	02/12/97
Project ID:	Landfill Site 2, MCAS El Toro	Service ID:	971449	Collected by:	Mark Banuellos
		Lab Sample ID:	97-1449-3	Received Date:	02/12/97
Sample ID:	**18609-211**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: C
Anal. Method:	8240	Prep. Date:	02/12/97	Anal. Date:	02/12/97
Batch No:	97G1331	Prep. No:	–	Anal. Time:	22:56
Data File Name:	1449-03	Sample Amount:	5 mL	Dilution Factor:	1
Test Level:	Low			Sparge Size:	5 mL
		Heated Purge: (Y/N) N			

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACETONE	67-64-1	µg/L	100	<100	U
2	ACROLEIN	107-02-8	µg/L	100	<100	U
3	ACRYLONITRILE	107-13-1	µg/L	50	<50	U
4	BENZENE	71-43-2	µg/L	5	<5	U
5	BROMODICHLOROMETHANE	75-27-4	µg/L	5	<5	U
6	BROMOFORM	75-25-2	µg/L	5	<5	U
7	BROMOMETHANE	74-83-9	µg/L	10	<10	U
8	2-BUTANONE (MEK)	78-93-3	µg/L	100	<100	U
9	CARBON DISULFIDE	75-15-0	µg/L	5	<5	U
10	CARBON TETRACHLORIDE	56-23-5	µg/L	5	<5	U
11	CHLOROBENZENE	108-90-7	µg/L	5	<5	U
12	DIBROMOCHLOROMETHANE	124-48-1	µg/L	5	<5	U
13	CHLOROETHANE	75-00-3	µg/L	10	<10	U
14	2-CHLOROETHYL VINYL ETHER	110-75-8	µg/L	50	<50	U
15	CHLOROFORM	67-66-3	µg/L	5	<5	U
16	CHLOROMETHANE	74-87-3	µg/L	10	<10	U
17	DIBROMOMETHANE	74-95-3	µg/L	5	<5	U
18	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	5	<5	U
19	1,1-DICHLOROETHANE	75-34-3	µg/L	5	<5	U
20	1,2-DICHLOROETHANE	107-06-2	µg/L	5	<5	U
21	1,1-DICHLOROETHENE	75-35-4	µg/L	5	<5	U
22	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	5	<5	U
23	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	5	<5	U
24	1,2-DICHLOROETHENE (TOTAL)	540-59-0	µg/L	5	<5	U
25	1,2-DICHLOROPROPANE	78-87-5	µg/L	5	<5	U
26	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	5	<5	U
27	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	5	<5	U
28	ETHYL METHACRYLATE	97-63-2	µg/L	10	<10	U
29	ETHYLBENZENE	100-41-4	µg/L	5	<5	U
30	2-HEXANONE	591-78-6	µg/L	50	<50	U
31	IODOMETHANE	74-88-4	µg/L	5	<5	U
32	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	50	<50	U
33	METHYLENE CHLORIDE	75-09-2	µg/L	10	<10	U
34	STYRENE	100-42-5	µg/L	5	<5	U
35	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	5	<5	U
36	TETRACHLOROETHENE	127-18-4	µg/L	5	<5	U
37	TOLUENE	108-88-3	µg/L	5	<5	U
38	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	5	<5	U
39	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	5	<5	U

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#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	TRICHLOROETHENE	79-01-6	µg/L	5	<5	U
41	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	5	<5	U
42	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	5	<5	U
43	VINYL ACETATE	108-05-4	µg/L	50	<50	U
44	VINYL CHLORIDE	75-01-4	µg/L	10	<10	U
45	O-XYLENE	95-47-6	µg/L	5	<5	U
46	M/P-XYLENE	108-38-3	µg/L	5	<5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	86-114	89
2	1,2-DICHLOROETHANE-D4	17060-07-0	79-113	93
3	TOLUENE-D8	2037-26-5	89-109	104
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	BROMOCHLOROMETHANE-D2		50-200	89
2	CHLOROBENZENE-D5	3114-55-4	50-200	89
3	1,4-DIFLUOROBENZENE	540-36-3	50-200	85
# of out-of-control				0

