M60050.002515
MCAS EL TORO
SSIC #5090.3

Addendum to Site Assessment Report

Firefighter Training Burn Pit MSC B1
Marine Corps Air Station
El Toro, California

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M60050.002515
MCAS EL TORO
SSIC # 5090.3

SITE ASSESSMENT REPORT
FIREFIGHTER TRAINING BURN PIT
MISCELLANEOUS SITE OF CONCERN (MSC) B1

DATED 11 FEBRUARY 2000

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A Subsidiary of OHM Corporation

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Abbreviations and Acronyms

BRAC	Base Realignment and Closure Act
BTEX	benzene, toluene, ethylbenzene and total xylenes
CA LUFT	California Leaking Underground Fuel Tank
CAM	California Assessment Metals
CDM	Camp, Dresser & McKee, Inc.
DCN	Document Control Number
DO	Delivery Order
EPA	U.S. Environmental Protection Agency
ft/ft	foot 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.
PRG	preliminary remediation goals, EPA Region 9
ROICC	Resident Officer In Charge of Construction
RWQCB	California Regional Water Quality Control Board
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

The purpose of this Addendum is to provide additional information pertaining to the Former Burn Pit, Miscellaneous Site of Concern (MSC) B1 (hereinafter referred to as MSC B1), at the Marine Corps Air Station El Toro, California (hereinafter referred to as the Station). Field sampling was conducted at the former MSC B1 site in response to comments received from the California Regional Water Quality Control Board (RWQCB) Santa Ana Region in October 2000. 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.

In December 1999, OHM performed field activities at the MSC B1 site. Four soil borings were advanced in the vicinity of the MSC B1 (MSC B1 SB-01 through MSC B1 SB-04). TPH as gas or diesel was not detected at or exceeding the laboratory reporting limits in soil samples collected from borings MSC B1 SB-01 through MSC B1 SB-04. No volatile organic compound (VOC) analytes, including methyl tert-butyl ether (MTBE), were detected at or exceeding the laboratory reporting limits in the soil samples collected from borings. OHM submitted *Summary Report, Firefighter Training Burn Pit MSC B1, Marine Corps Air Station, El Toro* in February 2000 (Appendix A).

The RWQCB reviewed the summary report and requested additional borings in the center of the MSC B1 in a letter dated October 10, 2000 (Appendix B). OHM advanced two soil borings near the center of MSC B1 in November 2000 (MSC B1 SB-05 and MSC B1 SB-06) (Figure 2-1). The sampling strategy for MSC B2 was utilized for MSC B1 site because of the similarities in usage and close proximity of the two sites. A copy of the response to the RWQCB comments is provided in Appendix B.

The former MSC B1 site is located in the Northwest quadrant of the Station, northwest of the Bee Canyon Wash, and southeast of Marshburn Channel, approximately 90 feet southeast of the Installation Restoration Program (IRP) Site 16, as shown in Figure 1-1. MSC B1 was a concrete-lined burn pit used for the fire training until closure of the Station in July 1999. Historical and background information pertaining to former MSC B1 and IRP Site 16 is provided in the *Summary Report,* February 2000 (Appendix A).

On October 23, 2000, the concrete basin of MSC B1 was demolished and the concrete transported off site by a Navy contractor MSC B1 is now an unpaved, level area. Photographs of MSC B1 site are provided in Appendix C.

Section 2
Field Activities

OHM advanced two (2) soil borings on November 17, 2000, (MSC B1 SB-05 and MSC B1-SB06) near the center of the former pit area, as requested by the RWQCB. Locations of these soil borings were selected and placed using land survey data and are shown on Figure 2-1. A summary of field activities is provided in this section.

Drilling and Soil Sampling Techniques

BC^2 Environmental Corporation (an OHM subcontractor) advanced these borings with a CME 75 drill rig using hollow-stem auger techniques. The drilling rig was decontaminated with a pressure washer between each boring. On November 17, 2000, OHM advanced two soil borings, MSC B1 SB-05 and MSC B1 SB-06, near the center of former MSC B1 to depths of approximately 10 and 4 feet below ground surface, respectively. A total of eight soil samples (including one duplicate sample) were collected from two soil borings using a California-modified splitspoon sampler. The sampling equipment was decontaminated between each boring location and between each sample interval. Samples were collected from depths of 15.5, 40.5, 70.5, and 100.5 below ground surface at MSC B1 SB-05 and from depths of 15.5, 30.5 and 40.5 below ground surface at MSC B1 SB-06. Soil samples collected from the borings were submitted for laboratory analysis. Following the completion of sampling activities, the soil borings were backfilled with cement-bentonite grout. Boring locations are shown in Figure 2-1. The field boring logs, describing soils underlying the site and indicating soil sample collection intervals, are presented in Appendix D.

Sample Tracking and Analytical Methods

Sample handling, chain-of-custody documentation, and packaging was conducted in accordance with the procedures described in the approved *Final Work Plan* (OHM, 1995).

The soil samples were analyzed for:

- Total petroleum hydrocarbons (TPH-extractable and purgeable) as JP-5, diesel and gasoline using CA LUFT Method 8015 Modified
- CAM by U.S. Environmental Protection Agency (EPA) Method 6010A
- Mercury by EPA Method 7471A
- VOCs, including MTBE, using EPA Method 8260A.

Analytical Results

TPH as gas and TPH as diesel were not detected at or exceeding the laboratory reporting limits. VOC analytes, including MTBE were not detected at or exceeding the laboratory reporting limits in the soil samples collected from borings MSC B1 SB-05 and

MSC B1 SB-06. With the exception of arsenic, CAM metals were detected at concentrations below the current EPA Region 9 PRGs; dated November 1, 2000. Arsenic was detected in soil samples at concentrations ranging from 0.605 mg/kg to a maximum concentration of 4.91 mg/kg (sample number 18609-3272A), which exceeds the industrial PRG levels (2.7 mg/kg).
However, the concentrations of arsenic detected are less than the established background concentration levels of 6.86 mg/kg (BNI, 1997) for the station.

These results do not indicate that a release has occurred from the former MSC B1 site to the vadose zone. A summary of the analytical results of the soil samples collected from the verification borings, the background concentrations and PRGs are presented in Table 2-1 and summarized in Figure 2-1. Laboratory analytical reports are provided in Appendix E, Laboratory Analytical Reports.

Quality Assurance/Quality Control

Field quality assurance/quality control (QA/QC) samples were collected during sampling activities to evaluate the consistency and accuracy of the analytical data. Field QC samples for the MSC B1 investigation consisted of equipment rinsate, soil sample duplicate, and trip blank samples as follows:

- One duplicate soil sample was collected.
- Trip blank samples were collected at a frequency of 1 blank for each cooler containing samples for VOC analysis.

Section 3
Findings and Recommendations

The following observations and conclusions are based upon information from the OHM *Summary Report, Firefighter Training Burn Pit MSC B1, Marine Corps Air Station, El Toro* and soil sampling data from the two verification soil borings:

- MSC B1 was a concrete-lined burn pit used for the fire training until closure of the Station on July 2, 1999. The concrete basin was removed in October 2000 and MSC B1 is now an unpaved, level area.
- In response to the RWQCB comments, OHM drilled two soil borings near the center of former MSC B1.
- TPH as gas, TPH as diesel, VOC analytes, including MTBE were not detected at or exceeding laboratory reporting limits in the soil samples collected from borings MSC B1 SB-05 and MSC B1 SB-06.
- With the exception of arsenic, CAM metals were detected at concentrations below the current EPA Region 9, PRG values. Arsenic was detected at a maximum concentration of 4.91 mg/kg (sample number 18609-3272A), which is less than the established background concentration levels of 6.86 mg/kg (BNI, 1997) for the Station.

Based on previously presented information in the *Summary Report* dated February 2000, the results of the field sampling activities that were conducted in November 2000, and the absence of evidence that a release of petroleum hydrocarbons, VOCs, and CAM metals occurred at the former MSC B1 site, it is recommended that No Further Action status be requested for the former MSC B1 (Burn Pit) site.

Section 4
References

Bechtel National Inc., 1997, *Draft Final Phase II Remedial Investigation Report, OU-3A Sites, MCAS El Toro, California,* June 1997.

BNI, see Bechtel National Inc.

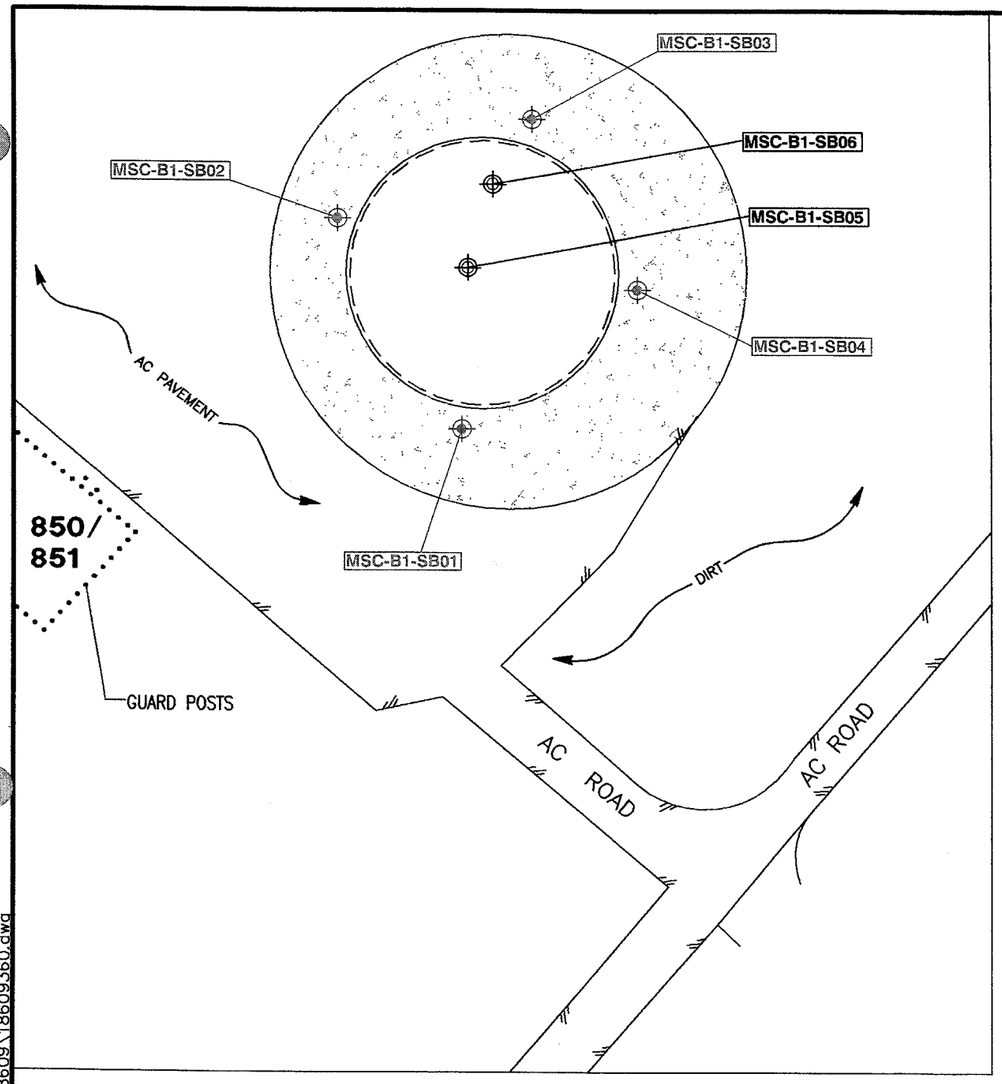
OHM, see OHM Remediation Services Corp.

OHM Remediation Services Corp., 1995, *Final Work Plan, Remediation of Various Underground Storage Tanks at the Marine Corps Air Station El Toro, California.*

OHM Remediation Services Corp., 2000, *Site Assessment Report, Firefighter Training Burn Pit MSC B1, Marine Corps Air Station El Toro, California.*

U.S. Environmental Protection Agency 2000, Region 9 Preliminary Remediation Goals (PRGs) November.

Figures



SAMPLE LOCATION AND ANALYTICAL DATA SUMMARY

BORING NUMBER / LOCATION: Northing (NAD 83)	Easting (NAD 83)	Elev (feet msl)	SAMPLE: Number	Depth (feet bgs)	TPH as (CalLuft 8015m): Diesel mg/kg	Gasoline mg/kg	Metals: Mercury (EPA 7471A) mg/kg	VOCs (EPA Method 8260A): Acetone µg/kg	Benzene µg/kg	Ethylbenzene µg/kg	Methyl tert-butyl ether µg/kg	Toluene µg/kg	Total Xylenes µg/kg
MSC B1 SB01													
219667.01	6110788.26	329.3	20242-1031	15.0	11 U	1.1 U	.11 U	55 U	5.5 U	5.5 U	11 U	5.5 U	5.5 g
			20242-1032	40.0	12 U	1.2 U	.119 U	60 U	6 U	6 U	12 U	6 U	6 U
			20242-1033	70.0	11 U	1.1 U	.106 U	53 U	5.3 U	5.3 U	11 U	5.3 U	5.3 U
			20242-1034	100.0	13 U	1.3 U	.134 U	67 U	6.7 U	6.7 U	13 U	6.7 U	6.7 U
MSC B1 SB02													
219722.63	6110755.75	329.34	20242-1049	15.0	10 U	1 U	.103 U	52 U	5.2 U	5.2 U	10 U	5.2 U	5.2 U
			20242-1050	40.0	12 U	1.2 U	.125 U	62 U	6.2 U	6.2 UJ	12 UJ	6.2 U	6.2 U
			20242-1051 (Dup)	40.5	11 U	1.1 U	.112 U	25 J	5.6 U	5.6 U	11 U	5.6 U	5.6 U
			20242-1052	60.0	12 U	1.2 U	.115 U	58 U	5.8 U	5.8 U	12 U	5.8 U	5.8 U
MSC B1 SB03													
2192748.78	6110806.87	329.48	20242-1043	15.0	11 U	1.1 U	.106 U	53 U	5.3 U	5.3 U	11 U	5.3 U	5.3 U
			20242-1044	40.0	12 U	1.2 U	.116 U	58 U	5.8 U	5.8 U	12 U	5.8 U	5.8 U
			20242-1045	70.0	11 U	1.1 U	.114 U	57 U	5.7 U	5.7 U	11 U	5.7 U	5.7 U
			20242-1048	100.0	11 U	1.1 U	.112 U	56 U	5.6 U	5.6 UJ	11 U	5.6 U	5.6 U
MSC B1 SB04													
2192703.85	6110834.54	329.44	20242-1037	15.0	10 U	1 U	.105 U	52 U	5.2 U	5.2 U	10 U	5.2 U	5.2 U
			20242-1038	40.0	12 U	1.2 U	.116 U	58 U	5.8 U	5.8 U	12 U	5.8 U	5.8 U
			20242-1039	70.0	11 U	1.1 U	.108 U	54 U	5.4 U	5.4 U	11 U	5.4 U	5.4 U
			20242-1040	100.0	11 U	1.1 U	.114 U	57 U	5.7 U	5.7 U	11 U	5.7 U	5.7 U
			20242-1041 (Dup)	100.5	11 U	1.1 U	.112 U	56 U	5.6 U	5.6 U	11 U	5.6 U	5.6 U
MSC B1 SB05													
2192709.60	6110789.91		18609-3263A	15.5	10 U	1.02 U	.102 U	51 U	5.1 U	5.1 U	10 U	5.1 U	5.1 U
			18609-3265A	40.5	12 U	1.17 U	.117 U	58 U	5.8 U	5.8 U	12 U	5.8 U	5.8 U
			18609-3266A	70.5	11 U	1.06 U	.106 U	53 U	5.3 U	5.3 U	11 U	5.3 U	5.3 U
			18609-3268A	100.5	11 U	1.13 U	.113 U	56 U	5.6 U	5.6 U	11 U	5.6 U	5.6 U
MSC B1 SB06													
2192731.60	6110796.61		18609-3270A	15.5	11 U	1.07 U	.107 U	54 U	5.4 U	5.4 U	11 U	5.4 U	5.4 U
			18609-3271A	30.5	14 U	1.37 U	.137 U	69 U	6.9 U	6.9 U	14 U	6.9 U	6.9 U
			18609-3272A (Dup)	30.0	14 U	1.37 U	.137 U	68 U	6.8 U	6.8 U	14 U	6.8 U	6.8 U
			18609-3273A	40.5	12 U	1.2 U	.12 U	60 U	6 U	6 U	12 U	6 U	6 U

Explanation:
NAD 83 - North American Datum, 1983
ft msl - Feet above mean sea level datum
ft bgs - Feet below ground surface
CA LUFT - California leaking underground fuel tank
EPA - US Environmental Protection Agency
J - estimated value
M - modified
mg/kg - milligrams per kilogram
SB - soil boring
TPH - total petroleum hydrocarbons
µg/kg - micrograms per kilogram
TPH - total petroleum hydrocarbons
U - not detected at or above the stated reporting limit
UJ - estimated reporting limit

EXPLANATION:

SAMPLE POINTS, NOVEMBER 2000

SAMPLE POINTS, DECEMBER 1999

EDGE OF PAVEMENT

DATE OF SURVEY: 12-14-99

N

GRAPHIC SCALE

0 20 40 80

(IN FEET)

REVISIONS			
REV. No.	DESCRIPTION	DATE	APPROVED
01	97102MSC-B1.DWG BY CALVADA SURVEYING INC.	2/14/99	

CONTRACT NAME: SWDIV

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

DRAWN BY: R. PIRMORADIAN DATE: 2/7/01
CHECKED BY: J. Erickson DATE: 2/15/01
APPROVED BY: for D. Rawal DATE: 2/15/01
PROJECT MANAGER DATE

AUTOCAD FILE No. 18609360.DWG

SITE PLAN
FORMER BURN PIT MSC-B1
(NOVEMBER 2000)

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.
1"=40'	1	1	SW9490	18609	FIG 2-1

Feb 15, 2001 15:15:30 I:\OHM_CORP\PROJECTS\18609\18609360.dwg

Tables

Table 2-1
Summary of Analytical Results — MSC B1

Sample Identification					18609-3263A	18609-3265A	18609-3266A	18609-3268A	18609-3270A
Location Code					MSCB1-SB05	MSCB1-SB05	MSCB1-SB05	MSCB1-SB05	MSCB1-SB06
Date Sampled					11/17/00	11/17/00	11/17/00	11/17/00	11/17/00
Depth (feet below ground surface)					15.5	40.5	70.5	100.5	15.5
	Unit	**Background**	**Residential PRG**	**Industrial PRG**					
CA LUFT 8015M									
TPH as Diesel	mg/kg	NE	NE	NE	10 U	12 U	11 U	11 U	11 U
TPH as Gasoline	mg/kg	NE	NE	NE	1.02 U	1.17 U	1.06 U	1.13 U	1.07 U
TPH as JP-5	mg/kg	NE	NE	NE	10 U	12 U	11 U	11 U	11 U
EPA 8260									
1,1,1-Trichloroethane	µg/kg	NE	770000	1400000	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
1,1,2,2-Tetrachloroethane	µg/kg	NE	380	900	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
1,1,2-Trichloroethane	µg/kg	NE	840	1900	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
1,1-Dichloroethane	µg/kg	NE	3300	7100	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
1,1-Dichloroethene	µg/kg	NE	54	120	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
1,2-Dichloroethane	µg/kg	NE	350	760	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
1,2-Dichloropropane	µg/kg	NE	350	770	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
2-Butanone (MEK)	µg/kg	NE	7300000	28000000	51 U	58 U	53 U	56 U	54 U
2-Chloroethyl vinyl ether	µg/kg	NE	NE	NE	51 U	58 U	53 U	56 U	54 U
2-Hexanone	µg/kg	NE	NE	NE	51 U	58 U	53 U	56 U	54 U
4-Methyl-2-pentanone (MIBK)	µg/kg	NE	790000	2900000	51 U	58 U	53 U	56 U	54 U
Acetone	µg/kg	NE	1600000	6200000	51 U	58 U	53 U	56 U	54 U
Benzene	µg/kg	NE	650	1500	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
Bromodichloromethane	µg/kg	NE	1000	2400	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
Bromoform	µg/kg	NE	62000	310000	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
Bromomethane	µg/kg	NE	3900	13000	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
Carbon disulfide	µg/kg	NE	360000	720000	10 U	12 U	11 U	11 U	11 U
Carbon tetrachloride	µg/kg	NE	240	530	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
Chlorobenzene	µg/kg	NE	150000	540000	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
Chloroethane	µg/kg	NE	3000	6500	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
Chloroform	µg/kg	NE	240	520	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
Chloromethane	µg/kg	NE	1200	2700	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
cis-1,2-Dichloroethene	µg/kg	NE	43000	150000	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
cis-1,3-Dichloropropene	µg/kg	NE	82	180	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
Dibromochloromethane	µg/kg	NE	1100	2700	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
Ethylbenzene	µg/kg	NE	230000	230000	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
Methyl tert-butyl ether (MTBE)	µg/kg	NE	17	37	10 U	12 U	11 U	11 U	11 U
Methylene chloride	µg/kg	NE	8900	21000	10 U	12 U	11 U	11 U	11 U

Table 2-1
Summary of Analytical Results — MSC B1

Sample Identification					18609-3263A	18609-3265A	18609-3266A	18609-3268A	18609-3270A
Location Code					MSCB1-SB05	MSCB1-SB05	MSCB1-SB05	MSCB1-SB05	MSCB1-SB06
Date Sampled					11/17/00	11/17/00	11/17/00	11/17/00	11/17/00
Depth (feet below ground surface)					15.5	40.5	70.5	100.5	15.5
	Unit	Background	Residential PRG	Industrial PRG					
Styrene	µg/kg	NE	1700000	1700000	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
Tetrachloroethene (PCE)	µg/kg	NE	5700	19000	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
Toluene	µg/kg	NE	520000	520000	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
trans-1,2-Dichloroethene	µg/kg	NE	63000	210000	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
trans-1,3-Dichloropropene	µg/kg	NE	82	180	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
Trichloroethene (TCE)	µg/kg	NE	2800	6100	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
Vinyl acetate	µg/kg	NE	430000	1400000	51 U	58 U	53 U	56 U	54 U
Vinyl chloride	µg/kg	NE	150	830	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
Xylenes (total)	µg/kg	NE	210000	210000	5.1 U	5.8 U	5.3 U	5.6 U	5.4 U
EPA 6010									
Aluminum	mg/kg	14800	76000	100000	2360	10500	4210	7460	2620
Antimony	mg/kg	3.06	31	820	10.2 U B	11.7 U B	10.6 U B	11.3 U B	10.7 U B
Arsenic	mg/kg	6.86	0.39	2.7	.605 J Y	1.93 Y	2.15 Y	1.55 Y	1.22 Y
Barium	mg/kg	173	5400	100000	25.7	188 B	82.4	88	35.3
Beryllium	mg/kg	0.669	150	2200	.0987 J	.393	.194 J	.358	.116 J
Cadmium	mg/kg	2.35	9.0	810	1.02 U	1.17 U	1.06 U	.238 J	1.07 U
Calcium	mg/kg	46000	NE	NE	5510	3020	3590	1890	3460
Chromium	mg/kg	26.9	210	450	4.2 J	14.2 J	6.88 J	10.6 J	5.52 J
Cobalt	mg/kg	6.98	4700	100000	1.55 U	4.56	2.63	5.09	1.72 U
Copper	mg/kg	10.5	2900	76000	22.3 B	8.56	5.98	5.73	10.7 B
Iron	mg/kg	18400	23000	100000	3530	15100	6690	9930	4050
Lead	mg/kg	15.1	400	750	1.03	2.67	1.53	2.83	.853 J
Magnesium	mg/kg	8370	NE	NE	1650	5100	2630	4970	1790
Manganese	mg/kg	291	1800	32000	76.2	142	131	166	81.1
Molybdenum	mg/kg	NE	390	10000	2.05 U	1.24 J	1.02 J	1.87 J	2.14 U
Nickel	mg/kg	15.3	150	41000	2.08	7.52	5.76	6.42	2.36
Potassium	mg/kg	4890	NE	NE	985	3060	1680	3070	1090
Selenium	mg/kg	0.32	390	10000	1.02 U B	1.17 U B	1.06 U B	1.13 U B	1.07 U B
Silver	mg/kg	0.539	390	10000	2.05 U B	2.33 U B	2.11 U B	2.26 U B	2.14 U B
Sodium	mg/kg	405	NE	NE	165 J	856 B	376 J	325 J	143 J
Thallium	mg/kg	0.42	5.2	130	1.02 U B	1.67 B	.836 J B	.936 J B	1.07 U B
Vanadium	mg/kg	71.8	550	14000	8.44	34.5	17.1	21	9.48
Zinc	mg/kg	77.9	23000	100000	23.4 J	46 J	21.4 J	30.7 J	21.5 J

Table 2-1
Summary of Analytical Results — MSC B1

Sample Identification					18609-3263A	18609-3265A	18609-3266A	18609-3268A	18609-3270A
Location Code					MSCB1-SB05	MSCB1-SB05	MSCB1-SB05	MSCB1-SB05	MSCB1-SB06
Date Sampled					11/17/00	11/17/00	11/17/00	11/17/00	11/17/00
Depth (feet below ground surface)					15.5	40.5	70.5	100.5	15.5
	Unit	**Background**	**Residential PRG**	**Industrial PRG**					
EPA 7471A									
Mercury	mg/kg	0.22	23	610	.102 U	.117 U	.106 U	.113 U	.107 U

Table 2-1
Summary of Analytical Results — MSC B1

Sample Identification					18609-3271A	18609-3272A (Dup)	18609-3273A
Location Code					MSCB1-SB06	MSCB1-SB06	MSCB1-SB06
Date Sampled					11/17/00	11/17/00	11/17/00
Depth (feet below ground surface)					30.5	30.0	40.5
	Unit	**Background**	**Residential PRG**	**Industrial PRG**			
CA LUFT 8015M							
TPH as Diesel	mg/kg	NE	NE	NE	14 U	14 U	12 U
TPH as Gasoline	mg/kg	NE	NE	NE	1.37 U	1.37 U	1.2 U
TPH as JP-5	mg/kg	NE	NE	NE	14 U	14 U	12 U
EPA 8260							
1,1,1-Trichloroethane	µg/kg	NE	770000	1400000	6.9 U	6.8 U	6 U
1,1,2,2-Tetrachloroethane	µg/kg	NE	380	900	6.9 U	6.8 U	6 U
1,1,2-Trichloroethane	µg/kg	NE	840	1900	6.9 U	6.8 U	6 U
1,1-Dichloroethane	µg/kg	NE	3300	7100	6.9 U	6.8 U	6 U
1,1-Dichloroethene	µg/kg	NE	54	120	6.9 U	6.8 U	6 U
1,2-Dichloroethane	µg/kg	NE	350	760	6.9 U	6.8 U	6 U
1,2-Dichloropropane	µg/kg	NE	350	770	6.9 U	6.8 U	6 U
2-Butanone (MEK)	µg/kg	NE	7300000	28000000	69 U	68 U	60 U
2-Chloroethyl vinyl ether	µg/kg	NE	NE	NE	69 U	68 U	60 U
2-Hexanone	µg/kg	NE	NE	NE	69 U	68 U	60 U
4-Methyl-2-pentanone (MIBK)	µg/kg	NE	790000	2900000	69 U	68 U	60 U
Acetone	µg/kg	NE	1600000	6200000	69 U	68 U	60 U
Benzene	µg/kg	NE	650	1500	6.9 U	6.8 U	6 U
Bromodichloromethane	µg/kg	NE	1000	2400	6.9 U	6.8 U	6 U
Bromoform	µg/kg	NE	62000	310000	6.9 U	6.8 U	6 U
Bromomethane	µg/kg	NE	3900	13000	6.9 U	6.8 U	6 U
Carbon disulfide	µg/kg	NE	360000	720000	14 U	14 U	12 U
Carbon tetrachloride	µg/kg	NE	240	530	6.9 U	6.8 U	6 U
Chlorobenzene	µg/kg	NE	150000	540000	6.9 U	6.8 U	6 U
Chloroethane	µg/kg	NE	3000	6500	6.9 U	6.8 U	6 U
Chloroform	µg/kg	NE	240	520	6.9 U	6.8 U	6 U
Chloromethane	µg/kg	NE	1200	2700	6.9 U	6.8 U	6 U
cis-1,2-Dichloroethene	µg/kg	NE	43000	150000	6.9 U	6.8 U	6 U
cis-1,3-Dichloropropene	µg/kg	NE	82	180	6.9 U	6.8 U	6 U
Dibromochloromethane	µg/kg	NE	1100	2700	6.9 U	6.8 U	6 U
Ethylbenzene	µg/kg	NE	230000	230000	6.9 U	6.8 U	6 U
Methyl tert-butyl ether (MTBE)	µg/kg	NE	17	37	14 U	14 U	12 U
Methylene chloride	µg/kg	NE	8900	21000	14 U	14 U	12 U

Table 2-1
Summary of Analytical Results — MSC B1

Sample Identification					18609-3271A	18609-3272A (Dup)	18609-3273A
Location Code					MSCB1-SB06	MSCB1-SB06	MSCB1-SB06
Date Sampled					11/17/00	11/17/00	11/17/00
Depth (feet below ground surface)					30.5	30.0	40.5
	Unit	**Background**	**Residential PRG**	**Industrial PRG**			
Styrene	µg/kg	NE	1700000	1700000	6.9 U	6.8 U	6 U
Tetrachloroethene (PCE)	µg/kg	NE	5700	19000	6.9 U	6.8 U	6 U
Toluene	µg/kg	NE	520000	520000	6.9 U	6.8 U	6 U
trans-1,2-Dichloroethene	µg/kg	NE	63000	210000	6.9 U	6.8 U	6 U
trans-1,3-Dichloropropene	µg/kg	NE	82	180	6.9 U	6.8 U	6 U
Trichloroethene (TCE)	µg/kg	NE	2800	6100	6.9 U	6.8 U	6 U
Vinyl acetate	µg/kg	NE	430000	1400000	69 U	68 U	60 U
Vinyl chloride	µg/kg	NE	150	830	6.9 U	6.8 U	6 U
Xylenes (total)	µg/kg	NE	210000	210000	6.9 U	6.8 U	6 U
EPA 6010							
Aluminum	mg/kg	14800	76000	100000	9770	16700 B	8530 J
Antimony	mg/kg	3.06	31	820	13.7 U B	13.7 U B	12 UJ B
Arsenic	mg/kg	6.86	0.39	2.7	1.97 Y	4.91 Y X	1.73 Y
Barium	mg/kg	173	5400	100000	155	209 B	269 B
Beryllium	mg/kg	0.669	150	2200	.401	.741 B	.44
Cadmium	mg/kg	2.35	9.0	810	.324 J	1.37 U	.674 J
Calcium	mg/kg	46000	NE	NE	9190	10200	4770
Chromium	mg/kg	26.9	210	450	11.6 J	17.7 J	12.2 J
Cobalt	mg/kg	6.98	4700	100000	6.23	8.67 B	4.78
Copper	mg/kg	10.5	2900	76000	24.2 B	25.5 B	8.46
Iron	mg/kg	18400	23000	100000	14100	22500 B	12200 J
Lead	mg/kg	15.1	400	750	2.11	3.96	2.74
Magnesium	mg/kg	8370	NE	NE	7090	11200 B	4840
Manganese	mg/kg	291	1800	32000	277	353 B	241 J
Molybdenum	mg/kg	NE	390	10000	2.08 J	1.27 J	2.4 U
Nickel	mg/kg	15.3	150	41000	8.03	10.7	11.3
Potassium	mg/kg	4890	NE	NE	4710	6380 B	2760
Selenium	mg/kg	0.32	390	10000	1.37 U B	1.37 U B	1.2 U B
Silver	mg/kg	0.539	390	10000	2.75 U B	2.73 U B	2.4 U B
Sodium	mg/kg	405	NE	NE	483 J B	980 B	865 B
Thallium	mg/kg	0.42	5.2	130	1.15 J B	2.01 B	1.56 B
Vanadium	mg/kg	71.8	550	14000	28.5	49.1	24.9
Zinc	mg/kg	77.9	23000	100000	63.9 J	93.6 J B	39.5 J

Table 2-1
Summary of Analytical Results — MSC B1

Sample Identification					18609-3271A	18609-3272A (Dup)	18609-3273A
Location Code					MSCB1-SB06	MSCB1-SB06	MSCB1-SB06
Date Sampled					11/17/00	11/17/00	11/17/00
Depth (feet below ground surface)					30.5	30.0	40.5
	Unit	**Background**	**Residential PRG**	**Industrial PRG**			
EPA 7471A							
Mercury	mg/kg	0.22	23	610	.137 U	.137 U	.12 U

Table 2-1
Summary of Analytical Results — MSC B1

B - result exceeds established background limits
CA LUFT - California Leaking Underground Fuel Tank
EPA - United States Environmental Protection Agency
J - estimated
M - Modified
MDL - method detection limit
mg/kg - milligrams per kilogram
NA - not analyzed
NE - not established
OHM - OHM Remediation Services Corp.
PRG - Preliminary Remediation Goal, EPA Region IX, November 2000
R - rejected data
RDL - reporting detection limit
SB - soil boring
TPH - total petroleum hydrocarbons
U - not detected above or equal to the stated reporting limit. In cases where RDL exceeded the target cleanup level, the MDL, rather than the RDL, was used to assess the data. When concentrations exceeded the MDLs but were below the RDLs, the laboratory flagged the results with the qualifier "J". When the concentrations were below the MDLs, the results were reported at the RDLs and flagged with the qualifier "U". The MDLs for all analytes met the target cleanup levels.
X - result exceeds industrial PRGs
Y - result exceeds residential PRGs
µg/kg - micrograms per kilogram

Table 2-1
Summary of Analytical Results — MSC B1

Sample Identification Location Code Date Sampled	Unit	18609-3262A Trip Blank 11/17/00	18609-3269A Equipment Rinsate 11/17/00
CA LUFT 8015M			
TPH as Diesel	mg/L	NA	.096 U
TPH as Gasoline	mg/L	.1 U	.1 U
TPH as JP-5	mg/L	NA	.48 U
EPA 8260			
1,1,1-Trichloroethane	µg/L	5 U	5 U
1,1,2,2-Tetrachloroethane	µg/L	5 U	5 U
1,1,2-Trichloroethane	µg/L	5 U	5 U
1,1-Dichloroethane	µg/L	5 U	5 U
1,1-Dichloroethene	µg/L	5 U	5 U
1,2-Dichloroethane	µg/L	5 U	5 U
1,2-Dichloropropane	µg/L	5 U	5 U
2-Butanone (MEK)	µg/L	50 U	50 U
2-Chloroethyl vinyl ether	µg/L	50 U	50 U
2-Hexanone	µg/L	50 U	50 U
4-Methyl-2-pentanone (MIBK)	µg/L	50 U	50 U
Acetone	µg/L	50 U	50 U
Benzene	µg/L	5 U	5 U
Bromodichloromethane	µg/L	5 U	5 U
Bromoform	µg/L	5 U	5 U
Bromomethane	µg/L	5 U	5 U
Carbon disulfide	µg/L	5 U	5 U
Carbon tetrachloride	µg/L	5 U	5 U
Chlorobenzene	µg/L	5 U	5 U
Chloroethane	µg/L	5 U	5 U
Chloroform	µg/L	5 U	5 U
Chloromethane	µg/L	5 U	5 U
cis-1,2-Dichloroethene	µg/L	5 U	5 U
cis-1,3-Dichloropropene	µg/L	5 U	5 U
Dibromochloromethane	µg/L	5 U	5 U
Ethylbenzene	µg/L	5 U	5 U
Methyl tert-butyl ether (MTBE)	µg/L	10 U	10 U
Methylene chloride	µg/L	1.4 J	5 U
Styrene	µg/L	5 U	5 U

Table 2-1
Summary of Analytical Results — MSC B1

Sample Identification Location Code Date Sampled		18609-3262A Trip Blank 11/17/00	18609-3269A Equipment Rinsate 11/17/00
	Unit		
Tetrachloroethene (PCE)	µg/L	5 U	5 U
Toluene	µg/L	5 U	5 U
trans-1,2-Dichloroethene	µg/L	5 U	5 U
trans-1,3-Dichloropropene	µg/L	5 U	5 U
Trichloroethene (TCE)	µg/L	5 UJ	5 U
Vinyl acetate	µg/L	50 U	50 U
Vinyl chloride	µg/L	5 U	5 U
Xylenes (total)	µg/L	5 U	5 U

Table 2-1
Summary of Analytical Results — MSC B1

CA LUFT - California Leaking Underground Fuel Tank
EPA - United States Environmental Protection Agency
J - estimated
M - Modified
MDL - method detection limit
mg/L - milligrams per liter
NA - not analyzed
NE - not established
OHM - OHM Remediation Services Corp.
PRG - Preliminary Remediation Goal, EPA Region IX, October 1999
R - rejected data
RDL - reporting detection limit
TPH - total petroleum hydrocarbons
U - not detected above or equal to the stated reporting limit. In cases where RDL exceeded the target cleanup level, the MDL, rather than the RDL, was used to assess the data. When concentrations exceeded the MDLs but were below the RDLs, the laboratory flagged the results with the qualifier "J". When the concentrations were below the MDLs, the results were reported at the RDLs and flagged with the qualifier "U". The MDLs for all analytes met the target cleanup levels.
µg/L - micrograms per liter

Appendix A
Summary Report

OHM Remediation
Services Corp.

1202 Kettner Boulevard
San Diego, California 92101

Firefighter Training Burn Pit MSC B1
Marine Corps Air Station
El Toro, California

SWDIV Contract No. N68711-93-D-1459 – Delivery Order No. 0112 – Revision 0
OHM Project No. 20242 – Document Control No. SW7844 – February 11, 2000

Site Assessment Report

Appendix A - Tentative Reuse Parcel Location of MSC B1; Appendix B - Excerpts From EBS;
Appendix C - Excerpts From Draft Final Phase II Remedial Investigation Report; Appendix D - Site Inspection Log;
Appendix E - Geophysical Survey Data; Appendix F - Field Soil Boring Logs;
Appendix G - Laboratory Analytical Reports; Appendix H - Land Survey Data

Site Assessment Report

Firefighter Training Burn Pit MSC B1
Marine Corps Air Station
El Toro, California

SWDIV Contract No. N68711-93-D-1459, Delivery Order No. 0112
OHM Project No. 20242
Document Control No. SW7844
Revision 0
February 11, 2000

OHM Remediation Services Corp.

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Acronyms and Abbreviations

BRAC	Base Realignment and Closure Act
BTEX	benzene, toluene, ethylbenzene and total xylenes
CA LUFT	California Leaking Underground Fuel Tank
CAM	California Assessment Metals
CDM	Camp, Dresser & McKee, Inc.
DCN	Document Control Number
DO	Delivery Order
EPA	U.S. Environmental Protection Agency
ft bgs	feet below ground surface
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
PRG	preliminary remediation goals, USEPA Region 9
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 activities at the Former Active Burn Pit, Miscellaneous Site of Concern (MSC) B1, 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.

Former Active Burn Pit MSC B1 is being addressed under the Station's Petroleum Corrective Action Program, as summarized in SWDIV memorandum for MSC B2 Site dated August 1998 (SWDIV, 1998). The Sampling Strategy for MSC B2 Site was utilized for MSC B1 Site because of the similarities in usage and close proximity of the two sites. OHM conducted verification drilling and sampling activities in the vicinity of the fire fighting training burn pit, MSC B1, to evaluate the subsurface conditions and to ascertain whether or not a release had occurred into the vadose zone. Analytical results from the verification drilling activities did not indicate that a release had occurred from MSC B1 Site. As a result, no further action status is recommended for MSC B1.

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, Facility Location Map.

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), MSC B1 is located within the tentatively identified Airfield area. The County of Orange issued the Preferred Land Use Plan (also known as Concept B) in September 1999; and that plan also identified the MSC B1 location within the Airfield area. The El Toro Community Reuse Plan working maps are provided in Appendix A, Tentative Reuse Parcel Location of MSC B1.

1.1 Site Description and Background

The MSC B1 is located in the Northwest quadrant of the Station, northwest of the Bee Canyon Wash, and southeast of Marshburn Channel. The Active Burn Pit, identified as structure 850, is located northwest of the intersection of the north-south and east-west runways, as shown on Figure 1-2, Location Map.

OHM reviewed available background documents, including the Base Realignment and Closure (BRAC) Cleanup Plan (SWDIV, 1999), the Final Environmental Baseline Survey Report (Jacobs Engineering Group, 1995), and Installation Restoration Program (IRP)

Site 16 Remedial Investigation (RI) Report (BNI, 1997). The BRAC Cleanup Plan listed MSC B1 as an active burn pit adjacent to IRP Site 16. MSC B1 is located adjacent to the former Burn pit MSC B2 and the IRP Site 16 - Crash Crew Pit Number 2. The MSC B1 is a concrete-lined basin that was constructed in 1988 and designed to contain burning petroleum hydrocarbon liquids (jet fuel – JP5) during fire fighting training. The training burns typically lasted three to ten minutes and were conducted approximately three to four time per month. Excerpts from the Final Environmental Baseline Survey (EBS) Report (JEG,1995) are enclosed as Appendix B.