Not Detected (N.D.) 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

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
OHM Remediation Services (Irvine)
Attention: Mary Schneider
2031 Main St.
Irvine, CA 92714
Tel: (714)263-1146 Fax: (714)263-1147

Service ID #: 801-971477
Collected by: Mark Banuellos
Collected on: 02/14/97

Received: 02/14/97
Extracted: 02/14/97
Tested: 02/14-17/97
Reported: 02/17/97

Sample Description: Oil from MCAS El Toro
Project Description: 18609 MCAS El Toro, Landfill UST Site #

Analysis of Oil Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 18609-117 97-01477-1	18609-118 97-01477-2
TTLC 17 METALS					
ANTIMONY	6010	mg/kg	5	N.D.	N.D.
ARSENIC	6010	mg/kg	0.3	N.D.	N.D.
BARIUM	6010	mg/kg	1	N.D.	N.D.
BERYLLIUM	6010	mg/kg	0.2	N.D.	N.D.
CADMIUM	6010	mg/kg	0.2	N.D.	N.D.
CHROMIUM	6010	mg/kg	0.5	N.D.	N.D.
COBALT	6010	mg/kg	0.5	N.D.	N.D.
COPPER	6010	mg/kg	0.5	0.54	N.D.
LEAD	6010	mg/kg	0.2	0.26	N.D.
MERCURY	7470	mg/kg	0.2	N.D.	N.D.
MOLYBDENUM	6010	mg/kg	0.2	N.D.	N.D.
NICKEL	6010	mg/kg	0.3	N.D.	N.D.
SELENIUM	6010	mg/kg	0.5	N.D.	N.D.
SILVER	6010	mg/kg	0.5	N.D.	N.D.
THALLIUM	6010	mg/kg	5	N.D.	N.D.
VANADIUM	6010	mg/kg	0.5	N.D.	N.D.
ZINC	6010	mg/kg	0.5	2.5	0.55
ORGANOCHLORINE PESTICIDES & PCBS					
Dilution Factor	8080			1	1
ALDRIN	8080	mg/kg	150	N.D.	N.D.
BETA-BHC	8080	mg/kg	150	N.D.	N.D.
ALPHA-BHC	8080	mg/kg	150	N.D.	N.D.
DELTA-BHC	8080	mg/kg	150	N.D.	N.D.
GAMMA-BHC	8080	mg/kg	150	N.D.	N.D.
4,4'-DDD	8080	mg/kg	300	N.D.	N.D.
4,4'-DDE	8080	mg/kg	300	N.D.	N.D.
4,4'-DDT	8080	mg/kg	300	N.D.	N.D.
DIELDRIN	8080	mg/kg	300	N.D.	N.D.
ENDOSULFAN I	8080	mg/kg	150	N.D.	N.D.
ENDOSULFAN II	8080	mg/kg	300	N.D.	N.D.

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 18609-117 97-01477-1	Analysis Result 18609-118 97-01477-2
ENDOSULFAN SULFATE	8080	mg/kg	1500	N.D.	N.D.
ENDRIN	8080	mg/kg	300	N.D.	N.D.
ENDRIN ALDEHYDE	8080	mg/kg	300	N.D.	N.D.
ENDRIN KETONE	8080	mg/kg	300	N.D.	N.D.
HEPTACHLOR	8080	mg/kg	150	N.D.	N.D.
HEPTACHLOR EPOXIDE	8080	mg/kg	150	N.D.	N.D.
METHOXYCHLOR	8080	mg/kg	6000	N.D.	N.D.
CHLORDANE	8080	mg/kg	7500	N.D.	N.D.
TOXAPHENE	8080	mg/kg	15000	N.D.	N.D.
AROCLOR-1016	8080	mg/kg	5000	N.D.	N.D.
AROCLOR-1221	8080	mg/kg	5000	N.D.	N.D.
AROCLOR-1232	8080	mg/kg	5000	N.D.	N.D.
AROCLOR-1242	8080	mg/kg	2000	N.D.	N.D.
AROCLOR-1248	8080	mg/kg	2000	N.D.	N.D.
AROCLOR-1254	8080	mg/kg	1000	N.D.	N.D.
AROCLOR-1260	8080	mg/kg	1000	N.D.	N.D.

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit

N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.

J: Reported between PQL and MDL.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

OH. Remediation Services Corp.

CHAIN-OF-CUSTODY RECORD

APCL # 01603

TRANSFER 1
Form 0019
Field Technical Services
Rev. 08/89

201969

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526

PROJECT NAME	PROJECT LOCATION
UST 9002 / 9001	MCAS EL TORO

PROJ. NO.	PROJECT CONTACT	PROJECT TELEPHONE NO.
18609	THIZAR TINTUT-WILLIAMS	(714) 263-1146

CLIENT'S REPRESENTATIVE	PROJECT MANAGER/SUPERVISOR
LYNN HORNECKER, SWDIV	BILL SEDLAK, OHM

ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS): ~~8015M (gasoline)~~ (B) 8020 (BTEX) 8015M (full range) Diesel (B) ~~418.1~~ (B) ~~8260~~ (B) 1312-SPLP-Hold

APCL Chino Hills, CA

ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS		~~8015M (gasoline)~~ (B)	8020 (BTEX)	8015M (full range)	~~418.1~~ (B)	~~8260~~ (B)	1312-SPLP-Hold		REMARKS
1	18609-2-143	2/26/97	1339		X	Tank 9001 - Bottom - NE side (c) 10'	1		X	X				X		
2	18609-2-144		1342		X	Tank 9001 and 9002 - Bottom - middle (c) 10'	1		X	X				X		
3	18609-2-~~145~~ 146 (B)		1343		X	Tank 9002 and 9001 - Bottom - middle (c) 10'	1		X	X				X		
4	18609-2-~~146~~ 145 (B)		1346		X	Tank 9002 - Bottom - SW side (c) 10'	1		X	X				X		
5	18609-2-147		1407		X	Tank 9001 - Side - NW wall (c) 9'	1		X	X				X		
6	18609-2-148		1409		X	Tank 9001 - Side - SE wall (c) 9'	1		X	X				X		
7	18609-2-149		1410		X	Tank 9002 - Side - NW wall (c) 9'	1		X	X				X		
8	18609-2-150		1411		X	Tank 9002 - Side - SE wall (c) 9'	1		X	X				X		
9	18609-2-151		1413		X	Tank 9001 - Side - NE wall (c) 9'	1		X	X				X		
10	18609-2-152		1414		X	Tank 9002 - Side - SW wall (c) 9'	1		X	X				X		

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1	1-10	[signature]	Joan Carlos Rel[illegible]	2/26/97	15:00
2					
3					
4					

REMARKS
1.) 24h TAT
2.) Perform SPLP if TPH (8015M full range) ≥ 10,000 ppm
3.) Analytical WBS # 0200971

SAMPLER'S SIGNATURE [signature] 2/26/~~96~~ 97

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
OHM Remediation Services (Irvine)
Attention: Mary Schneider
2031 Main St.
Irvine CA 92714
Tel: (714)263-1146 Fax: (714)263-1147

Service ID #: 801-971603B
Collected by:
Collected on: 02/26/97

Received: 02/26/97
Extracted: 02/27/97
Tested: 02/27/97
Reported: 02/28/97

Sample Description: Soil and Water
Project Description: 18609 UST 9002/9001

Analysis of Soil Samples†

Component Analyzed	Method	Unit	PQL	Analysis Result 18609-2-143 97-01603-1	18609-2-144 97-01603-2	18609-2-146 97-01603-3	18609-2-145 97-01603-4
MOISTURE, PERCENT IN SOIL	ASTM-D2216	%Moisture	0.5	5.1	7.5	7.1	8.5
BENZ. TOLU. XYLEN. ETHYLBENZ. (BTXE)							
Dilution Factor	8020			1	1	1	1
BENZENE	8020	µg/kg	5	< 5.3	< 5.4	< 5.4	< 5.5
ETHYLBENZENE	8020	µg/kg	5	< 5.3	< 5.4	< 5.4	< 5.5
TOLUENE	8020	µg/kg	5	< 5.3	< 5.4	< 5.4	< 5.5
O-XYLENE	8020	µg/kg	5	< 5.3	< 5.4	< 5.4	< 5.5
M/P-XYLENE	8020	µg/kg	10	< 11	< 11	< 11	< 11
Dilution Factor	M8015E			1	1	1	1
TPH AS DIESEL	M8015E	mg/kg	10	120	94	18	52
TPH AS MOTOR OIL	M8015E	mg/kg	10	180	190	78	130