1.2 IRP Site 16 Remedial Investigation

The former active Burn Pit MSC B1 is located approximately 90 feet southeast of the IRP Site 16 study area. Because of the close proximity of the IRP Site 16 to MSC B1, review of the information collected during the RI at IRP Site 16 is pertinent to this evaluation. Excerpts from the Draft Final Phase II Remedial Investigation Report, OU-3A sites, Marine Corps Air Station El Toro, California (BNI, 1997) are included in Appendix C.

IRP site 16 was composed of three units: Unit 1 - three unlined earthen pits and a buffer zone, Unit 2 - the main pit, and Unit 3 - a low drainage swale northwest of the unlined pits. The Remedial Investigation (RI) was conducted in two phases collecting soil samples and groundwater samples. Soil samples were analyzed for the presence of petroleum hydrocarbons, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides and herbicides, dioxins, phosphorus, and metals, reflecting the constituents burned during firefighting training. Groundwater samples were analyzed for petroleum hydrocarbons, VOCs, SVOCs, pesticides, cyanide, metals, and general chemistry.

Section 2
Environmental Setting

This section summarizes the general physiographic, geologic, and hydrogeologic setting in the vicinity of MSC B1.

2.1 Physiography and Topography

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 800 feet msl near the northeast corner of the Station. The topography in the area of MSC B1 is relatively flat, with an elevation approximately 330 feet above msl datum.

2.2 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).

2.3 Hydrogeology

The Station is situated within the Irvine Groundwater Subbasin. The Irvine Subbasin is located within 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 foot 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. The depth to groundwater in the vicinity of MSC B1 is estimated to be approximately 169 feet bgs, based on available water-level data from nearby Phase I wells 16_DBMW52, 16_UGMW33 and 16_DGMW81. These data are presented in the Groundwater Monitoring Report (Camp Dresser & McKee, Inc. [CDM] Federal Programs, 1997), and summarized in Table 2-1. The well locations are shown in Figure 1-2.

Analyses of groundwater samples collected from the Phase I wells did not indicate the presence of TPH as JP-5 or of the VOCs benzene, toluene, ethylbenzene, or total xylenes (BTEX) (CDM 1997). Trace amounts of Freon, not associated with MSC B1, were detected in the groundwater samples collected from monitoring well 16_DBMW52 (CDM, 1997).

Section 3
Field Activities

OHM performed field activities at MSC B1 to assess whether a possible petroleum hydrocarbon release had occurred from use of the Former Active Burn Pit. Field activities included a site inspection; a geophysical survey; collection and laboratory analyses of soil samples from four verification soil borings; and a land survey.

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).

3.1 Site Inspection

OHM personnel conducted a site inspection on December 2, 1999 to prepare for the field sampling activities at MSC B1 using as-built drawings. Based on the existing landmarks, OHM proposed the location of the soil borings in the vicinity of MSC B1. A copy of the Site Inspection Log is included in Appendix D, Site Inspection Log.

3.2 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 December 2, 1999, Spectrum-Gasch Geophysical conducted a geophysical survey at MSC B1 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 lines. A copy of the geophysical survey data is included in Appendix E, Geophysical Survey Data.

3.3 Verification Drilling Activities

During the week of December 6, 1999, OHM advanced four soil borings in the vicinity of the MSC B1 (MSC B1 SB-01, SB-03, and SB-04 to a depth of 100 feet bgs and MSC B1 SB-02 to a depth of 60 feet bgs). These boring locations were selected based on a review of as-built drawings and the geophysical survey. The soil boring locations are shown in Figure 3-1, Site Plan.

Drilling and Soil Sampling Techniques

BC^2 Environmental Corporation (an OHM subcontractor) advanced these borings with a CME 75 drilling rig using hollow-stem auger techniques. The drilling rig was decontaminated with a pressure washer between each boring. A total of 17 soil samples (including two duplicate samples) were collected from four soil borings using a California-modified split-spoon sampler. The sampling equipment was decontaminated between each boring location and between each sample interval. Samples were collected from depths at 15, 40, 70, and 100 feet bgs, except in the case of boring SB 02 where samples were collected at 15, 40, and 60 feet bgs. Soil samples collected from the borings were submitted for laboratory analyses. Following the completion of sampling activities, the soil borings were backfilled with cement-bentonite grout.

Soil Lithology

The field boring logs, describing soils underlying the site and indicating soil sample collection intervals, are presented in Appendix F, Field Soil Boring Logs. These boring logs indicate that the subsurface soil in the vicinity of the MSC B1 primarily consists of interbedded, poorly graded sand, silty sand, and silt.

Sample Tracking and Analytical Methods

Sample handling, documentation, 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 purgeable) as JP-5 using CA LUFT Method 8015 Modified;

California Assessment Metals (CAM) by U.S. Environmental Protection Agency (USEPA) Method 6010A;

Mercury by USEPA Method 7470A; and for

Volatile organic compounds (VOCs), including methyl tert-butyl ether (MTBE) using USEPA Method 8260A.

Analytical Results

TPH as gas or diesel were not detected at or exceeding the laboratory reporting limits. No VOC analytes, including MTBE were detected at or exceeding the laboratory reporting limits in the soil samples collected from borings MSC B1 SB01 through SB04, with the exception of methylene chloride which was also detected in the blank sample. With the exception of arsenic, CAM metals, were detected at concentrations below the current EPA Region 9 Preliminary Remediation Goals (PRGs); dated October 1, 1999. Arsenic was detected in the soil samples in concentrations ranging from 1.19 mg/kg to a maximum concentration of 4.36 mg/kg, which exceeds the residential PRG (0.93 mg/kg). However, the concentrations of arsenic detected are less than established background concentration of 6.86 mg/kg (BNI, 1997) for the station.

These results do not indicate the presence of a release from the former Active Burn Pit (MSC B1) to the vadose zone. The analytical results of the soil samples collected from the

verification borings, the background concentrations and PRGs are presented in Table 3-1 and summarized in Figure 3-1. Laboratory analytical reports are provided in Appendix G, Laboratory Analytical Reports.

Disposal of Soil Cuttings

Soil cuttings generated during drilling operations were placed in 55-gallon drums, labeled, and stored at the Station's Central Treatment Facility (CTF) compound pending analytical results. Analyses of the soil boring samples indicated that the soils were non-hazardous. The drummed soils were placed in the clean soil stockpile at the CTF.

3.4 Land Surveying

After completing the verification drilling, the soil boring locations were surveyed on December 14, 1999 by Cal Vada Surveying, Inc., a California-registered land surveyor. The surveyed locations were measured to ± 0.01 ft/ft 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 datum. The surveyed plan for the former MSC B1 is presented as Appendix H, Land Survey Plan.

3.5 Quality Assurance/Quality Control

Field quality assurance/quality control (QA/QC) samples were collected during sampling activities to evaluate the consistency and accuracy of the analytical data. Field QC samples for the MSC B1 investigation consisted of equipment rinsate, soil sample duplicate, and trip blank samples as follows:

- Equipment rinsate samples were collected at a frequency of 1 per day.
- Two duplicate soil samples were collected.
- Trip blank samples were collected at a frequency of 1 blank for each cooler containing samples for VOC analysis.

Section 4
Conclusions and Recommendations

The following observations and conclusions are based upon information from surveys, existing records, and soil sampling data from verification soil borings:

MSC B1 was a concrete lined burn pit used for the fire training until closure of the Station on July 2, 1999.

The depth to groundwater is estimated to be approximately 169 feet bgs based on historical data from nearby Phase I monitoring wells 16_DBMW52, 16_UGMW33, and 16_DGMW81.

Analysis of groundwater from the Phase I groundwater monitoring wells 16_DBMW52, 16_UGMW33, and 16_DGMW81 did not indicate the presence of BTEX constituents (CDM, 1997).

OHM evaluated MSC B1 site for a potential release of petroleum hydrocarbons. Four verification soil borings were advanced at the site, and 17 soil samples were collected. No TPH analytes (extractable or purgeable) or VOC analytes, including BTEX and MTBE, were detected in concentrations equal to or exceeding the laboratory reporting limits in any of the soil samples, with the exception of methylene chloride which was also detected in the blank.

- MSC B1 soils were also evaluated for the presence of CAM metals. With the exception of arsenic, all metals concentrations were below the current EPA Region 9 Residential PRGs dated October 1, 1999. Although arsenic concentrations were detected in soil samples exceeding the PRGs, the concentrations were below the acceptable Station's established background concentrations (6.86 mg/kg).

Based on the information provided by the site verification activities, no petroleum hydrocarbons were detected, and detected levels of metals are below background levels and metals do not appear to pose a significant threat to human health or the environment. 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 MSC B1.

Section 5
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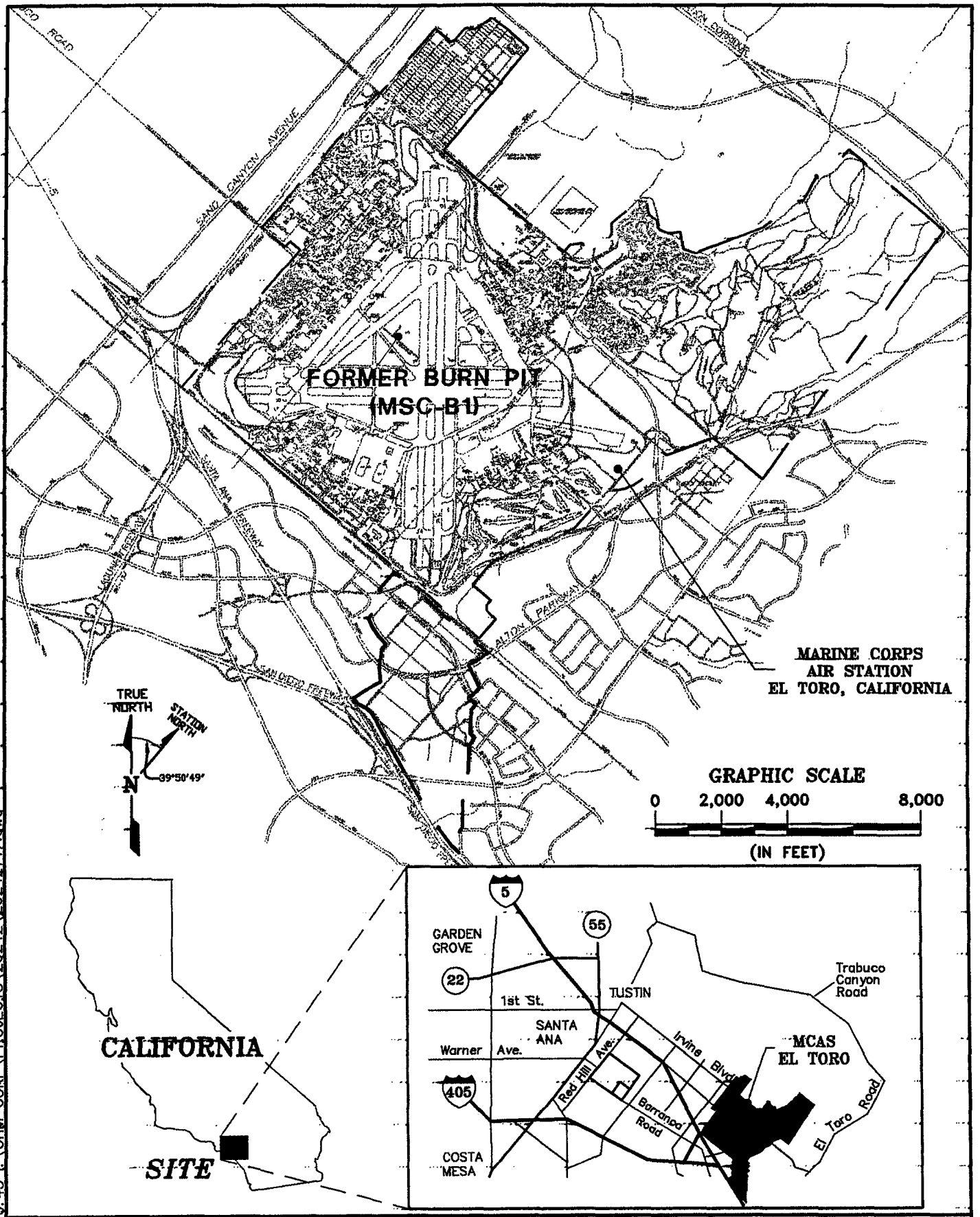
Figures



OHM Remediation Services Corp. A Subsidiary of OHM Corporation SAN DIEGO, CA	DRAWN BY R. PIRMORADIAN	DATE 2/2/2000	FACILITY LOCATION MAP FORMER BURN PIT MSC-B1
	CHECKED BY	DATE 2/2/2000	
	APPROVED BY	DATE 2/10/2000	MARINE CORPS AIR STATION EL TORO, CALIFORNIA
CONTRACT NAME SWDIV	PROJECT MANAGER	DATE 2/10/00	

AUTOCAD FILE No.	PLOT SCALE	SHEET	OF	SCALE	DOCUMENT CONTROL No.	OHM PROJECT No.	FIGURE No.	REVISION
20242147.DWG	1=1	1	1	1"=4,000'	SW7844	20242	FIG 1-1	0

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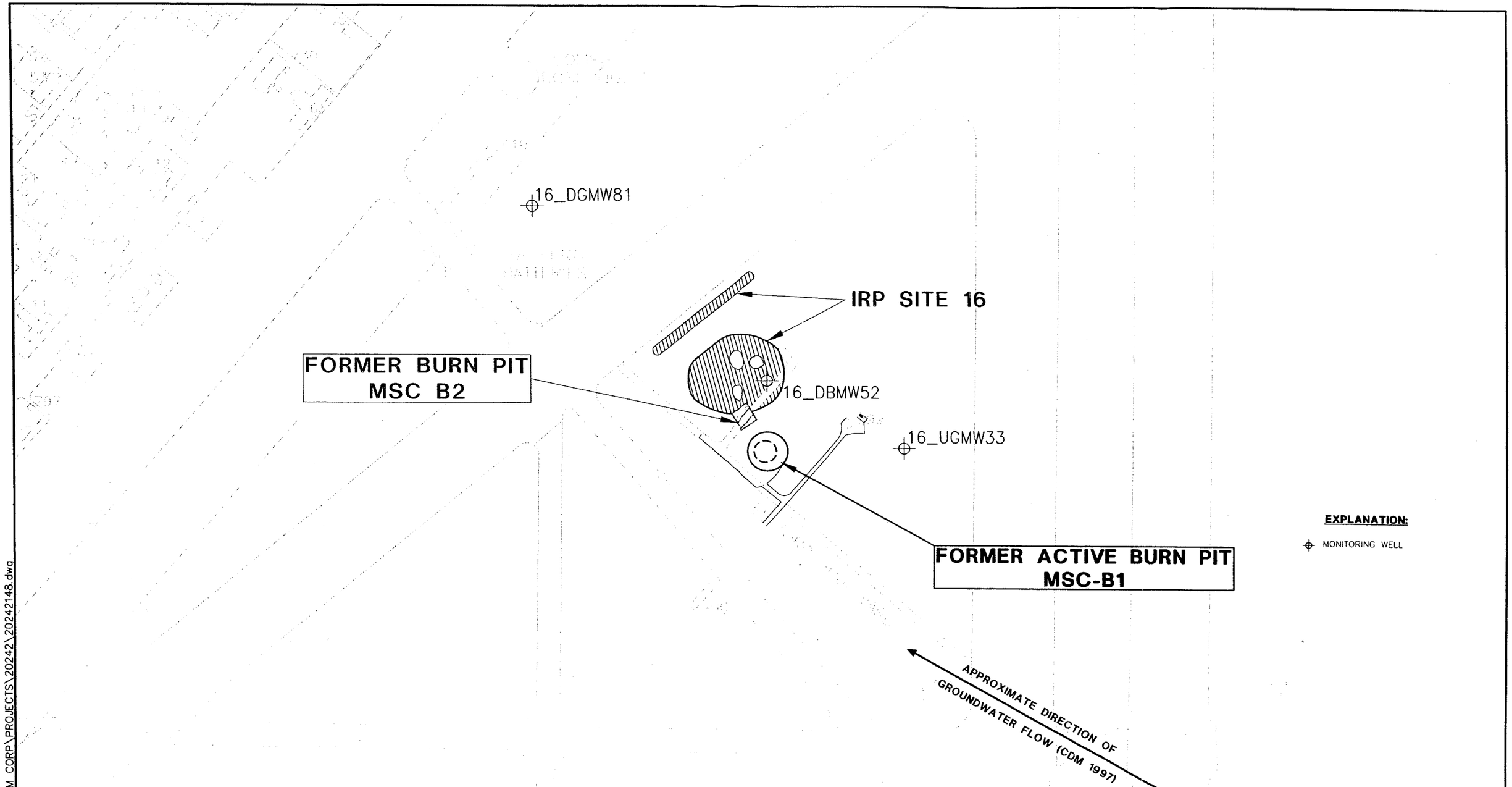

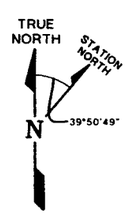

GRAPHIC SCALE

0 150 300 600

(IN FEET)

REVISIONS			
REV. No.	DESCRIPTION	DATE	APPROVED

CONTRACT NAME	SWDIV
DRAWN BY R. PIRMORADIAN	DATE 1/20/2000
CHECKED BY	DATE 2/2/2000
APPROVED BY	DATE 2/10/2000
PROJECT MANAGER	DATE 2/10/00
AUTOCAD FILE No. 20242148.DWG	

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

LOCATION MAP
FORMER BURN PIT
MSC-B1

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.
1"=300'	1	1	SW7844	20242	FIG 1-2

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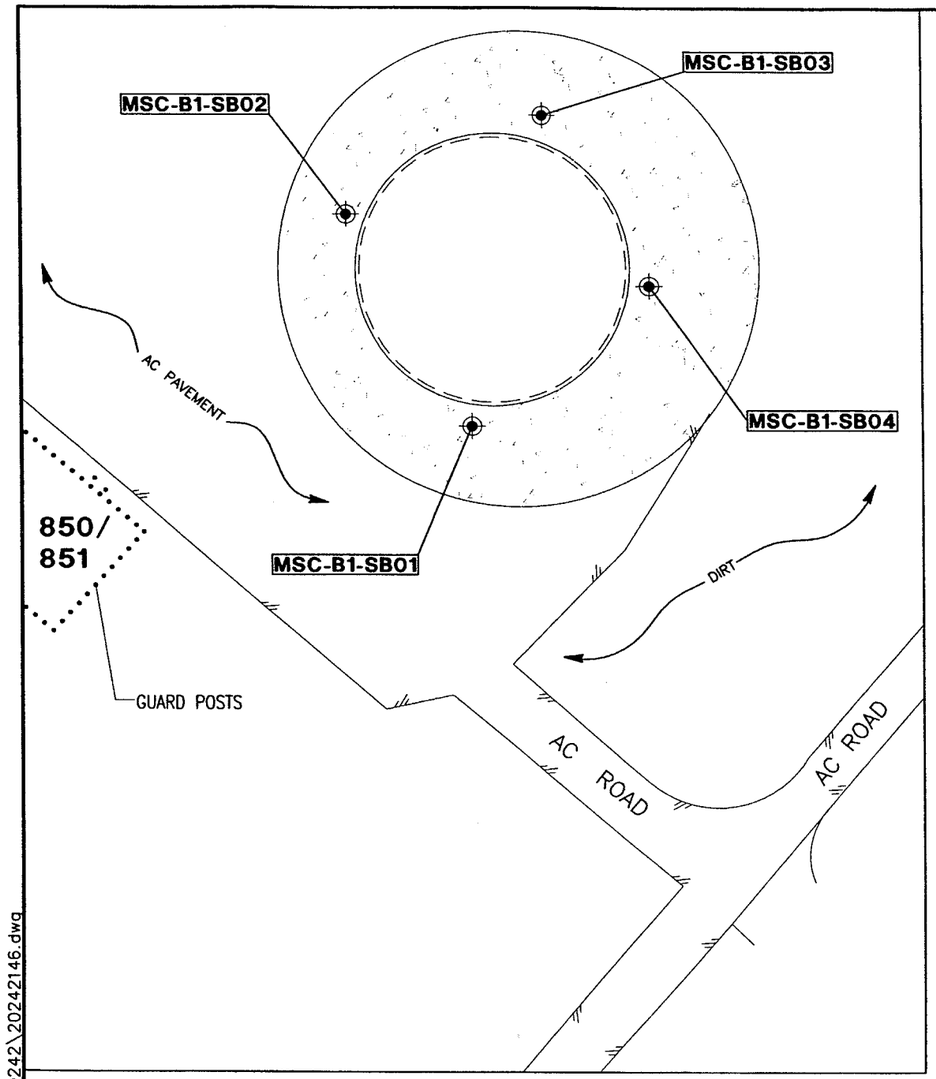


SAMPLE LOCATION AND ANALYTICAL DATA SUMMARY

BORING NUMBER LOCATION: Northing (NAD 83)	Easting (NAD 83)	Elev (feet msl)	SAMPLE: Number	Depth (feet bgs)	TPH as (CalLuft 8015m): Diesel mg/kg	Gasoline mg/kg	Metals: Arsenic★ (EPA 6010A) mg/kg	VOCs (EPA Method 8260A): Mercury (EPA 7471A) mg/kg	Acetone µg/kg	Benzene µg/kg	Ethylbenzene µg/kg	Methyl tert-butyl ether µg/kg	Toluene µg/kg	Total Xylenes µg/kg
MSC B1 SB01														
219667.01	6110788.26	329.3	20242-1031	15.0	11 U	1.1 U	**2.39**	.11 U	55 U	5.5 U	5.5 U	11 U	5.5 U	5.5 g
			20242-1032	40.0	12 U	1.2 U	**2.17**	.119 U	60 U	6 U	6 U	12 U	6 U	6 U
			20242-1033	70.0	11 U	1.1 U	**2.41**	.106 U	53 U	5.3 U	5.3 U	11 U	5.3 U	5.3 U
			20242-1034	100.0	13 U	1.3 U	**4.36**	.134 U	67 U	6.7 U	6.7 U	13 U	6.7 U	6.7 U
MSC B1 SB02														
219722.63	6110755.75	329.34	20242-1049	15.0	10 U	1 U	**1.03**	.103 U	52 U	5.2 U	5.2 U	10 U	5.2 U	5.2 U
			20242-1050	40.0	12 U	1.2 U	**2.42**	.125 U	62 U	6.2 U	6.2 UJ	12 UJ	6.2 U	6.2 U
			20242-1051 (Dup)	40.5	11 U	1.1 U	**1.19**	.112 U	25 J	5.6 U	5.6 U	11 U	5.6 U	5.6 U
			20242-1052	60.0	12 U	1.2 U	**2.97**	.115 U	58 U	5.8 U	5.8 U	12 U	5.8 U	5.8 U
MSC B1 SB03														
2192748.78	6110806.87	329.48	20242-1043	15.0	11 U	1.1 U	**2.35**	.106 U	53 U	5.3 U	5.3 U	11 U	5.3 U	5.3 U
			20242-1044	40.0	12 U	1.2 U	**3.42**	.116 U	58 U	5.8 U	5.8 U	12 U	5.8 U	5.8 U
			20242-1045	70.0	11 U	1.1 U	**2.86**	.114 U	57 U	5.7 U	5.7 U	11 U	5.7 U	5.7 U
			20242-1048	100.0	11 U	1.1 U	**2.09**	.112 U	56 U	5.6 U	5.6 UJ	11 U	5.6 U	5.6 U
MSC B1 SB04														
2192703.85	6110834.54	329.44	20242-1037	15.0	10 U	1 U	**1.77**	.105 U	52 U	5.2 U	5.2 U	10 U	5.2 U	5.2 U
			20242-1038	40.0	12 U	1.2 U	**3.04**	.116 U	58 U	5.8 U	5.8 U	12 U	5.8 U	5.8 U
			20242-1039	70.0	11 U	1.1 U	**2.62**	.108 U	54 U	5.4 U	5.4 U	11 U	5.4 U	5.4 U
			20242-1040	100.0	11 U	1.1 U	**2.59**	.114 U	57 U	5.7 U	5.7 U	11 U	5.7 U	5.7 U
			20242-1041 (Dup)	100.5	11 U	1.1 U	**2.04**	.112 U	56 U	5.6 U	5.6 U	11 U	5.6 U	5.6 U

Explanation:
NAD 83 - North American Datum, 1983
ft msl - Feet above mean sea level datum
ft bgs - Feet below ground surface
CA LUFT - California leaking underground fuel tank
EPA - US Environmental Protection Agency
J - estimated value
M - modified
mg/kg - milligrams per kilogram
SB - soil boring
TPH - total petroleum hydrocarbons
µg/kg - micrograms per kilogram
TPH - total petroleum hydrocarbons
U - not detected at or above the stated reporting limit
UJ - estimated reporting limit
★- bolded numbers indicate concentration above residential P.R.G. (0.93 mg/kg).

EXPLANATION:

SAMPLE POINTS

EDGE OF PAVEMENT

DATE OF SURVEY: 12-14-99

N

GRAPHIC SCALE
0 20 40 80
(IN FEET)

REVISIONS			
REV. No.	DESCRIPTION	DATE	APPROVED
01	97102MSC-B1.DWG BY CALVADA SURVEYING INC.	2/14/99	

CONTRACT NAME: SWDIV

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

DRAWN BY: R. PIRMORADIAN DATE: 2/7/2000
CHECKED BY DATE
APPROVED BY DATE: 2/10/2000
PROJECT MANAGER DATE: 2/10/2000
AUTOCAD FILE No. 20242146.DWG

SITE PLAN
FORMER BURN PIT
MSC-B1

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.
1"=40'	1	1	SW7844	20242	FIG 3-1

Feb 07, 2000 - 15:13:11 I:\OHM CORP\PROJECTS\20242\20242146.dwg

Tables

Table 2-1
Monitoring Well Data Summary – Burn Pit MSC B1 Vicinity

Monitoring Well Identification Number	Approximate Distance from MSC B1 (feet)	Direction from MSC B1	TOP OF CASING (feet, msl)	Screened Interval (feet, bgs)	Depth To Water (feet TOC)	Well Total Depth (feet, bgs)	Depth to Groundwater (feet, msl)
16_DBMW52	150	North	332	182 – 222	169.58	227	162.42
16_UGMW33	450	East	337	180 – 220	171.74	225	165.26
16_DGMW81	950	Northwest	323	176 - 216	164.68	221	158.32

bgs - below ground surface
MSC - miscellaneous site of concern
T O C – Top of Casing
msl - mean sea level
Groundwater Measurement Data - 12/97

Table 3-1
Analytical Results for Soil Samples — MSC B1

Sample Identification					20242-1031	20242-1032	20242-1033	20242-1034	20242-1049
Location Code					MSC-B1-SB01	MSC-B1-SB01	MSC-B1-SB01	MSC-B1-SB01	MSC-B1-SB02
Date Sampled					12/06/99	12/06/99	12/06/99	12/06/99	12/08/99
Depth (feet below ground surface)					15.0	40.0	70.0	100.0	15.0
	Unit	Background	Residential PRG	Industrial PRG					
CA LUFT 8015M									
TPH as Diesel	mg/kg	NE	NE	NE	11 U	12 U	11 U	13 U	10 U
TPH as Gasoline	mg/kg	NE	NE	NE	1.1 U	1.2 U	1.1 U	1.3 U	1 U
EPA 8260A									
1,1,1-Trichloroethane	µg/kg	NE	770000	1400000	5.5 U	6 U	5.3 U	6.7 U	5.2 U
1,1,2,2-Tetrachloroethane	µg/kg	NE	380	900	5.5 U	6 U	5.3 U	6.7 U	5.2 U
1,1,2-Trichloroethane	µg/kg	NE	840	1900	5.5 U	6 U	5.3 U	6.7 U	5.2 U
1,1-Dichloroethane	µg/kg	NE	590000	2100000	5.5 U	6 U	5.3 U	6.7 U	5.2 U
1,1-Dichloroethene	µg/kg	NE	54	120	5.5 U	6 U	5.3 U	6.7 U	5.2 UJ
1,2-Dichloroethane	µg/kg	NE	350	760	5.5 U	6 U	5.3 U	6.7 U	5.2 U
1,2-Dichloropropane	µg/kg	NE	350	770	5.5 U	6 U	5.3 U	6.7 U	5.2 U
2-Butanone (MEK)	µg/kg	NE	7300000	28000000	55 U	60 U	53 U	67 U	52 U
2-Chloroethyl vinyl ether	µg/kg	NE	NE	NE	55 UJ	60 UJ	53 UJ	67 UJ	52 U
2-Hexanone	µg/kg	NE	NE	NE	55 U	60 U	53 U	67 U	52 U
4-Methyl-2-pentanone (MIBK)	µg/kg	NE	790000	2900000	55 U	60 U	53 U	67 U	52 U
Acetone	µg/kg	NE	1600000	6200000	55 U	60 U	53 U	67 U	52 U
Benzene	µg/kg	NE	670	1500	5.5 U	6 U	5.3 U	6.7 U	5.2 UJ
Bromodichloromethane	µg/kg	NE	1000	2400	5.5 U	6 U	5.3 U	6.7 U	5.2 U
Bromoform	µg/kg	NE	62000	310000	5.5 U	6 U	5.3 U	6.7 U	5.2 U
Bromomethane	µg/kg	NE	3900	13000	5.5 U	6 U	5.3 U	6.7 U	5.2 U
Carbon disulfide	µg/kg	NE	360000	720000	5.5 U	6 U	5.3 U	6.7 U	5.2 U
Carbon tetrachloride	µg/kg	NE	240	530	5.5 U	6 U	5.3 U	6.7 U	5.2 U
Chlorobenzene	µg/kg	NE	150000	540000	5.5 U	6 U	5.3 U	6.7 U	5.2 UJ
Chloroethane	µg/kg	NE	3000	6500	5.5 U	6 U	5.3 U	6.7 U	5.2 U
Chloroform	µg/kg	NE	240	520	5.5 U	6 U	5.3 U	6.7 U	5.2 U
Chloromethane	µg/kg	NE	1200	2700	5.5 U	6 U	5.3 U	6.7 U	5.2 U
cis-1,2-Dichloroethene	µg/kg	NE	43000	150000	5.5 U	6 U	5.3 U	6.7 U	5.2 U
cis-1,3-Dichloropropene	µg/kg	NE	82	180	5.5 U	6 U	5.3 U	6.7 U	5.2 U
Dibromochloromethane	µg/kg	NE	1100	2700	5.5 U	6 U	5.3 U	6.7 U	5.2 U
Ethylbenzene	µg/kg	NE	230000	230000	5.5 U	6 U	5.3 U	6.7 U	5.2 U
Methyl tert-butyl ether (MTBE)	µg/kg	NE	NE	NE	11 U	12 U	11 U	13 U	10 U
Methylene chloride	µg/kg	NE	8900	21000	5.5 U	6 U	6 U	5.3 U	5.2 U
Styrene	µg/kg	NE	1700000	1700000	5.5 U	6 U	5.3 U	6.7 U	5.2 U

Table 3-1
Analytical Results for Soil Samples — MSC B1

Sample Identification					20242-1031	20242-1032	20242-1033	20242-1034	20242-1049
Location Code					MSC-B1-SB01	MSC-B1-SB01	MSC-B1-SB01	MSC-B1-SB01	MSC-B1-SB02
Date Sampled					12/06/99	12/06/99	12/06/99	12/06/99	12/08/99
Depth (feet below ground surface)					15.0	40.0	70.0	100.0	15.0
	Unit	Background	Residential PRG	Industrial PRG					
Tetrachloroethene	µg/kg	NE	5700	19000	5.5 U	6 U	5.3 U	6.7 U	5.2 U
Toluene	µg/kg	NE	520000	520000	5.5 U	6 U	5.3 U	6.7 U	5.2 UJ
trans-1,2-Dichloroethene	µg/kg	NE	63000	210000	5.5 U	6 U	5.3 U	6.7 U	5.2 U
trans-1,3-Dichloropropene	µg/kg	NE	82	180	5.5 U	6 U	5.3 U	6.7 U	5.2 U
Trichloroethene	µg/kg	NE	2800	6100	5.5 U	6 U	5.3 U	6.7 U	5.2 UJ
Vinyl acetate	µg/kg	NE	430000	1400000	55 R	60 R	53 R	67 U	52 U
Vinyl chloride	µg/kg	NE	22	49	5.5 U	6 U	5.3 U	6.7 U	5.2 U
Xylenes (total)	µg/kg	NE	210000	210000	5.5 U	6 U	5.3 U	6.7 U	5.2 U
EPA 6010A									
Antimony	mg/kg	3.06	31	820	11 UJ B	11.9 UJ B	10.6 UJ B	13.4 UJ B	10.3 UJ B
Arsenic	mg/kg	6.86	0.39*	2.7	2.39 Y	2.17 Y	2.41 Y	4.36 Y X	1.03 U Y
Barium	mg/kg	173	5400	100000	129	219 B	90.8	289 B	80.9 J
Beryllium	mg/kg	0.669	150	2200	.313	.481	.253	.876 B	.207 U
Cadmium	mg/kg	2.35	9.0	810	.464 U	.159 U	.657 U	1.51	1.03 U
Chromium	mg/kg	26.9	210	450	8.09	15.6	7.31	24.9	2.85
Cobalt	mg/kg	6.98	4700	100000	3.91	5.88	3.49	10.5 B	1.66
Copper	mg/kg	10.5	2900	76000	6.4	9.03	5.7	19.5 B	1.8
Lead	mg/kg	15.1	400	1000	2	3.15	1.89	5.07	1.15
Manganese	mg/kg	291	1800	32000	192 J	155 J	158 J	438 J B	118 J
Molybdenum	mg/kg	NE	390	10000	2.2 U	2.39 U	3.57	2.69 U	2.07 U
Nickel	mg/kg	15.3	150	41000	4.52	9.25	5.64	17.3 B	2.07 U
Selenium	mg/kg	0.32	390	10000	1.1 U B	1.19 U B	1.06 U B	1.34 U B	1.03 U B
Silver	mg/kg	0.539	390	10000	2.2 U B	2.39 U B	2.13 U B	2.69 U B	2.07 U B
Thallium	mg/kg	0.42	5.5	140	1.1 U B	1.19 U B	1.06 U B	1.17 J B	1.03 U B
Vanadium	mg/kg	71.8	550	14000	27.9 J	41.7 J	26.1 J	75.1 J B	11.5
Zinc	mg/kg	77.9	23000	100000	33 J	46 J	25.3 J	95.4 J B	12.7
EPA 7471A									
Mercury	mg/kg	0.22	23	610	.11 U	.119 U	.106 U	.134 U	.103 U

Table 3-1
Analytical Results for Soil Samples — MSC B1

Sample Identification					20242-1050	20242-1051 (Dup)	20242-1052	20242-1043	20242-1044
Location Code					MSC-B1-SB02	MSC-B1-SB02	MSC-B1-SB02	MSC-B1-SB03	MSC-B1-SB03
Date Sampled					12/08/99	12/08/99	12/08/99	12/07/99	12/07/99
Depth (feet below ground surface)					40.0	40.5	60.0	15.0	40.0
	Unit	Background	Residential PRG	Industrial PRG					
CA LUFT 8015M									
TPH as Diesel	mg/kg	NE	NE	NE	12 U	11 U	12 U	11 U	12 U
TPH as Gasoline	mg/kg	NE	NE	NE	1.2 U	1.1 U	1.2 U	1.1 U	1.2 U
EPA 8260A									
1,1,1-Trichloroethane	µg/kg	NE	770000	1400000	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
1,1,2,2-Tetrachloroethane	µg/kg	NE	380	900	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
1,1,2-Trichloroethane	µg/kg	NE	840	1900	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
1,1-Dichloroethane	µg/kg	NE	590000	2100000	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
1,1-Dichloroethene	µg/kg	NE	54	120	6.2 UJ	5.6 UJ	5.8 UJ	5.3 U	5.8 U
1,2-Dichloroethane	µg/kg	NE	350	760	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
1,2-Dichloropropane	µg/kg	NE	350	770	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
2-Butanone (MEK)	µg/kg	NE	7300000	28000000	62 U	56 U	58 U	53 U	58 U
2-Chloroethyl vinyl ether	µg/kg	NE	NE	NE	62 U	56 U	58 U	53 U	58 U
2-Hexanone	µg/kg	NE	NE	NE	62 U	56 U	58 U	53 U	58 U
4-Methyl-2-pentanone (MIBK)	µg/kg	NE	790000	2900000	62 U	56 U	58 U	53 U	58 U
Acetone	µg/kg	NE	1600000	6200000	62 U	25 J	58 U	53 U	58 U
Benzene	µg/kg	NE	670	1500	6.2 UJ	5.6 UJ	5.8 UJ	5.3 U	5.8 U
Bromodichloromethane	µg/kg	NE	1000	2400	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
Bromoform	µg/kg	NE	62000	310000	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
Bromomethane	µg/kg	NE	3900	13000	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
Carbon disulfide	µg/kg	NE	360000	720000	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
Carbon tetrachloride	µg/kg	NE	240	530	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
Chlorobenzene	µg/kg	NE	150000	540000	6.2 UJ	5.6 UJ	5.8 UJ	5.3 U	5.8 U
Chloroethane	µg/kg	NE	3000	6500	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
Chloroform	µg/kg	NE	240	520	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
Chloromethane	µg/kg	NE	1200	2700	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
cis-1,2-Dichloroethene	µg/kg	NE	43000	150000	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
cis-1,3-Dichloropropene	µg/kg	NE	82	180	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
Dibromochloromethane	µg/kg	NE	1100	2700	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
Ethylbenzene	µg/kg	NE	230000	230000	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
Methyl tert-butyl ether (MTBE)	µg/kg	NE	NE	NE	12 U	11 U	12 U	11 U	12 U
Methylene chloride	µg/kg	NE	8900	21000	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
Styrene	µg/kg	NE	1700000	1700000	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U

Table 3-1
Analytical Results for Soil Samples — MSC B1

Sample Identification					20242-1050	20242-1051 (Dup)	20242-1052	20242-1043	20242-1044
Location Code					MSC-B1-SB02	MSC-B1-SB02	MSC-B1-SB02	MSC-B1-SB03	MSC-B1-SB03
Date Sampled					12/08/99	12/08/99	12/08/99	12/07/99	12/07/99
Depth (feet below ground surface)					40.0	40.5	60.0	15.0	40.0
	Unit	Background	Residential PRG	Industrial PRG					
Tetrachloroethene	µg/kg	NE	5700	19000	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
Toluene	µg/kg	NE	520000	520000	6.2 UJ	5.6 UJ	5.8 UJ	5.3 U	5.8 U
trans-1,2-Dichloroethene	µg/kg	NE	63000	210000	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
trans-1,3-Dichloropropene	µg/kg	NE	82	180	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
Trichloroethene	µg/kg	NE	2800	6100	6.2 UJ	5.6 UJ	5.8 UJ	5.3 U	5.8 U
Vinyl acetate	µg/kg	NE	430000	1400000	62 U	56 U	58 U	53 U	58 U
Vinyl chloride	µg/kg	NE	22	49	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
Xylenes (total)	µg/kg	NE	210000	210000	6.2 U	5.6 U	5.8 U	5.3 U	5.8 U
EPA 6010A									
Antimony	mg/kg	3.06	31	820	12.5 UJ B	11.2 UJ B	11.5 UJ B	10.6 UJ B	11.6 UJ B
Arsenic	mg/kg	6.86	0.39*	2.7	2.42 Y	1.19 Y	2.97 Y X	2.35 Y	3.42 Y X
Barium	mg/kg	173	5400	100000	238 J B	179 J B	157 J	169	154
Beryllium	mg/kg	0.669	150	2200	.699 B	.348	.458	.301	.782 B
Cadmium	mg/kg	2.35	9.0	810	1.25 U	1.12 U	1.15 U	1.06 U	1.59
Chromium	mg/kg	26.9	210	450	19.7	10.7	13.2	7.69	25.1
Cobalt	mg/kg	6.98	4700	100000	9.85 B	4.24	6.3	3.97	7.81 B
Copper	mg/kg	10.5	2900	76000	8.3	4.27	6.75	5.86	15 B
Lead	mg/kg	15.1	400	1000	4.1	2.24	2.41	1.65	4.72
Manganese	mg/kg	291	1800	32000	318 J B	161 J	261 J	230 J	406 J B
Molybdenum	mg/kg	NE	390	10000	2.5 U	2.25 U	2.3 U	2.13 U	2.32 U
Nickel	mg/kg	15.3	150	41000	12.3	5.6	7.06	3.08	15.7 B
Selenium	mg/kg	0.32	390	10000	1.25 U B	1.12 U B	1.15 U B	1.06 U B	1.16 U B
Silver	mg/kg	0.539	390	10000	2.5 U B	2.25 U B	2.3 U B	2.13 U B	2.32 U B
Thallium	mg/kg	0.42	5.5	140	1.25 U B	1.12 U B	1.15 U B	1.06 U B	1.16 U B
Vanadium	mg/kg	71.8	550	14000	45	30.1	40.5	29 J	63.4 J
Zinc	mg/kg	77.9	23000	100000	49.2	29.9	47.9	34.7 J	70.2 J
EPA 7471A									
Mercury	mg/kg	0.22	23	610	.125 U	.112 U	.115 U	.106 U	.116 U