Component Analyzed	Method	Unit	PQL	Analysis Result 18609-2-147 97-01603-5	18609-2-148 97-01603-6	18609-2-149 97-01603-7
MOISTURE, PERCENT IN SOIL	ASTM-D2216	%Moisture	0.5	11.3	9.8	7.9
BENZ. TOLU. XYLEN. ETHYLBENZ. (BTXE)						
Dilution Factor	8020			1	1	1
BENZENE	8020	µg/kg	5	< 5.6	< 5.5	< 5.4
ETHYLBENZENE	8020	µg/kg	5	< 5.6	< 5.5	< 5.4
TOLUENE	8020	µg/kg	5	< 5.6	< 5.5	< 5.4
O-XYLENE	8020	µg/kg	5	< 5.6	< 5.5	< 5.4
M/P-XYLENE	8020	µg/kg	10	< 11	< 11	< 11
FUEL FINGER PRINT, C8 – C40						
Dilution Factor	M8015E			1	1	1
TPH AS DIESEL	M8015E	mg/kg	10	120	20	47
TPH AS MOTOR OIL	M8015E	mg/kg	10	223	110	200

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 18609-2-150 97-01603-8	18609-2-151 97-01603-9	18609-2-152 97-01603-10
MOISTURE, PERCENT IN SOIL	ASTM-D2216	%Moisture	0.5	6.6	6.3	9.1
BENZ. TOLU. XYLEN. ETHYLBENZ. (BTXE)						
Dilution Factor	8020			1	1	1
BENZENE	8020	µg/kg	5	<5.4	<5.3	<5.5
ETHYLBENZENE	8020	µg/kg	5	<5.4	<5.3	<5.5
TOLUENE	8020	µg/kg	5	<5.4	<5.3	<5.5
O-XYLENE	8020	µg/kg	5	24	<5.3	<5.5
M/P-XYLENE	8020	µg/kg	10	15	<11	<11
FUEL FINGER PRINT, C8 - C40						
Dilution Factor	M8015E			1	1	1
TPH AS DIESEL	M8015E	mg/kg	10	77	<11	32
TPH AS MOTOR OIL	M8015E	mg/kg	10	210	180	130

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
† All metals and organic results are reported on dry basis for soil samples.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory

Wet Analysis Results for Method ASTM-D2216

Client Name: OHM Remediation Services (Irvine) Project No: 18609 Anal. Method ASTM-D2216
Project ID: UST 9002/9001 Service ID: 971603 Collected by:

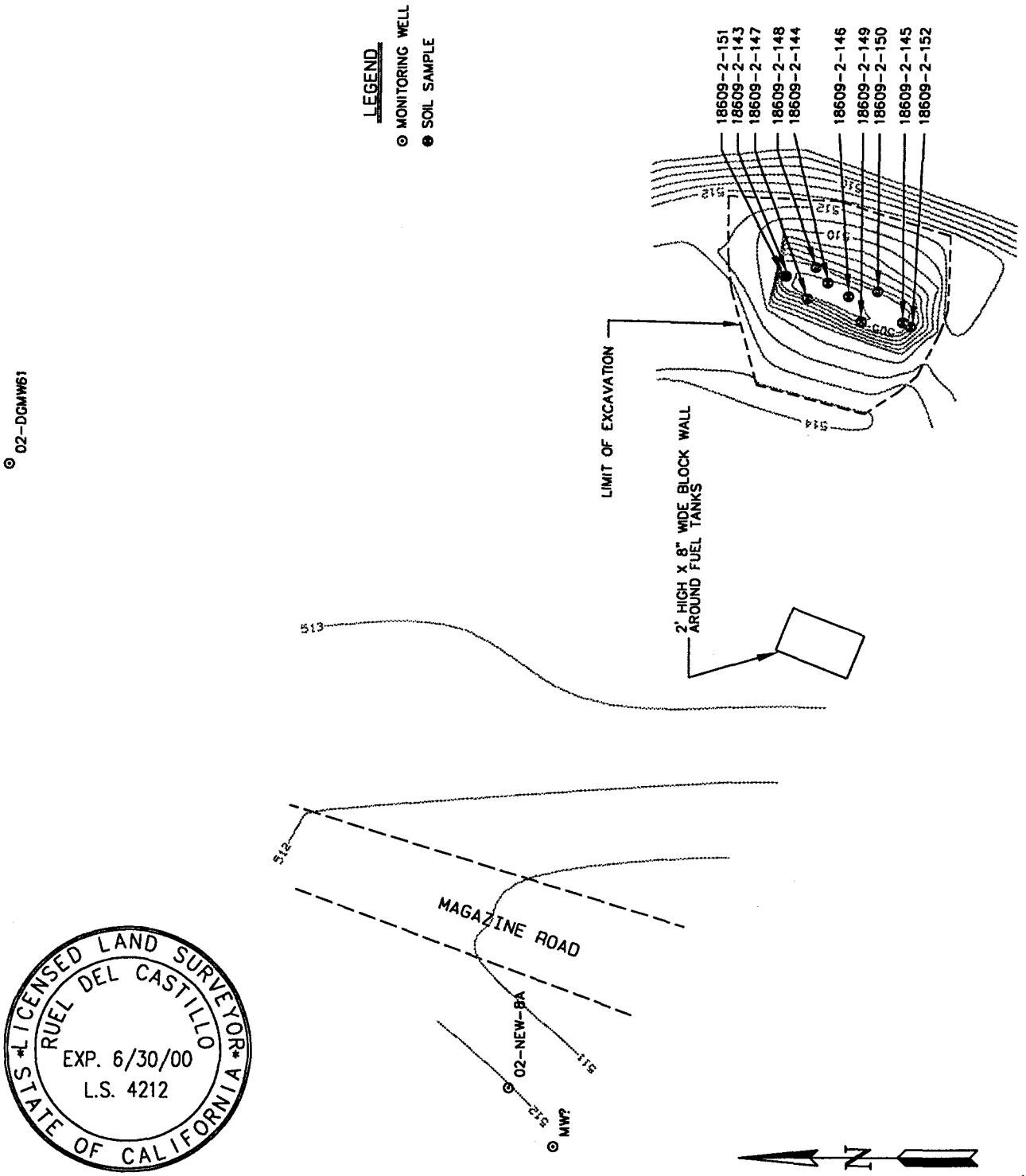
Component Name: PERCENT MOISTURE
CAS No: 7732-18-5

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
97-1603-1	18609-2-143	Soil	02/26/97	02/26/97	02/27/97	97W1818	%Moisture	0.5	5.1	
97-1603-2	18609-2-144	Soil	02/26/97	02/26/97	02/27/97	97W1818	%Moisture	0.5	7.5	
97-1603-3	18609-2-146	Soil	02/26/97	02/26/97	02/27/97	97W1818	%Moisture	0.5	7.1	
97-1603-4	18609-2-145	Soil	02/26/97	02/26/97	02/27/97	97W1818	%Moisture	0.5	8.5	
97-1603-5	18609-2-147	Soil	02/26/97	02/26/97	02/27/97	97W1818	%Moisture	0.5	11.3	
97-1603-6	18609-2-148	Soil	02/26/97	02/26/97	02/27/97	97W1818	%Moisture	0.5	9.8	
97-1603-7	18609-2-149	Soil	02/26/97	02/26/97	02/27/97	97W1818	%Moisture	0.5	7.9	
97-1603-8	18609-2-150	Soil	02/26/97	02/26/97	02/27/97	97W1818	%Moisture	0.5	6.6	
97-1603-9	18609-2-151	Soil	02/26/97	02/26/97	02/27/97	97W1818	%Moisture	0.5	6.3	
97-1603-10	18609-2-152	Soil	02/26/97	02/26/97	02/27/97	97W1818	%Moisture	0.5	9.1	
97-1603-12	18609-672-140	Soil	02/26/97	02/26/97	02/27/97	97W1818	%Moisture	0.5	11.9	
97-1603-13	18609-672-141	Soil	02/26/97	02/26/97	02/27/97	97W1818	%Moisture	0.5	10.9	
97-1603-14	18609-672-142	Soil	02/26/97	02/26/97	02/27/97	97W1818	%Moisture	0.5	6.6	