Table 3-1
Analytical Results for Soil Samples — MSC B1

Sample Identification					20242-1045	20242-1048	20242-1037	20242-1038	20242-1039
Location Code					MSC-B1-SB03	MSC-B1-SB03	MSC-B1-SB04	MSC-B1-SB04	MSC-B1-SB04
Date Sampled					12/07/99	12/08/99	12/07/99	12/07/99	12/07/99
Depth (feet below ground surface)					70.0	100.0	15.0	40.0	70.0
	Unit	Background	Residential PRG	Industrial PRG					
CA LUFT 8015M									
TPH as Diesel	mg/kg	NE	NE	NE	11 U	11 U	10 U	12 U	11 U
TPH as Gasoline	mg/kg	NE	NE	NE	1.1 U	1.1 U	1 U	1.2 U	1.1 U
EPA 8260A									
1,1,1-Trichloroethane	µg/kg	NE	770000	1400000	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
1,1,2,2-Tetrachloroethane	µg/kg	NE	380	900	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
1,1,2-Trichloroethane	µg/kg	NE	840	1900	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
1,1-Dichloroethane	µg/kg	NE	590000	2100000	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
1,1-Dichloroethene	µg/kg	NE	54	120	5.7 U	5.6 UJ	5.2 U	5.8 U	5.4 U
1,2-Dichloroethane	µg/kg	NE	350	760	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
1,2-Dichloropropane	µg/kg	NE	350	770	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
2-Butanone (MEK)	µg/kg	NE	7300000	28000000	57 U	56 U	52 U	58 U	54 U
2-Chloroethyl vinyl ether	µg/kg	NE	NE	NE	57 U	56 U	52 U	58 U	54 U
2-Hexanone	µg/kg	NE	NE	NE	57 U	56 U	52 U	58 U	54 U
4-Methyl-2-pentanone (MIBK)	µg/kg	NE	790000	2900000	57 U	56 U	52 U	58 U	54 U
Acetone	µg/kg	NE	1600000	6200000	57 U	56 U	52 U	58 U	54 U
Benzene	µg/kg	NE	670	1500	5.7 U	5.6 UJ	5.2 U	5.8 U	5.4 U
Bromodichloromethane	µg/kg	NE	1000	2400	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
Bromoform	µg/kg	NE	62000	310000	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
Bromomethane	µg/kg	NE	3900	13000	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
Carbon disulfide	µg/kg	NE	360000	720000	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
Carbon tetrachloride	µg/kg	NE	240	530	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
Chlorobenzene	µg/kg	NE	150000	540000	5.7 U	5.6 UJ	5.2 U	5.8 U	5.4 U
Chloroethane	µg/kg	NE	3000	6500	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
Chloroform	µg/kg	NE	240	520	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
Chloromethane	µg/kg	NE	1200	2700	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
cis-1,2-Dichloroethene	µg/kg	NE	43000	150000	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
cis-1,3-Dichloropropene	µg/kg	NE	82	180	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
Dibromochloromethane	µg/kg	NE	1100	2700	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
Ethylbenzene	µg/kg	NE	230000	230000	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
Methyl tert-butyl ether (MTBE)	µg/kg	NE	NE	NE	11 U	11 U	10 U	12 U	11 U
Methylene chloride	µg/kg	NE	8900	21000	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
Styrene	µg/kg	NE	1700000	1700000	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U

Table 3-1
Analytical Results for Soil Samples — MSC B1

Sample Identification					20242-1045	20242-1048	20242-1037	20242-1038	20242-1039
Location Code					MSC-B1-SB03	MSC-B1-SB03	MSC-B1-SB04	MSC-B1-SB04	MSC-B1-SB04
Date Sampled					12/07/99	12/08/99	12/07/99	12/07/99	12/07/99
Depth (feet below ground surface)					70.0	100.0	15.0	40.0	70.0
	Unit	Background	Residential PRG	Industrial PRG					
Tetrachloroethene	µg/kg	NE	5700	19000	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
Toluene	µg/kg	NE	520000	520000	5.7 U	5.6 UJ	5.2 U	5.8 U	5.4 U
trans-1,2-Dichloroethene	µg/kg	NE	63000	210000	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
trans-1,3-Dichloropropene	µg/kg	NE	82	180	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
Trichloroethene	µg/kg	NE	2800	6100	5.7 U	5.6 UJ	5.2 U	5.8 U	5.4 U
Vinyl acetate	µg/kg	NE	430000	1400000	57 U	56 U	52 U	58 U	54 U
Vinyl chloride	µg/kg	NE	22	49	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
Xylenes (total)	µg/kg	NE	210000	210000	5.7 U	5.6 U	5.2 U	5.8 U	5.4 U
EPA 6010A									
Antimony	mg/kg	3.06	31	820	11.4 UJ B	11.2 UJ B	10.5 UJ B	11.6 UJ B	10.8 UJ B
Arsenic	mg/kg	6.86	0.39*	2.7	2.86 Y X	2.09 Y	1.77 Y	3.04 Y X	2.62 Y
Barium	mg/kg	173	5400	100000	163	143 J	89.5	188 B	132
Beryllium	mg/kg	0.669	150	2200	.408	.456	.212	.613	.293
Cadmium	mg/kg	2.35	9.0	810	1.14 U	1.12 U	1.05 U	1.4	1.08 U
Chromium	mg/kg	26.9	210	450	12.7	12.6	5.39	18.5	9.55
Cobalt	mg/kg	6.98	4700	100000	5.13	4.82	2.45	8.13 B	3.88
Copper	mg/kg	10.5	2900	76000	8.16	6.34	4.69	12.8 B	6.18
Lead	mg/kg	15.1	400	1000	2.29	3.26	1.48	4.6	2.03
Manganese	mg/kg	291	1800	32000	224 J	245 J	165 J	447 J B	210 J
Molybdenum	mg/kg	NE	390	10000	2.27 U	2.25 U	2.1 U	2.33 U	2.15 U
Nickel	mg/kg	15.3	150	41000	8.31	8.12	2.33	12	6.45
Selenium	mg/kg	0.32	390	10000	1.14 U B	1.12 U B	1.05 U B	1.16 U B	1.08 U B
Silver	mg/kg	0.539	390	10000	2.27 U B	2.25 U B	2.1 U B	2.33 U B	2.15 U B
Thallium	mg/kg	0.42	5.5	140	1.14 U B	1.12 U B	1.05 U B	1.16 U B	1.08 U B
Vanadium	mg/kg	71.8	550	14000	39.1 J	32	19.6 J	46.6 J	31.2 J
Zinc	mg/kg	77.9	23000	100000	42.1 J	39	23.3 J	58.3 J	31.1 J
EPA 7471A									
Mercury	mg/kg	0.22	23	610	.114 U	.112 U	.105 U	.116 U	.108 U

Table 3-1
Analytical Results for Soil Samples — MSC B1

Sample Identification					20242-1040	20242-1041 (Dup)
Location Code					MSC-B1-SB04	MSC-B1-SB04
Date Sampled					12/07/99	12/07/99
Depth (feet below ground surface)					100.0	100.5
	Unit	Background	Residential PRG	Industrial PRG		
CA LUFT 8015M						
TPH as Diesel	mg/kg	NE	NE	NE	11 U	11 U
TPH as Gasoline	mg/kg	NE	NE	NE	1.1 U	1.1 U
EPA 8260A						
1,1,1-Trichloroethane	µg/kg	NE	770000	1400000	5.7 U	5.6 U
1,1,2,2-Tetrachloroethane	µg/kg	NE	380	900	5.7 U	5.6 U
1,1,2-Trichloroethane	µg/kg	NE	840	1900	5.7 U	5.6 U
1,1-Dichloroethane	µg/kg	NE	590000	2100000	5.7 U	5.6 U
1,1-Dichloroethene	µg/kg	NE	54	120	5.7 U	5.6 U
1,2-Dichloroethane	µg/kg	NE	350	760	5.7 U	.38 J
1,2-Dichloropropane	µg/kg	NE	350	770	5.7 U	5.6 U
2-Butanone (MEK)	µg/kg	NE	7300000	28000000	57 U	56 U
2-Chloroethyl vinyl ether	µg/kg	NE	NE	NE	57 U	56 U
2-Hexanone	µg/kg	NE	NE	NE	57 U	56 U
4-Methyl-2-pentanone (MIBK)	µg/kg	NE	790000	2900000	57 U	56 U
Acetone	µg/kg	NE	1600000	6200000	57 U	56 U
Benzene	µg/kg	NE	670	1500	5.7 U	5.6 U
Bromodichloromethane	µg/kg	NE	1000	2400	5.7 U	5.6 U
Bromoform	µg/kg	NE	62000	310000	5.7 U	5.6 U
Bromomethane	µg/kg	NE	3900	13000	5.7 U	5.6 U
Carbon disulfide	µg/kg	NE	360000	720000	5.7 U	5.6 U
Carbon tetrachloride	µg/kg	NE	240	530	5.7 U	5.6 U
Chlorobenzene	µg/kg	NE	150000	540000	5.7 U	5.6 U
Chloroethane	µg/kg	NE	3000	6500	5.7 U	5.6 U
Chloroform	µg/kg	NE	240	520	5.7 U	5.6 U
Chloromethane	µg/kg	NE	1200	2700	5.7 U	5.6 U
cis-1,2-Dichloroethene	µg/kg	NE	43000	150000	5.7 U	5.6 U
cis-1,3-Dichloropropene	µg/kg	NE	82	180	5.7 U	5.6 U
Dibromochloromethane	µg/kg	NE	1100	2700	5.7 U	5.6 U
Ethylbenzene	µg/kg	NE	230000	230000	5.7 U	5.6 U
Methyl tert-butyl ether (MTBE)	µg/kg	NE	NE	NE	11 U	11 U
Methylene chloride	µg/kg	NE	8900	21000	5.7 U	5.6 U
Styrene	µg/kg	NE	1700000	1700000	5.7 U	5.6 U

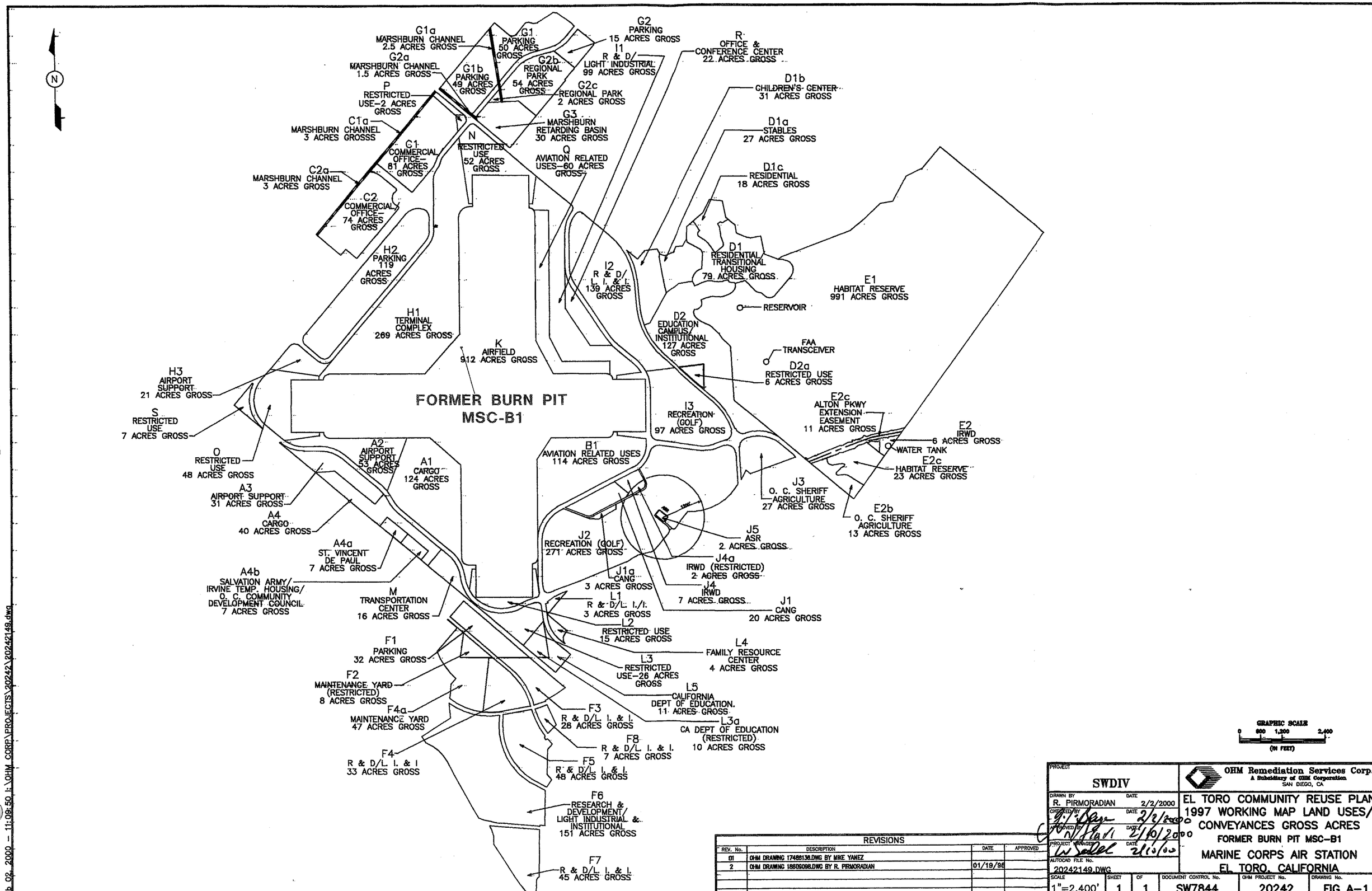
Table 3-1
Analytical Results for Soil Samples — MSC B1

Sample Identification					20242-1040	20242-1041 (Dup)
Location Code					MSC-B1-SB04	MSC-B1-SB04
Date Sampled					12/07/99	12/07/99
Depth (feet below ground surface)					100.0	100.5
	Unit	Background	Residential PRG	Industrial PRG		
Tetrachloroethene	µg/kg	NE	5700	19000	5.7 U	5.6 U
Toluene	µg/kg	NE	520000	520000	5.7 U	5.6 U
trans-1,2-Dichloroethene	µg/kg	NE	63000	210000	5.7 U	5.6 U
trans-1,3-Dichloropropene	µg/kg	NE	82	180	5.7 U	5.6 U
Trichloroethene	µg/kg	NE	2800	6100	5.7 U	.51 J
Vinyl acetate	µg/kg	NE	430000	1400000	57 U	56 U
Vinyl chloride	µg/kg	NE	22	49	5.7 U	5.6 U
Xylenes (total)	µg/kg	NE	210000	210000	5.7 U	5.6 U
EPA 6010A						
Antimony	mg/kg	3.06	31	820	11.4 UJ B	11.2 UJ B
Arsenic	mg/kg	6.86	0.39*	2.7	2.59 Y	2.04 Y
Barium	mg/kg	173	5400	100000	156	155
Beryllium	mg/kg	0.669	150	2200	.582	.472
Cadmium	mg/kg	2.35	9.0	810	1.14 U	1.12 U
Chromium	mg/kg	26.9	210	450	17.1	14.8
Cobalt	mg/kg	6.98	4700	100000	5.42	4.81
Copper	mg/kg	10.5	2900	76000	9.43	8.17
Lead	mg/kg	15.1	400	1000	4.12	3.55
Manganese	mg/kg	291	1800	32000	225 J	187 J
Molybdenum	mg/kg	NE	390	10000	2.27 U	2.24 U
Nickel	mg/kg	15.3	150	41000	9.9	8.02
Selenium	mg/kg	0.32	390	10000	1.14 U B	1.12 U B
Silver	mg/kg	0.539	390	10000	2.27 U B	2.24 U B
Thallium	mg/kg	0.42	5.5	140	1.14 U B	1.12 U B
Vanadium	mg/kg	71.8	550	14000	44.6 J	37.9 J
Zinc	mg/kg	77.9	23000	100000	48.7 J	42.1 J
EPA 7471A						
Mercury	mg/kg	0.22	23	610	.114 U	.112 U

Table 3-1
Analytical Results for Soil Samples — MSC B1

Explanation:
CA LUFT - California Leaking Underground Fuel Tank
EPA - United States Environmental Protection Agency
J - estimated
M - Modified
MDL - method detection limit
mg/kg - milligrams per kilogram
OHM - OHM Remediation Services Corp.
R - quality control indicates the data is not usable.
RL - reporting limit
SB - soil boring
TPH - total petroleum hydrocarbons
U - not detected above or equal to the stated reporting limit
µg/kg - micrograms per kilogram
UJ - the compound or analyte was anlyzed for but not detected. The sample detection limit is an estimated value.

Appendix A
Tentative Reuse Parcel Location of MSC B1



REVISIONS			
REV. No.	DESCRIPTION	DATE	APPROVED
01	OHM DRAWING 17486136.DWG BY MIKE YANEZ		
2	OHM DRAWING 18809098.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: 2/2/2000				EL TORO COMMUNITY REUSE PLAN 1997 WORKING MAP LAND USES/ CONVEYANCES GROSS ACRES FORMER BURN PIT MSC–B1 MARINE CORPS AIR STATION EL TORO, CALIFORNIA
CHECKED BY:	DATE: 2/2/2000				
APPROVED BY:	DATE: 2/10/2000				
PROJECT MANAGER:	DATE: 2/10/00				
AUTOCAD FILE No.: 20242149.DWG					
SCALE: 1"=2,400'	SHEET: 1	OF: 1	DOCUMENT CONTROL No.: SW7844	OHM PROJECT No.: 20242	DRAWING No.: FIG A–1

Feb 02, 2000 – 11:09:50 J:\OHM CORP\PROJECTS\20242\20242149.dwg

Appendix B
Excerpts From EBS

MARINE CORPS AIR STATION EL TORO
EL TORO, CALIFORNIA
INSTALLATION RESTORATION PROGRAM
FINAL ENVIRONMENTAL BASELINE SURVEY REPORT

01 April 1995

Revision 0

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

THROUGH:
CONTRACT #N68711-89-D-8296
CTO #284
DOCUMENT CONTROL NO:
CLE-C01-01F284-S2-0004

WITH:
Jacobs Engineering Group Inc.
401 West A Street, Suite 1905
San Diego, California 92101

In association with:
International Technology Corporation
CH2M HILL

MARINE CORPS AIR STATION EL TORO
EL TORO, CALIFORNIA
INSTALLATION RESTORATION PROGRAM
FINAL ENVIRONMENTAL BASELINE SURVEY REPORT

01 April 1995

Revision 0

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

THROUGH:
CONTRACT #N68711-89-D-8295
CTO #284
DOCUMENT CONTROL NO:
CLE-C01-01F284-S2-0004

WITH:
Jacobs Engineering Group Inc.
401 West A Street, Suite 1905
San Diego, California 92101

In association with:
International Technology Corporation
CH2M HILL

M. N. Arends 3/31/95

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

Max Pan 3-31-95

Max Pan, P.E. Date
CLEAN Technical Reviewer
IT Corporation

SCO100217CD.WP5\95\MA

northernmost portion of the Station. The second pesticide storage area located in the southernmost portion of the Station, which is leased by Magarro Farms. Both of these storage areas were included in the Confirmation Sampling Program performed at the Station in late 1994 (refer to Section 5.0 for a summary of the sampling results).

Fire Training Burn Pits. The Station has two concrete-lined burn pits located adjacent to IRP Site 16 (Crash Crew Pit No. 2). Both pits were constructed in 1988, but only one is currently used. The western burn pit was only used one time. It was then retired (i.e., left in place) because the builder used an improper type of concrete that deteriorated during the initial burn event; however, no significant cracks are evident in the floor of the pit. Burns typically last 3 to 10 minutes and are conducted approximately 4 to 6 times per month. Only JP-5 is burned in the remaining pit.

Silver Recovery Units. Silver recovery units are used in the Station's general photography laboratory (Building 443) and medical clinic (Building 439). The silver recovery units currently in Building 443 were formerly located in Building 312 (moved in 1988). All three of these buildings are identified as LOCs.

Drum Storage Area. During a routine site visit to MCAS El Toro in 1991, the Jacobs Team discovered a drum storage area located in the southeast quadrant of the Station, east of DRMO Storage Yard No. 3. The storage area contained hazardous waste that was generated overseas during Desert Storm

Appendix C
Excerpts From Draft Final Phase II Remedial Investigation Report

Southwest Division
Naval Facilities Engineering Command
Contracts Department
1220 Pacific Highway, Room 135
San Diego, California 92132-5187

Contract No. N68711-92-D-4670

COMPREHENSIVE LONG-TERM ENVIRONMENTAL ACTION NAVY

CLEAN II

DRAFT FINAL PHASE II REMEDIAL INVESTIGATION REPORT OU-3A SITE 16, CRASH CREW PIT NO. 2 ATTACHMENT J MARINE CORPS AIR STATION EL TORO, CALIFORNIA

CTO-0079/0391

June 1997

Prepared by:

BECHTEL NATIONAL, INC.
401 West A Street, Suite 1000
San Diego, California 92101

The risk results presented for Site 16 should not be taken as a characterization of absolute risk. The estimated cancer and noncancer risks in presented are based on numerous assumptions, most of which are conservative. As a result of the cumulative effect of these conservative assumptions, the estimated risks are thought to substantially overestimate the actual risks at the site.

7.2 CONCLUSIONS

The Phase II RI was conducted using the seven-step U.S. EPA DQO process (U.S. EPA 1993). Using this process, four site-specific DQOs that formed the basis for the investigation were developed for Site 16 in the Work Plan. The RI has successfully met these DQOs as summarized in Table 7-1 and discussed below.

1. *Do contaminants in shallow soil (less than 10 feet bgs) within each unit exceed established background concentrations and PRGs, and/or do they present an unacceptable risk to human health or the environment?*

   TAL metals above their respective background concentrations and VOCs and PAHs in shallow soil at Site 16 do not appear to pose an unacceptable risk to a potential on-site resident (or on-site industrial worker) based upon the reported range of concentrations in shallow soil and the calculated risk values. The results of the habitat assessment indicated an absence of significant plant and wildlife habitat at Site 16.

2. *Has the extent of the impacted soil been defined for the shallow-soil interval?*

   Yes. The extent of the impacted soil had been defined in shallow soil. The BCT agreed that the nature and extent of shallow-soil contamination associated with TAL metals, VOCs, and PAHs in Units 1, 2, and 3 has been defined in a sufficient manner to reach a decision for future actions.

3. *Does the impacted soil extend below a depth of 10 feet bgs?*

   Yes. VOCs were identified in soil samples to the groundwater table. Petroleum hydrocarbons were also identified in deeper subsurface soil. TAL metals above their respective background concentrations are also present to depths of at least 10 feet bgs. Chemicals in soil at Site 16 have impacted groundwater beneath the site.

4. *Do the media being evaluated for a response action qualify for Early Action?*

   No. The chemicals identified in soil at Site 16 do not pose an imminent risk to human health or the environment. Although these chemicals appear to have migrated to groundwater at the site, due to the location of Site 16 in the middle of the runways groundwater is not expected to impact receptors at the present time.

Table 7-1
OU[a]-3A Phase II RI[b] Site 16 Results

DQO[c] Decisions (Section 1)	Physical Characteristics (Section 3)	Nature and Extent (Section 4)	Fate and Transport (Section 5)	Risk Assessment (Section 6)[d]	Recommendation
1. Assess whether COPCs[e] in shallow soil exceed screening levels (background and PRGs[f]) and/or present unacceptable risk.	Site is level except for the main pit, which has been not filled in. Surface soil at the site is partially vegetated. Surface drainage from the site appears to flow northwest to a storm drain, which eventually discharges into the Bee Canyon Wash.	VOCs[g], PAHs[h], petroleum hydrocarbons, and TAL[i] metals are present in shallow and deeper subsurface soil throughout at the site.	Four potential migration pathways are air, surface water, soil infiltration, and groundwater. VOCs infiltrated through vadose zone and are present in groundwater.	Risk to a resident is 1.6E-6/1.8E-6, and the risk to an industrial worker is 1.4E-6/1.7E-6 for cancer at Units 1 and 2. Risk to a resident is 1.9E-5/2.0E-5 and the risk to an industrial worker is 6.7E-6/6.9E-6 for cancer at Unit 3. Risk to a resident is 8.0E-5 for cancer from groundwater beneath the site.	No remedial action is necessary at Unit 3. Remedial action is necessary at Units 1 and 2 to reduce VOCs in the vadose zone and/or contain their migration through the vadose zone and to prevent or minimize further degradation of the shallow aquifer beneath the site.
2. Determine the extent of contamination in shallow soil (< 10 feet bgs[j]).	—[k]	VOCs, PAHs, petroleum hydrocarbons, and TAL metals are present in shallow soil. BCT[l] agrees extent of contamination in shallow soil is defined sufficiently to reach a decision for future actions.	—	—	No further action necessary.

(table continues)

Table 7-1 (continued)

DQO[c] Decisions (Section 1)	Physical Characteristics (Section 3)	Nature and Extent (Section 4)	Fate and Transport (Section 5)	Risk Assessment (Section 6)[d]	Recommendation
3a. Determine if extent of contamination extends into deeper subsurface soil (> 10 feet bgs).	—	Deeper subsurface soil sampling was performed as part of the Phase II RI Work Plan because petroleum hydrocarbon contamination was identified below 10 feet bgs in the Phase I RI. BCT agrees extent of contamination in deeper subsurface soil is defined sufficiently to reach a decision for future actions.	—	—	Remedial action is necessary to contain migration of VOCs through the vadose zone to prevent or minimize further groundwater degradation.
3b. If soil contamination extends to groundwater, determine whether groundwater has been impacted.	—	Groundwater samples collected from HydroPunch and monitoring wells identified VOCs in the groundwater. Plume extends approximately 100 feet off-site.	Past practices at the site introduced large volumes of water into the pits at the site mobilizing VOCs through soil, which eventually reached groundwater. Due to present site conditions of low net infiltration rates, transport of VOCs downward in the soil at this time appears to be reduced greatly.	Risk to a resident is 8.0E-5 for cancer from groundwater beneath the site.	Remedial action is necessary to reduce VOCs in the saturated zone and/or contain their migration through the saturated zone and to prevent or minimize further degradation of the shallow aquifer beneath the site.

(table continues)

Table 7-1 (continued)

DQO[c] Decisions (Section 1)	Physical Characteristics (Section 3)	Nature and Extent (Section 4)	Fate and Transport (Section 5)	Risk Assessment (Section 6)[d]	Recommendation
4. Determine if site qualifies for Early Action.	—	VOCs, PAHs, petroleum hydrocarbons, and TAL metals are present in shallow and deeper subsurface soil throughout at the site.	Four potential migration pathways are air, surface water, soil infiltration, and groundwater. VOCs infiltrated through vadose zone and are present in groundwater.	Site does not appear to be an imminent threat to human health or the environment.	No early action necessary

Notes:

[a] OU – operable unit
[b] RI – Remedial Investigation
[c] DQO – data quality objective
[d] United States Environmental Protection Agency (U.S. EPA)/California Environmental Protection Agency
[e] COPC – chemicals of potential concern
[f] PRG – (U.S. EPA) preliminary remediation goal
[g] VOC – volatile organic compound
[h] PAH – polynuclear aromatic hydrocarbon
[i] TAL – target analyte list
[j] bgs – below ground surface
[k] — – not applicable
[l] BCT – Base Realignment and Closure (BRAC) Cleanup Team

Appendix D
Site Inspection Log

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

~~UST~~ MSC SITE: MSCB1

Field Observations by: D. Rawal **Date:** 12/2/99

Former ~~UST~~ MSC area: (Paved) or Unpaved

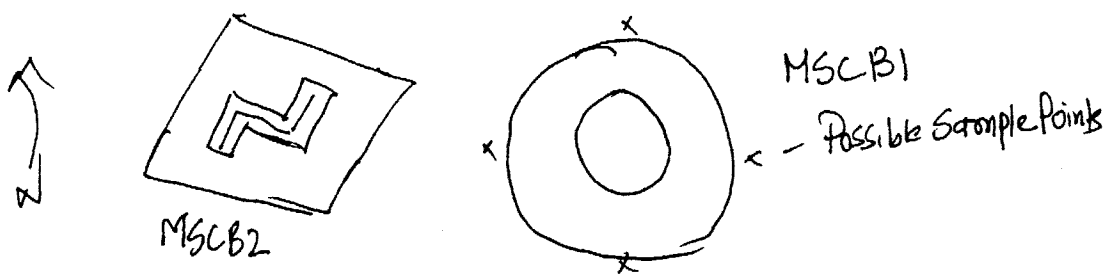
Paved: (Concrete) or Asphalt Concrete Paved area Surrounding to Former Active Burn Pit
Unpaved: Open dirt area NO,
Any Visible Sprinkler System: Yes / (No)

-Nearest Building or Structure Distance: Building 851, UST/OWS 850

-Any Underground Piping/Lines, or Transformer Observed: None Geophysical Survey to be Performed to identify any utilities.
-Overhead Utility Lines/Poles: None.

-Site Setup Constrains: None, Base is closed so no Activities on Flight line or Radio tower area

Draw Sketch:



Bldg 850

Additional Field Notes:
No Spill or Stains were observed around the Burn Pit. No Fuel Remaining inside the Pit. Some Rainwater Very Close to Site 16. Use MSCB2 drilling method.

Appendix E
Geophysical Survey Data

Results of Subsurface Investigation
Site 56
MCAS El Toro
Irvine, California

Introduction

On February 26, 1999 Spectrum-Gasch Geophysics conducted a subsurface investigation of Site 56 at MCAS El Toro in Irvine, California. The purpose was to investigate one area, approximately 70 by 90 feet, for detectable subsurface utilities and a possible backfilled UST excavation.

Methods

The equipment used in this investigation included 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 area 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 area was 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 (Figure 1).

2.) Each area was 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.) Each area was investigated with two operators in conjunction with a matched frequency transmitter and receiver. We conducted bidirectional 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 20 traverses were collected. A map of these traverses is presented in Figure 1. 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 possible backfilled UST excavations.

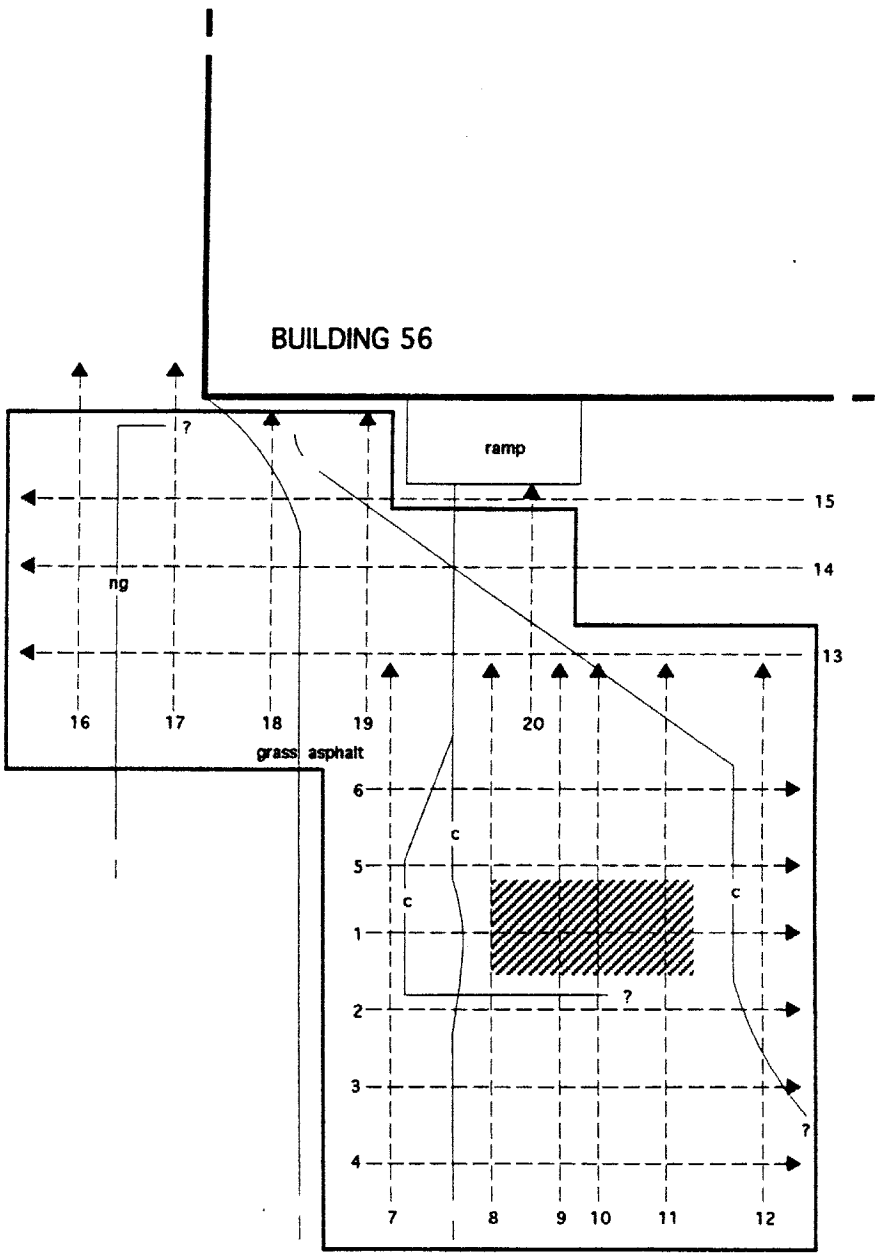
Results and Conclusions The surface trace of detected utilities was marked on the ground with spray paint using a color code established by the American Public Works Association. A site map with geophysical interpretation is presented in Figure 1. Drilling and excavation activities should be kept a minimum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

The penetration depth of the GPR signal was approximately 1-2 feet 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-Gasch cannot guarantee that all nonmetallic conduits, such as sewers and pvc water lines, have been identified within the areas of investigation.

A possible backfilled UST excavation was identified with GPR. The GPR profile exhibiting this anomaly is presented in Figure 2. This anomaly was marked on the ground and is indicated in Figure 1. Base utility maps for this area are included in Appendix A.

FIGURE 1
AREA OF SUBSURFACE INVESTIGATION
SITE 56
MCAS EL TORO
IRVINE, CALIFORNIA

SPECTRUM
GEOPHYSICS
15260 Sky High Road
Escondido, California 92025



EXPLANATION

Area of subsurface investigation	CONDUITS	
GPR anomaly	— c —	Conduit
1 — ▶ GPR traverse with number	— ng —	Natural gas
	— —	Trend continues
	— ?	Continued trend not determined

N

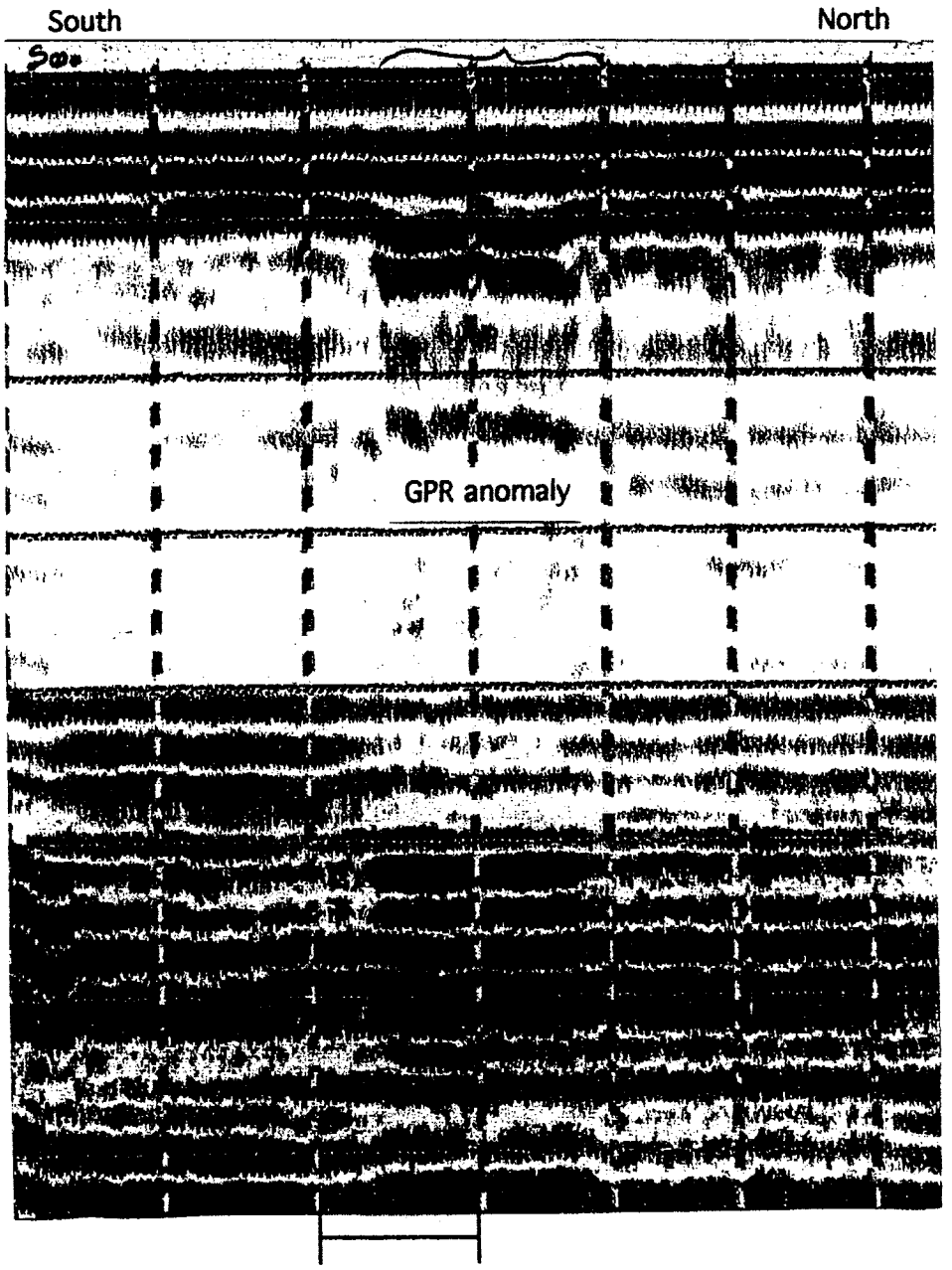
0 10 20
One inch equals approximately 20 feet

Project Number: 9902262F
Date of Investigation: February 26, 1999
Map by J. Pfoser

Not all below ground facilities may be represented on this map

FIGURE 2
GROUND PENETRATING RADAR TRAVERSE NO. 9
SITE 56
MCAS EL TORO
IRVINE, CALIFORNIA

SPECTRUM
GEOPHYSICS
15260 Sky High Road
Escondido, CA 92025



Distance between markers
approximately 10 feet

Project Number: 9902262F
Date of Investigation:
February 26, 1999

Appendix F
Field Soil Boring Logs

Geologic Log of Boring MSC-B1-SB01

Project **MCAS/EL TORO**	Northing -	Drilling Company BC2	
Project Number **920242**	Easting -	Drill Rig CME75	Begin Drilling 12/6/99
Client SWDIV	TOC Elevation -	Driller Diego Torres	End Drilling 12/6/99
Location **BURN PIT**	TOP OF RIM -	Drill Method HSA	Well Completion Date
Geologist B. Tanaka	DIAGRAM NOT TO SCALE		
Borehole Diameter 8-INCHES	Total Depth of Borehole 101 FEET	Depth to Water NOT ENCOUNTERED	

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)	BORING DETAIL
Concrete surface. Cored, hand augured to 10 feet bgs for untility clearance.	0	SM						BENTONITE GROUT
	2							
	4							
	6							
	8							
Silty Sand (SM): Reddish brown (5YR 5/3), 80% fine sands, 20% fine nonplastic silts, slightly moist, no odor.	10	SP			0 0 0	13 15 10	F F F	
	12							
	14				0 0 0	13 16 22	F F F	
Sands (SP) same as above, no odor detected. **20242-1031 Sample collected at 15.0-15.5 feet bgs.**	16							
	18							
Sands (SP): Dark reddish brown (5YR 4/4), well sorted medium sands, some fine grain sand, some silt, slightly plastic, no odor detected, slightly moist.	20				0 0 0	16 17 20	F F F	
	22							
	24							
Sands (SP) same as above.	26				0 0 0	18 20 26	F F F	
	28							
Silts (ML): Dark reddish brown (5YR 4/4), firm to hard, fine silts, slightly plastic, slightly moist, no odor detected.	30	ML			0 0 0	15 23 35	F F F	
	32							
	34							
Silts (ML) same as above.	36				0 0 0	17 21 26	F F F	
	38							
	40				0	18	F	

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Geologic Log of Boring MSC-B1-SB01

Project **MCAS/EL TORO**	Northing -	Drilling Company BC2	
Project Number **920242**	Easting -	Drill Rig CME75	Begin Drilling 12/6/99
Client SWDIV	TOC Elevation -	Driller Diego Torres	End Drilling 12/6/99
Location **BURN PIT**	TOP OF RIM -	Drill Method HSA	Well Completion Date
Geologist B. Tanaka	DIAGRAM NOT TO SCALE		
Borehole Diameter 8-INCHES	Total Depth of Borehole 101 FEET	Depth to Water NOT ENCOUNTERED	

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)	BORING DETAIL
Silts (ML) Dark reddish brown (5YR 4/4), firm to hard, fine silts, slightly plastic, slightly moist, no odor detected.	40	ML			0	40		BENTONITE GROUT
20242-1032 Sample collected at 40.0-40.5 feet bgs.	42				0	44		
	44							
Silts (ML) same as above, no odor detected	46				0	19		
					0	22		
					0	25		
	48							
Silty Sand (SM): Dark reddish brown (5YR 3/2), firm to soft, fine plastic silts, fine sands, slightly moist, no odor detected.	50	SM			0	16		
					0	21		
					0	22		
	52							
	54							
Sands (SP): Reddish brown (5YR 5/4) fine sands, trace mediums, coarse, subangular to subrounded, medium dense, slightly moist, no odor detected.	56	SP			0	12		
					0	15		
					0	17		
	58							
Silts (ML): Yellowish red (5YR 5/6) fine silts with some very fine sand, firm to soft, slightly moist, no odor detected.	60	ML			0	14		
					0	16		
					0	19		
	62							
	64							
Silts (ML): Dark yellowish brown (10YR 4/4), fine slight plastic silts, trace fine sand, slightly moist, soft to firm, no odor detected.	66				0	14		
					0	16		
					0	19		
	68							
Sands (SP): Yellowish brown (10YR 5/4) fine sands, well sorted, subangular to subrounded, medium dense, slightly moist, no odor detected.	70	SP			0	13		
20242-1045 Sample collected at 70.0-70.5 feet bgs.					0	14		
					0	17		
	72							
	74							
Silts (ML): Yellowish brown (10YR 5/4), fine slightly plastic silts, firm to soft, slightly moist, no odor detected.	76	ML			0	18		
					0	21		
					0	27		
	78							
	80							

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Geologic Log of Boring MSC-B1-SB01

Project **MCAS/EL TORO**	Northing -	Drilling Company BC2	
Project Number **920242**	Easting -	Drill Rig CME75	Begin Drilling 12/6/99
Client SWDIV	TOC Elevation -	Driller Diego Torres	End Drilling 12/6/99
Location **BURN PIT**	TOP OF RIM -	Drill Method HSA	Well Completion Date
Geologist B. Tanaka	DIAGRAM NOT TO SCALE		
Borehole Diameter 8-INCHES	Total Depth of Borehole 101 FEET	Depth to Water NOT ENCOUNTERED	

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)	BORING DETAIL
Sands (SP). Yellowish brown (10YR 5/4) fine sands, subrounded to subangular, medium dense, well sorted, slightly moist, no odor detected	80	SP			0 0 0	14 17 20		BENTONITE GROUT
	82							
	84							
Sands (SP) same as above, no odor detected	86				0 0 0	14 16 22		
	88							
Sands (SP) same as above, no odor detected	90				0 0 0	15 20 22		
	92							
	94							
Sands with Silts (SM). Yellowish brown (10YR 5/4) fine sands, subrounded to subangular, medium dense, well sorted, fine slightly plastic silts, slightly moist, no odor detected.	96				0 0 0	16 19 26		
	98							
Silty Sands (SM) same as above, no odor detected	100	SM			0 0 0	14 18 24		
20242-1048 Sample collected at 100.0-100.5 feet bgs.								
End of boring at 101 feet bgs. No groundwater encountered in the boring. Boring was backfilled with 21 (100lb) bags of cement mixed with 110 gallons of portable water.	102							
	104							
	106							
	108							
	110							
	112							
	114							
	116							
	118							
	120							

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Geologic Log of Boring MSC-B1-SB02

Project **MCAS/EL TORO**	Northing -	Drilling Company BC2	
Project Number **920242**	Easting -	Drill Rig CME75	Begin Drilling 12/8/99
Client SWDIV	TOC Elevation -	Driller Diego Torres	End Drilling 12/8/99
Location **BURN PIT**	TOP OF RIM -	Drill Method HSA	Well Completion Date -
Geologist B. Tanaka	DIAGRAM NOT TO SCALE		
Borehole Diameter 8-INCHES	Total Depth of Borehole 61 FEET	Depth to Water NOT ENCOUNTERED	

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)	BORING DETAIL
Concrete surface: Cored, hand augured to 10 feet bgs for utility clearance. Silty Sand (SM): Reddish brown (5YR 5/3), 80% fine sands, 20% non plastic silts, slightly moist, no odor detected.	0, 2, 4, 6, 8	SM						BENTONITE GROUT
Same as above (SM): Yellow brown (10YR 5/6).	10, 12				0, 0, 0	12, 14, 17	F, F, F	
Sands (SP): Yellow brown (10YR 5/6), very fine to fine sands, well sorted, subrounded to subangular, medium dense, slightly moist, no odor detected. **20242-1049 Sample collected at 15.0-15.5 feet bgs.**	14, 16, 18	SP			0, 0, 0	13, 16, 19	F, F, F	
Sands (SP): Yellow brown (10YR 5/6), very fine to fine, well sorted, medium dense, sands, slightly moist, no odor detected.	20, 22, 24, 26, 28				0, 0, 0	14, 15, 19	F, F, F	
Silty Sands (SM): Yellow brown (10YR 5/6), very fine to fine sands, very fine slightly plastic silts, slightly moist, no odor detected.	30, 32, 34, 36, 38, 40	SM			0, 0, 0	16, 18, 24	F, F, F	

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Geologic Log of Boring MSC-B1-SB02

Project **MCAS/EL TORO**	Northing -	Drilling Company BC2	
Project Number **920242**	Easting -	Drill Rig CME75	Begin Drilling 12/8/99
Client SWDIV	TOC Elevation -	Driller Diego Torres	End Drilling 12/8/99
Location **BURN PIT**	TOP OF RIM -	Drill Method HSA	Well Completion Date -
Geologist B. Tanaka	DIAGRAM NOT TO SCALE		
Borehole Diameter 8-INCHES	Total Depth of Borehole 61 FEET	Depth to Water NOT ENCOUNTERED	

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)	BORING DETAIL
Silt (ML): Yellow brown (10YR 5/6), very fine, slightly plastic, firm silts, slightly moist, no odor detected. **20242-1050 & 20242-1051 Samples collected at 40.0-41.0 feet bgs.**	40	ML			0 0 0	19 22 26		BENTONITE GROUT
	42							
	44							
	46							
	48							
Silt (ML): Yellow brown (10YR 5/6), very fine slightly to plastic silts, firm to hard, slightly moist, no odor detected.	50				0 0 0	17 20 24		
	52							
	54							
	56							
	58							
Same as above (ML): No odor detected. **20242-1052 Sample collected at 60.0-60.5 feet bgs.**	60				0 0 0	16 16 22		
End of boring at 61 feet bgs. No groundwater encountered in the boring. Boring was backfilled with 21 (100lb) bags of bentonite grout mixed with 80 gallons of portable water.	62							
	64							
	66							
	68							
	70							
	72							
	74							
	76							
	78							
	80							

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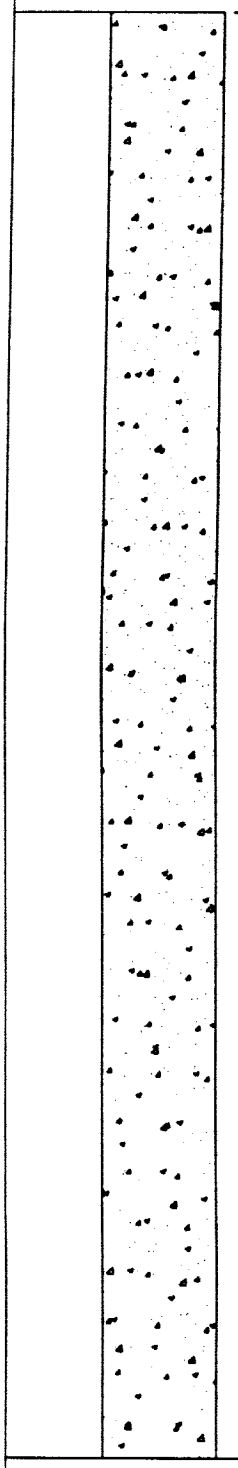
Geologic Log of Boring MSC-B1-SB03

Project **MCAS/EL TORO**	Northing -	Drilling Company BC2	
Project Number **920242**	Easting -	Drill Rig CME75	Begin Drilling 12/7/99
Client SWDIV	TOC Elevation -	Driller Diego Torres	End Drilling 12/7/99
Location **BURN PIT**	TOP OF RIM -	Drill Method HSA	Well Completion Date
Geologist B. Tanaka	DIAGRAM NOT TO SCALE		
Borehole Diameter 8-INCHES	Total Depth of Borehole 101 FEET	Depth to Water NOT ENCOUNTERED	

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)
Concrete surface: Cored, hand augured to 10 feet bgs for untility clearance.	0						
Silty Sand (SM): Reddish brown (5YR 5/3), fine sands 80%, 20% fine nonplastic silts, slightly moist, no odor.	2						
	4						
	6						
	8						
Sands (SP): Dark yellowish brown (10YR 4/6), medium, some fines well sorted, subrounded to subangular, medium dense, slightly moist, no odor detected.	10	SP			0 0 0	10 13 8	
	12						
Sands (SP): Dark yellowish brown (10YR 4/6), very fine sand, well sorted, subrounded to subangular, midium dense, slightly moist, no odor detected. **20242-1043 Sample collected at 15.0-15.5 feet bgs.**	14				0 0 0	14 15 17	
	16						
	18						
Sands (SP): Dark yellowish brown (10YR 4/6), very fine sands with silts, 5% micaceous, slightly moist, no odor detected.	20				0 0 0	15 15 17	
	22						
	24						
Sands (SM) with silts: Dark yellowish brown (10YR 4/6), very fine sands with 15% silts, micaceous, slighty moist, no odor detected.	26	SM			0 0 0	13 16 18	
	28						
Silts with Clay (ML): Very dark grayish brown (10YR 3/2), firm to soft, fine silts, 10% slighty plastic clay, slightly moist, no odor detected.	30	ML			0 0 0	15 22 22	
	32						
	34						
Same as above (ML): no odor detected.	36				0 0 0	14 16 16	
	38	SP					
	40				0	16	F

BORING DETAIL



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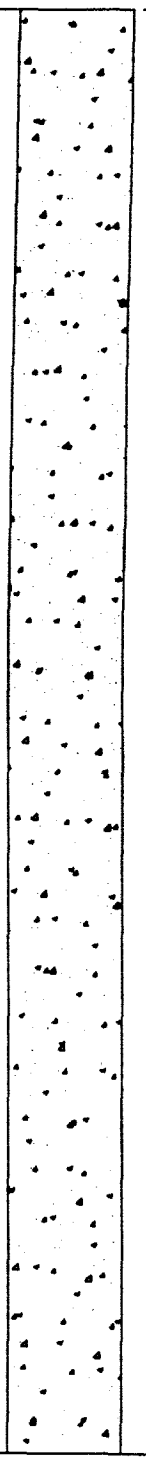
Geologic Log of Boring MSC-B1-SB03

Project **MCAS/EL TORO**	Northing -	Drilling Company BC2	
Project Number **920242**	Easting -	Drill Rig CME75	Begin Drilling 12/7/99
Client SWDIV	TOC Elevation -	Driller Diego Torres	End Drilling 12/7/99
Location **BURN PIT**	TOP OF RIM -	Drill Method HSA	Well Completion Date
Geologist B. Tanaka	DIAGRAM NOT TO SCALE		
Borehole Diameter 8-INCHES	Total Depth of Borehole 101 FEET	Depth to Water NOT ENCOUNTERED	

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)
Silts (ML): Very dark grayish brown (10YR 3/2), firm, fine, slighty plastic silts, some clay, slighty mosist, no odor detected. **20242-1044 Sample collected at 40.0-40.5 feet bgs.**	40	SP			0 0	20 21	
Sand (SP) well sorted: Very dark grayish brown (10YR 3/2), medium dense, fine sands, some mediums, subrounded to subangular, slighty moist, no odor detected. ▣46-46.5' Silts (ML): firm, slightly moist, no odor.	46	ML			0 0 0	32 20 24	
Silts same as above. Sands (SP): Light yellow brown (2.5Y 6/3), fines, some mediums, sujbrounded to subangular, medium dense, well sorted, trace silts (5%), slightly moist, no odor detected.	50	SP			0 0 0	18 20 23	
Sands (SP): Light yellow brown (2.5Y 6/3), very fine sands, well sorted, medium dense, subrounded to subangular, slighty moist, no odor detected.	56				0 0 0	19 21 26	
Silts (ML): Light yellow brown (2.5Y 6/3), very fine silts, micaceous, slight plastic, firm, slightly moist, no odor detected.	60	ML			0 0 0	13 23 25	
Silts, same as above. Silty Sand (SM): Light yellow brown (2.5Y 6/3), fine to medium sands, subrounded to subangular, medium dense, fine silts with mica, slighty moist, no odor detected.	66	SM			0 0 0	19 25 27	
Silts (ML): Dark yellow brown (10YR 4/4), fine, firm silts with mica, slightly plastic, trace very fine sand, slighty moist, no odor detected. **20242-1045 Sample collected at 70.0-70.5 feet bgs.**	70	ML			0 0 0	16 18 22	
Silty Sands (SM): Dark yellow brown (10YR 4/4), very fine to fine sands, trace mediums, fine soft, slighty plastic, silts with mica, slightly moist, no odor detected.	76	SM			0 0 0	14 17 20	
	80						

BORING DETAIL



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Geologic Log of Boring MSC-B1-SB03

Project **MCAS/EL TORO**	Northing -	Drilling Company BC2	
Project Number **920242**	Easting -	Drill Rig CME75	Begin Drilling 12/7/99
Client SWDIV	TOC Elevation -	Driller Diego Torres	End Drilling 12/7/99
Location **BURN PIT**	TOP OF RIM -	Drill Method HSA	Well Completion Date
Geologist B. Tanaka	DIAGRAM NOT TO SCALE		
Borehole Diameter 8-INCHES	Total Depth of Borehole 101 FEET	Depth to Water NOT ENCOUNTERED	

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)	BORING DETAIL
Silty Sands (SM), same as above, strong brown (7.5YR 5/6), no odor detected.	80				0 0 0	15 16 22		BENTONITE GROUT
	82							
	84							
Silty Sands (SM), same as above, core was fractured, no odor detected.	86				0 0 0	16 18 22		
	88							
Silty Sand (SM), same as above, slight core fracturing, slightly moist, no odor detected.	90	SM			0 0 0	18 21 26		
	92							
	94							
Silts (ML). Dark yellow brown (10YR 4/4), fine, firm to soft silt with mica, trace fine sand, slightly moist, no odor detected.	96				0 0 0	19 23 25		
	98							
Silt (ML) same as above, no odor detected.	100				0 0 0	21 23 26		
20242-1048 Sample collected at 100.0-100.5 feet bgs.								
End of boring at 101 feet bgs. No groundwater encounted in the boring. Boring was backfilled with 12 (100lb) bags of cement mixed with 30 gallons of portable water.	102							
	104							
	106							
	108							
	110							
	112							
	114							
	116							
	118							
	120							

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Geologic Log of Boring MSC-B1-SB04

Project **MCAS/EL TORO**	Northing -	Drilling Company BC2	
Project Number **920242**	Easting -	Drill Rig CME75	Begin Drilling 12/7/99
Client SWDIV	TOC Elevation -	Driller Diego Torres	End Drilling 12/7/99
Location **BURN PIT**	TOP OF RIM -	Drill Method HSA	Well Completion Date
Geologist B. Tanaka	DIAGRAM NOT TO SCALE		
Borehole Diameter 8-INCHES	Total Depth of Borehole 101 FEET	Depth to Water NOT ENCOUNTERED	

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)	BORING DETAIL
Concrete surface: Cored, hand augured to 10 feet bgs for untility clearance. Silty Sand (SM): Reddish brown (5YR 5/3), fine sands 80%, subrounded to subangular, medium dense to loose, 20% fine nonplastic silts, slightly moist, no odor detected.	0	SM						BENTONITE GROUT
	2							
	4							
	6							
	8							
Sands (SP): Dark yellowish brown (10YR 4/6), fine sands, subrounded to subangular, medium dense, well sorted, trace medium grain, slightly moist, no odor dectected.	10	SP			0 0 0	10 13 16		
	12							
Sands (SP) same as above, no odor detected. **20242-1037 Sample collected at 15.0-15.5 feet bgs.**	14				0 0 0	16 20 21		
	16							
	18							
Sands (SP): Yellowish brown (10YR 5/6), medium dense, fine sand, well sorted, subrounded to subangular, slightly moist, no odor detected.	20				0 0 0	14 17 20		
Silts (ML): (10YR 3/6), fine, firm, slightly plastic, slightly moist.	22	ML						
	24							
	26							
	28							
Silts (ML): (10YR 3/6), fine silts, firm to soft, slightly plastic to medium plastic, slightly moist, no odor detected.	30				0 0 0	12 14 22		
	32							
	34							
	36							
	38							
	40							

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Geologic Log of Boring MSC-B1-SB04

Project **MCAS/EL TORO**	Northing -	Drilling Company BC2	
Project Number **920242**	Easting -	Drill Rig CME75	Begin Drilling 12/7/99
Client SWDIV	TOC Elevation -	Driller Diego Torres	End Drilling 12/7/99
Location **BURN PIT**	TOP OF RIM -	Drill Method HSA	Well Completion Date
Geologist B. Tanaka	DIAGRAM NOT TO SCALE		
Borehole Diameter 8-INCHES	Total Depth of Borehole 101 FEET	Depth to Water NOT ENCOUNTERED	

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)	BORING DETAIL
Silts (ML): Yellowish brown (10YR 3/6) fine silts, firm, slightly plastic, slightly moist, no odor detected. **20242-1036 Sample collected at 40.0-40.5 feet bgs.**	40	ML			0	18		BENTONITE GROUT
	42				0	22		
	44				0	25		
	46							
	48							
Sands (SP) well sorted: Olive brown (2.5Y 4/4) very fine sand, subrounded to subangular, medium dense, slightly moist, no odor detected.	50	SP			0	19		
	52				0	22		
	54				0	25		
	56							
	58							
Sands with Silt (SM): Olive brown (2.5Y 4/4), 90% very fine sands, 10% very fine silts, slightly plastic, slightly moist, medium dense, no odor detected.	60	SM			0	19		
	62				0	22		
	64				0	26		
	66							
	68							
Sands with Silt (SM) same as above, no odor detected. **20242-1039 Sample collected at 70.0-70.5 feet bgs.**	70				0	19		
	72				0	21		
	74				0	26		
	76							
	78							
	80							

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Geologic Log of Boring MSC-B1-SB04

Project **MCAS/EL TORO**	Northing -	Drilling Company BC2	
Project Number **920242**	Easting -	Drill Rig CME75	Begin Drilling 12/7/99
Client SWDIV	TOC Elevation -	Driller Diego Torres	End Drilling 12/7/99
Location **BURN PIT**	TOP OF RIM -	Drill Method HSA	Well Completion Date
Geologist B. Tanaka	DIAGRAM NOT TO SCALE		
Borehole Diameter 8-INCHES	Total Depth of Borehole 101 FEET	Depth to Water NOT ENCOUNTERED	

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)	BORING DETAIL
Silts (ML): Olive brown (2.5Y 4/4), firm to hard, fine, slightly plastic silts, 10% fine sand, slightly moist, no odor detected.	80	ML			0 0 0	20 27 21		BENTONITE GROUT
	82							
	84							
	86							
	88							
Sand (SP): Light yellowish brown (2.5Y 6/3), well sorted, fine sand, medium dense, subrounded to subangular, slightly moist, no odor detected.	90	SP			0 0 0	17 19 24		
	92							
	94							
	96							
	98							
Silts (ML): Olive brown (2.5Y 4/4), fine, firm silts, slightly plastic, slightly moist, no odor detected.	100	ML			0 0 0	16 20 24		
210242-1040 Sample collected at 100.0-100.5 feet bgs.	102							
End of boring at 101 feet bgs. No groundwater encounted in the boring. Boring was backfilled with 21 (100lb) bags of cement mixed with 110 gallons of portable water.	104							
	106							
	108							
	110							
	112							
	114							
	116							
	118							
	120							

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Appendix G
Laboratory Analytical Reports

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/06/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/06/99
Batch No.	: 99L032	Date Extracted:	12/10/99 02:06
Sample ID:	20242-1031	Date Analyzed:	12/10/99 02:06
Lab Samp ID:	L032-01	Dilution Factor:	1
Lab File ID:	RLH104	Matrix :	SOIL
Ext Btch ID:	VOL0704	% Moisture :	9.2
Calib. Ref.:	RLH092	Instrument ID :	T-041

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.5	.36
1,1,2,2-TETRACHLOROETHANE	ND	5.5	.36
1,1,2-TRICHLOROETHANE	ND	5.5	.26
1,1-DICHLOROETHANE	ND	5.5	.33
1,1-DICHLOROETHENE	ND	5.5	.59
1,2-DICHLOROETHANE	ND	5.5	.36
1,2-DICHLOROPROPANE	ND	5.5	.41
2-BUTANONE	ND	55	5.6
2-CHLOROETHYLVINYLETHER	ND	55	.19
2-HEXANONE	ND	55	1.4
4-METHYL-2-PENTANONE	ND	55	1.3
ACETONE	ND	55	4.5
BENZENE	ND	5.5	.27
BROMODICHLOROMETHANE	ND	5.5	.29
BROMOFORM	ND	5.5	.31
BROMOMETHANE	ND	5.5	.7
CARBON DISULFIDE	ND	5.5	.14
CARBON TETRACHLORIDE	ND	5.5	.87
CHLOROBENZENE	ND	5.5	.22
CHLOROETHANE	ND	5.5	2
CHLOROFORM	ND	5.5	.47
CHLOROMETHANE	ND	5.5	2.3
CIS-1,2-DICHLOROETHENE	ND	5.5	.32
CIS-1,3-DICHLOROPROPENE	ND	5.5	.24
DIBROMOCHLOROMETHANE	ND	5.5	.087
ETHYLBENZENE	ND	5.5	.43
MTBE	ND	11	.41
METHYLENE CHLORIDE	3.5JB	5.5	.45
STYRENE	ND	5.5	.48
TETRACHLOROETHENE	ND	5.5	.27
TOLUENE	ND	5.5	.35
TRANS-1,2-DICHLOROETHENE	ND	5.5	.32
TRANS-1,3-DICHLOROPROPENE	ND	5.5	.73
TRICHLOROETHENE	ND	5.5	.28
VINYL ACETATE	ND	55	.79
VINYL CHLORIDE	ND	5.5	1.1
XYLENES	ND	5.5	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	106	52-149
TOLUENE-D8	102	65-135
BROMOFLUOROBENZENE	100	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/06/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/06/99
Batch No.	: 99L032	Date Extracted:	12/10/99 02:46
Sample ID:	20242-1032	Date Analyzed:	12/10/99 02:46
Lab Samp ID:	L032-02	Dilution Factor:	1
Lab File ID:	RLH105	Matrix :	SOIL
Ext Btch ID:	VOL0704	% Moisture :	16.2
Calib. Ref.:	RLH092	Instrument ID :	T-041

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	6	.39
1,1,2,2-TETRACHLOROETHANE	ND	6	.39
1,1,2-TRICHLOROETHANE	ND	6	.28
1,1-DICHLOROETHANE	ND	6	.36
1,1-DICHLOROETHENE	ND	6	.64
1,2-DICHLOROETHANE	ND	6	.39
1,2-DICHLOROPROPANE	ND	6	.45
2-BUTANONE	ND	60	6.1
2-CHLOROETHYLVINYLETHER	ND	60	.2
2-HEXANONE	ND	60	1.5
4-METHYL-2-PENTANONE	ND	60	1.4
ACETONE	ND	60	4.9
BENZENE	ND	6	.3
BROMODICHLOROMETHANE	ND	6	.31
BROMOFORM	ND	6	.33
BROMOMETHANE	ND	6	.76
CARBON DISULFIDE	ND	6	.15
CARBON TETRACHLORIDE	ND	6	.94
CHLOROBENZENE	ND	6	.24
CHLOROETHANE	ND	6	2.1
CHLOROFORM	ND	6	.51
CHLOROMETHANE	ND	6	2.5
CIS-1,2-DICHLOROETHENE	ND	6	.35
CIS-1,3-DICHLOROPROPENE	ND	6	.26
DIBROMOCHLOROMETHANE	ND	6	.094
ETHYLBENZENE	ND	6	.47
MTBE	ND	12	.44
METHYLENE CHLORIDE	4.1JB	6	.49
STYRENE	ND	6	.52
TETRACHLOROETHENE	ND	6	.29
TOLUENE	ND	6	.37
TRANS-1,2-DICHLOROETHENE	ND	6	.34
TRANS-1,3-DICHLOROPROPENE	ND	6	.79
TRICHLOROETHENE	ND	6	.3
VINYL ACETATE	ND	60	.85
VINYL CHLORIDE	ND	6	1.2
XYLENES	ND	6	1.3

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	114	52-149
TOLUENE-D8	103	65-135
BROMOFLUOROBENZENE	109	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/06/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/06/99
Batch No.	: 99L032	Date Extracted:	12/10/99 03:25
Sample ID:	20242-1033	Date Analyzed:	12/10/99 03:25
Lab Samp ID:	L032-03	Dilution Factor:	1
Lab File ID:	RLH106	Matrix :	SOIL
Ext Btch ID:	VOL0704	% Moisture :	6.1
Calib. Ref.:	RLH092	Instrument ID :	T-041

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.3	.35
1,1,2,2-TETRACHLOROETHANE	ND	5.3	.35
1,1,2-TRICHLOROETHANE	ND	5.3	.25
1,1-DICHLOROETHANE	ND	5.3	.32
1,1-DICHLOROETHENE	ND	5.3	.57
1,2-DICHLOROETHANE	ND	5.3	.35
1,2-DICHLOROPROPANE	ND	5.3	.4
2-BUTANONE	ND	53	5.5
2-CHLOROETHYLVINYLETHER	ND	53	.18
2-HEXANONE	ND	53	1.3
4-METHYL-2-PENTANONE	ND	53	1.2
ACETONE	ND	53	4.4
BENZENE	ND	5.3	.26
BROMODICHLOROMETHANE	ND	5.3	.28
BROMOFORM	ND	5.3	.3
BROMOMETHANE	ND	5.3	.68
CARBON DISULFIDE	ND	5.3	.13
CARBON TETRACHLORIDE	ND	5.3	.84
CHLOROBENZENE	ND	5.3	.21
CHLOROETHANE	ND	5.3	1.9
CHLOROFORM	ND	5.3	.45
CHLOROMETHANE	ND	5.3	2.2
CIS-1,2-DICHLOROETHENE	ND	5.3	.31
CIS-1,3-DICHLOROPROPENE	ND	5.3	.24
DIBROMOCHLOROMETHANE	ND	5.3	.084
ETHYLBENZENE	ND	5.3	.42
MTBE	ND	11	.4
METHYLENE CHLORIDE	3.4JB	5.3	.44
STYRENE	ND	5.3	.47
TETRACHLOROETHENE	ND	5.3	.26
TOLUENE	ND	5.3	.33
TRANS-1,2-DICHLOROETHENE	ND	5.3	.31
TRANS-1,3-DICHLOROPROPENE	ND	5.3	.71
TRICHLOROETHENE	ND	5.3	.27
VINYL ACETATE	ND	53	.76
VINYL CHLORIDE	ND	5.3	1.1
XYLENES	ND	5.3	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	113	52-149
TOLUENE-D8	101	65-135
BROMOFLUOROBENZENE	105	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/06/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/06/99
Batch No.	: 99L032	Date Extracted:	12/10/99 04:04
Sample ID:	20242-1034	Date Analyzed:	12/10/99 04:04
Lab Samp ID:	L032-04	Dilution Factor:	1
Lab File ID:	RLH107	Matrix :	SOIL
Ext Btch ID:	VOL0704	% Moisture :	25.6
Calib. Ref.:	RLH092	Instrument ID :	T-041

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	6.7	.44
1,1,2,2-TETRACHLOROETHANE	ND	6.7	.44
1,1,2-TRICHLOROETHANE	ND	6.7	.31
1,1-DICHLOROETHANE	ND	6.7	.41
1,1-DICHLOROETHENE	ND	6.7	.72
1,2-DICHLOROETHANE	ND	6.7	.44
1,2-DICHLOROPROPANE	ND	6.7	.51
2-BUTANONE	ND	67	6.9
2-CHLOROETHYLVINYLETHER	ND	67	.23
2-HEXANONE	ND	67	1.7
4-METHYL-2-PENTANONE	ND	67	1.5
ACETONE	ND	67	5.5
BENZENE	ND	6.7	.33
BROMODICHLOROMETHANE	ND	6.7	.35
BROMOFORM	ND	6.7	.38
BROMOMETHANE	ND	6.7	.86
CARBON DISULFIDE	ND	6.7	.17
CARBON TETRACHLORIDE	ND	6.7	1.1
CHLOROBENZENE	ND	6.7	.26
CHLOROETHANE	ND	6.7	2.4
CHLOROFORM	ND	6.7	.57
CHLOROMETHANE	ND	6.7	2.8
CIS-1,2-DICHLOROETHENE	ND	6.7	.39
CIS-1,3-DICHLOROPROPENE	ND	6.7	.3
DIBROMOCHLOROMETHANE	ND	6.7	.11
ETHYLBENZENE	ND	6.7	.53
MTBE	ND	13	.5
METHYLENE CHLORIDE	3.4JB	6.7	.55
STYRENE	ND	6.7	.59
TETRACHLOROETHENE	ND	6.7	.33
TOLUENE	ND	6.7	.42
TRANS-1,2-DICHLOROETHENE	ND	6.7	.39
TRANS-1,3-DICHLOROPROPENE	ND	6.7	.9
TRICHLOROETHENE	ND	6.7	.34
VINYL ACETATE	ND	67	.96
VINYL CHLORIDE	ND	6.7	1.4
XYLENES	ND	6.7	1.5

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	113	52-149
TOLUENE-D8	103	65-135
BROMOFLUOROBENZENE	100	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/06/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/06/99
Batch No.	: 99L032	Date Extracted:	12/09/99 21:33
Sample ID:	20242-1035	Date Analyzed:	12/09/99 21:33
Lab Samp ID:	L032-05	Dilution Factor:	1
Lab File ID:	RLH097	Matrix :	WATER
Ext Btch ID:	VOL0704	% Moisture :	NA
Calib. Ref.:	RLH092	Instrument ID :	T-041

PARAMETERS	RESULTS (ug/L)	PRL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	1.1
1,1,2,2-TETRACHLOROETHANE	ND	5	.49
1,1,2-TRICHLOROETHANE	ND	5	.52
1,1-DICHLOROETHANE	ND	5	1.2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	.58
1,2-DICHLOROPROPANE	ND	5	.53
2-BUTANONE	ND	50	7.9
2-CHLOROETHYLVINYLETHER	ND	50	.83
2-HEXANONE	ND	50	1
4-METHYL-2-PENTANONE	ND	50	1
ACETONE	ND	50	10
BENZENE	ND	5	.85
BROMODICHLOROMETHANE	ND	5	.33
BROMOFORM	ND	5	.29
BROMOMETHANE	ND	5	1.5
CARBON DISULFIDE	ND	5	1.3
CARBON TETRACHLORIDE	ND	5	1.3
CHLOROBENZENE	ND	5	.68
CHLOROETHANE	ND	5	2.9
CHLOROFORM	ND	5	.85
CHLOROMETHANE	ND	5	1.7
CIS-1,2-DICHLOROETHENE	ND	5	.97
CIS-1,3-DICHLOROPROPENE	ND	5	.47
DIBROMOCHLOROMETHANE	ND	5	.29
ETHYLBENZENE	ND	5	.72
MTBE	ND	10	.96
METHYLENE CHLORIDE	ND	5	1.8
STYRENE	ND	5	.58
TETRACHLOROETHENE	ND	5	1.2
TOLUENE	1.2J	5	.92
TRANS-1,2-DICHLOROETHENE	ND	5	1.5
TRANS-1,3-DICHLOROPROPENE	ND	5	.45
TRICHLOROETHENE	ND	5	.9
VINYL ACETATE	ND	50	6.2
VINYL CHLORIDE	ND	5	1.7
XYLENES	ND	5	2.4

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	104	62-139
TOLUENE-D8	101	75-125
BROMOFLUOROBENZENE	103	75-125

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/06/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/06/99
Batch No.	: 99L032	Date Extracted:	12/09/99 22:12
Sample ID:	20242-1036	Date Analyzed:	12/09/99 22:12
Lab Samp ID:	L032-06	Dilution Factor:	1
Lab File ID:	RLH098	Matrix :	WATER
Ext Btch ID:	VOL0704	% Moisture :	NA
Calib. Ref.:	RLH092	Instrument ID :	T-041

PARAMETERS	RESULTS (ug/L)	PRL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	1.1
1,1,2,2-TETRACHLOROETHANE	ND	5	.49
1,1,2-TRICHLOROETHANE	ND	5	.52
1,1-DICHLOROETHANE	ND	5	1.2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	.58
1,2-DICHLOROPROPANE	ND	5	.53
2-BUTANONE	ND	50	7.9
2-CHLOROETHYLVINYLETHER	ND	50	.83
2-HEXANONE	ND	50	1
4-METHYL-2-PENTANONE	ND	50	1
ACETONE	ND	50	10
BENZENE	ND	5	.85
BROMODICHLOROMETHANE	ND	5	.33
BROMOFORM	ND	5	.29
BROMOMETHANE	ND	5	1.5
CARBON DISULFIDE	ND	5	1.3
CARBON TETRACHLORIDE	ND	5	1.3
CHLOROBENZENE	ND	5	.68
CHLOROETHANE	ND	5	2.9
CHLOROFORM	ND	5	.85
CHLOROMETHANE	ND	5	1.7
CIS-1,2-DICHLOROETHENE	ND	5	.97
CIS-1,3-DICHLOROPROPENE	ND	5	.47
DIBROMOCHLOROMETHANE	ND	5	.29
ETHYLBENZENE	ND	5	.72
MTBE	ND	10	.96
METHYLENE CHLORIDE	ND	5	1.8
STYRENE	ND	5	.58
TETRACHLOROETHENE	ND	5	1.2
TOLUENE	ND	5	.92
TRANS-1,2-DICHLOROETHENE	ND	5	1.5
TRANS-1,3-DICHLOROPROPENE	ND	5	.45
TRICHLOROETHENE	ND	5	.9
VINYL ACETATE	ND	50	6.2
VINYL CHLORIDE	ND	5	1.7
XYLENES	ND	5	2.4

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	105	62-139
TOLUENE-D8	100	75-125
BROMOFLUOROBENZENE	100	75-125

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

LETED 1800, 1-7-00 MG 1/13/00

IT Corporation
2790 Mosside Blvd.
Monroeville, PA 15146-2792
(412)372-7701

CHAIN-OF-CUSTODY RECORD

PROJECT DATA MANAGER'S COPY

A 10064

FORM 0019 REV. 9.99

MSC-B1 (Burnett)

LAB COORDINATOR: Bienkowski	LAB COORDINATOR'S PHONE: 949-1660-7537	LAB COORDINATOR'S FAX: (949) 475-5433	LABORATORY SERVICE ID: 99L032	LABORATORY CONTACT: EMAX	MAIL REPORT (COMPANY NAME): Dwayne Ishida
PROJECT NAME: ASEI Tolo-DO	PROJECT LOCATION: 12 El Toro, CA	PROJECT NUMBER: 20242	LABORATORY PHONE: 310-618-8889	LABORATORY FAX:	RECIPIENT NAME: IT Corp.
PROJECT CONTACT: Bienkowski	PROJECT PHONE NUMBER: 949-451-1606	PROJECT FAX:	LABORATORY ADDRESS: 630 Maple		ADDRESS: 3347 Michelson, #350
PROJECT ADDRESS:	CITY, STATE AND ZIP CODE:	CLIENT: SWDIV	CITY, STATE AND ZIP CODE: Torrance, CA		CITY, STATE AND ZIP CODE: Irvine, CA
PROJECT MANAGER: Sedlak	PROJECT MANAGER'S PHONE: 949-1660-5446	PROJECT MANAGER'S FAX:			

Analyze from "X" end

Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	TPH-GRO	TPH-Diesel	TPH-JP5	TPH-Motor Oil	EPA 8260 VOC	CAM 17 Metals			Comments
20242-1031	Soil	12/6/99	0940	N	1	3	5day	✓	✓	✓	✓	✓	✓ AM			
20242-1032	Soil	12/6/99	1005	N	1	3	5day	✓	✓	✓	✓	✓	✓ PM			
20242-1033	Soil	12/6/99	1110	N	1	3	5day	✓	✓	✓	✓	✓	✓ AM			
20242-1034	Soil	12/6/99	1215	N	1	3	5day	✓	✓	✓	✓	✓	✓ PM			
20242-1035	W	12/6/99	0800	HCL	3	3	5day	✓				✓				
20242-1036	W	12/6/99	1500	HCL HNO3	7	3	5day	✓	✓	✓	✓	✓	✓ PM			

BT 12/6/99

SAMPLES COLLECTED BY: Vivian Tanaka	COURIER AND AIR BILL NUMBER			COOLER TEMPERATURE UPON RECEIPT
RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
		12/6/99	4:12	

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

WBS: 02001701

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

MSC-B1 Soil Borings

Sample Point Location	Sample Type G	C	F	QC
1. MSC B-1 - SB01 15'-15.5' BGS	✓			
2. MSC B-1 - SB01 40'-40.5' BGS	✓			
3. MSC B-1 SB01 70-70.5 BGS	✓			
4. MSC B-1 SB01 100-100.5 BGS	✓			
5. MSC B-1 Trip blank				✓
6. MSC B-1 Equip Rinse				✓

Comments

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

0004447

METHOD 5030B/M8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE & TRAP

Client : IT CORPORATION
Project : MCAS EL TORO/20242/D.O. 112
Batch No. : 99L032

Matrix : WATER
Instrument ID : GCT039

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	SURR (%)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	VAL1439B	ND	85	1	NA	.1	.012	12/08/9908:16	12/08/9908:16	EL05-29	EL05-26	VAL1439	NA	NA
LCS1W	VAL1439L	1.05	108	1	NA	.1	.012	12/08/9908:50	12/08/9908:50	EL05-30	EL05-26	VAL1439	NA	NA
LCD1W	VAL1439C	1.03	102	1	NA	.1	.012	12/08/9909:25	12/08/9909:25	EL05-31	EL05-26	VAL1439	NA	NA
20242-1036	L032-06	ND	86	1	NA	.1	.012	12/08/9916:22	12/08/9916:22	EL05-40	EL05-38	VAL1439	12/06/99	12/06/99

SURR : Bromofluorobenzene(BFB), WATER:65-135%, SOIL:60-140%
RL : Reporting Limit
* : Out of QC limit due to matrix interference

METHOD 5030B/M8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE & TRAP

Client : IT CORPORATION
Project : MCAS EL TORO/20242/D.O. 112
Batch No. : 99L032

Matrix : SOIL
Instrument ID : GCT039

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	SURR (%)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	VAL1539B	ND	91	1	NA	1	.02	12/09/9905:49	12/09/9905:49	EL06-3	EL06-2	VAL1539	NA	NA
LCS1S	VAL1539L	5.55	106	1	NA	1	.02	12/09/9906:24	12/09/9906:24	EL06-4	EL06-2	VAL1539	NA	NA
LCD1S	VAL1539C	6.18	103	1	NA	1	.02	12/09/9906:58	12/09/9906:58	EL06-5	EL06-2	VAL1539	NA	NA
20242-1031	L032-01	ND	86	1	9.2	1.1	.022	12/09/9909:18	12/09/9909:18	EL06-9	EL06-2	VAL1539	12/06/99	12/06/99
20242-1032	L032-02	ND	89	1	16.2	1.2	.024	12/09/9909:52	12/09/9909:52	EL06-10	EL06-2	VAL1539	12/06/99	12/06/99
20242-1033	L032-03	ND	88	1	6.1	1.1	.021	12/09/9910:27	12/09/9910:27	EL06-11	EL06-2	VAL1539	12/06/99	12/06/99
20242-1034	L032-04	ND	85	1	25.6	1.3	.027	12/09/9911:02	12/09/9911:02	EL06-12	EL06-2	VAL1539	12/06/99	12/06/99

SURR : Bromofluorobenzene(BFB), WATER:65-135%, SOIL:60-140%
RL : Reporting Limit
* : Out of QC limit due to matrix interference

METHOD M8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : IT CORPORATION
Project : MCAS EL TORO/20242/D.O. 112
Batch No. : 99L032