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

002350

Appendix C
Land Surveying Report and Soil Sample Locations



THIS REPRESENTS A SURVEY DONE UNDER MY SUPERVISION

RUEL DEL CASTILLO, L.S. 4212

JOB # 5232	UST 9001 & 9002	Towill, inc.
DATE 4/29/97	MCAS EL TORO	15405 Redhill Avenue, Suite A
SCALE 1"=40'		Tustin, CA. 92680 (714) 566-9280
SHEET 1 OF 1		

Towill, Inc.
15405 Redhill, Suite A
Tustin, Ca 92780
(714) 566-9280
Tue Apr 29 13:34:38 1997

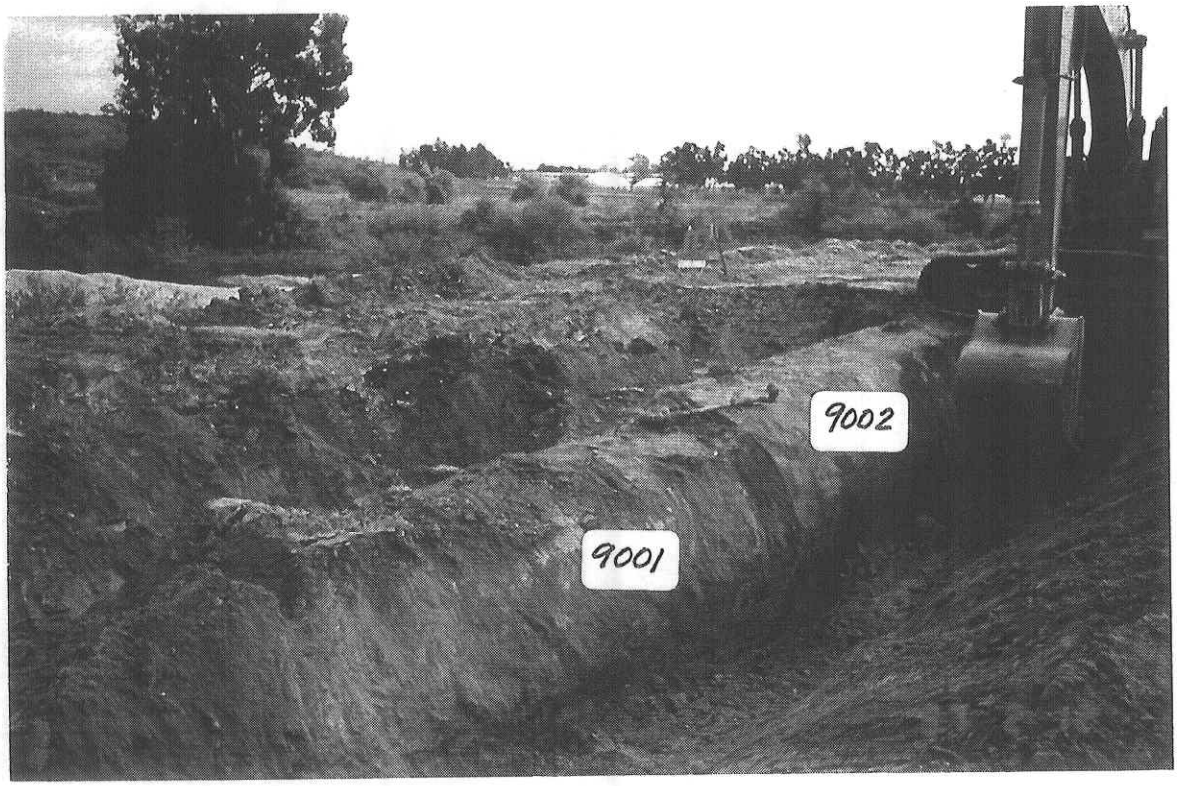
UST 9001 & 9002 PROJECT: G:\SURV\965232\MAIN.PRO