Matrix : WATER
Instrument ID : GCT043

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	SUR1 (%)	SUR2 (%)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	DSL010WB	ND	89	98	1	NA	.1	.012	12/09/9906:52	12/08/9918:00	DL05-30	DL05-25	DSL010W	NA	12/08/99
LCS1W	DSL010WL	4.61	95	101	1	NA	.1	.012	12/09/9907:31	12/08/9918:00	DL05-31	DL05-25	DSL010W	NA	12/08/99
LCD1W	DSL010WC	4.76	96	102	1	NA	.1	.012	12/09/9908:10	12/08/9918:00	DL05-32	DL05-25	DSL010W	NA	12/08/99
20242-1036	L032-06	.28	91	97	.95	NA	.095	.011	12/09/9908:49	12/08/9918:00	DL05-33	DL05-25	DSL010W	12/06/99	12/06/99

RL : Reporting Limit
SURR1 : Bromobenzene
SURR2 : Hexacosane

Parameter	H-C Range
JP5	C7 -C18
Diesel	C10-C24
Motor Oil	C18-C34
Gas	C6 -C12

METHOD M8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : IT CORPORATION
Project : MCAS EL TORO/20242/D.O. 112
Batch No. : 99L032

Matrix : SOIL
Instrument ID : GCT043

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	SUR1 (%)	SUR2 (%)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	DSL009SB	ND	103	100	1	NA	10	.834	12/08/9912:30	12/07/9915:00	DL05-4	DL05-3	DSL009S	NA	12/07/99
LCS1S	DSL009SL	347	83	76	1	NA	10	.834	12/08/9913:09	12/07/9915:00	DL05-5	DL05-3	DSL009S	NA	12/07/99
LCD1S	DSL009SC	444	108	108	1	NA	10	.834	12/08/9913:49	12/07/9915:00	DL05-6	DL05-3	DSL009S	NA	12/07/99
20242-1031	L032-01	ND	121	120	1	9.2	11	.92	12/09/9904:15	12/07/9915:00	DL05-26	DL05-25	DSL009S	12/06/99	12/06/99
20242-1032	L032-02	ND	96	91	1	16.2	12	1.0	12/09/9904:54	12/07/9915:00	DL05-27	DL05-25	DSL009S	12/06/99	12/06/99
20242-1033	L032-03	ND	98	95	1	6.1	11	.89	12/09/9905:33	12/07/9915:00	DL05-28	DL05-25	DSL009S	12/06/99	12/06/99
20242-1034	L032-04	ND	99	96	1	25.6	13	1.1	12/09/9906:12	12/07/9915:00	DL05-29	DL05-25	DSL009S	12/06/99	12/06/99

RL : Reporting Limit
SURR1 : Bromobenzene
SURR2 : Hexacosane

Parameter	H-C Range
JP5	C7 -C18
Diesel	C10-C24
Motor Oil	C18-C34
Gas	C6 -C12

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	12/06/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/06/99
SDG NO.	: 99L032	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1031	Date Analyzed:	12/09/99 19:40
Lab Samp ID:	L032-01	Dilution Factor:	1
Lab File ID:	I07L025029	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	9.2
Calib. Ref.:	I07L025022	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11	3.94
Barium	129	1.1	.143
Beryllium	.313	.22	.022
Cadmium	.464J	1.1	.0771
Chromium	8.09	1.1	.661
Cobalt	3.91	1.1	.672
Copper	6.4	1.1	.815
Manganese	192	2.2	.132
Molybdenum	ND	2.2	.716
Nickel	4.52	2.2	.507
Silver	ND	1.1	1.55
Vanadium	27.9	1.1	.914
Zinc	33	1.1	.286

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	12/06/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/06/99
SDG NO.	: 99L032	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1031	Date Analyzed:	12/09/99 20:07
Lab Samp ID:	L032-01	Dilution Factor:	1
Lab File ID:	I31L018021	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	9.2
Calib. Ref.:	I31L018014	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.39	1.1	.565
Lead	2	1.1	.291
Selenium	ND	1.1	.499
Thallium *	ND	1.1	.513

RL: Reporting Limit

* Analyzed on 12-16-99 File # I31L034

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	12/06/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/06/99
SDG NO.	: 99L032	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1032	Date Analyzed:	12/09/99 19:45
Lab Samp ID:	L032-02	Dilution Factor:	1
Lab File ID:	I07L025030	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	16.2
Calib. Ref.:	I07L025022	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.9	4.27
Barium	219	1.19	.155
Beryllium	.481	.239	.0239
Cadmium	.159J	1.19	.0835
Chromium	15.6	1.19	.716
Cobalt	5.88	1.19	.728
Copper	9.03	1.19	.883
Manganese	155	2.39	.143
Molybdenum	ND	2.39	.776
Nickel	9.25	2.39	.549
Silver	ND	1.19	1.68
Vanadium	41.7	1.19	.99
Zinc	46	1.19	.31

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	12/06/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/06/99
SDG NO.	: 99L032	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1032	Date Analyzed:	12/09/99 20:11
Lab Samp ID:	L032-02	Dilution Factor:	1
Lab File ID:	I31L018022	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	16.2
Calib. Ref.:	I31L018014	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.17	1.19	.612
Lead	3.15	1.19	.315
Selenium	ND	1.19	.541
Thallium *	ND	1.19	.556

RL: Reporting Limit

* Analyzed on 12-16-99 File # I31L034

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	12/06/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/06/99
SDG NO.	: 99L032	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1033	Date Analyzed:	12/09/99 19:50
Lab Samp ID:	L032-03	Dilution Factor:	1
Lab File ID:	I07L025031	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	6.1
Calib. Ref.:	I07L025022	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10.6	3.81
Barium	90.8	1.06	.138
Beryllium	.253	.213	.0213
Cadmium	.657J	1.06	.0745
Chromium	7.31	1.06	.639
Cobalt	3.49	1.06	.65
Copper	5.7	1.06	.788
Manganese	158	2.13	.128
Molybdenum	3.57	2.13	.692
Nickel	5.64	2.13	.49
Silver	ND	1.06	1.5
Vanadium	26.1	1.06	.884
Zinc	25.3	1.06	.277

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	12/06/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/06/99
SDG NO.	: 99L032	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1033	Date Analyzed:	12/09/99 20:36
Lab Samp ID:	L032-03	Dilution Factor:	1
Lab File ID:	I31L018028	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	6.1
Calib. Ref.:	I31L018026	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.41	1.06	.546
Lead	1.89	1.06	.281
Selenium	ND	1.06	.482
Thallium *	ND	1.06	.496

RL: Reporting Limit

* Analyzed on 12-16-99 File # I31L034

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	12/06/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/06/99
SDG NO.	: 99L032	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1034	Date Analyzed:	12/09/99 20:01
Lab Samp ID:	L032-04	Dilution Factor:	1
Lab File ID:	I07L025033	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	25.6
Calib. Ref.:	I07L025022	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	13.4	4.81
Barium	289	1.34	.175
Beryllium	.876	.269	.0269
Cadmium	1.51	1.34	.0941
Chromium	24.9	1.34	.806
Cobalt	10.5	1.34	.82
Copper	19.5	1.34	.995
Manganese	438	2.69	.161
Molybdenum	ND	2.69	.874
Nickel	17.3	2.69	.618
Silver	ND	1.34	1.9
Vanadium	75.1	1.34	1.12
Zinc	95.4	1.34	.349

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	12/06/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/06/99
SDG NO.	: 99L032	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1034	Date Analyzed:	12/09/99 20:40
Lab Samp ID:	L032-04	Dilution Factor:	1
Lab File ID:	I31L018029	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	25.6
Calib. Ref.:	I31L018026	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	4.36	1.34	.69
Lead	5.07	1.34	.355
Selenium	ND	1.34	.609
Thallium ^	1.17J	1.34	.626

RL: Reporting Limit

^ Analyzed on 12-16-99 File # I31L034

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	NA
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/08/99
SDG NO.	: 99L032	Date Extracted:	12/08/99 15:30
Sample ID:	MBLK1S	Date Analyzed:	12/09/99 18:06
Lab Samp ID:	IPL012SB	Dilution Factor:	1
Lab File ID:	I07L025012	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	NA
Calib. Ref.:	I07L025010	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10	3.58
Barium	ND	1	.13
Beryllium	ND	.2	.02
Cadmium	.181J	1	.07
Chromium	ND	1	.6
Cobalt	ND	1	.61
Copper	ND	1	.74
Manganese	ND	2	.12
Molybdenum	ND	2	.65
Nickel	ND	2	.46
Silver	ND	1	1.41
Vanadium	ND	1	.83
Zinc	.53J	1	.26

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	NA
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/08/99
SDG NO.	: 99L032	Date Extracted:	12/08/99 15:30
Sample ID:	MBLK1S	Date Analyzed:	12/09/99 19:46
Lab Samp ID:	IPL012SB	Dilution Factor:	1
Lab File ID:	I31L018016	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	NA
Calib. Ref.:	I31L018014	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	ND	1	.513
Lead	ND	1	.264
Selenium	ND	1	.453
Thallium*	ND	1	.466

RL: Reporting Limit
* Analyzed on 12/16/99, File #I31L034

METHOD 7471A
MERCURY BY COLD VAPOR

Client : IT CORPORATION
Project : MCAS EL TORO/20242/D.O. 112
Batch No. : 99L032

Matrix : SOIL
Instrument ID : TI023

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	HGL010SB	ND	1	NA	.1	.028	12/13/9912:40	12/13/9912:00	M99L014008	M99L014006	HGL010S	NA	12/13/99
LCS1S	HGL010SL	.838	1	NA	.1	.028	12/13/9912:42	12/13/9912:00	M99L014009	M99L014006	HGL010S	NA	12/13/99
LCD1S	HGL010SC	.831	1	NA	.1	.028	12/13/9912:44	12/13/9912:00	M99L014010	M99L014006	HGL010S	NA	12/13/99
20242-1031	L032-01	ND	1	9.2	.11	.0308	12/13/9912:46	12/13/9912:00	M99L014011	M99L014006	HGL010S	12/06/99	12/06/99
20242-1031MS	L032-01M	.849	1	9.2	.11	.0308	12/13/9912:48	12/13/9912:00	M99L014012	M99L014006	HGL010S	12/06/99	12/06/99
20242-1031MSD	L032-01S	.850	1	9.2	.11	.0308	12/13/9912:50	12/13/9912:00	M99L014013	M99L014006	HGL010S	12/06/99	12/06/99
20242-1031DL	L032-01T	ND	5	9.2	.551	.154	12/13/9912:52	12/13/9912:00	M99L014014	M99L014006	HGL010S	12/06/99	12/06/99
20242-1031AS	L032-01A	.386	1	9.2	.11	.0308	12/13/9912:55	12/13/9912:00	M99L014015	M99L014006	HGL010S	12/06/99	12/06/99
20242-1032	L032-02	ND	1	16.2	.119	.0334	12/13/9912:57	12/13/9912:00	M99L014016	M99L014006	HGL010S	12/06/99	12/06/99
20242-1033	L032-03	ND	1	6.1	.106	.0298	12/13/9912:59	12/13/9912:00	M99L014017	M99L014006	HGL010S	12/06/99	12/06/99
20242-1034	L032-04	ND	1	25.6	.134	.0376	12/13/9913:06	12/13/9912:00	M99L014020	M99L014018	HGL010S	12/06/99	12/06/99

RL: Reporting Limit

METHOD 7470A
MERCURY BY COLD VAPOR

Client : IT CORPORATION
Project : MCAS EL TORO/20242/D.O. 112
Batch No. : 99L032

Matrix : WATER
Instrument ID : TI023

SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DLF	MOIST	RL (ug/L)	MDL (ug/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	HGL005WB	ND	1	NA	.2	.179	12/08/9918:44	12/08/9912:00	M99L010053	M99L010051	HGL005W	NA	12/08/99
LCS1W	HGL005WL	5.2	1	NA	.2	.179	12/08/9918:46	12/08/9912:00	M99L010054	M99L010051	HGL005W	NA	12/08/99
LCD1W	HGL005WC	5.18	1	NA	.2	.179	12/08/9918:48	12/08/9912:00	M99L010055	M99L010051	HGL005W	NA	12/08/99
20242-1036	L032-06	ND	1	NA	.2	.179	12/08/9918:52	12/08/9912:00	M99L010057	M99L010051	HGL005W	12/06/99	12/06/99

RL: Reporting Limit

7054

COMPLETED 1-7-00 1/14/00

the IT group

IT Corporation
2790 Mosside Blvd.
Monroeville, PA 15146-2792
(412)372-7701

CHAIN-OF-CUSTODY RECORD

PROJECT DATA MANAGER'S COPY

MSC-B-4
MSC-B-3 (Burn Pit)

A 10067

FORM 0019 REV. 9-99

LAB COORDINATOR: Brenkowski	LAB COORDINATOR'S PHONE: 949-660-7537	LAB COORDINATOR'S FAX: 949-475-5433	LABORATORY SERVICE ID: 99L039	LABORATORY CONTACT: E MAX	MAIL REPORT (COMPANY NAME): Dwayne Ishida
PROJECT NAME: D0112 NAS El Toro	PROJECT LOCATION: El Toro CA	PROJECT NUMBER: 20242	LABORATORY PHONE: 310 618-8889	LABORATORY FAX:	RECIPIENT NAME: IT Corp
PROJECT CONTACT: Brenkowski	PROJECT PHONE NUMBER: 949 451-1666	PROJECT FAX:	LABORATORY ADDRESS: 630 Maple		ADDRESS: 3347 Michelson #200
PROJECT ADDRESS:	CITY, STATE AND ZIP CODE:	CLIENT: SWDIV	CITY, STATE AND ZIP CODE: Torrance, CA		CITY, STATE AND ZIP CODE: IRVINE CA 92612
PROJECT MANAGER: B. Sedlak	PROJECT MANAGER'S PHONE: 949.660.5446	PROJECT MANAGER'S FAX:			

ANALYZE From "X" end

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	TPH Gas	TPH Diesel	TPH 30-5	TPH Motor Oil	EPA 8260 + MTBE	CAM 17 Metals			Comments
1	20242-1037	Soil	12/7/99	0804	NONE	1	3	5day	✓	✓	✓	✓	✓	✓			
2	20242-1038	Soil	12/7/99	0825	NONE	1	3	5day	✓	✓	✓	✓	✓	✓			
3	20242-1039	Soil	↓	0915	NONE	1	3	5day	✓	✓	✓	✓	✓	✓			
4	20242-1040	Soil	↓	1010	NONE	1	3	5day	✓	✓	✓	✓	✓	✓			
5	20242-1041	Soil	↓	1011	NONE	1	4	5day	✓	✓	✓	✓	✓	✓			
6	20242-1042	Water		1200	HCL/HNO3	7	3	5day	✓	✓	✓	✓	✓	✓			
7	20242-1043	Soil		1355	NONE	1	3	5day	✓	✓	✓	✓	✓	✓			
8	20242-1044	Soil		1415	NONE	1	3	5day	✓	✓	✓	✓	✓	✓			
9	20242-1045	Soil		1450	NONE	1	3	5day	✓	✓	✓	✓	✓	✓			
10	20242-1046	Water	↓	0800	HCL	3	3	5day					✓				

SAMPLES COLLECTED BY: Brian Tuma

COURIER AND AIR BILL NUMBER:

COOLER TEMPERATURE UPON RECEIPT:

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
[illegible]	[illegible]	12/7/99	1600	

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

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

MSC-B1 Soil Borings

Sample Point Location	Sample Type G	C	F	QC
1) MSC B-4 SB4 15.0-15.5' BGS	✓			
2) MSC B-4 SB4 40.0-40.5' BGS	✓			
3) MSC B4 SB4 70.0-70.5 BGS	✓			
4) MSC B4 SB4 100.0-100.5 BGS	✓			
5) MSC B4 SB4 100.0-100.0 DUP				✓
6) MSC B4 SB4 Equipment Rinse				✓
7) MSC B-B SB3 15.0-15.5' BGS	✓			
8) MSC BB SB3 40.0-40.5 bgs	✓			
9) MSC BB SB3 70.0-70.5 BGS	✓			
10) MSC B4 & 3 trip Blank				✓

Comments

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

0004479-

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
Batch No.	: 99L039	Date Extracted:	12/12/99 05:23
Sample ID:	20242-1037	Date Analyzed:	12/12/99 05:23
Lab Samp ID:	L039-01	Dilution Factor:	1
Lab File ID:	RLV181	Matrix :	SOIL
Ext Btch ID:	VOL1201	% Moisture :	4.6
Calib. Ref.:	RLV174	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.2	.35
1,1,2,2-TETRACHLOROETHANE	ND	5.2	.35
1,1,2-TRICHLOROETHANE	ND	5.2	.24
1,1-DICHLOROETHANE	ND	5.2	.32
1,1-DICHLOROETHENE	ND	5.2	.56
1,2-DICHLOROETHANE	ND	5.2	.34
1,2-DICHLOROPROPANE	ND	5.2	.39
2-BUTANONE	ND	52	5.4
2-CHLOROETHYLVINYLETHER	ND	52	.18
2-HEXANONE	ND	52	1.3
4-METHYL-2-PENTANONE	ND	52	1.2
ACETONE	ND	52	4.3
BENZENE	ND	5.2	.26
BROMODICHLOROMETHANE	ND	5.2	.27
BROMOFORM	ND	5.2	.29
BROMOMETHANE	ND	5.2	.67
CARBON DISULFIDE	ND	5.2	.13
CARBON TETRACHLORIDE	ND	5.2	.83
CHLOROBENZENE	ND	5.2	.21
CHLOROETHANE	ND	5.2	1.9
CHLOROFORM	ND	5.2	.44
CHLOROMETHANE	ND	5.2	2.2
CIS-1,2-DICHLOROETHENE	ND	5.2	.31
CIS-1,3-DICHLOROPROPENE	ND	5.2	.23
DIBROMOCHLOROMETHANE	ND	5.2	.083
ETHYLBENZENE	ND	5.2	.41
MTBE	ND	10	.39
METHYLENE CHLORIDE	ND	5.2	.43
STYRENE	ND	5.2	.46
TETRACHLOROETHENE	ND	5.2	.25
TOLUENE	ND	5.2	.33
TRANS-1,2-DICHLOROETHENE	ND	5.2	.3
TRANS-1,3-DICHLOROPROPENE	ND	5.2	.7
TRICHLOROETHENE	ND	5.2	.27
VINYL ACETATE	ND	52	.75
VINYL CHLORIDE	ND	5.2	1.1
XYLENES	ND	5.2	1.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	104	52-149
TOLUENE-D8	94	65-135
BROMOFLUOROBENZENE	94	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
Batch No.	: 99L039	Date Extracted:	12/12/99 05:57
Sample ID:	20242-1038	Date Analyzed:	12/12/99 05:57
Lab Samp ID:	L039-02	Dilution Factor:	1
Lab File ID:	RLV182	Matrix	: SOIL
Ext Btch ID:	VOL1201	% Moisture	: 14.1
Calib. Ref.:	RLV174	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.8	.39
1,1,2,2-TETRACHLOROETHANE	ND	5.8	.39
1,1,2-TRICHLOROETHANE	ND	5.8	.27
1,1-DICHLOROETHANE	ND	5.8	.35
1,1-DICHLOROETHENE	ND	5.8	.63
1,2-DICHLOROETHANE	ND	5.8	.38
1,2-DICHLOROPROPANE	ND	5.8	.44
2-BUTANONE	ND	58	6
2-CHLOROETHYLVINYLETHER	ND	58	.2
2-HEXANONE	ND	58	1.5
4-METHYL-2-PENTANONE	ND	58	1.3
ACETONE	ND	58	4.8
BENZENE	ND	5.8	.29
BROMODICHLOROMETHANE	ND	5.8	.3
BROMOFORM	ND	5.8	.32
BROMOMETHANE	ND	5.8	.74
CARBON DISULFIDE	ND	5.8	.15
CARBON TETRACHLORIDE	ND	5.8	.92
CHLOROBENZENE	ND	5.8	.23
CHLOROETHANE	ND	5.8	2.1
CHLOROFORM	ND	5.8	.49
CHLOROMETHANE	ND	5.8	2.4
CIS-1,2-DICHLOROETHENE	ND	5.8	.34
CIS-1,3-DICHLOROPROPENE	ND	5.8	.26
DIBROMOCHLOROMETHANE	ND	5.8	.092
ETHYLBENZENE	ND	5.8	.46
MTBE	ND	12	.43
METHYLENE CHLORIDE	ND	5.8	.48
STYRENE	ND	5.8	.51
TETRACHLOROETHENE	ND	5.8	.28
TOLUENE	ND	5.8	.37
TRANS-1,2-DICHLOROETHENE	ND	5.8	.34
TRANS-1,3-DICHLOROPROPENE	ND	5.8	.78
TRICHLOROETHENE	ND	5.8	.3
VINYL ACETATE	ND	58	.83
VINYL CHLORIDE	ND	5.8	1.2
XYLENES	ND	5.8	1.3

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	103	52-149
TOLUENE-D8	95	65-135
BROMOFLUOROBENZENE	95	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
Batch No.	: 99L039	Date Extracted:	12/12/99 06:31
Sample ID:	20242-1039	Date Analyzed:	12/12/99 06:31
Lab Samp ID:	L039-03	Dilution Factor:	1
Lab File ID:	RLV183	Matrix :	SOIL
Ext Btch ID:	VOL1201	% Moisture :	7.1
Calib. Ref.:	RLV174	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.4	.36
1,1,2,2-TETRACHLOROETHANE	ND	5.4	.36
1,1,2-TRICHLOROETHANE	ND	5.4	.25
1,1-DICHLOROETHANE	ND	5.4	.33
1,1-DICHLOROETHENE	ND	5.4	.58
1,2-DICHLOROETHANE	ND	5.4	.35
1,2-DICHLOROPROPANE	ND	5.4	.4
2-BUTANONE	ND	54	5.5
2-CHLOROETHYLVINYLETHER	ND	54	.18
2-HEXANONE	ND	54	1.3
4-METHYL-2-PENTANONE	ND	54	1.2
ACETONE	ND	54	4.4
BENZENE	ND	5.4	.27
BROMODICHLOROMETHANE	ND	5.4	.28
BROMOFORM	ND	5.4	.3
BROMOMETHANE	ND	5.4	.69
CARBON DISULFIDE	ND	5.4	.14
CARBON TETRACHLORIDE	ND	5.4	.85
CHLOROBENZENE	ND	5.4	.21
CHLOROETHANE	ND	5.4	1.9
CHLOROFORM	ND	5.4	.46
CHLOROMETHANE	ND	5.4	2.2
CIS-1,2-DICHLOROETHENE	ND	5.4	.31
CIS-1,3-DICHLOROPROPENE	ND	5.4	.24
DIBROMOCHLOROMETHANE	ND	5.4	.085
ETHYLBENZENE	ND	5.4	.42
MTBE	ND	11	.4
METHYLENE CHLORIDE	ND	5.4	.44
STYRENE	ND	5.4	.47
TETRACHLOROETHENE	ND	5.4	.26
TOLUENE	ND	5.4	.34
TRANS-1,2-DICHLOROETHENE	ND	5.4	.31
TRANS-1,3-DICHLOROPROPENE	ND	5.4	.72
TRICHLOROETHENE	ND	5.4	.27
VINYL ACETATE	ND	54	.77
VINYL CHLORIDE	ND	5.4	1.1
XYLENES	ND	5.4	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	103	52-149
TOLUENE-D8	95	65-135
BROMOFLUOROBENZENE	96	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
Batch No.	: 99L039	Date Extracted:	12/12/99 07:05
Sample ID:	20242-1040	Date Analyzed:	12/12/99 07:05
Lab Samp ID:	L039-04	Dilution Factor:	1
Lab File ID:	RLV184	Matrix :	SOIL
Ext Btch ID:	VOL1201	% Moisture :	11.9
Calib. Ref.:	RLV174	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.7	.38
1,1,2,2-TETRACHLOROETHANE	ND	5.7	.38
1,1,2-TRICHLOROETHANE	ND	5.7	.26
1,1-DICHLOROETHANE	ND	5.7	.34
1,1-DICHLOROETHENE	ND	5.7	.61
1,2-DICHLOROETHANE	ND	5.7	.37
1,2-DICHLOROPROPANE	ND	5.7	.43
2-BUTANONE	ND	57	5.8
2-CHLOROETHYLVINYLETHER	ND	57	.19
2-HEXANONE	ND	57	1.4
4-METHYL-2-PENTANONE	ND	57	1.3
ACETONE	ND	57	4.6
BENZENE	ND	5.7	.28
BROMODICHLOROMETHANE	ND	5.7	.29
BROMOFORM	ND	5.7	.32
BROMOMETHANE	ND	5.7	.73
CARBON DISULFIDE	ND	5.7	.14
CARBON TETRACHLORIDE	ND	5.7	.9
CHLOROBENZENE	ND	5.7	.22
CHLOROETHANE	ND	5.7	2
CHLOROFORM	ND	5.7	.48
CHLOROMETHANE	ND	5.7	2.3
CIS-1,2-DICHLOROETHENE	ND	5.7	.33
CIS-1,3-DICHLOROPROPENE	ND	5.7	.25
DIBROMOCHLOROMETHANE	ND	5.7	.09
ETHYLBENZENE	ND	5.7	.44
MTBE	ND	11	.42
METHYLENE CHLORIDE	ND	5.7	.46
STYRENE	ND	5.7	.5
TETRACHLOROETHENE	ND	5.7	.28
TOLUENE	ND	5.7	.36
TRANS-1,2-DICHLOROETHENE	ND	5.7	.33
TRANS-1,3-DICHLOROPROPENE	ND	5.7	.76
TRICHLOROETHENE	ND	5.7	.29
VINYL ACETATE	ND	57	.81
VINYL CHLORIDE	ND	5.7	1.1
XYLENES	ND	5.7	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	101	52-149
TOLUENE-D8	92	65-135
BROMOFLUOROBENZENE	93	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
Batch No.	: 99L039	Date Extracted:	12/12/99 07:39
Sample ID:	20242-1041	Date Analyzed:	12/12/99 07:39
Lab Samp ID:	L039-05	Dilution Factor:	1
Lab File ID:	RLV185	Matrix :	SOIL
Ext Btch ID:	VOL1201	% Moisture :	10.7
Calib. Ref.:	RLV174	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.6	.37
1,1,2,2-TETRACHLOROETHANE	ND	5.6	.37
1,1,2-TRICHLOROETHANE	ND	5.6	.26
1,1-DICHLOROETHANE	ND	5.6	.34
1,1-DICHLOROETHENE	ND	5.6	.6
1,2-DICHLOROETHANE	.38J	5.6	.37
1,2-DICHLOROPROPANE	ND	5.6	.42
2-BUTANONE	ND	56	5.7
2-CHLOROETHYLVINYLETHER	ND	56	.19
2-HEXANONE	ND	56	1.4
4-METHYL-2-PENTANONE	ND	56	1.3
ACETONE	ND	56	4.6
BENZENE	ND	5.6	.28
BROMODICHLOROMETHANE	ND	5.6	.29
BROMOFORM	ND	5.6	.31
BROMOMETHANE	ND	5.6	.72
CARBON DISULFIDE	ND	5.6	.14
CARBON TETRACHLORIDE	ND	5.6	.89
CHLOROBENZENE	ND	5.6	.22
CHLOROETHANE	ND	5.6	2
CHLOROFORM	ND	5.6	.47
CHLOROMETHANE	ND	5.6	2.3
CIS-1,2-DICHLOROETHENE	ND	5.6	.33
CIS-1,3-DICHLOROPROPENE	ND	5.6	.25
DIBROMOCHLOROMETHANE	ND	5.6	.088
ETHYLBENZENE	ND	5.6	.44
MTBE	ND	11	.42
METHYLENE CHLORIDE	1.7JB	5.6	.46
STYRENE	ND	5.6	.49
TETRACHLOROETHENE	ND	5.6	.27
TOLUENE	ND	5.6	.35
TRANS-1,2-DICHLOROETHENE	ND	5.6	.32
TRANS-1,3-DICHLOROPROPENE	ND	5.6	.75
TRICHLOROETHENE	.51J	5.6	.29
VINYL ACETATE	ND	56	.8
VINYL CHLORIDE	ND	5.6	1.1
XYLENES	ND	5.6	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	102	52-149
TOLUENE-D8	94	65-135
BROMOFLUOROBENZENE	92	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
Batch No.	: 99L039	Date Extracted:	12/12/99 04:15
Sample ID:	20242-1042	Date Analyzed:	12/12/99 04:15
Lab Samp ID:	L039-06	Dilution Factor:	1
Lab File ID:	RLV179	Matrix :	WATER
Ext Btch ID:	VOL1201	% Moisture :	NA
Calib. Ref.:	RLV174	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/L)	PRL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	1.1
1,1,2,2-TETRACHLOROETHANE	ND	5	.49
1,1,2-TRICHLOROETHANE	ND	5	.52
1,1-DICHLOROETHANE	ND	5	1.2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	.58
1,2-DICHLOROPROPANE	ND	5	.53
2-BUTANONE	ND	50	7.9
2-CHLOROETHYLVINYLETHER	ND	50	.83
2-HEXANONE	ND	50	1
4-METHYL-2-PENTANONE	ND	50	1
ACETONE	ND	50	10
BENZENE	ND	5	.85
BROMODICHLOROMETHANE	ND	5	.33
BROMOFORM	ND	5	.29
BROMOMETHANE	ND	5	1.5
CARBON DISULFIDE	ND	5	1.3
CARBON TETRACHLORIDE	ND	5	1.3
CHLOROBENZENE	ND	5	.68
CHLOROETHANE	ND	5	2.9
CHLOROFORM	ND	5	.85
CHLOROMETHANE	ND	5	1.7
CIS-1,2-DICHLOROETHENE	ND	5	.97
CIS-1,3-DICHLOROPROPENE	ND	5	.47
DIBROMOCHLOROMETHANE	ND	5	.29
ETHYLBENZENE	ND	5	.72
MTBE	ND	10	.96
METHYLENE CHLORIDE	ND	5	1.8
STYRENE	ND	5	.58
TETRACHLOROETHENE	ND	5	1.2
TOLUENE	ND	5	.92
TRANS-1,2-DICHLOROETHENE	ND	5	1.5
TRANS-1,3-DICHLOROPROPENE	ND	5	.45
TRICHLOROETHENE	ND	5	.9
VINYL ACETATE	ND	50	6.2
VINYL CHLORIDE	ND	5	1.7
XYLENES	ND	5	2.4

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	105	62-139
TOLUENE-D8	94	75-125
BROMOFLUOROBENZENE	96	75-125

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
Batch No.	: 99L039	Date Extracted:	12/12/99 08:14
Sample ID:	20242-1043	Date Analyzed:	12/12/99 08:14
Lab Samp ID:	L039-07	Dilution Factor:	1
Lab File ID:	RLV186	Matrix :	SOIL
Ext Btch ID:	VOL1201	% Moisture :	6.1
Calib. Ref.:	RLV174	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.3	.35
1,1,2,2-TETRACHLOROETHANE	ND	5.3	.35
1,1,2-TRICHLOROETHANE	ND	5.3	.25
1,1-DICHLOROETHANE	ND	5.3	.32
1,1-DICHLOROETHENE	ND	5.3	.57
1,2-DICHLOROETHANE	ND	5.3	.35
1,2-DICHLOROPROPANE	ND	5.3	.4
2-BUTANONE	ND	53	5.5
2-CHLOROETHYLVINYLETHER	ND	53	.18
2-HEXANONE	ND	53	1.3
4-METHYL-2-PENTANONE	ND	53	1.2
ACETONE	ND	53	4.4
BENZENE	ND	5.3	.26
BROMODICHLOROMETHANE	ND	5.3	.28
BROMOFORM	ND	5.3	.3
BROMOMETHANE	ND	5.3	.68
CARBON DISULFIDE	ND	5.3	.13
CARBON TETRACHLORIDE	ND	5.3	.84
CHLOROBENZENE	ND	5.3	.21
CHLOROETHANE	ND	5.3	1.9
CHLOROFORM	ND	5.3	.45
CHLOROMETHANE	ND	5.3	2.2
CIS-1,2-DICHLOROETHENE	ND	5.3	.31
CIS-1,3-DICHLOROPROPENE	ND	5.3	.24
DIBROMOCHLOROMETHANE	ND	5.3	.084
ETHYLBENZENE	ND	5.3	.42
MTBE	ND	11	.4
METHYLENE CHLORIDE	ND	5.3	.44
STYRENE	ND	5.3	.47
TETRACHLOROETHENE	ND	5.3	.26
TOLUENE	ND	5.3	.33
TRANS-1,2-DICHLOROETHENE	ND	5.3	.31
TRANS-1,3-DICHLOROPROPENE	ND	5.3	.71
TRICHLOROETHENE	ND	5.3	.27
VINYL ACETATE	ND	53	.76
VINYL CHLORIDE	ND	5.3	1.1
XYLENES	ND	5.3	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	104	52-149
TOLUENE-D8	95	65-135
BROMOFLUOROBENZENE	94	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
Batch No.	: 99L039	Date Extracted:	12/12/99 08:48
Sample ID:	20242-1044	Date Analyzed:	12/12/99 08:48
Lab Samp ID:	L039-08	Dilution Factor:	1
Lab File ID:	RLV187	Matrix :	SOIL
Ext Btch ID:	VOL1201	% Moisture :	13.8
Calib. Ref.:	RLV174	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.8	.38
1,1,2,2-TETRACHLOROETHANE	ND	5.8	.38
1,1,2-TRICHLOROETHANE	ND	5.8	.27
1,1-DICHLOROETHANE	ND	5.8	.35
1,1-DICHLOROETHENE	ND	5.8	.62
1,2-DICHLOROETHANE	ND	5.8	.38
1,2-DICHLOROPROPANE	ND	5.8	.44
2-BUTANONE	ND	58	5.9
2-CHLOROETHYLVINYLETHER	ND	58	.2
2-HEXANONE	ND	58	1.4
4-METHYL-2-PENTANONE	ND	58	1.3
ACETONE	ND	58	4.7
BENZENE	ND	5.8	.29
BROMODICHLOROMETHANE	ND	5.8	.3
BROMOFORM	ND	5.8	.32
BROMOMETHANE	ND	5.8	.74
CARBON DISULFIDE	ND	5.8	.15
CARBON TETRACHLORIDE	ND	5.8	.92
CHLOROBENZENE	ND	5.8	.23
CHLOROETHANE	ND	5.8	2.1
CHLOROFORM	ND	5.8	.49
CHLOROMETHANE	ND	5.8	2.4
CIS-1,2-DICHLOROETHENE	ND	5.8	.34
CIS-1,3-DICHLOROPROPENE	ND	5.8	.26
DIBROMOCHLOROMETHANE	ND	5.8	.092
ETHYLBENZENE	ND	5.8	.45
MTBE	ND	12	.43
METHYLENE CHLORIDE	ND	5.8	.47
STYRENE	ND	5.8	.51
TETRACHLOROETHENE	ND	5.8	.28
TOLUENE	ND	5.8	.36
TRANS-1,2-DICHLOROETHENE	ND	5.8	.33
TRANS-1,3-DICHLOROPROPENE	ND	5.8	.77
TRICHLOROETHENE	ND	5.8	.3
VINYL ACETATE	ND	58	.83
VINYL CHLORIDE	ND	5.8	1.2
XYLENES	ND	5.8	1.3

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	106	52-149
TOLUENE-D8	94	65-135
BROMOFLUOROBENZENE	94	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
Batch No.	: 99L039	Date Extracted:	12/12/99 09:22
Sample ID:	20242-1045	Date Analyzed:	12/12/99 09:22
Lab Samp ID:	L039-09	Dilution Factor:	1
Lab File ID:	RLV188	Matrix	: SOIL
Ext Btch ID:	VOL1201	% Moisture	: 11.9
Calib. Ref.:	RLV174	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.7	.38
1,1,2,2-TETRACHLOROETHANE	ND	5.7	.38
1,1,2-TRICHLOROETHANE	ND	5.7	.26
1,1-DICHLOROETHANE	ND	5.7	.34
1,1-DICHLOROETHENE	ND	5.7	.61
1,2-DICHLOROETHANE	ND	5.7	.37
1,2-DICHLOROPROPANE	ND	5.7	.43
2-BUTANONE	ND	57	5.8
2-CHLOROETHYLVINYLETHER	ND	57	.19
2-HEXANONE	ND	57	1.4
4-METHYL-2-PENTANONE	ND	57	1.3
ACETONE	ND	57	4.6
BENZENE	ND	5.7	.28
BROMODICHLOROMETHANE	ND	5.7	.29
BROMOFORM	ND	5.7	.32
BROMOMETHANE	ND	5.7	.73
CARBON DISULFIDE	ND	5.7	.14
CARBON TETRACHLORIDE	ND	5.7	.9
CHLOROBENZENE	ND	5.7	.22
CHLOROETHANE	ND	5.7	2
CHLOROFORM	ND	5.7	.48
CHLOROMETHANE	ND	5.7	2.3
CIS-1,2-DICHLOROETHENE	ND	5.7	.33
CIS-1,3-DICHLOROPROPENE	ND	5.7	.25
DIBROMOCHLOROMETHANE	ND	5.7	.09
ETHYLBENZENE	ND	5.7	.44
MTBE	ND	11	.42
METHYLENE CHLORIDE	ND	5.7	.46
STYRENE	ND	5.7	.5
TETRACHLOROETHENE	ND	5.7	.28
TOLUENE	ND	5.7	.36
TRANS-1,2-DICHLOROETHENE	ND	5.7	.33
TRANS-1,3-DICHLOROPROPENE	ND	5.7	.76
TRICHLOROETHENE	ND	5.7	.29
VINYL ACETATE	ND	57	.81
VINYL CHLORIDE	ND	5.7	1.1
XYLENES	ND	5.7	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	108	52-149
TOLUENE-D8	94	65-135
BROMOFLUOROBENZENE	93	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
Batch No.	: 99L039	Date Extracted:	12/12/99 04:49
Sample ID:	20242-1046	Date Analyzed:	12/12/99 04:49
Lab Samp ID:	L039-10	Dilution Factor:	1
Lab File ID:	RLV180	Matrix :	WATER
Ext Btch ID:	VOL1201	% Moisture :	NA
Calib. Ref.:	RLV174	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/L)	PRL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	1.1
1,1,2,2-TETRACHLOROETHANE	ND	5	.49
1,1,2-TRICHLOROETHANE	ND	5	.52
1,1-DICHLOROETHANE	ND	5	1.2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	.58
1,2-DICHLOROPROPANE	ND	5	.53
2-BUTANONE	ND	50	7.9
2-CHLOROETHYLVINYLETHER	ND	50	.83
2-HEXANONE	ND	50	1
4-METHYL-2-PENTANONE	ND	50	1
ACETONE	ND	50	10
BENZENE	ND	5	.85
BROMODICHLOROMETHANE	ND	5	.33
BROMOFORM	ND	5	.29
BROMOMETHANE	ND	5	1.5
CARBON DISULFIDE	ND	5	1.3
CARBON TETRACHLORIDE	ND	5	1.3
CHLOROBENZENE	ND	5	.68
CHLOROETHANE	ND	5	2.9
CHLOROFORM	ND	5	.85
CHLOROMETHANE	ND	5	1.7
CIS-1,2-DICHLOROETHENE	ND	5	.97
CIS-1,3-DICHLOROPROPENE	ND	5	.47
DIBROMOCHLOROMETHANE	ND	5	.29
ETHYLBENZENE	ND	5	.72
MTBE	ND	10	.96
METHYLENE CHLORIDE	ND	5	1.8
STYRENE	ND	5	.58
TETRACHLOROETHENE	ND	5	1.2
TOLUENE	ND	5	.92
TRANS-1,2-DICHLOROETHENE	ND	5	1.5
TRANS-1,3-DICHLOROPROPENE	ND	5	.45
TRICHLOROETHENE	ND	5	.9
VINYL ACETATE	ND	50	6.2
VINYL CHLORIDE	ND	5	1.7
XYLENES	ND	5	2.4

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	104	62-139
TOLUENE-D8	95	75-125
BROMOFLUOROBENZENE	95	75-125

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030B/M8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE & TRAP

Client : IT CORPORATION
Project : MCAS EL TORO/20242/D.O. 112
Batch No. : 99L039

Matrix : SOIL
Instrument ID : GCT039

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	SURR (%)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	VAL1539B	ND	91	1	NA	1	.02	12/09/9905:49	12/09/9905:49	EL06-3	EL06-2	VAL1539	NA	NA
LCS1S	VAL1539L	5.55	106	1	NA	1	.02	12/09/9906:24	12/09/9906:24	EL06-4	EL06-2	VAL1539	NA	NA
LCD1S	VAL1539C	6.18	103	1	NA	1	.02	12/09/9906:58	12/09/9906:58	EL06-5	EL06-2	VAL1539	NA	NA
20242-1037	L039-01	ND	89	1	4.6	1	.021	12/09/9912:56	12/09/9912:56	EL06-15	EL06-14	VAL1539	12/07/99	12/07/99
20242-1038	L039-02	ND	95	1	14.1	1.2	.023	12/09/9913:32	12/09/9913:32	EL06-16	EL06-14	VAL1539	12/07/99	12/07/99
20242-1039	L039-03	ND	81	1	7.1	1.1	.022	12/09/9914:07	12/09/9914:07	EL06-17	EL06-14	VAL1539	12/07/99	12/07/99
20242-1040	L039-04	ND	94	1	11.9	1.1	.023	12/09/9914:43	12/09/9914:43	EL06-18	EL06-14	VAL1539	12/07/99	12/07/99
20242-1040MS	L039-04M	6.79	102	1	11.9	1.14	.0227	12/09/9915:18	12/09/9915:18	EL06-19	EL06-14	VAL1539	12/07/99	12/07/99
20242-1040MSD	L039-04S	8.14	107	1	11.9	1.14	.0227	12/09/9915:54	12/09/9915:54	EL06-20	EL06-14	VAL1539	12/07/99	12/07/99
20242-1041	L039-05	ND	89	1	10.7	1.1	.022	12/09/9916:29	12/09/9916:29	EL06-21	EL06-14	VAL1539	12/07/99	12/07/99
20242-1043	L039-07	ND	62	1	6.1	1.1	.021	12/09/9920:00	12/09/9920:00	EL06-27	EL06-26	VAL1539	12/07/99	12/07/99
20242-1044	L039-08	ND	76	1	13.8	1.2	.023	12/09/9917:05	12/09/9917:05	EL06-22	EL06-14	VAL1539	12/07/99	12/07/99
20242-1045	L039-09	ND	81	1	11.9	1.1	.023	12/09/9917:40	12/09/9917:40	EL06-23	EL06-14	VAL1539	12/07/99	12/07/99

SURR : Bromofluorobenzene(BFB), WATER:65-135%, SOIL:60-140%
RL : Reporting Limit
* : Out of QC limit due to matrix interference

METHOD 5030B/M8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE & TRAP

Client : IT CORPORATION
Project : MCAS EL TORO/20242/D.O. 112
Batch No. : 99L039

Matrix : WATER
Instrument ID : GCT039

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	SURR (%)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	VAL1439B	ND	85	1	NA	.1	.012	12/08/9908:16	12/08/9908:16	EL05-29	EL05-26	VAL1439	NA	NA
LCS1W	VAL1439L	1.05	108	1	NA	.1	.012	12/08/9908:50	12/08/9908:50	EL05-30	EL05-26	VAL1439	NA	NA
LCD1W	VAL1439C	1.03	102	1	NA	.1	.012	12/08/9909:25	12/08/9909:25	EL05-31	EL05-26	VAL1439	NA	NA
20242-1042	L039-06	ND	87	1	NA	.1	.012	12/08/9916:58	12/08/9916:58	EL05-41	EL05-38	VAL1439	12/07/99	12/07/99
20242-1042MS	L039-06M	1.09	104	1	NA	.1	.012	12/08/9917:34	12/08/9917:34	EL05-42	EL05-38	VAL1439	12/07/99	12/07/99
20242-1042MSD	L039-06S	1	97	1	NA	.1	.012	12/08/9918:09	12/08/9918:09	EL05-43	EL05-38	VAL1439	12/07/99	12/07/99

SURR : Bromofluorobenzene(BFB), WATER:65-135%, SOIL:60-140%
RL : Reporting Limit
* : Out of QC limit due to matrix interference

METHOD M8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : IT CORPORATION
Project : MCAS EL TORO/20242/D.O. 112
Batch No. : 99L039

Matrix : SOIL
Instrument ID : GCT043

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	SUR1 (%)	SUR2 (%)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Receive DATETIM
MBLK1S	DSL011SB	ND	89	82	1	NA	10	.834	12/09/9916:41	12/08/9913:15	DL05-43	DL05-38	DSL011S	NA	12/08/9
LCS1S	DSL011SL	356	89	84	1	NA	10	.834	12/09/9917:21	12/08/9913:15	DL05-44	DL05-38	DSL011S	NA	12/08/9
LCD1S	DSL011SC	375	97	91	1	NA	10	.834	12/09/9918:00	12/08/9913:15	DL05-45	DL05-38	DSL011S	NA	12/08/9
20242-1037	L039-01	ND	93	80	1	4.6	10	.87	12/11/9904:05	12/08/9913:15	DL05-95	DL05-94	DSL011S	12/07/99	12/07/9
20242-1038	L039-02	ND	102	91	1	14.1	12	.97	12/11/9904:44	12/08/9913:15	DL05-96	DL05-94	DSL011S	12/07/99	12/07/9
20242-1039	L039-03	ND	97	86	1	7.1	11	.9	12/11/9905:22	12/08/9913:15	DL05-97	DL05-94	DSL011S	12/07/99	12/07/9
20242-1039MS	L039-03M	418	99	90	1	7.1	10.8	.898	12/11/9906:01	12/08/9913:15	DL05-98	DL05-94	DSL011S	12/07/99	12/07/9
20242-1039MSD	L039-03S	404	95	85	1	7.1	10.8	.898	12/11/9906:40	12/08/9913:15	DL05-99	DL05-94	DSL011S	12/07/99	12/07/9
20242-1040	L039-04	ND	95	85	1	11.9	11	.95	12/11/9907:19	12/08/9913:15	DL05-100	DL05-94	DSL011S	12/07/99	12/07/9
20242-1041	L039-05	ND	114	104	1	10.7	11	.93	12/11/9907:58	12/08/9913:15	DL05-101	DL05-94	DSL011S	12/07/99	12/07/9
20242-1043	L039-07	ND	90	80	1	6.1	11	.89	12/11/9908:37	12/08/9913:15	DL05-102	DL05-94	DSL011S	12/07/99	12/07/9
20242-1044	L039-08	ND	112	102	1	13.8	12	.97	12/11/9909:16	12/08/9913:15	DL05-103	DL05-94	DSL011S	12/07/99	12/07/9
20242-1045	L039-09	ND	91	81	1	11.9	11	.95	12/11/9909:55	12/08/9913:15	DL05-104	DL05-94	DSL011S	12/07/99	12/07/9

RL : Reporting Limit
SURR1 : Bromobenzene
SURR2 : Hexacosane

Parameter	H-C Range
JP5	C7 -C18
Diesel	C10-C24
Motor Oil	C18-C34
Gas	C6 -C12

5004

METHOD M8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : IT CORPORATION
Project : MCAS EL TORO/20242/D.O. 112
Batch No. : 99L039

Matrix : WATER
Instrument ID : GCT043

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	SUR1 (%)	SUR2 (%)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Receive DATETIM
MBLK1W	DSL013WB	ND	88	97	1	NA	.1	.012	12/13/9919:29	12/10/9916:30	DL06-14	DL06-13	DSL013W	NA	12/10/9
LCS1W	DSL013WL	3.94	70	93	1	NA	.1	.012	12/13/9920:08	12/10/9916:30	DL06-15	DL06-13	DSL013W	NA	12/10/9
LCD1W	DSL013WC	4.96	96	110	1	NA	.1	.012	12/13/9920:48	12/10/9916:30	DL06-16	DL06-13	DSL013W	NA	12/10/9
20242-1042	L039-06	ND	88	86	.95	NA	.095	.011	12/14/9904:36	12/10/9916:30	DL06-28	DL06-26	DSL013W	12/07/99	12/07/9

RL : Reporting Limit
SURR1 : Bromobenzene
SURR2 : Hexacosane

Parameter	H-C Range
JP5	C7 -C18
Diesel	C10-C24
Motor Oil	C18-C34
Gas	C6 -C12

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
SDG NO.	: 99L039	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1037	Date Analyzed:	12/09/99 18:42
Lab Samp ID:	L039-01	Dilution Factor:	1
Lab File ID:	I07L025019	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	4.6
Calib. Ref.:	I07L025010	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10.5	3.75
Barium	89.5	1.05	.136
Beryllium	.212	.21	.021
Cadmium	ND	1.05	.0734
Chromium	5.39	1.05	.629
Cobalt	2.45	1.05	.639
Copper	4.69	1.05	.776
Manganese	165	2.1	.126
Molybdenum	ND	2.1	.681
Nickel	2.33	2.1	.482
Silver	ND	1.05	1.48
Vanadium	19.6	1.05	.87
Zinc	23.3	1.05	.273

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
SDG NO.	: 99L039	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1037	Date Analyzed:	12/09/99 20:57
Lab Samp ID:	L039-01	Dilution Factor:	1
Lab File ID:	I31L018033	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	4.6
Calib. Ref.:	I31L018026	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	1.77	1.05	.538
Lead	1.48	1.05	.277
Selenium	ND	1.05	.475
Thallium *	ND	1.05	.488

RL: Reporting Limit

* Analyzed on 12-16-99 File # I31L034

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
SDG NO.	: 99L039	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1038	Date Analyzed:	12/09/99 18:48
Lab Samp ID:	L039-02	Dilution Factor:	1
Lab File ID:	I07L025020	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	14.1
Calib. Ref.:	I07L025010	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.6	4.17
Barium	188	1.16	.151
Beryllium	.613	.233	.0233
Cadmium	1.4	1.16	.0815
Chromium	18.5	1.16	.698
Cobalt	8.13	1.16	.71
Copper	12.8	1.16	.861
Manganese	447	2.33	.14
Molybdenum	ND	2.33	.757
Nickel	12	2.33	.536
Silver	ND	1.16	1.64
Vanadium	46.6	1.16	.966
Zinc	58.3	1.16	.303

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
SDG NO.	: 99L039	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1038	Date Analyzed:	12/09/99 21:01
Lab Samp ID:	L039-02	Dilution Factor:	1
Lab File ID:	I31L018034	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	14.1
Calib. Ref.:	I31L018026	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	3.04	1.16	.597
Lead	4.6	1.16	.307
Selenium	ND	1.16	.527
Thallium *	ND	1.16	.542

RL: Reporting Limit

* Analyzed on 12-16-99 File # I31L034

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
SDG NO.	: 99L039	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1039	Date Analyzed:	12/09/99 18:53
Lab Samp ID:	L039-03	Dilution Factor:	1
Lab File ID:	I07L025021	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	7.1
Calib. Ref.:	I07L025010	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10.8	3.85
Barium	132	1.08	.14
Beryllium	.293	.215	.0215
Cadmium	ND	1.08	.0753
Chromium	9.55	1.08	.646
Cobalt	3.88	1.08	.657
Copper	6.18	1.08	.797
Manganese	210	2.15	.129
Molybdenum	ND	2.15	.7
Nickel	6.45	2.15	.495
Silver	ND	1.08	1.52
Vanadium	31.2	1.08	.893
Zinc	31.1	1.08	.28

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
SDG NO.	: 99L039	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1039	Date Analyzed:	12/09/99 21:05
Lab Samp ID:	L039-03	Dilution Factor:	1
Lab File ID:	I31L018035	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	7.1
Calib. Ref.:	I31L018026	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.62	1.08	.552
Lead	2.03	1.08	.284
Selenium	ND	1.08	.488
Thallium *	ND	1.08	.502

RL: Reporting Limit

*Analyzed on 12-16-99 File # I31L034

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
SDG NO.	: 99L039	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1040	Date Analyzed:	12/09/99 19:14
Lab Samp ID:	L039-04	Dilution Factor:	1
Lab File ID:	I07L025024	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	11.9
Calib. Ref.:	I07L025022	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.4	4.06
Barium	156	1.14	.148
Beryllium	.582	.227	.0227
Cadmium	ND	1.14	.0795
Chromium	17.1	1.14	.681
Cobalt	5.42	1.14	.692
Copper	9.43	1.14	.84
Manganese	225	2.27	.136
Molybdenum	ND	2.27	.738
Nickel	9.9	2.27	.522
Silver	ND	1.14	1.6
Vanadium	44.6	1.14	.942
Zinc	48.7	1.14	.295

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
SDG NO.	: 99L039	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1040	Date Analyzed:	12/09/99 21:09
Lab Samp ID:	L039-04	Dilution Factor:	1
Lab File ID:	I31L018036	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	11.9
Calib. Ref.:	I31L018026	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.59	1.14	.582
Lead	4.12	1.14	.3
Selenium	ND	1.14	.514
Thallium *	ND	1.14	.529

RL: Reporting Limit

* Analyzed on 12-16-99 File # I31L034

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
SDG NO.	: 99L039	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1041	Date Analyzed:	12/09/99 19:19
Lab Samp ID:	L039-05	Dilution Factor:	1
Lab File ID:	I07L025025	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	10.7
Calib. Ref.:	I07L025022	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.2	4.01
Barium	155	1.12	.146
Beryllium	.472	.224	.0224
Cadmium	ND	1.12	.0784
Chromium	14.8	1.12	.672
Cobalt	4.81	1.12	.683
Copper	8.17	1.12	.829
Manganese	187	2.24	.134
Molybdenum	ND	2.24	.728
Nickel	8.02	2.24	.515
Silver	ND	1.12	1.58
Vanadium	37.9	1.12	.929
Zinc	42.1	1.12	.291

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
SDG NO.	: 99L039	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1041	Date Analyzed:	12/09/99 21:13
Lab Samp ID:	L039-05	Dilution Factor:	1
Lab File ID:	I31L018037	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	10.7
Calib. Ref.:	I31L018026	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.04	1.12	.574
Lead	3.55	1.12	.296
Selenium	ND	1.12	.507
Thallium *	ND	1.12	.522

RL: Reporting Limit

* Analyzed on 12-16-99 File # I31L034

METHOD 3010A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
SDG NO.	: 99L039	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1042	Date Analyzed:	12/09/99 22:43
Lab Samp ID:	L039-06	Dilution Factor:	1
Lab File ID:	I07L026018	Matrix :	WATER
Ext Btch ID:	IPL013W	% Moisture :	NA
Calib. Ref.:	I07L026010	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Antimony	ND	500	39.8
Barium	ND	100	1.41
Beryllium	ND	10	.12
Cadmium	ND	10	2.06
Chromium	ND	50	4.77
Cobalt	ND	50	6.64
Copper	ND	50	6.47
Manganese	ND	20	.64
Molybdenum	ND	100	9.37
Nickel	ND	150	3.93
Silver	ND	50	4.69
Vanadium	ND	100	4.7
Zinc	42.8	20	2.47

RL: Reporting Limit

METHOD 3010A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
SDG NO.	: 99L039	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1042	Date Analyzed:	12/09/99 23:53
Lab Samp ID:	L039-06	Dilution Factor:	1
Lab File ID:	I31L019022	Matrix :	WATER
Ext Btch ID:	IPL013W	% Moisture :	NA
Calib. Ref.:	I31L019014	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Arsenic	ND	10	4.37
Lead	ND	10	1.42
Selenium ^	ND	10	4.21
Thallium	ND	400	3.31

RL: Reporting Limit

^ Analyzed on 12-16-99 File # I31L037

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
SDG NO.	: 99L039	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1043	Date Analyzed:	12/09/99 19:24
Lab Samp ID:	L039-07	Dilution Factor:	1
Lab File ID:	I07L025026	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	6.1
Calib. Ref.:	I07L025022	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10.6	3.81
Barium	169	1.06	.138
Beryllium	.301	.213	.0213
Cadmium	ND	1.06	.0745
Chromium	7.69	1.06	.639
Cobalt	3.97	1.06	.65
Copper	5.86	1.06	.788
Manganese	230	2.13	.128
Molybdenum	ND	2.13	.692
Nickel	3.08	2.13	.49
Silver	ND	1.06	1.5
Vanadium	29	1.06	.884
Zinc	34.7	1.06	.277

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
SDG NO.	: 99L039	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1043	Date Analyzed:	12/09/99 21:26
Lab Samp ID:	L039-07	Dilution Factor:	1
Lab File ID:	I31L018040	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	6.1
Calib. Ref.:	I31L018038	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.35	1.06	.546
Lead	1.65	1.06	.281
Selenium	ND	1.06	.482
Thallium *	ND	1.06	.496

RL: Reporting Limit

* Analyzed on 12-16-99 File # I31L034

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
SDG NO.	: 99L039	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1044	Date Analyzed:	12/09/99 19:29
Lab Samp ID:	L039-08	Dilution Factor:	1
Lab File ID:	I07L025027	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	13.8
Calib. Ref.:	I07L025022	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.6	4.15
Barium	154	1.16	.151
Beryllium	.782	.232	.0232
Cadmium	1.59	1.16	.0812
Chromium	25.1	1.16	.696
Cobalt	7.81	1.16	.708
Copper	15	1.16	.858
Manganese	406	2.32	.139
Molybdenum	ND	2.32	.754
Nickel	15.7	2.32	.534
Silver	ND	1.16	1.64
Vanadium	63.4	1.16	.963
Zinc	70.2	1.16	.302

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
SDG NO.	: 99L039	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1044	Date Analyzed:	12/09/99 21:30
Lab Samp ID:	L039-08	Dilution Factor:	1
Lab File ID:	I31L018041	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	13.8
Calib. Ref.:	I31L018038	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	3.42	1.16	.595
Lead	4.72	1.16	.306
Selenium	ND	1.16	.526
Thallium *	ND	1.16	.541

RL: Reporting Limit

* Analyzed on 12-16-99 File # I31L034

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
SDG NO.	: 99L039	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1045	Date Analyzed:	12/09/99 19:35
Lab Samp ID:	L039-09	Dilution Factor:	1
Lab File ID:	I07L025028	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	11.9
Calib. Ref.:	I07L025022	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.4	4.06
Barium	163	1.14	.148
Beryllium	.408	.227	.0227
Cadmium	ND	1.14	.0795
Chromium	12.7	1.14	.681
Cobalt	5.13	1.14	.692
Copper	8.16	1.14	.84
Manganese	224	2.27	.136
Molybdenum	ND	2.27	.738
Nickel	8.31	2.27	.522
Silver	ND	1.14	1.6
Vanadium	39.1	1.14	.942
Zinc	42.1	1.14	.295

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	12/07/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/07/99
SDG NO.	: 99L039	Date Extracted:	12/08/99 15:30
Sample ID:	20242-1045	Date Analyzed:	12/09/99 21:34
Lab Samp ID:	L039-09	Dilution Factor:	1
Lab File ID:	I31L018042	Matrix :	SOIL
Ext Btch ID:	IPL012S	% Moisture :	11.9
Calib. Ref.:	I31L018038	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.86	1.14	.582
Lead	2.29	1.14	.3
Selenium	ND	1.14	.514
Thallium *	ND	1.14	.529

RL: Reporting Limit

* Analyzed on 12-16-99 File # I31L034

METHOD 7471A
MERCURY BY COLD VAPOR

Client : IT CORPORATION
Project : MCAS EL TORO/20242/D.O. 112
Batch No. : 99L039

Matrix : SOIL
Instrument ID : TI023

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	HGL007SB	ND	1	NA	.1	.028	12/09/9913:59	12/09/9912:00	M99L011013	M99L011006	HGL007S	NA	12/09/99
LCS1S	HGL007SL	.816	1	NA	.1	.028	12/09/9914:01	12/09/9912:00	M99L011014	M99L011006	HGL007S	NA	12/09/99
LCD1S	HGL007SC	.816	1	NA	.1	.028	12/09/9914:04	12/09/9912:00	M99L011015	M99L011006	HGL007S	NA	12/09/99
20242-1037	L039-01	ND	1	4.6	.105	.0294	12/09/9914:42	12/09/9912:00	M99L011032	M99L011030	HGL007S	12/07/99	12/07/99
20242-1038	L039-02	ND	1	14.1	.116	.0326	12/09/9914:44	12/09/9912:00	M99L011033	M99L011030	HGL007S	12/07/99	12/07/99
20242-1039	L039-03	ND	1	7.1	.108	.0301	12/09/9914:47	12/09/9912:00	M99L011034	M99L011030	HGL007S	12/07/99	12/07/99
20242-1040	L039-04	ND	1	11.9	.114	.0318	12/09/9914:49	12/09/9912:00	M99L011035	M99L011030	HGL007S	12/07/99	12/07/99
20242-1041	L039-05	ND	1	10.7	.112	.0314	12/09/9914:51	12/09/9912:00	M99L011036	M99L011030	HGL007S	12/07/99	12/07/99
20242-1043	L039-07	ND	1	6.1	.106	.0298	12/09/9914:54	12/09/9912:00	M99L011037	M99L011030	HGL007S	12/07/99	12/07/99
20242-1044	L039-08	ND	1	13.8	.116	.0325	12/09/9914:56	12/09/9912:00	M99L011038	M99L011030	HGL007S	12/07/99	12/07/99
20242-1045	L039-09	ND	1	11.9	.114	.0318	12/09/9914:58	12/09/9912:00	M99L011039	M99L011030	HGL007S	12/07/99	12/07/99

RL: Reporting Limit

METHOD 7470A
MERCURY BY COLD VAPOR

Client : IT CORPORATION
Project : MCAS EL TORO/20242/D.O. 112
Batch No. : 99L039

Matrix : WATER
Instrument ID : TI023

SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DLF	MOIST	RL (ug/L)	MDL (ug/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	HGL005WB	ND	1	NA	.2	.179	12/08/9918:44	12/08/9912:00	M99L010053	M99L010051	HGL005W	NA	12/08/99
LCS1W	HGL005WL	5.20	1	NA	.2	.179	12/08/9918:46	12/08/9912:00	M99L010054	M99L010051	HGL005W	NA	12/08/99
LCD1W	HGL005WC	5.18	1	NA	.2	.179	12/08/9918:48	12/08/9912:00	M99L010055	M99L010051	HGL005W	NA	12/08/99
20242-1042	L039-06	ND	1	NA	.2	.179	12/08/9919:54	12/08/9912:00	M99L010084	M99L010075	HGL005W	12/07/99	12/07/99

RL: Reporting Limit

7450

OMPLETED (BW 1/10) MG 1/14/00

IT Corporation
2790 Mosside Blvd.
Monroeville, PA 15146-2792
(412)372-7701

CHAIN-OF-CUSTODY RECORD

PROJECT DATA MANAGER'S COPY

A 10072

MSC-B1 Burn Pit

FORM 0019 REV. 9-99

NDINATOR: CZKOWSKI	LAB COORDINATOR'S PHONE: 949.660.7537	LAB COORDINATOR'S FAX: 949-475-5433	LABORATORY SERVICE ID: 991049	LABORATORY CONTACT: EMAX	MAIL REPORT (COMPANY NAME): DWAYNE ISHIDA
E: AS EL TORO	PROJECT LOCATION: EL TORO CA	PROJECT NUMBER: 20242	LABORATORY PHONE: 310 618 8889	LABORATORY FAX	RECIPIENT NAME: IT CORP
NTACT: CZKOWSKI	PROJECT PHONE NUMBER: 949.451-1666	PROJECT FAX	LABORATORY ADDRESS		ADDRESS: 3347 Michelson #200
DRESS	CITY, STATE AND ZIP CODE	CLIENT: SWDIV	CITY, STATE AND ZIP CODE		CITY, STATE AND ZIP CODE: IRVINE CA 92612
NAGER: Sedlak	PROJECT MANAGER'S PHONE: 949.660.5446	PROJECT MANAGER'S FAX			

ANALYZE FROM "X" end

Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	TPH Gas	TPH Diesel	TPH JP-5	TPH Motor oil	8260 + MTBE	17 Metals			Comments
0242-1047	W	12/8/99	0800	HCL	3	3	5day					✓				
0242-1048	SOIL	12/8/99	0855	NONE	1	3	5day	✓	✓	✓	✓	✓	F A M ✓			
0242-1049	SOIL	12/8/99	1112	NONE	1	3	5day	✓	✓	✓	✓	✓	F A M ✓			
0242-1050	SOIL	12/8/99	1130	NONE	1	3	5day	✓	✓	✓	✓	✓	F A M ✓			
0242-1051	SOIL	12/8/99	1131	NONE	1	4	5day	✓	✓	✓	✓	✓	F A M ✓			
0242-1052	SOIL	12/8/99	1145	NONE	1	3	5day	✓	✓	✓	✓	✓	F A M ✓			

BT 12/8/99

ES COLLECTED BY: BRIAN TANAKA	COURIER AND AIR BILL NUMBER			COOLER TEMPERATURE UPON RECEIPT
RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
		12/8/99		

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

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

MSC B1, Soil borings

Sample Point Location	Sample Type G	C	F	QC
1) MSCB1 TRIPBlank				✓
2) MSCB1 SB-3 100-100.5 BGS	✓			
3) MSCB1-SB2 15.0-15.5	✓			
4) MSCB1-SB2 40.0-40.5	✓			
5) MSCB1-SB2 40.5-40.5 (DUP)				✓
6) MSCB1-SB2 60.0-60.5 BGS	✓			

Comments

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

0004448

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/08/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/08/99
Batch No.	: 99L049	Date Extracted:	12/21/99 22:44
Sample ID:	20242-1047	Date Analyzed:	12/21/99 22:44
Lab Samp ID:	L049-01	Dilution Factor:	1
Lab File ID:	RLP200	Matrix :	WATER
Ext Btch ID:	VOL1402	% Moisture :	NA
Calib. Ref.:	RLP184	Instrument ID :	T-002

PARAMETERS	RESULTS (ug/L)	PRL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	1.1
1,1,2,2-TETRACHLOROETHANE	ND	5	.49
1,1,2-TRICHLOROETHANE	ND	5	.52
1,1-DICHLOROETHANE	ND	5	1.2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	.58
1,2-DICHLOROPROPANE	ND	5	.53
2-BUTANONE	ND	50	7.9
2-CHLOROETHYLVINYLETHER	ND	50	.83
2-HEXANONE	ND	50	1
4-METHYL-2-PENTANONE	ND	50	1
ACETONE	ND	50	10
BENZENE	ND	5	.85
BROMODICHLOROMETHANE	ND	5	.33
BROMOFORM	ND	5	.29
BROMOMETHANE	ND	5	1.5
CARBON DISULFIDE	ND	5	1.3
CARBON TETRACHLORIDE	ND	5	1.3
CHLOROBENZENE	ND	5	.68
CHLOROETHANE	ND	5	2.9
CHLOROFORM	ND	5	.85
CHLOROMETHANE	ND	5	1.7
CIS-1,2-DICHLOROETHENE	ND	5	.97
CIS-1,3-DICHLOROPROPENE	ND	5	.47
DIBROMOCHLOROMETHANE	ND	5	.29
ETHYLBENZENE	ND	5	.72
MTBE	ND	10	.96
METHYLENE CHLORIDE	4JB	5	1.8
STYRENE	ND	5	.58
TETRACHLOROETHENE	ND	5	1.2
TOLUENE	ND	5	.92
TRANS-1,2-DICHLOROETHENE	ND	5	1.5
TRANS-1,3-DICHLOROPROPENE	ND	5	.45
TRICHLOROETHENE	ND	5	.9
VINYL ACETATE	ND	50	6.2
VINYL CHLORIDE	ND	5	1.7
XYLENES	ND	5	2.4

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	99	62-139
TOLUENE-D8	97	75-125
BROMOFLUOROBENZENE	96	75-125

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/08/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/08/99
Batch No.	: 99L049	Date Extracted:	12/21/99 23:19
Sample ID:	20242-1048	Date Analyzed:	12/21/99 23:19
Lab Samp ID:	L049-02	Dilution Factor:	1
Lab File ID:	RLP201	Matrix :	SOIL
Ext Btch ID:	VOL1402	% Moisture :	11.1
Calib. Ref.:	RLP184	Instrument ID :	T-002

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.6	.37
1,1,2,2-TETRACHLOROETHANE	ND	5.6	.37
1,1,2-TRICHLOROETHANE	ND	5.6	.26
1,1-DICHLOROETHANE	ND	5.6	.34
1,1-DICHLOROETHENE	ND	5.6	.61
1,2-DICHLOROETHANE	ND	5.6	.37
1,2-DICHLOROPROPANE	ND	5.6	.42
2-BUTANONE	ND	56	5.8
2-CHLOROETHYLVINYLETHER	ND	56	.19
2-HEXANONE	ND	56	1.4
4-METHYL-2-PENTANONE	ND	56	1.3
ACETONE	ND	56	4.6
BENZENE	ND	5.6	.28
BROMODICHLOROMETHANE	ND	5.6	.29
BROMOFORM	ND	5.6	.31
BROMOMETHANE	ND	5.6	.72
CARBON DISULFIDE	ND	5.6	.14
CARBON TETRACHLORIDE	ND	5.6	.89
CHLOROBENZENE	ND	5.6	.22
CHLOROETHANE	ND	5.6	2
CHLOROFORM	ND	5.6	.48
CHLOROMETHANE	ND	5.6	2.3
CIS-1,2-DICHLOROETHENE	ND	5.6	.33
CIS-1,3-DICHLOROPROPENE	ND	5.6	.25
DIBROMOCHLOROMETHANE	ND	5.6	.089
ETHYLBENZENE	ND	5.6	.44
MTBE	ND	11	.42
METHYLENE CHLORIDE	4.7JB	5.6	.46
STYRENE	ND	5.6	.49
TETRACHLOROETHENE	ND	5.6	.27
TOLUENE	ND	5.6	.35
TRANS-1,2-DICHLOROETHENE	ND	5.6	.32
TRANS-1,3-DICHLOROPROPENE	ND	5.6	.75
TRICHLOROETHENE	ND	5.6	.29
VINYL ACETATE	ND	56	.81
VINYL CHLORIDE	ND	5.6	1.1
XYLENES	ND	5.6	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	109	52-149
TOLUENE-D8	93	65-135
BROMOFLUOROBENZENE	90	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/08/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/08/99
Batch No.	: 99L049	Date Extracted:	12/21/99 23:53
Sample ID:	20242-1049	Date Analyzed:	12/21/99 23:53
Lab Samp ID:	L049-03	Dilution Factor:	1
Lab File ID:	RLP202	Matrix :	SOIL
Ext Btch ID:	VOL1402	% Moisture :	3.3
Calib. Ref.:	RLP184	Instrument ID :	T-002

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.2	.34
1,1,2,2-TETRACHLOROETHANE	ND	5.2	.34
1,1,2-TRICHLOROETHANE	ND	5.2	.24
1,1-DICHLOROETHANE	ND	5.2	.31
1,1-DICHLOROETHENE	ND	5.2	.56
1,2-DICHLOROETHANE	ND	5.2	.34
1,2-DICHLOROPROPANE	ND	5.2	.39
2-BUTANONE	ND	52	5.3
2-CHLOROETHYLVINYLETHER	ND	52	.18
2-HEXANONE	ND	52	1.3
4-METHYL-2-PENTANONE	ND	52	1.2
ACETONE	ND	52	4.2
BENZENE	ND	5.2	.26
BROMODICHLOROMETHANE	ND	5.2	.27
BROMOFORM	ND	5.2	.29
BROMOMETHANE	ND	5.2	.66
CARBON DISULFIDE	ND	5.2	.13
CARBON TETRACHLORIDE	ND	5.2	.82
CHLOROBENZENE	ND	5.2	.2
CHLOROETHANE	ND	5.2	1.8
CHLOROFORM	ND	5.2	.44
CHLOROMETHANE	ND	5.2	2.1
CIS-1,2-DICHLOROETHENE	ND	5.2	.3
CIS-1,3-DICHLOROPROPENE	ND	5.2	.23
DIBROMOCHLOROMETHANE	ND	5.2	.082
ETHYLBENZENE	ND	5.2	.41
MTBE	ND	10	.38
METHYLENE CHLORIDE	4.2JB	5.2	.42
STYRENE	ND	5.2	.45
TETRACHLOROETHENE	ND	5.2	.25
TOLUENE	ND	5.2	.32
TRANS-1,2-DICHLOROETHENE	ND	5.2	.3
TRANS-1,3-DICHLOROPROPENE	ND	5.2	.69
TRICHLOROETHENE	ND	5.2	.26
VINYL ACETATE	ND	52	.74
VINYL CHLORIDE	ND	5.2	1
XYLENES	ND	5.2	1.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	106	52-149
TOLUENE-D8	91	65-135
BROMOFLUOROBENZENE	87	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/08/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/08/99
Batch No.	: 99L049	Date Extracted:	12/22/99 00:26
Sample ID:	20242-1050	Date Analyzed:	12/22/99 00:26
Lab Samp ID:	L049-04	Dilution Factor:	1
Lab File ID:	RLP203	Matrix :	SOIL
Ext Btch ID:	VOL1402	% Moisture :	20.0
Calib. Ref.:	RLP184	Instrument ID :	T-002

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	6.2	.41
1,1,2,2-TETRACHLOROETHANE	ND	6.2	.41
1,1,2-TRICHLOROETHANE	ND	6.2	.29
1,1-DICHLOROETHANE	ND	6.2	.38
1,1-DICHLOROETHENE	ND	6.2	.67
1,2-DICHLOROETHANE	ND	6.2	.41
1,2-DICHLOROPROPANE	ND	6.2	.47
2-BUTANONE	ND	62	6.4
2-CHLOROETHYLVINYLETHER	ND	62	.21
2-HEXANONE	ND	62	1.6
4-METHYL-2-PENTANONE	ND	62	1.4
ACETONE	ND	62	5.1
BENZENE	ND	6.2	.31
BROMODICHLOROMETHANE	ND	6.2	.32
BROMOFORM	ND	6.2	.35
BROMOMETHANE	ND	6.2	.8
CARBON DISULFIDE	ND	6.2	.16
CARBON TETRACHLORIDE	ND	6.2	.99
CHLOROBENZENE	ND	6.2	.25
CHLOROETHANE	ND	6.2	2.2
CHLOROFORM	ND	6.2	.53
CHLOROMETHANE	ND	6.2	2.6
CIS-1,2-DICHLOROETHENE	ND	6.2	.36
CIS-1,3-DICHLOROPROPENE	ND	6.2	.28
DIBROMOCHLOROMETHANE	ND	6.2	.099
ETHYLBENZENE	ND	6.2	.49
MTBE	ND	12	.46
METHYLENE CHLORIDE	4.8JB	6.2	.51
STYRENE	ND	6.2	.55
TETRACHLOROETHENE	ND	6.2	.3
TOLUENE	ND	6.2	.39
TRANS-1,2-DICHLOROETHENE	ND	6.2	.36
TRANS-1,3-DICHLOROPROPENE	ND	6.2	.83
TRICHLOROETHENE	ND	6.2	.32
VINYL ACETATE	ND	62	.9
VINYL CHLORIDE	ND	6.2	1.3
XYLENES	ND	6.2	1.4

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	106	52-149
TOLUENE-D8	93	65-135
BROMOFLUOROBENZENE	91	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/08/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/08/99
Batch No.	: 99L049	Date Extracted:	12/22/99 15:38
Sample ID:	20242-1051	Date Analyzed:	12/22/99 15:38
Lab Samp ID:	L049-05	Dilution Factor:	1
Lab File ID:	RLP213	Matrix :	SOIL
Ext Btch ID:	VOL1502	% Moisture :	11.1
Calib. Ref.:	RLP208	Instrument ID :	T-002

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.6	.37
1,1,2,2-TETRACHLOROETHANE	ND	5.6	.37
1,1,2-TRICHLOROETHANE	ND	5.6	.26
1,1-DICHLOROETHANE	ND	5.6	.34
1,1-DICHLOROETHENE	ND	5.6	.61
1,2-DICHLOROETHANE	ND	5.6	.37
1,2-DICHLOROPROPANE	ND	5.6	.42
2-BUTANONE	ND	56	5.8
2-CHLOROETHYLVINYLETHER	ND	56	.19
2-HEXANONE	ND	56	1.4
4-METHYL-2-PENTANONE	ND	56	1.3
ACETONE	25J	56	4.6
BENZENE	ND	5.6	.28
BROMODICHLOROMETHANE	ND	5.6	.29
BROMOFORM	ND	5.6	.31
BROMOMETHANE	ND	5.6	.72
CARBON DISULFIDE	ND	5.6	.14
CARBON TETRACHLORIDE	ND	5.6	.89
CHLOROBENZENE	ND	5.6	.22
CHLOROETHANE	ND	5.6	2
CHLOROFORM	ND	5.6	.48
CHLOROMETHANE	ND	5.6	2.3
CIS-1,2-DICHLOROETHENE	ND	5.6	.33
CIS-1,3-DICHLOROPROPENE	ND	5.6	.25
DIBROMOCHLOROMETHANE	ND	5.6	.089
ETHYLBENZENE	ND	5.6	.44
MTBE	ND	11	.42
METHYLENE CHLORIDE	4.1JB	5.6	.46
STYRENE	ND	5.6	.49
TETRACHLOROETHENE	ND	5.6	.27
TOLUENE	ND	5.6	.35
TRANS-1,2-DICHLOROETHENE	ND	5.6	.32
TRANS-1,3-DICHLOROPROPENE	ND	5.6	.75
TRICHLOROETHENE	ND	5.6	.29
VINYL ACETATE	ND	56	.81
VINYL CHLORIDE	ND	5.6	1.1
XYLENES	ND	5.6	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	96	52-149
TOLUENE-D8	92	65-135
BROMOFLUOROBENZENE	88	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	12/08/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/08/99
Batch No.	: 99L049	Date Extracted:	12/22/99 01:33
Sample ID:	20242-1052	Date Analyzed:	12/22/99 01:33
Lab Samp ID:	L049-06	Dilution Factor:	1
Lab File ID:	RLP205	Matrix :	SOIL
Ext Btch ID:	VOL1402	% Moisture :	13.2
Calib. Ref.:	RLP184	Instrument ID :	T-002

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.8	.38
1,1,2,2-TETRACHLOROETHANE	ND	5.8	.38
1,1,2-TRICHLOROETHANE	ND	5.8	.27
1,1-DICHLOROETHANE	ND	5.8	.35
1,1-DICHLOROETHENE	ND	5.8	.62
1,2-DICHLOROETHANE	ND	5.8	.38
1,2-DICHLOROPROPANE	ND	5.8	.43
2-BUTANONE	ND	58	5.9
2-CHLOROETHYLVINYLETHER	ND	58	.2
2-HEXANONE	ND	58	1.4
4-METHYL-2-PENTANONE	ND	58	1.3
ACETONE	ND	58	4.7
BENZENE	ND	5.8	.29
BROMODICHLOROMETHANE	ND	5.8	.3
BROMOFORM	ND	5.8	.32
BROMOMETHANE	ND	5.8	.74
CARBON DISULFIDE	ND	5.8	.15
CARBON TETRACHLORIDE	ND	5.8	.91
CHLOROBENZENE	ND	5.8	.23
CHLOROETHANE	ND	5.8	2
CHLOROFORM	ND	5.8	.49
CHLOROMETHANE	ND	5.8	2.4
CIS-1,2-DICHLOROETHENE	ND	5.8	.34
CIS-1,3-DICHLOROPROPENE	ND	5.8	.26
DIBROMOCHLOROMETHANE	ND	5.8	.091
ETHYLBENZENE	ND	5.8	.45
MTBE	ND	12	.43
METHYLENE CHLORIDE	4.1JB	5.8	.47
STYRENE	ND	5.8	.5
TETRACHLOROETHENE	ND	5.8	.28
TOLUENE	ND	5.8	.36
TRANS-1,2-DICHLOROETHENE	ND	5.8	.33
TRANS-1,3-DICHLOROPROPENE	ND	5.8	.77
TRICHLOROETHENE	ND	5.8	.29
VINYL ACETATE	ND	58	.82
VINYL CHLORIDE	ND	5.8	1.2
XYLENES	ND	5.8	1.3

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	89	52-149
TOLUENE-D8	99	65-135
BROMOFLUOROBENZENE	90	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030B/M8015

TOTAL PETROLEUM HYDROCARBONS BY PURGE & TRAP

Client : IT CORPORATION
Project : MCAS EL TORO/20242/D.O. 112
Batch No. : 99L049

Matrix : SOIL
Instrument ID : GCT039

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	SURR (%)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	VAL1639B	ND	93	1	NA	1	.02	12/09/9921:46	12/09/9921:46	EL06-30	EL06-26	VAL1639	NA	NA
LCS1S	VAL1639L	6.31	109	1	NA	1	.02	12/09/9922:21	12/09/9922:21	EL06-31	EL06-26	VAL1639	NA	NA
LCD1S	VAL1639C	6.07	106	1	NA	1	.02	12/09/9922:56	12/09/9922:56	EL06-32	EL06-26	VAL1639	NA	NA
20242-1048	L049-02	ND	89	1	11.1	1.1	.022	12/10/9901:16	12/10/9901:16	EL06-36	EL06-26	VAL1639	12/08/99	12/08/99
20242-1049	L049-03	ND	85	1	3.3	1	.021	12/10/9903:01	12/10/9903:01	EL06-39	EL06-38	VAL1639	12/08/99	12/08/99
20242-1050	L049-04	ND	87	1	20.0	1.2	.025	12/10/9903:36	12/10/9903:36	EL06-40	EL06-38	VAL1639	12/08/99	12/08/99
20242-1051	L049-05	ND	86	1	11.1	1.1	.022	12/10/9904:10	12/10/9904:10	EL06-41	EL06-38	VAL1639	12/08/99	12/08/99
20242-1052	L049-06	ND	86	1	13.2	1.2	.023	12/10/9904:45	12/10/9904:45	EL06-42	EL06-38	VAL1639	12/08/99	12/08/99

SURR : Bromofluorobenzene(BFB), WATER:65-135%, SOIL:60-140%
RL : Reporting Limit
* : Out of QC limit due to matrix interference