Point Coordinates Listing

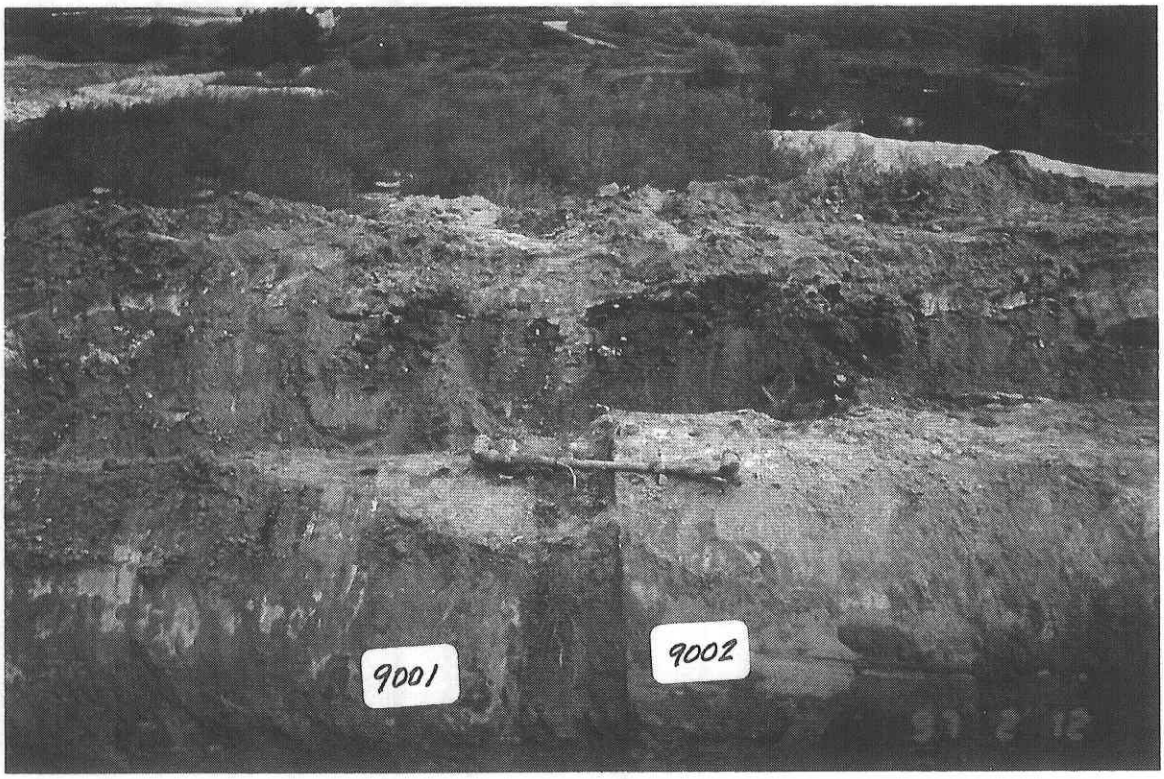
Point	North	East	Elev	Name
187	2190401.086	6120749.820	514.18	+ ON 02-DGMW61
20636	2190268.124	6120583.427	512.07	02-NEW-8A PAD
20637	2190256.450	6120568.057	512.13	MW? PAD
20638	2190323.909	6120635.718	511.86	% EP
20648	2190235.940	6120602.517	510.08	! EP
20649	2190222.064	6120625.677	510.07	% EP
20659	2190273.645	6120626.918	511.02	MAGAZINE ROAD
20660	2190325.509	6120657.819	512.08	! EP
20664	2190399.491	6120747.650	514.11	02-DGMW61 PAD
20665	2190198.239	6120698.427	513.72	% WAB % CLS
20666	2190179.790	6120690.997	513.40	WAB
20667	2190175.247	6120702.097	513.50	WAB
20669	2190193.800	6120709.537	513.74	! WAB ! CLS
20670	2190176.257	6120760.648	514.07	% LIMIT % CLS
20674	2190204.039	6120768.198	514.08	LIMIT
20675	2190210.941	6120793.838	513.51	LIMIT
20676	2190211.638	6120800.519	511.82	LIMIT
20677	2190211.801	6120817.939	512.74	LIMIT
20678	2190183.087	6120816.598	512.57	LIMIT
20679	2190153.922	6120807.468	512.70	LIMIT
20680	2190154.493	6120788.038	512.62	LIMIT
20684	2190156.504	6120782.118	511.52	LIMIT
20685	2190162.378	6120770.568	512.33	LIMIT
20686	2190167.162	6120766.528	513.69	! LIMIT ! CLS
20687	2190166.591	6120775.738	510.52	% GB
20688	2190183.287	6120781.608	510.30	GB
20689	2190201.468	6120787.958	510.99	GB
20690	2190196.774	6120808.808	509.90	GB
20692	2190176.593	6120801.358	508.40	GB
20693	2190157.100	6120793.858	509.99	! GB
20694	2190163.327	6120790.418	506.79	% GB
20695	2190180.125	6120796.918	506.27	GB
20696	2190196.041	6120803.358	506.47	! GB
20697	2190197.950	6120799.978	504.43	% GB % CLS
20698	2190197.758	6120794.118	504.19	GB
20699	2190182.850	6120788.978	503.64	GB
20704	2190167.004	6120782.098	504.24	GB
20714	2190165.051	6120787.088	504.42	GB
20715	2190179.906	6120793.738	503.88	! GB ! CLS
20716	2190196.600	6120796.748	504.44	18609-2-143
20717	2190185.832	6120794.998	502.88	18609-2-144/145
20835	2190166.226	6120784.508	504.59	18609-2-146
20836	2190190.981	6120790.878	505.70	18609-2-147
20837	2190188.904	6120799.098	504.46	18609-2-148
20838	2190176.972	6120784.688	504.25	18609-2-149
20839	2190172.752	6120792.718	504.86	18609-2-150
20840	2190197.149	6120796.768	505.42	18609-2-151
20841	2190164.162	6120783.348	505.82	18609-2-152
20842	2190229.853	6120815.999	512.63	NG
20843	2190229.797	6120827.289	506.90	NG
20844	2190193.242	6120830.689	507.02	NG
20845	2190136.708	6120811.808	506.15	NG
20846	2190136.842	6120800.418	511.87	NG
20847	2190147.984	6120766.777	511.40	NG
20848	2190156.226	6120736.127	513.65	NG
20849	2190201.345	6120745.188	513.81	NG
20850	2190226.775	6120771.998	514.01	NG

Appendix D
Site Photographs

Photograph No. 1: Excavation of USTs 9001 and 9002



Photograph No. 2: Excavation of USTs 9001 and 9002



Photograph No. 3: USTs 9001 and 9002 Exposed

Photograph No. 4: UST Contents Sampled

Photograph No. 5: UST 9001 Being Loaded for Transport

Photograph No. 6: UST 9002 Being Removed from Excavation

Appendix E
Tank Disposal Waste Manifests

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. C.A.L.1.7.0.0.2.3.2.0.8	Manifest Document No.	2. Page 1 1 of 1	

3. Generator's Name and Mailing Address
[illegible]
[illegible]
[illegible] 42708-[illegible]

4. Generator's Phone (714) 726-2112

5. Transporter 1 Company Name: Van Dyke Oil Inc	6. US EPA ID Number	
7. Transporter 2 Company Name	8. US EPA ID Number	
9. Designated Facility Name and Site Address: AMR [illegible] [illegible] [illegible] [illegible]	10. US EPA ID Number: C.A.D.[illegible]	A. Transporter's Phone (909) 877-2513 B. Transporter's Phone C. Facility's Phone (909) 390-3700

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. [illegible]	0.0.2	T.P	[illegible]	P
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Tanks and Tank [illegible] to AMR for [illegible].

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
E. VENAVENTE	[signature]	2	28	97

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
DELROY POWELL	Delroy Powell	2	28	97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

GENERATOR

TRANSPORTER

FACILITY

COPY

2 BUS 06 Rev 4/94