METHOD M8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : IT CORPORATION
Project : MCAS EL TORO/20242/D.O. 112
Batch No. : 99L049

Matrix : SOIL
Instrument ID : GCT043

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	SUR1 (%)	SUR2 (%)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	DSL012SB	ND	102	99	1	NA	10	.834	12/14/9923:42	12/09/9916:00	DL06-56	DL06-53	DSL012S	NA	12/09/99
LCS1S	DSL012SL	388	95	91	1	NA	10	.834	12/15/9900:21	12/09/9916:00	DL06-57	DL06-53	DSL012S	NA	12/09/99
LCD1S	DSL012SC	397	98	92	1	NA	10	.834	12/15/9901:00	12/09/9916:00	DL06-58	DL06-53	DSL012S	NA	12/09/99
20242-1048	L049-02	ND	115	115	1	11.1	11	.94	12/15/9901:39	12/09/9916:00	DL06-59	DL06-53	DSL012S	12/08/99	12/08/99
20242-1049	L049-03	ND	119	118	1	3.3	10	.86	12/15/9902:18	12/09/9916:00	DL06-60	DL06-53	DSL012S	12/08/99	12/08/99
20242-1050	L049-04	ND	118	114	1	20.0	12	1	12/15/9902:57	12/09/9916:00	DL06-61	DL06-53	DSL012S	12/08/99	12/08/99
20242-1051	L049-05	ND	112	109	1	11.1	11	.94	12/15/9903:36	12/09/9916:00	DL06-62	DL06-53	DSL012S	12/08/99	12/08/99
20242-1052	L049-06	ND	112	110	1	13.2	12	.96	12/15/9904:15	12/09/9916:00	DL06-63	DL06-53	DSL012S	12/08/99	12/08/99

RL : Reporting Limit
SURR1 : Bromobenzene
SURR2 : Hexacosane

Parameter	H-C Range
JP5	C7 -C18
Diesel	C10-C24
Motor Oil	C18-C34
Gas	C6 -C12

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	12/08/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/08/99
SDG NO.	: 99L049	Date Extracted:	12/09/99 17:05
Sample ID:	20242-1048	Date Analyzed:	12/10/99 08:07
Lab Samp ID:	L049-02	Dilution Factor:	1
Lab File ID:	I07L027025	Matrix :	SOIL
Ext Btch ID:	IPL016S	% Moisture :	11.1
Calib. Ref.:	I07L027022	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.2	4.03
Barium	143	1.12	.146
Beryllium	.456	.225	.0225
Cadmium	ND	1.12	.0787
Chromium	12.6	1.12	.675
Cobalt	4.82	1.12	.686
Copper	6.34	1.12	.832
Manganese	245	2.25	.135
Molybdenum	ND	2.25	.731
Nickel	8.12	2.25	.517
Silver	ND	1.12	1.59
Vanadium	32	1.12	.934
Zinc	39	1.12	.292

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	12/08/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/08/99
SDG NO.	: 99L049	Date Extracted:	12/09/99 17:05
Sample ID:	20242-1048	Date Analyzed:	12/16/99 20:43
Lab Samp ID:	L049-02	Dilution Factor:	1
Lab File ID:	I31L038021	Matrix :	SOIL
Ext Btch ID:	IPL016S	% Moisture :	11.1
Calib. Ref.:	I31L038014	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.09	1.12	.577
Lead	3.26	1.12	.297
Selenium	ND	1.12	.51
Thallium	ND	1.12	.524

RL: Reporting Limit

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	12/08/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/08/99
SDG NO.	: 99L049	Date Extracted:	12/09/99 17:05
Sample ID:	20242-1049	Date Analyzed:	12/10/99 07:40
Lab Samp ID:	L049-03	Dilution Factor:	1
Lab File ID:	I07L027020	Matrix :	SOIL
Ext Btch ID:	IPL016S	% Moisture :	3.3
Calib. Ref.:	I07L027010	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10.3	3.7
Barium	80.9	1.03	.134
Beryllium	ND	.207	.0207
Cadmium	ND	1.03	.0724
Chromium	2.85	1.03	.62
Cobalt	1.66	1.03	.631
Copper	1.8	1.03	.765
Manganese	118	2.07	.124
Molybdenum	ND	2.07	.672
Nickel	ND	2.07	.476
Silver	ND	1.03	1.46
Vanadium	11.5	1.03	.858
Zinc	12.7	1.03	.269

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	12/08/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/08/99
SDG NO.	: 99L049	Date Extracted:	12/09/99 17:05
Sample ID:	20242-1049	Date Analyzed:	12/16/99 20:47
Lab Samp ID:	L049-03	Dilution Factor:	1
Lab File ID:	I31L038022	Matrix :	SOIL
Ext Btch ID:	IPL016S	% Moisture :	3.3
Calib. Ref.:	I31L038014	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	ND	1.03	.531
Lead	1.15	1.03	.273
Selenium	ND	1.03	.468
Thallium	ND	1.03	.482

RL: Reporting Limit

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	12/08/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/08/99
SDG NO.	: 99L049	Date Extracted:	12/09/99 17:05
Sample ID:	20242-1050	Date Analyzed:	12/10/99 07:45
Lab Samp ID:	L049-04	Dilution Factor:	1
Lab File ID:	I07L027021	Matrix :	SOIL
Ext Btch ID:	IPL016S	% Moisture :	20.0
Calib. Ref.:	I07L027010	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	12.5	4.47
Barium	238	1.25	.162
Beryllium	.699	.25	.025
Cadmium	ND	1.25	.0875
Chromium	19.7	1.25	.75
Cobalt	9.85	1.25	.763
Copper	8.3	1.25	.925
Manganese	318	2.5	.15
Molybdenum	ND	2.5	.812
Nickel	12.3	2.5	.575
Silver	ND	1.25	1.76
Vanadium	45	1.25	1.04
Zinc	49.2	1.25	.325

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	12/08/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/08/99
SDG NO.	: 99L049	Date Extracted:	12/09/99 17:05
Sample ID:	20242-1050	Date Analyzed:	12/17/99 19:10
Lab Samp ID:	L049-04	Dilution Factor:	1
Lab File ID:	I31L042034	Matrix :	SOIL
Ext Btch ID:	IPL016S	% Moisture :	20.0
Calib. Ref.:	I31L042026	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.42	1.25	.641
Lead	4.1	1.25	.33
Selenium	ND	1.25	.566
Thallium	ND	1.25	.583

RL: Reporting Limit

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	12/08/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/08/99
SDG NO.	: 99L049	Date Extracted:	12/09/99 17:05
Sample ID:	20242-1051	Date Analyzed:	12/10/99 08:12
Lab Samp ID:	L049-05	Dilution Factor:	1
Lab File ID:	I07L027026	Matrix :	SOIL
Ext Btch ID:	IPL016S	% Moisture :	11.1
Calib. Ref.:	I07L027022	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.2	4.03
Barium	179	1.12	.146
Beryllium	.348	.225	.0225
Cadmium	ND	1.12	.0787
Chromium	10.7	1.12	.675
Cobalt	4.24	1.12	.686
Copper	4.27	1.12	.832
Manganese	161	2.25	.135
Molybdenum	ND	2.25	.731
Nickel	5.6	2.25	.517
Silver	ND	1.12	1.59
Vanadium	30.1	1.12	.934
Zinc	29.9	1.12	.292

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	12/08/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/08/99
DG NO.	: 99L049	Date Extracted:	12/09/99 17:05
Sample ID:	20242-1051	Date Analyzed:	12/17/99 19:14
Lab Samp ID:	L049-05	Dilution Factor:	1
Lab File ID:	I31L042035	Matrix :	SOIL
Ext Btch ID:	IPL016S	% Moisture :	11.1
Calib. Ref.:	I31L042026	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	1.19	1.12	.577
Lead	2.24	1.12	.297
Selenium	ND	1.12	.51
Thallium	ND	1.12	.524

RL: Reporting Limit

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	12/08/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/08/99
SDG NO.	: 99L049	Date Extracted:	12/09/99 17:05
Sample ID:	20242-1052	Date Analyzed:	12/10/99 08:17
Lab Samp ID:	L049-06	Dilution Factor:	1
Lab File ID:	I07L027027	Matrix :	SOIL
Ext Btch ID:	IPL016S	% Moisture :	13.2
Calib. Ref.:	I07L027022	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.5	4.12
Barium	157	1.15	.15
Beryllium	.458	.23	.023
Cadmium	ND	1.15	.0806
Chromium	13.2	1.15	.691
Cobalt	6.3	1.15	.703
Copper	6.75	1.15	.853
Manganese	261	2.3	.138
Molybdenum	ND	2.3	.749
Nickel	7.06	2.3	.53
Silver	ND	1.15	1.62
Vanadium	40.5	1.15	.956
Zinc	47.9	1.15	.3

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	12/08/99
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/08/99
SDG NO.	: 99L049	Date Extracted:	12/09/99 17:05
Sample ID:	20242-1052	Date Analyzed:	12/17/99 19:19
Lab Samp ID:	L049-06	Dilution Factor:	1
Lab File ID:	I31L042036	Matrix :	SOIL
Ext Btch ID:	IPL016S	% Moisture :	13.2
Calib. Ref.:	I31L042026	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.97	1.15	.591
Lead	2.41	1.15	.304
Selenium	ND	1.15	.522
Thallium	ND	1.15	.537

RL: Reporting Limit

METHOD 3050A/6010A
CAM METALS BY ICP

Client	: IT CORPORATION	Date Collected:	NA
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/09/99
SDG NO.	: 99L049	Date Extracted:	12/09/99 17:05
Sample ID:	MBLK1S	Date Analyzed:	12/10/99 06:58
Lab Samp ID:	IPL016SB	Dilution Factor:	1
Lab File ID:	I07L027012	Matrix :	SOIL
Ext Btch ID:	IPL016S	% Moisture :	NA
Calib. Ref.:	I07L027010	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10	3.58
Barium	ND	1	.13
Beryllium	ND	.2	.02
Cadmium	ND	1	.07
Chromium	ND	1	.6
Cobalt	ND	1	.61
Copper	ND	1	.74
Manganese	ND	2	.12
Molybdenum	ND	2	.65
Nickel	ND	2	.46
Silver	ND	1	1.41
Vanadium	ND	1	.83
Zinc	ND	1	.26

RL: Reporting Limit

METHOD 3050A/6010A
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	NA
Project	: MCAS EL TORO/20242/D.O. 112	Date Received:	12/09/99
SDG NO.	: 99L049	Date Extracted:	12/09/99 17:05
Sample ID:	MBLK1S	Date Analyzed:	12/16/99 20:22
Lab Samp ID:	IPL016SB	Dilution Factor:	1
Lab File ID:	I31L038016	Matrix :	SOIL
Ext Btch ID:	IPL016S	% Moisture :	NA
Calib. Ref.:	I31L038014	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	ND	1	.513
Lead	ND	1	.264
Selenium	ND	1	.453
Thallium	ND	1	.466

RL: Reporting Limit

METHOD 7471A
MERCURY BY COLD VAPOR

Client : IT CORPORATION
Project : MCAS EL TORO/20242/D.O. 112
Batch No. : 99L049

Matrix : SOIL
Instrument ID : TI023

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	HGL009SB	ND	1	NA	.1	.028	12/10/9913:02	12/10/9912:00	M99L013008	M99L013006	HGL009S	NA	12/10/99
LCS1S	HGL009SL	.780	1	NA	.1	.028	12/10/9913:04	12/10/9912:00	M99L013009	M99L013006	HGL009S	NA	12/10/99
LCD1S	HGL009SC	.777	1	NA	.1	.028	12/10/9913:06	12/10/9912:00	M99L013010	M99L013006	HGL009S	NA	12/10/99
20242-1048	L049-02	ND	1	11.1	.112	.0315	12/10/9913:18	12/10/9912:00	M99L013015	M99L013006	HGL009S	12/08/99	12/08/99
20242-1048MS	L049-02M	.857	1	11.1	.112	.0315	12/10/9913:20	12/10/9912:00	M99L013016	M99L013006	HGL009S	12/08/99	12/08/99
20242-1048MSD	L049-02S	.793	1	11.1	.112	.0315	12/10/9913:22	12/10/9912:00	M99L013017	M99L013006	HGL009S	12/08/99	12/08/99
20242-1048DL	L049-02T	ND	5	11.1	.562	.157	12/10/9913:29	12/10/9912:00	M99L013020	M99L013018	HGL009S	12/08/99	12/08/99
20242-1048AS	L049-02A	.373	1	11.1	.112	.0315	12/10/9913:31	12/10/9912:00	M99L013021	M99L013018	HGL009S	12/08/99	12/08/99
20242-1049	L049-03	ND	1	3.3	.103	.029	12/10/9913:33	12/10/9912:00	M99L013022	M99L013018	HGL009S	12/08/99	12/08/99
20242-1050	L049-04	ND	1	20.0	.125	.035	12/10/9913:35	12/10/9912:00	M99L013023	M99L013018	HGL009S	12/08/99	12/08/99
20242-1051	L049-05	ND	1	11.1	.112	.0315	12/10/9913:38	12/10/9912:00	M99L013024	M99L013018	HGL009S	12/08/99	12/08/99
20242-1052	L049-06	ND	1	13.2	.115	.0323	12/10/9913:40	12/10/9912:00	M99L013025	M99L013018	HGL009S	12/08/99	12/08/99

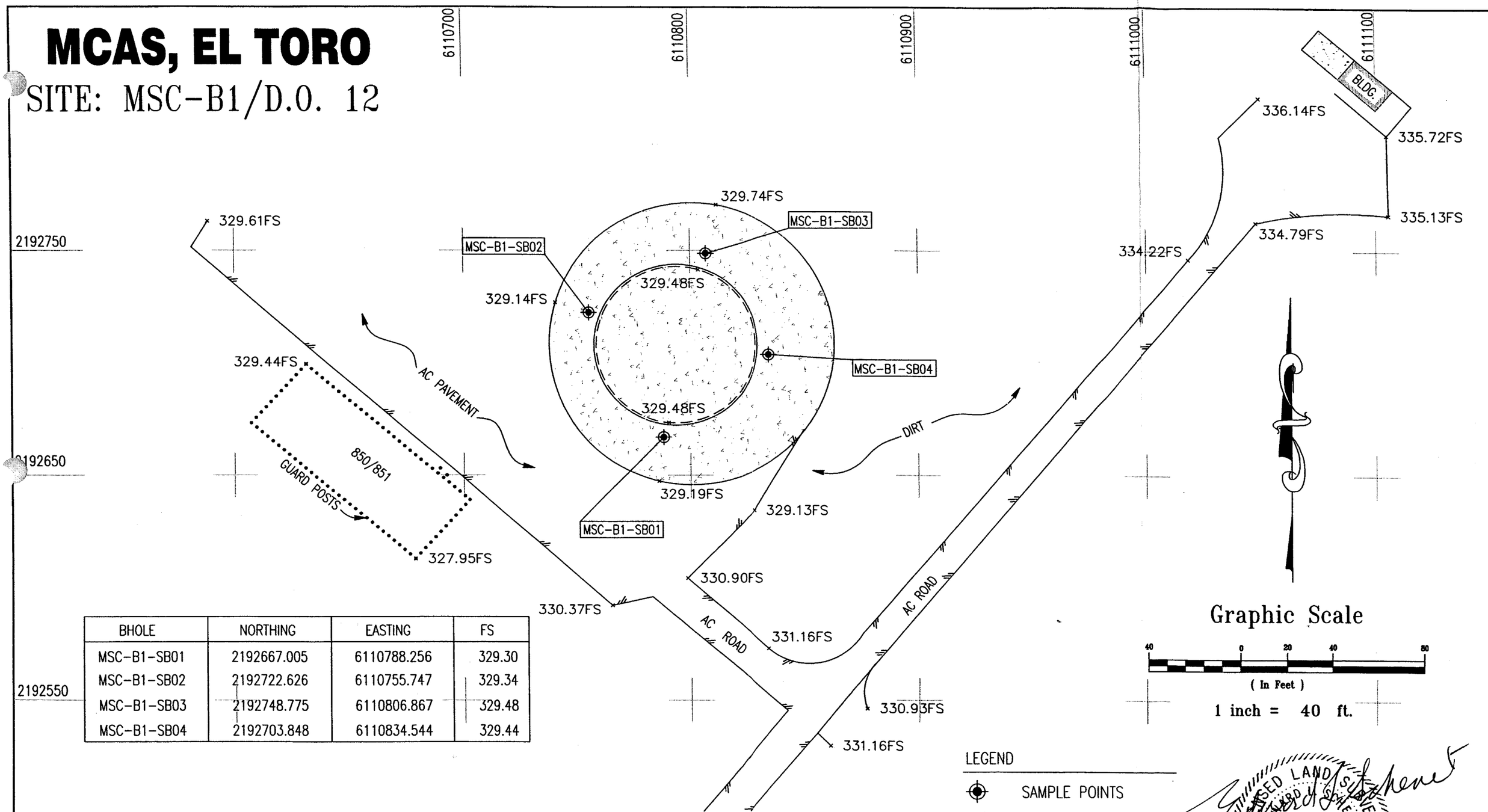
RL: Reporting Limit

7190

Appendix H
Land Survey Data

MCAS, EL TORO

SITE: MSC-B1/D.O. 12



BHOLE	NORTHING	EASTING	FS
MSC-B1-SB01	2192667.005	6110788.256	329.30
MSC-B1-SB02	2192722.626	6110755.747	329.34
MSC-B1-SB03	2192748.775	6110806.867	329.48
MSC-B1-SB04	2192703.848	6110834.544	329.44

Graphic Scale

40 0 20 40 80

(In Feet)

1 inch = 40 ft.

LEGEND

- SAMPLE POINTS
- EDGE OF PAVEMENT
- FS FINISH SURFACE
- TC TOP OF CURB
- FH FIRE HYDRANT
- CHAIN LINK FENCE

LICENSED LAND SURVEYOR
EDWARD J. SCHENET
L.S. 4240
Exp 6/30/00
STATE OF CALIFORNIA

DATE OF SURVEY: 12-14-99

CAL VADA SURVEYING, INC.
108 Business Center Dr, Corona, Ca 92880-1782
PHONE: (909) 280-9960 FAX: (909) 280-9746

JOB NO. 97102MSC-B1

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

Appendix B
Response to Comments

RESPONSE TO CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SANTA ANA REGION COMMENTS – SITE ASSESSMENT REPORT, FIREFIGHTER TRAINING BURN PIT MSC B1

Former Marine Corps Air Station, El Toro, California, dated October 10, 2000

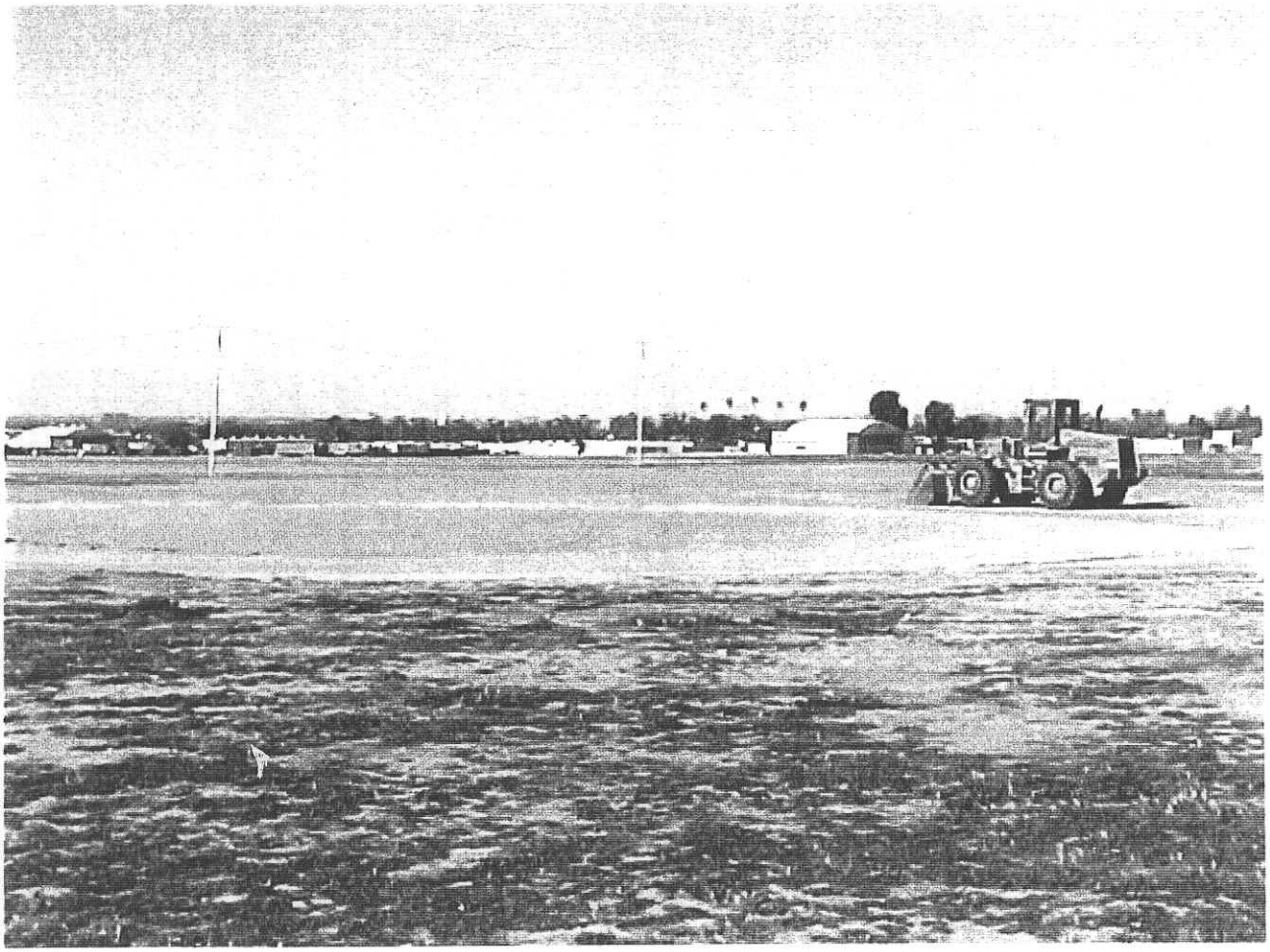
OHM Project No. 18609, Delivery Order No. 070, Document Control Number SW7844

Comment No.	Section/Page Number	Comment	OHM's Response
Comments from Mr. John Broderick, California Regional Water Quality Control Board, Santa Ana Region Dated 10 October 2000.			
1.		This report does not sufficiently describe the physical condition of the burn pit. The physical condition is relevant in the assessment of the release from the facility. Please revise the report to include discussion of the facility's physical condition.	Comment noted. Additional details about the physical condition of the burn pit have been provided in the Addendum to the Summary Report.
2.		The report lacks complete discussion on the basis for selection of the four soil boring locations. Review of Figure 3-1 leads us to assume that no boring was advanced through the area where liquids were contained during the facility's use. It may be appropriate to complete soil boring(s) in the pit center area to complete the assessment.	Comment noted. Two additional borings were advanced in the center of the former burn pit area. Analytical results and boring locations are provided in the Addendum to the Summary Report.

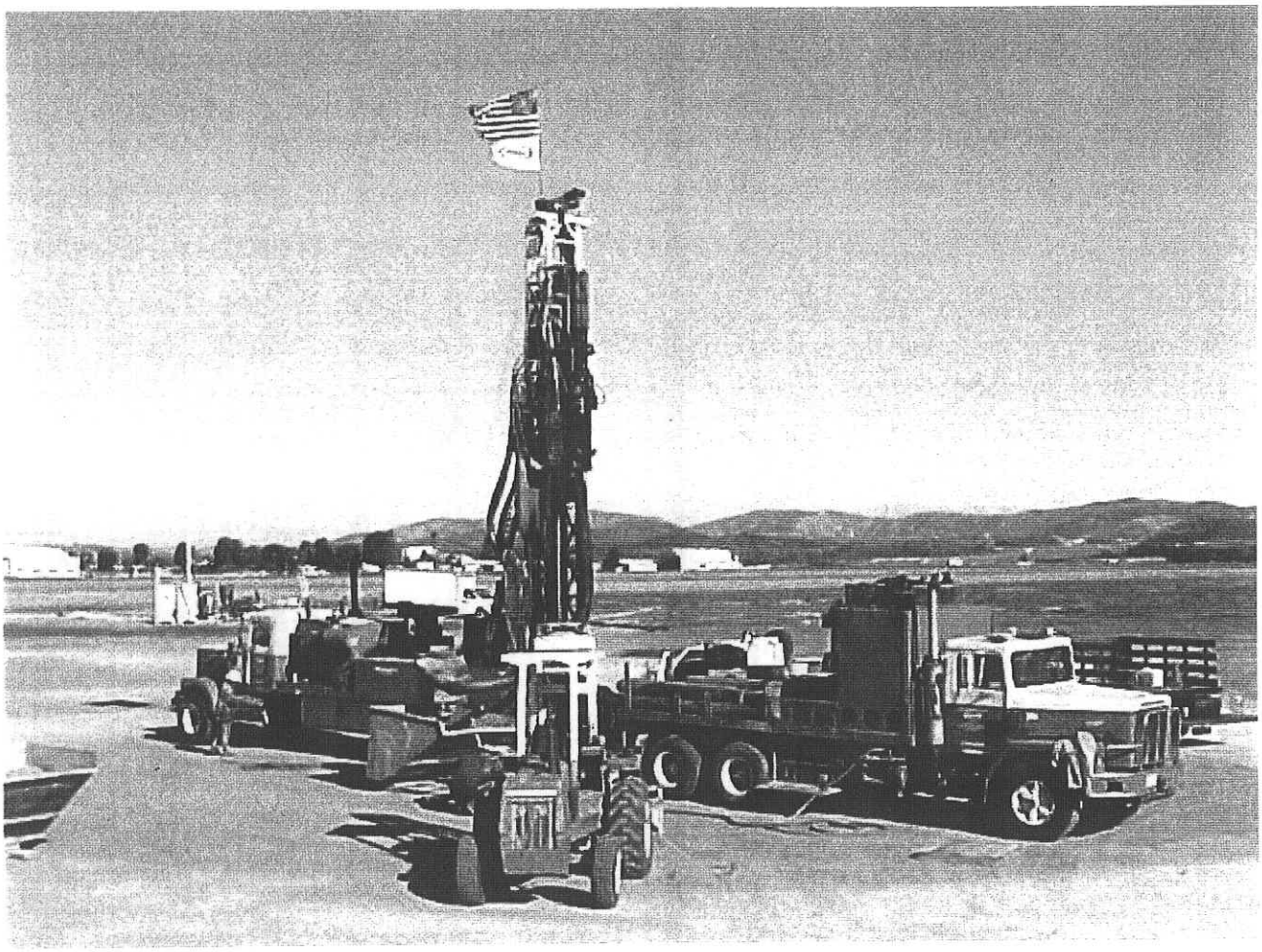
Appendix C
Site Photographs

Photograph 1.
Former Burn Pit MSC-B1
View of: Concrete basin removal activity
Marine Corps Air Station, El Toro
Date of Photograph: January 2001

Photograph 2.
Former Burn Pit MSC-B1
View of: After concrete basin removal
Marine Corps Air Station, El Toro
Date of Photograph: January 2001



Photograph 3.
Former Burn Pit MSC-B1
View of: Drilling activities
Marine Corps Air Station, El Toro
Date of Photograph: January 2001



Appendix D
Soil Boring Logs

OHM REMEDIATION

Geologic Log

BOREHOLE NUMBER: MSC-B1-SB1
SHEET 1 OF 5

PROJECT NO. 18609 DATE: 11/17/00
CLIENT: SWDIV
LOCATION: ~~FF 398~~ MSCB1
LOGGED BY: Brian Tanaka

DRILLNG CO.: Layne
DRILL RIG MODEL: Foremost Drill AP-1000
DRILLER: Pancho
DRILLING METHOD: Air Rotary HOLE DIAMETER: 9 inches

BORING COMPLETION DATA: Backfilled with cement grout; 26 bags cement, 2 bags gel

DEPTH TO WATER:				
TIME				

TIME	DEPTH	PID/FID HNU OVA (PPM)	BLOWS/6 IN PRESSURE (PSI)	RECOVERY	SAMPLE NUMBER	SAMPLE INTERVAL	WELL DETAIL	SOIL/ROCK SYMBOL	GRAPHIC LOG	
		Ø						SM		Surface: Silty Sand (SM) Yellow (2.5Y 7/6) Boring hand augered to 7 feet bgs for underground utilities. fine slightly plastic silts, fine to coarse poorly sorted, Dense sands, subrounded to subangular, with some fine gravels (subrounded to subangular), slightly moist, no odor detected.
	5	Ø						SM		as above (SM) slightly moist no odor detected
	10	Ø						SM		as above (SM) slightly moist no odor detected
	15									Sand (SW) Light Yellowish Brown (2.5Y 6/4) fine to coarse poorly sorted medium dense subrounded to subangular, slightly moist no odor detected
0636			10	9		X				18609-3263 Sample collected at 15½-16' BGS
			11	6	3263	X				
			13	6		X				
	20									

QHM
REMEDIATION
SERVICES CORP.

LOCATION: ~~FF348~~ MSCB1
DATE: 11/17/00

BOREHOLE NUMBER: MSC-B1-SB1
SHEET 2 OF 5

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
0640		Ø	13	4		X		SP		Sand (SP) Light Yellowish Brown (2.5Y 6/4)
		Ø	13	6		X				Well sorted fine, medium dense Sand,
		Ø	23	6		X				Slightly moist, no odor detected.
	25									
	30									
0650		Ø	6	4		X		ML		Silts (ML) Yellowish Brown (10YR 5/4)
		Ø	7	6	3264	X				fine, soft silts, mica, slightly plastic
		Ø	8	6		X				stack very fine Sand, slightly moist, no
										odor detected.
										18609-3264 Sample collected @ 30½-31' BGS
	35									
	40					X				
0658		Ø	13	6		X		ML		as above (ML) slightly moist no odor detected
		Ø	15	6	3265	X				18609-3265 Sample collected @ 40½-41' BGS
		Ø	17	6		X				

QHM REMEDIATION SERVICES CORP.

LOCATION: MSCBI ~~IE3948~~

DATE: 11/17/00

BOREHOLE NUMBER: MSCBI-SB0

SHEET 3 OF 5

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
	45									
	50									
0715		0	17	4		X		ML		Sandy Silt (ML) Brown (10YR 5/3) Firm to hard fine, plastic silts, mica, some CaCO3 lenses, some very fine to fine sand, slightly moist, no odor detected.
		0	30	6		X				
		0	40	6		X				
	55									
	60									
0729		0	10	4		X		ML		Silts (ML) Brown (10YR 5/3) firm to hard fine, plastic silts, mica, some CaCO3 lenses some very fine to fine sand, trace mediums, coarse, slightly moist, no odor detected.
		0	38	6		X				
		0	36	6		X				
	65									
	70									

OHM REMEDIATION SERVICES CORP.

LOCATION: ~~TF398~~ MSCB1

DATE: 11/17/00

BOREHOLE NUMBER: MSCB1-SBC

SHEET 4 OF 5

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
	70									
0850		⊖	23			X				Sand (SW) Very Pale Brown (10YR 7/3)
		⊖	30		3266	X				poorly sorted, Very dense, fine to coarse,
		⊖	40			X				subrounded to subangular sands, Slightly
										moist, no odor detected.
										18609-3266 Sample collected at 70½-71' BGS
	75									
	80									
0814		⊖	11			X		ML		Sandy Silt (ML) Strong Brown (7.5YR 5/8)
		⊖	15			X				fine plastic, firm to hard. silts, mica,
		⊖	30			X				some $CaCO_3$ (reacts with HCl) some fine
										to medium subrounded to subangular sands,
										trace medium, Slightly moist no odor detected.
	85									
	90									
0833		⊖	24			X		SW		Sand (SW) Light Olive Brown (2.5Y 5/4)
		⊖	50		3267	X				fine to coarse poorly sorted, Dense, subrounded
		⊖	50			X		SP		to subangular sands, Some fine to coarse
										(subrounded to subangular) gravels, Slightly
										moist no odor detected.
										Sand (SP) Light Olive Brown (2.5Y 5/4) Very fine
										well sorted sand, dense, Slightly moist no
										odor detected.
										18609-3267 Sample collected @ 90½-91' BGS
	95									

OHM
REMEDIATION
SERVICES CORP.

LOCATION: ~~TF 398~~ MSCB1

DATE: 11/17/00

BOREHOLE NUMBER: MSCB1-SB

SHEET 5 OF 5

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
	95									
	100									
0856		0	13			X		ML		Sandy Silts (ML) Olive Brown (2.5Y 4/3) fine, plastic, firm to hard, mica, some fine to medium subrounded to subangular sands, trace coarse, slightly moist, no odor detected.
		0	35		3268	X				18609-3268 Sample collected at 100½-101'a
		0	50			X				
										End of boring at 101½' BGS, No Groundwater was encountered, Boring was back filled with cement grout.
	105									
										26 Bags 94lb Coltan TYPE II/V Cement 2 Bags 64lb Bentonite gel.
	110									
	115									
	120									

OHM REMEDIATION

Geologic Log

BOREHOLE NUMBER: MSC B1-SB

SHEET 1 OF 2

PROJECT NO. 18609 DATE: 11/17/00

CLIENT: SWDIV

LOCATION: MSCB1

LOGGED BY: Brian Tanaka

DRILLNG CO.: Layne

DRILL RIG MODEL: Foremost Drill AP-1000

DRILLER: Panchto

DRILLING METHOD: Air Rotary HOLE DIAMETER: 9 inches

BORING COMPLETION DATA: Backfilled

DEPTH TO WATER:				
TIME				

TIME	DEPTH	PID/FID HNU OVA (PPM)	BLOWS/6 IN PRESSURE (PSI)	RECOVERY	SAMPLE NUMBER	SAMPLE INTERVAL	WELL DETAIL	SOIL/ROCK SYMBOL	GRAPHIC LOG	
start 1138		Ø						SM		Surface: Silty Sand Yellow (2.5Y 7/6) Boring hand augered to 7 feet bgs for underground utilities. fine slightly plastic silts, fine to coarse poorly sorted, Dense sands, subrounded to subangular, with fine gravels (subrounded to subangular) Slightly moist, no odor detected.
	5	Ø						SM		as above (SM) slightly moist no odor detected.
	10									
	15									
1155		Ø	8	6		X				Sand (SP) Light Yellowish brown (2.5Y 6/4) well sorted fine, Loose sand, slightly moist no odor detected
		Ø	8	6	3270	X				18609-3270 Sample collected @ 15½-16' BGS
		Ø	10	6		X				
	20									

OHM REMEDIATION SERVICES CORP.

LOCATION: MSCB1

DATE: 11/17/00

BOREHOLE NUMBER: MSCB1-SB 0

SHEET 2 OF 2

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
1203	20	Ø	8	6		X		SP		as above (SP) Slightly moist no odor detected
		Ø	8	6		X				No analytical sample collected.
		Ø	13	6		X				
	25									
	30									
			9			X				as above (SP) Slightly moist no odor detected.
1208	32		10		3271	X				
1210			10		3272	X				
	35									
	40									
1220		Ø	10	5		X		ML		Silts (ML) Yellowish Brown (10YR 5/4) fine, from silts, mica, plastic. Some Caliche Lenses
		Ø	14	6		X				Slightly moist, no odor detected.
		Ø	15	6		X				End of boring at 41½' BGS. No Groundwater was encountered in the boring.
										Boring was backfilled with
	45									

Appendix E
Laboratory Analytical Reports

1 of 2

the i group — IT Corporation, 2790 Mosside Blvd., Monroeville, PA 15146-2792, (412)372-7701

CHAIN-OF-CUSTODY RECORD

Soil Borings @ MSCB-1

PROJECT DATA MANAGER'S COPY

A 12375

FORM 0019 REV. 9-99

IT'S LAB COORDINATOR: M. Concepcion	LAB COORDINATOR'S PHONE: 949-660-7550	LAB COORDINATOR'S FAX: 949-475-5433	LABORATORY SERVICE ID: 00K184	LABORATORY CONTACT: E-MAX	MAIL REPORT (COMPANY NAME): IT CORP
PROJECT NAME: Former burn Pit MSC-B1	PROJECT LOCATION: MCAS ELTORO	PROJECT NUMBER: 18609	LABORATORY PHONE: 310-618-8889	LABORATORY FAX: 310-618-0818	RECIPIENT NAME: Dwayne Ishida
PROJECT CONTACT: M. Concepcion	PROJECT PHONE NUMBER: 949-451-1666	PROJECT FAX: 949-451-1672	LABORATORY ADDRESS: 630 Maple Ave	ADDRESS: 3347 Michelson #200	
PROJECT ADDRESS: MCAS BLDG 311 EL TORO	CITY, STATE AND ZIP CODE: SANTA ANA CA 92708	CLIENT: SWDIV	CITY, STATE AND ZIP CODE: TORRANCE CA 90503	CITY, STATE AND ZIP CODE: IRVINE CA 92612	
PROJECT MANAGER: D. Rawal	PROJECT MANAGER'S PHONE: 949-660-7576	PROJECT MANAGER'S FAX: 949-474-8309			

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	Analyses: MV8015 TPH/GAS	TPH Diesel	TPH 3P5	Metals 6010A	8260A (w/MTBE)	Mercury 7470A			Comments
1	18609-3262A	Water	11/17/00	0600	HCl	2	3	5day	X				X				
2	18609-3263A	Soil		0630	4°C	1	3		X	X	X	X	X	X			
3	18609-3264A			0650	4°C	1	3		X	X	X	X	X	X			Hold
4	18609-3265A			0658	4°C	1	3		X	X	X	X	X	X			
5	18609-3266A			0750	4°C	1	3		X	X	X	X	X	X			
6	18609-3267A			0833	4°C	1	3		X	X	X	X	X	X			Hold
7	18609-3268A			0896	4°C	1	3		X	X	X	X	X	X			
8	18609-3269A	Water		1000	HCl 4°C	7	3		X	X	X	X	X	X			cancel analysis for metals MG 11/21/00 no cont.
9	18609-3270A	Soil		1155	4°C	1	3		X	X	X	X	X	X			
10	18609-3271A	Soil		1208	4°C	1	3		X	X	X	X	X	X			

SAMPLES COLLECTED BY: BRIAN TANAKA

COURIER AND AIR BILL NUMBER:

COOLER TEMPERATURE UPON RECEIPT:

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
[signature]	[signature]	11/17/00	1515	

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

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

Sample Point Location	G	C	F	QC
1) MSCB-1 Trip Blank				✓
2) MSCB-1 SB-05 @ 15½-16'	✓			
3) MSCB-1 SB-05 @ 30½-31'	✓			
4) MSCB-1 SB-05 @ 40½-41'	✓			
5) MSCB-1 SB-05 @ 70½-71'	✓			
6) MSCB-1 SB-05 @ 90½-91'	✓			
7) MSCB-1 SB-05 @ 100½-101'	✓			
8) MSCB-1 Rinsate rec'd				✓
9) MSCB-1 SB-06 @ 15½-16'	✓			
10) MSCB-1 SB-06 @ 30½-31'	✓			

Comments

due 11/28/00 rec'd 11/28/00

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

COMPLETED GW 11/27/00 MG 11/28/00

272

the IT group

IT Corporation
2790 Mosside Blvd.
Monroeville, PA 15146-2792
(412)372-7701

CHAIN-OF-CUSTODY RECORD

PROJECT DATA MANAGER'S COPY

A 10758

FORM 0019 REV. 9-99

Soil Boring @ MSC B-1

484

IT'S LAB COORDINATOR: M. Concepcion	LAB COORDINATOR'S PHONE: 949-660-7550	LAB COORDINATOR'S FAX: 949-475-5433	LABORATORY SERVICE ID: 00K148	LABORATORY CONTACT: E-MAX	MAIL REPORT (COMPANY NAME): IT CORP
PROJECT NAME: Former Burn Pit MSC-B1	PROJECT LOCATION: MCAS EL TORO	PROJECT NUMBER: 18609	LABORATORY PHONE: 310-618-8889	LABORATORY FAX: 310-618-0818	RECIPIENT NAME: Dwayne Ishida
PROJECT CONTACT: M Concepcion	PROJECT PHONE NUMBER: 949-451-1666	PROJECT FAX: 949-451-1672	LABORATORY ADDRESS: 630 Maple Ave		ADDRESS: 3347 Michelson #200
PROJECT ADDRESS: MCAS BLDG 311 EL TORO	CITY, STATE AND ZIP CODE: SANTA ANA CA 92708	CLIENT: SWDIV	CITY, STATE AND ZIP CODE: TORRANCE CA 90503		CITY, STATE AND ZIP CODE: IRVINE CA 92612
PROJECT MANAGER: D. Rowal	PROJECT MANAGER'S PHONE: 949-660-7576	PROJECT MANAGER'S FAX: 949-474-8309			

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	TOH GAS	TOH DIESEL	TPH TP-5	METALS (DNX)	6260 A W/MTBE	Mercury 7470A			Comments
1	18609-3272A	Soil	11/17/00	1210	°C	1	3	5day	X	X	X	X	X	X			
2	18609-3273A	Soil	11/17/00	1220	°C	1	3	5day	X	X	X	X	X	X			
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

BT 11/17/00

SAMPLES COLLECTED BY: BRIAN TANAKA

COURIER AND AIR BILL NUMBER:

COOLER TEMPERATURE UPON RECEIPT:

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
[signature]	[signature]	11/17/00	1515	

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

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

Sample Point Location	Sample Type G	C	F	QC
1) MSCB1SB06 30' Duplicate	✓			✓
2) MSCB1-SB06 @ 40½-41' BGS	✓			

Comments

due 11/28/00 rec'd 11/28/00

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

5730A

EMAX
LABORATORIES, INC.
630 Maple Ave.
Torrance, CA 90503
Telephone: (310) 618-8889
Fax: (310) 618-0818

Date: 12-04-2000
EMAX Batch No.: 00K184

Attn: Dwayne Ishida

IT Corporation
3347 Michelson Dr. # 200
Irvine CA 92612

Subject: Laboratory Report
Project: MCAS El Toro/18609/D.O. 70

Enclosed is the Laboratory report for samples received on 11/17/00. The data reported include :

Sample ID	Control #	Col Date	Matrix	Analysis
18609-3262	K184-01	11/17/00	WATER	TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
18609-3263	K184-02	11/17/00	SOIL	TPH DIESEL
				TPH GASOLINE
				MERCURY
				METALS CAM
				VOLATILE ORGANICS BY GC/MS
18609-3264	K184-03	11/17/00	SOIL	HOLD
18609-3265	K184-04	11/17/00	SOIL	TPH DIESEL
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
				MERCURY
				METALS CAM
18609-3266	K184-05	11/17/00	SOIL	TPH DIESEL
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
				METALS CAM
				MERCURY
18609-3267	K184-06	11/17/00	SOIL	HOLD
18609-3268	K184-07	11/17/00	SOIL	TPH DIESEL
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
				MERCURY
				METALS CAM
18609-3269	K184-08	11/17/00	WATER	TPH DIESEL
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
18609-3270	K184-09	11/17/00	SOIL	TPH DIESEL
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
				MERCURY
				METALS CAM

Sample ID	Control #	Col Date	Matrix	Analysis
18609-3271	K184-10	11/17/00	SOIL	TPH DIESEL
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
				METALS CAM
				MERCURY
18609-3272	K184-11	11/17/00	SOIL	TPH DIESEL
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
				MERCURY
				METALS CAM
18609-3273	K184-12	11/17/00	SOIL	TPH DIESEL
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
				METALS CAM
				MERCURY

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Kam Y. Pang, Ph.D.
Laboratory Director

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

METHOD M8015

TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/21/00 15:45
Sample ID:	18609-3263 A	Date Analyzed:	11/22/00 04:23
Lab Samp ID:	K184-02	Dilution Factor:	1
Lab File ID:	TK07038A	Matrix :	SOIL
Ext Btch ID:	DSK026S	% Moisture :	2.3
Calib. Ref.:	TK07032A	Instrument ID :	GCT050

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DIESEL	ND	10	3.6
JP5	ND	10	3.8

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	112	60-140
HEXACOSANE	95	55-150

QC LIMIT : (SOIL) 60-140 55-150

QC LIMIT : (WATER) 65-135 60-145

SURR1 : Bromobenzene

SURR2 : Hexacosane

RL : Reporting Limit

METHOD M8015

TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/21/00 15:45
Sample ID:	18609-3265	Date Analyzed:	11/22/00 06:00
Lab Samp ID:	K184-04	Dilution Factor:	1
Lab File ID:	TK07040A	Matrix :	SOIL
Ext Btch ID:	DSK026S	% Moisture :	14.3
Calib. Ref.:	TK07032A	Instrument ID :	GCT050

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DIESEL	ND	12	4
JP5	ND	12	4.3

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	100	60-140
HEXACOSANE	82	55-150

QC LIMIT : (SOIL) 60-140 55-150

QC LIMIT : (WATER) 65-135 60-145

SURR1 : Bromobenzene

SURR2 : Hexacosane

RL : Reporting Limit

METHOD M8015

TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/21/00 15:45
Sample ID:	18609-3266 P	Date Analyzed:	11/22/00 06:48
Lab Samp ID:	K184-05	Dilution Factor:	1
Lab File ID:	TK07041A	Matrix :	SOIL
Ext Btch ID:	DSK026S	% Moisture :	5.4
Calib. Ref.:	TK07032A	Instrument ID :	GCT050

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DIESEL	ND	11	3.7
JP5	ND	11	3.9

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	113	60-140
HEXACOSANE	96	55-150

QC LIMIT : (SOIL) 60-140 55-150

QC LIMIT : (WATER) 65-135 60-145

SURR1 : Bromobenzene

SURR2 : Hexacosane

RL : Reporting Limit

METHOD M8015

TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/21/00 15:45
Sample ID:	18609-3268 A	Date Analyzed:	11/22/00 11:38
Lab Samp ID:	K184-07	Dilution Factor:	1
Lab File ID:	TK07047A	Matrix :	SOIL
Ext Btch ID:	DSK026S	% Moisture :	11.5
Calib. Ref.:	TK07044A	Instrument ID :	GCT050

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DIESEL	ND	11	3.9
JP5	ND	11	4.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	112	60-140
HEXACOSANE	92	55-150

QC LIMIT : (SOIL) 60-140 55-150

QC LIMIT : (WATER) 65-135 60-145

SURR1 : Bromobenzene

SURR2 : Hexacosane

RL : Reporting Limit

METHOD M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/21/00 15:45
Sample ID:	18609-3270 P	Date Analyzed:	11/22/00 12:27
Lab Samp ID:	K184-09	Dilution Factor:	1
Lab File ID:	TK07048A	Matrix :	SOIL
Ext Btch ID:	DSK026S	% Moisture :	6.6
Calib. Ref.:	TK07044A	Instrument ID :	GCT050

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DIESEL	ND	11	3.7
JP5	ND	11	4

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	114	60-140
HEXACOSANE	93	55-150

QC LIMIT : (SOIL) 60-140 55-150
QC LIMIT : (WATER) 65-135 60-145
SURR1 : Bromobenzene
SURR2 : Hexacosane
RL : Reporting Limit

METHOD M8015

TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/21/00 15:45
Sample ID:	18609-3271 A	Date Analyzed:	11/22/00 13:15
Lab Samp ID:	K184-10	Dilution Factor:	1
Lab File ID:	TK07049A	Matrix :	SOIL
Ext Btch ID:	DSK026S	% Moisture :	27.2
Calib. Ref.:	TK07044A	Instrument ID :	GCT050

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DIESEL	ND	14	4.8
JP5	ND	14	5.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	113	60-140
HEXACOSANE	91	55-150

QC LIMIT : (SOIL) 60-140 55-150

QC LIMIT : (WATER) 65-135 60-145

SURR1 : Bromobenzene

SURR2 : Hexacosane

RL : Reporting Limit

METHOD M8015

TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/21/00 15:45
Sample ID:	18609-3272 A	Date Analyzed:	11/22/00 14:04
Lab Samp ID:	K184-11	Dilution Factor:	1
Lab File ID:	TK07050A	Matrix :	SOIL
Ext Btch ID:	DSK026S	% Moisture :	26.8
Calib. Ref.:	TK07044A	Instrument ID :	GCT050

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DIESEL	ND	14	4.7
JP5	ND	14	5.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	113	60-140
HEXACOSANE	92	55-150

QC LIMIT : (SOIL) 60-140 55-150

QC LIMIT : (WATER) 65-135 60-145

SURR1 : Bromobenzene

SURR2 : Hexacosane

RL : Reporting Limit

METHOD M8015

TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/21/00 15:45
Sample ID:	18609-3273	Date Analyzed:	11/22/00 14:52
Lab Samp ID:	K184-12	Dilution Factor:	1
Lab File ID:	TK07051A	Matrix :	SOIL
Ext Btch ID:	DSK026S	% Moisture :	16.7
Calib. Ref.:	TK07044A	Instrument ID :	GCT050

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DIESEL	ND	12	4.2
JP5	ND	12	4.5

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	114	60-140
HEXACOSANE	92	55-150

QC LIMIT : (SOIL) 60-140 55-150

QC LIMIT : (WATER) 65-135 60-145

SURR1 : Bromobenzene

SURR2 : Hexacosane

RL : Reporting Limit

METHOD M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/21/00 15:40
Sample ID:	18609-3269	Date Analyzed:	11/22/00 01:08
Lab Samp ID:	K184-08	Dilution Factor:	.96
Lab File ID:	TK07034A	Matrix :	WATER
Ext Btch ID:	DSK025W	% Moisture :	NA
Calib. Ref.:	TK07032A	Instrument ID :	GCT050

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
DIESEL	ND	.096	.064
JP5	ND	.48	.12

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	109	65-135
HEXACOSANE	101	60-145

QC LIMIT : (SOIL) 60-140 55-150
QC LIMIT : (WATER) 65-135 60-145
SURR1 : Bromobenzene
SURR2 : Hexacosane
RL : Reporting Limit

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: 00K184
METHOD: METHOD M8015

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSK026SB	DSK026SL	DSK026SC		
LAB FILE ID:	TK07035A	TK07036A	TK07037A		
DATE EXTRACTED:	11/21/0015:45	11/21/0015:45	11/21/0015:45	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/0001:57	11/22/0002:46	11/22/0003:34	DATE RECEIVED:	11/21/00
PREP. BATCH:	DSK026S	DSK026S	DSK026S		
CALIB. REF:	TK07032A	TK07032A	TK07032A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Diesel	ND	500	354	71	500	373	75	5	51-153	50

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	94.1	94	100	96.9	97	60-140
Hexacosane	25	18	72	25	18.3	73	55-150

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: 00K184
METHOD: METHOD M8015

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DSK025WB	DSK025WL	DSK025WC		
LAB FILE ID:	TK07025A	TK07026A	TK07027A		
DATE EXTRACTED:	11/21/0015:40	11/21/0015:40	11/21/0015:40	DATE COLLECTED:	NA
DATE ANALYZED:	11/21/0017:52	11/21/0018:41	11/21/0019:29	DATE RECEIVED:	11/21/00
PREP. BATCH:	DSK025W	DSK025W	DSK025W		
CALIB. REF:	TK07023A	TK07023A	TK07023A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Diesel	ND	5	5.13 ✓	103	5	5.15	103	0	61-143	30

SURROGATE PARAMETER	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	QC LIMIT (%)
Bromobenzene	1	1.14	114	1	1.1	110	65-135
Hexacosane	.25	.28	112	.25	.271	108	60-145

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: 00K184
METHOD: METHOD M8015

MATRIX:	SOIL			% MOISTURE:	5.4
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	18609-3266				
LAB SAMP ID:	K184-05	K184-05M	K184-05S		
LAB FILE ID:	TK07041A	TK07042A	TK07043A		
DATE EXTRACTED:	11/21/0015:45	11/21/0015:45	11/21/0015:45	DATE COLLECTED:	11/17/00
DATE ANALYZED:	11/22/0006:48	11/22/0007:36	11/22/0008:24	DATE RECEIVED:	11/17/00
PREP. BATCH:	DSK026S	DSK026S	DSK026S		
CALIB. REF:	TK07032A	TK07032A	TK07032A		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Diesel	ND	527	513	97	527	513	97	0	51-153	50

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	QC LIMIT (%)
Bromobenzene	105.5	126.4	120	105.4	123	117	60-140
Hexacosane	26.4	26.2	99	26.3	25.6	97	55-150

METHOD 5030B/M8015
TOTAL PETROLEUM HYDROCARBONS BY PURGE & TRAP

Client : IT CORPORATION
Project : MCAS EL TORO/18609/D.O. 70
Batch No. : 00K184

Matrix : SOIL
Instrument ID : GCT039

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	SURR (%)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	VAK1839B	ND	86	1	NA	1	.02	11/20/0016:35	11/20/0016:35	EK07003A	EK07002A	VAK1839	NA	11/20/00
LCS1S	VAK1839L	2.5	109	1	NA	1	.02	11/20/0017:09	11/20/0017:09	EK07004A	EK07002A	VAK1839	NA	11/20/00
LCD1S	VAK1839C	2.49	107	1	NA	1	.02	11/20/0017:43	11/20/0017:43	EK07005A	EK07002A	VAK1839	NA	11/20/00
18609-3263 A	K184-02	ND	86	1	2.3	1.02	.0205	11/20/0020:33	11/20/0020:33	EK07010A	EK07002A	VAK1839	11/17/00	11/17/00
18609-3265 A	K184-04	ND	91	1	14.3	1.17	.0233	11/20/0021:41	11/20/0021:41	EK07012A	EK07002A	VAK1839	11/17/00	11/17/00
18609-3266 A	K184-05	ND	91	1	5.4	1.06	.0211	11/20/0022:49	11/20/0022:49	EK07014A	EK07013A	VAK1839	11/17/00	11/17/00
18609-3268 A	K184-07	ND	91	1	11.5	1.13	.0226	11/20/0023:58	11/20/0023:58	EK07016A	EK07013A	VAK1839	11/17/00	11/17/00
18609-3270 A	K184-09	ND	90	1	6.6	1.07	.0214	11/21/0000:32	11/21/0000:32	EK07017A	EK07013A	VAK1839	11/17/00	11/17/00
18609-3271 A	K184-10	ND	88	1	27.2	1.37	.0275	11/21/0001:07	11/21/0001:07	EK07018A	EK07013A	VAK1839	11/17/00	11/17/00
18609-3272 A	K184-11	ND	89	1	26.8	1.37	.0273	11/21/0001:41	11/21/0001:41	EK07019A	EK07013A	VAK1839	11/17/00	11/17/00
18609-3273 Rx	K184-12	ND	90	1	16.7	1.2	.024	11/21/0002:16	11/21/0002:16	EK07020A	EK07013A	VAK1839	11/17/00	11/17/00

SURR : Bromofluorobenzene (W)65-135 (S)60-140
PRL : Reporting Limit
E : Value exceed the upper level of the initial calibration
D : Value from dilution

METHOD 5030B/M8015
TOTAL PETROLEUM HYDROCARBONS BY PURGE & TRAP

Client : IT CORPORATION
Project : MCAS EL TORO/18609/D.O. 70
Batch No. : 00K184

Matrix : WATER
Instrument ID : GCT039

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	SURR (%)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	VAK1939B	ND	89	1	NA	.1	.012	11/21/0002:51	11/21/0002:51	EK07021A	EK07013A	VAK1939	NA	11/21/00
LCS1W	VAK1939L	.467	106	1	NA	.1	.012	11/21/0003:25	11/21/0003:25	EK07022A	EK07013A	VAK1939	NA	11/21/00
LCD1W	VAK1939C	.465	103	1	NA	.1	.012	11/21/0004:00	11/21/0004:00	EK07023A	EK07013A	VAK1939	NA	11/21/00
18609-3262 A	K184-01	ND	102	1	NA	.1	.012	11/21/0005:43	11/21/0005:43	EK07026A	EK07024A	VAK1939	11/17/00	11/17/00
18609-3269 N	K184-08	ND	93	1	NA	.1	.012	11/21/0005:09	11/21/0005:09	EK07025A	EK07024A	VAK1939	11/17/00	11/17/00

SURR : Bromofluorobenzene (W)65-135 (S)60-140
PRL : Reporting Limit
E : Value exceed the upper level of the initial calibration
D : Value from dilution

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/22/00 18:41
Sample ID:	18609-3262	Date Analyzed:	11/22/00 18:41
Lab Samp ID:	K184-01R	Dilution Factor:	1
Lab File ID:	RKW643	Matrix :	WATER
Ext Btch ID:	VOK6106	% Moisture :	NA
Calib. Ref.:	RKW637	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/L)	PRL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	.91
1,1,2,2-TETRACHLOROETHANE	ND	5	1.1
1,1,2-TRICHLOROETHANE	ND	5	.83
1,1-DICHLOROETHANE	ND	5	.65
1,1-DICHLOROETHENE	ND	5	.86
1,2-DICHLOROETHANE	ND	5	.95
1,2-DICHLOROPROPANE	ND	5	.73
2-BUTANONE	ND	50	6.7
2-CHLOROETHYLVINYLETHER	ND	50	1.3
2-HEXANONE	ND	50	5.6
4-METHYL-2-PENTANONE	ND	50	3.6
ACETONE	ND	50	9.6
BENZENE	ND	5	.77
BROMODICHLOROMETHANE	ND	5	.82
BROMOFORM	ND	5	.74
BROMOMETHANE	ND	5	1.9
CARBON DISULFIDE	ND	5	.61
CARBON TETRACHLORIDE	ND	5	.83
CHLOROBENZENE	ND	5	1.1
CHLOROETHANE	ND	5	1.7
CHLOROFORM	ND	5	.67
CHLOROMETHANE	ND	5	.67
CIS-1,2-DICHLOROETHENE	ND	5	.79
CIS-1,3-DICHLOROPROPENE	ND	5	.79
DIBROMOCHLOROMETHANE	ND	5	.71
ETHYLBENZENE	ND	5	1
MTBE	ND	10	.77
METHYLENE CHLORIDE	1.4J	5	1.4
STYRENE	ND	5	.87
TETRACHLOROETHENE	ND	5	1.1
TOLUENE	ND	5	.99
TRANS-1,2-DICHLOROETHENE	ND	5	.73
TRANS-1,3-DICHLOROPROPENE	ND	5	.82
TRICHLOROETHENE	ND	5	.89
VINYL ACETATE	ND	50	1.4
VINYL CHLORIDE	ND	5	2.5
XYLENES	ND	5	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	106	62-139
BROMOFLUOROBENZENE	110	75-125
TOLUENE-D8	113	75-125

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/22/00 08:46
Sample ID:	18609-3263 A	Date Analyzed:	11/22/00 08:46
Lab Samp ID:	K184-02	Dilution Factor:	1
Lab File ID:	RKW627	Matrix :	SOIL
Ext Btch ID:	VOK5906	% Moisture :	2.3
Calib. Ref.:	RKW615	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.1	.35
1,1,2,2-TETRACHLOROETHANE	ND	5.1	.76
1,1,2-TRICHLOROETHANE	ND	5.1	.67
1,1-DICHLOROETHANE	ND	5.1	.54
1,1-DICHLOROETHENE	ND	5.1	.49
1,2-DICHLOROETHANE	ND	5.1	1
1,2-DICHLOROPROPANE	ND	5.1	.56
2-BUTANONE	ND	51	1.6
2-CHLOROETHYLVINYLETHER	ND	51	.76
2-HEXANONE	ND	51	1.5
4-METHYL-2-PENTANONE	ND	51	2.9
ACETONE	ND	51	2.9
BENZENE	ND	5.1	.54
BROMODICHLOROMETHANE	ND	5.1	.43
BROMOFORM	ND	5.1	.61
BROMOMETHANE	ND	5.1	3.7
CARBON DISULFIDE	ND	10	.34
CARBON TETRACHLORIDE	ND	5.1	.55
CHLOROBENZENE	ND	5.1	.47
CHLOROETHANE	ND	5.1	.94
CHLOROFORM	ND	5.1	.54
CHLOROMETHANE	ND	5.1	.54
CIS-1,2-DICHLOROETHENE	ND	5.1	.47
CIS-1,3-DICHLOROPROPENE	ND	5.1	.41
DIBROMOCHLOROMETHANE	ND	5.1	.38
ETHYLBENZENE	ND	5.1	.47
MTBE	ND	10	.77
METHYLENE CHLORIDE	ND	10	3.1
STYRENE	ND	5.1	.35
TETRACHLOROETHENE	ND	5.1	.35
TOLUENE	ND	5.1	.59
TRANS-1,2-DICHLOROETHENE	ND	5.1	.49
TRANS-1,3-DICHLOROPROPENE	ND	5.1	.46
TRICHLOROETHENE	ND	5.1	.63
VINYL ACETATE	ND	51	.85
VINYL CHLORIDE	ND	5.1	.6
XYLENES	ND	5.1	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	130	52-149
BROMOFLUOROBENZENE	114	65-135
TOLUENE-D8	121	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/22/00 09:21
Sample ID:	18609-3265 A	Date Analyzed:	11/22/00 09:21
Lab Samp ID:	K184-04	Dilution Factor:	1
Lab File ID:	RKW628	Matrix :	SOIL
Ext Btch ID:	VOK5906	% Moisture :	14.3
Calib. Ref.:	RKW615	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.8	.4
1,1,2,2-TETRACHLOROETHANE	ND	5.8	.86
1,1,2-TRICHLOROETHANE	ND	5.8	.77
1,1-DICHLOROETHANE	ND	5.8	.61
1,1-DICHLOROETHENE	ND	5.8	.56
1,2-DICHLOROETHANE	ND	5.8	1.1
1,2-DICHLOROPROPANE	ND	5.8	.64
2-BUTANONE	ND	58	1.8
2-CHLOROETHYLVINYLETHER	ND	58	.86
2-HEXANONE	ND	58	1.7
4-METHYL-2-PENTANONE	ND	58	3.3
ACETONE	ND	58	3.4
BENZENE	ND	5.8	.61
BROMODICHLOROMETHANE	ND	5.8	.49
BROMOFORM	ND	5.8	.69
BROMOMETHANE	ND	5.8	4.2
CARBON DISULFIDE	ND	12	.39
CARBON TETRACHLORIDE	ND	5.8	.63
CHLOROBENZENE	ND	5.8	.54
CHLOROETHANE	ND	5.8	1.1
CHLOROFORM	ND	5.8	.61
CHLOROMETHANE	ND	5.8	.61
CIS-1,2-DICHLOROETHENE	ND	5.8	.54
CIS-1,3-DICHLOROPROPENE	ND	5.8	.47
DIBROMOCHLOROMETHANE	ND	5.8	.43
ETHYLBENZENE	ND	5.8	.54
MTBE	ND	12	.88
METHYLENE CHLORIDE	ND	12	3.5
STYRENE	ND	5.8	.4
TETRACHLOROETHENE	ND	5.8	.39
TOLUENE	ND	5.8	.67
TRANS-1,2-DICHLOROETHENE	ND	5.8	.55
TRANS-1,3-DICHLOROPROPENE	ND	5.8	.53
TRICHLOROETHENE	ND	5.8	.71
VINYL ACETATE	ND	58	.97
VINYL CHLORIDE	ND	5.8	.68
XYLENES	ND	5.8	1.3

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	131	52-149
BROMOFLUOROBENZENE	116	65-135
TOLUENE-D8	119	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/22/00 09:55
Sample ID:	18609-3266 A	Date Analyzed:	11/22/00 09:55
Lab Samp ID:	K184-05	Dilution Factor:	1
Lab File ID:	RKW629	Matrix :	SOIL
Ext Btch ID:	VOK5906	% Moisture :	5.4
Calib. Ref.:	RKW615	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.3	.36
1,1,2,2-TETRACHLOROETHANE	ND	5.3	.78
1,1,2-TRICHLOROETHANE	ND	5.3	.69
1,1-DICHLOROETHANE	ND	5.3	.55
1,1-DICHLOROETHENE	ND	5.3	.51
1,2-DICHLOROETHANE	ND	5.3	1
1,2-DICHLOROPROPANE	ND	5.3	.58
2-BUTANONE	ND	53	1.6
2-CHLOROETHYLVINYLETHER	ND	53	.78
2-HEXANONE	ND	53	1.6
4-METHYL-2-PENTANONE	ND	53	3
ACETONE	ND	53	3
BENZENE	ND	5.3	.56
BROMODICHLOROMETHANE	ND	5.3	.45
BROMOFORM	ND	5.3	.63
BROMOMETHANE	ND	5.3	3.8
CARBON DISULFIDE	ND	11	.35
CARBON TETRACHLORIDE	ND	5.3	.57
CHLOROBENZENE	ND	5.3	.49
CHLOROETHANE	ND	5.3	.97
CHLOROFORM	ND	5.3	.55
CHLOROMETHANE	ND	5.3	.56
CIS-1,2-DICHLOROETHENE	ND	5.3	.49
CIS-1,3-DICHLOROPROPENE	ND	5.3	.42
DIBROMOCHLOROMETHANE	ND	5.3	.39
ETHYLBENZENE	ND	5.3	.49
MTBE	ND	11	.8
METHYLENE CHLORIDE	ND	11	3.2
STYRENE	ND	5.3	.36
TETRACHLOROETHENE	ND	5.3	.36
TOLUENE	ND	5.3	.61
TRANS-1,2-DICHLOROETHENE	ND	5.3	.5
TRANS-1,3-DICHLOROPROPENE	ND	5.3	.48
TRICHLOROETHENE	ND	5.3	.65
VINYL ACETATE	ND	53	.88
VINYL CHLORIDE	ND	5.3	.62
XYLENES	ND	5.3	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	125	52-149
BROMOFLUOROBENZENE	114	65-135
TOLUENE-D8	121	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/22/00 10:30
Sample ID:	18609-3268 A	Date Analyzed:	11/22/00 10:30
Lab Samp ID:	K184-07	Dilution Factor:	1
Lab File ID:	RKW630	Matrix :	SOIL
Ext Btch ID:	VOK5906	% Moisture :	11.5
Calib. Ref.:	RKW615	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.6	.38
1,1,2,2-TETRACHLOROETHANE	ND	5.6	.83
1,1,2-TRICHLOROETHANE	ND	5.6	.74
1,1-DICHLOROETHANE	ND	5.6	.59
1,1-DICHLOROETHENE	ND	5.6	.54
1,2-DICHLOROETHANE	ND	5.6	1.1
1,2-DICHLOROPROPANE	ND	5.6	.62
2-BUTANONE	ND	56	1.7
2-CHLOROETHYLVINYLETHER	ND	56	.84
2-HEXANONE	ND	56	1.7
4-METHYL-2-PENTANONE	ND	56	3.2
ACETONE	ND	56	3.3
BENZENE	ND	5.6	.59
BROMODICHLOROMETHANE	ND	5.6	.48
BROMOFORM	ND	5.6	.67
BROMOMETHANE	ND	5.6	4.1
CARBON DISULFIDE	ND	11	.38
CARBON TETRACHLORIDE	ND	5.6	.61
CHLOROBENZENE	ND	5.6	.52
CHLOROETHANE	ND	5.6	1
CHLOROFORM	ND	5.6	.59
CHLOROMETHANE	ND	5.6	.6
CIS-1,2-DICHLOROETHENE	ND	5.6	.52
CIS-1,3-DICHLOROPROPENE	ND	5.6	.45
DIBROMOCHLOROMETHANE	ND	5.6	.41
ETHYLBENZENE	ND	5.6	.52
MTBE	ND	11	.85
METHYLENE CHLORIDE	ND	11	3.4
STYRENE	ND	5.6	.39
TETRACHLOROETHENE	ND	5.6	.38
TOLUENE	ND	5.6	.65
TRANS-1,2-DICHLOROETHENE	ND	5.6	.54
TRANS-1,3-DICHLOROPROPENE	ND	5.6	.51
TRICHLOROETHENE	ND	5.6	.69
VINYL ACETATE	ND	56	.94
VINYL CHLORIDE	ND	5.6	.66
XYLENES	ND	5.6	1.3

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	131	52-149
BROMOFLUOROBENZENE	112	65-135
TOLUENE-D8	120	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/22/00 06:28
Sample ID:	18609-3269	Date Analyzed:	11/22/00 06:28
Lab Samp ID:	K184-08	Dilution Factor:	1
Lab File ID:	RKW623	Matrix	: WATER
Ext Btch ID:	VOK5906	% Moisture	: NA
Calib. Ref.:	RKW615	Instrument ID	: T-006

PARAMETERS	RESULTS (ug/L)	PRL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	.91
1,1,2,2-TETRACHLOROETHANE	ND	5	1.1
1,1,2-TRICHLOROETHANE	ND	5	.83
1,1-DICHLOROETHANE	ND	5	.65
1,1-DICHLOROETHENE	ND	5	.86
1,2-DICHLOROETHANE	ND	5	.95
1,2-DICHLOROPROPANE	ND	5	.73
2-BUTANONE	ND	50	6.7
2-CHLOROETHYLVINYLETHER	ND	50	1.3
2-HEXANONE	ND	50	5.6
4-METHYL-2-PENTANONE	ND	50	3.6
ACETONE	ND	50	9.6
BENZENE	ND	5	.77
BROMODICHLOROMETHANE	ND	5	.82
BROMOFORM	ND	5	.74
BROMOMETHANE	ND	5	1.9
CARBON DISULFIDE	ND	5	.61
CARBON TETRACHLORIDE	ND	5	.83
CHLOROBENZENE	ND	5	1.1
CHLOROETHANE	ND	5	1.7
CHLOROFORM	ND	5	.67
CHLOROMETHANE	ND	5	.67
CIS-1,2-DICHLOROETHENE	ND	5	.79
CIS-1,3-DICHLOROPROPENE	ND	5	.79
DIBROMOCHLOROMETHANE	ND	5	.71
ETHYLBENZENE	ND	5	1
MTBE	ND	10	.77
METHYLENE CHLORIDE	ND	5	1.4
STYRENE	ND	5	.87
TETRACHLOROETHENE	ND	5	1.1
TOLUENE	ND	5	.99
TRANS-1,2-DICHLOROETHENE	ND	5	.73
TRANS-1,3-DICHLOROPROPENE	ND	5	.82
TRICHLOROETHENE	ND	5	.89
VINYL ACETATE	ND	50	1.4
VINYL CHLORIDE	ND	5	2.5
XYLENES	ND	5	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	122	62-139
BROMOFLUOROBENZENE	119	75-125
TOLUENE-D8	122	75-125

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/22/00 11:05
Sample ID:	18609-3270	Date Analyzed:	11/22/00 11:05
Lab Samp ID:	K184-09	Dilution Factor:	1
Lab File ID:	RKW631	Matrix :	SOIL
Ext Btch ID:	VOK5906	% Moisture :	6.6
Calib. Ref.:	RKW615	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.4	.36
1,1,2,2-TETRACHLOROETHANE	ND	5.4	.79
1,1,2-TRICHLOROETHANE	ND	5.4	.7
1,1-DICHLOROETHANE	ND	5.4	.56
1,1-DICHLOROETHENE	ND	5.4	.51
1,2-DICHLOROETHANE	ND	5.4	1.1
1,2-DICHLOROPROPANE	ND	5.4	.59
2-BUTANONE	ND	54	1.6
2-CHLOROETHYLVINYLETHER	ND	54	.79
2-HEXANONE	ND	54	1.6
4-METHYL-2-PENTANONE	ND	54	3
ACETONE	ND	54	3.1
BENZENE	ND	5.4	.56
BROMODICHLOROMETHANE	ND	5.4	.45
BROMOFORM	ND	5.4	.63
BROMOMETHANE	ND	5.4	3.8
CARBON DISULFIDE	ND	11	.36
CARBON TETRACHLORIDE	ND	5.4	.57
CHLOROBENZENE	ND	5.4	.5
CHLOROETHANE	ND	5.4	.99
CHLOROFORM	ND	5.4	.56
CHLOROMETHANE	ND	5.4	.56
CIS-1,2-DICHLOROETHENE	ND	5.4	.49
CIS-1,3-DICHLOROPROPENE	ND	5.4	.43
DIBROMOCHLOROMETHANE	ND	5.4	.39
ETHYLBENZENE	ND	5.4	.49
MTBE	ND	11	.81
METHYLENE CHLORIDE	ND	11	3.2
STYRENE	ND	5.4	.37
TETRACHLOROETHENE	ND	5.4	.36
TOLUENE	ND	5.4	.62
TRANS-1,2-DICHLOROETHENE	ND	5.4	.51
TRANS-1,3-DICHLOROPROPENE	ND	5.4	.48
TRICHLOROETHENE	ND	5.4	.66
VINYL ACETATE	ND	54	.89
VINYL CHLORIDE	ND	5.4	.63
XYLENES	ND	5.4	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	125	52-149
BROMOFLUOROBENZENE	117	65-135
TOLUENE-D8	127	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/22/00 11:39
Sample ID:	18609-3271 A	Date Analyzed:	11/22/00 11:39
Lab Samp ID:	K184-10	Dilution Factor:	1
Lab File ID:	RKW632	Matrix :	SOIL
Ext Btch ID:	VOK5906	% Moisture :	27.2
Calib. Ref.:	RKW615	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	6.9	.47
1,1,2,2-TETRACHLOROETHANE	ND	6.9	1
1,1,2-TRICHLOROETHANE	ND	6.9	.9
1,1-DICHLOROETHANE	ND	6.9	.72
1,1-DICHLOROETHENE	ND	6.9	.66
1,2-DICHLOROETHANE	ND	6.9	1.4
1,2-DICHLOROPROPANE	ND	6.9	.75
2-BUTANONE	ND	69	2.1
2-CHLOROETHYLVINYLETHER	ND	69	1
2-HEXANONE	ND	69	2
4-METHYL-2-PENTANONE	ND	69	3.9
ACETONE	ND	69	4
BENZENE	ND	6.9	.72
BROMODICHLOROMETHANE	ND	6.9	.58
BROMOFORM	ND	6.9	.81
BROMOMETHANE	ND	6.9	4.9
CARBON DISULFIDE	ND	14	.46
CARBON TETRACHLORIDE	ND	6.9	.74
CHLOROBENZENE	ND	6.9	.64
CHLOROETHANE	ND	6.9	1.3
CHLOROFORM	ND	6.9	.72
CHLOROMETHANE	ND	6.9	.72
CIS-1,2-DICHLOROETHENE	ND	6.9	.63
CIS-1,3-DICHLOROPROPENE	ND	6.9	.55
DIBROMOCHLOROMETHANE	ND	6.9	.5
ETHYLBENZENE	ND	6.9	.63
MTBE	ND	14	1
METHYLENE CHLORIDE	ND	14	4.1
STYRENE	ND	6.9	.47
TETRACHLOROETHENE	ND	6.9	.46
TOLUENE	ND	6.9	.79
TRANS-1,2-DICHLOROETHENE	ND	6.9	.65
TRANS-1,3-DICHLOROPROPENE	ND	6.9	.62
TRICHLOROETHENE	ND	6.9	.84
VINYL ACETATE	ND	69	1.1
VINYL CHLORIDE	ND	6.9	.8
XYLENES	ND	6.9	1.6

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	124	52-149
BROMOFLUOROBENZENE	118	65-135
TOLUENE-D8	125	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/22/00 12:11
Sample ID:	18609-3272	Date Analyzed:	11/22/00 12:11
Lab Samp ID:	K184-11	Dilution Factor:	1
Lab File ID:	RKW633	Matrix :	SOIL
Ext Btch ID:	VOK5906	% Moisture :	26.8
Calib. Ref.:	RKW615	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	6.8	.46
1,1,2,2-TETRACHLOROETHANE	ND	6.8	1
1,1,2-TRICHLOROETHANE	ND	6.8	.9
1,1-DICHLOROETHANE	ND	6.8	.72
1,1-DICHLOROETHENE	ND	6.8	.66
1,2-DICHLOROETHANE	ND	6.8	1.3
1,2-DICHLOROPROPANE	ND	6.8	.75
2-BUTANONE	ND	68	2.1
2-CHLOROETHYLVINYLETHER	ND	68	1
2-HEXANONE	ND	68	2
4-METHYL-2-PENTANONE	ND	68	3.8
ACETONE	ND	68	3.9
BENZENE	ND	6.8	.72
BROMODICHLOROMETHANE	ND	6.8	.58
BROMOFORM	ND	6.8	.81
BROMOMETHANE	ND	6.8	4.9
CARBON DISULFIDE	ND	14	.46
CARBON TETRACHLORIDE	ND	6.8	.73
CHLOROBENZENE	ND	6.8	.63
CHLOROETHANE	ND	6.8	1.3
CHLOROFORM	ND	6.8	.72
CHLOROMETHANE	ND	6.8	.72
CIS-1,2-DICHLOROETHENE	ND	6.8	.63
CIS-1,3-DICHLOROPROPENE	ND	6.8	.55
DIBROMOCHLOROMETHANE	ND	6.8	.5
ETHYLBENZENE	ND	6.8	.63
MTBE	ND	14	1
METHYLENE CHLORIDE	ND	14	4.1
STYRENE	ND	6.8	.47
TETRACHLOROETHENE	ND	6.8	.46
TOLUENE	ND	6.8	.79
TRANS-1,2-DICHLOROETHENE	ND	6.8	.65
TRANS-1,3-DICHLOROPROPENE	ND	6.8	.61
TRICHLOROETHENE	ND	6.8	.84
VINYL ACETATE	ND	68	1.1
VINYL CHLORIDE	ND	6.8	.8
XYLENES	ND	6.8	1.5

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	124	52-149
BROMOFLUOROBENZENE	114	65-135
TOLUENE-D8	120	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
Batch No.	: 00K184	Date Extracted:	11/22/00 12:45
Sample ID:	18609-3273	Date Analyzed:	11/22/00 12:45
Lab Samp ID:	K184-12	Dilution Factor:	1
Lab File ID:	RKW634	Matrix :	SOIL
Ext Btch ID:	VOK5906	% Moisture :	16.7
Calib. Ref.:	RKW615	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	6	.41
1,1,2,2-TETRACHLOROETHANE	ND	6	.89
1,1,2-TRICHLOROETHANE	ND	6	.79
1,1-DICHLOROETHANE	ND	6	.63
1,1-DICHLOROETHENE	ND	6	.58
1,2-DICHLOROETHANE	ND	6	1.2
1,2-DICHLOROPROPANE	ND	6	.66
2-BUTANONE	ND	60	1.8
2-CHLOROETHYLVINYLETHER	ND	60	.89
2-HEXANONE	ND	60	1.8
4-METHYL-2-PENTANONE	ND	60	3.4
ACETONE	ND	60	3.5
BENZENE	ND	6	.63
BROMODICHLOROMETHANE	ND	6	.51
BROMOFORM	ND	6	.71
BROMOMETHANE	ND	6	4.3
CARBON DISULFIDE	ND	12	.4
CARBON TETRACHLORIDE	ND	6	.64
CHLOROBENZENE	ND	6	.56
CHLOROETHANE	ND	6	1.1
CHLOROFORM	ND	6	.63
CHLOROMETHANE	ND	6	.63
CIS-1,2-DICHLOROETHENE	ND	6	.55
CIS-1,3-DICHLOROPROPENE	ND	6	.48
DIBROMOCHLOROMETHANE	ND	6	.44
ETHYLBENZENE	ND	6	.55
MTBE	ND	12	.91
METHYLENE CHLORIDE	ND	12	3.6
STYRENE	ND	6	.41
TETRACHLOROETHENE	ND	6	.41
TOLUENE	ND	6	.69
TRANS-1,2-DICHLOROETHENE	ND	6	.57
TRANS-1,3-DICHLOROPROPENE	ND	6	.54
TRICHLOROETHENE	ND	6	.73
VINYL ACETATE	ND	60	1.0
VINYL CHLORIDE	ND	6	.7
XYLENES	ND	6	1.4

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	127	52-149
BROMOFLUOROBENZENE	115	65-135
TOLUENE-D8	123	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	NA
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/22/00
Batch No.	: 00K184	Date Extracted:	11/22/00 04:43
Sample ID:	MBLK1S	Date Analyzed:	11/22/00 04:43
Lab Samp ID:	VOK5906Q	Dilution Factor:	1
Lab File ID:	RKW620	Matrix :	SOIL
Ext Btch ID:	VOK5906	% Moisture :	NA
Calib. Ref.:	RKW615	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5	.34
1,1,2,2-TETRACHLOROETHANE	ND	5	.74
1,1,2-TRICHLOROETHANE	ND	5	.66
1,1-DICHLOROETHANE	ND	5	.52
1,1-DICHLOROETHENE	ND	5	.48
1,2-DICHLOROETHANE	ND	5	.99
1,2-DICHLOROPROPANE	ND	5	.55
2-BUTANONE	ND	50	1.5
2-CHLOROETHYLVINYLETHER	ND	50	.74
2-HEXANONE	ND	50	1.5
4-METHYL-2-PENTANONE	ND	50	2.8
ACETONE	ND	50	2.9
BENZENE	ND	5	.53
BROMODICHLOROMETHANE	ND	5	.42
BROMOFORM	ND	5	.59
BROMOMETHANE	ND	5	3.6
CARBON DISULFIDE	ND	10	.33
CARBON TETRACHLORIDE	ND	5	.54
CHLOROBENZENE	ND	5	.46
CHLOROETHANE	ND	5	.92
CHLOROFORM	ND	5	.52
CHLOROMETHANE	ND	5	.53
CIS-1,2-DICHLOROETHENE	ND	5	.46
CIS-1,3-DICHLOROPROPENE	ND	5	.4
DIBROMOCHLOROMETHANE	ND	5	.37
ETHYLBENZENE	ND	5	.46
MTBE	ND	10	.76
METHYLENE CHLORIDE	ND	10	3
STYRENE	ND	5	.34
TETRACHLOROETHENE	ND	5	.34
TOLUENE	ND	5	.58
TRANS-1,2-DICHLOROETHENE	ND	5	.47
TRANS-1,3-DICHLOROPROPENE	ND	5	.45
TRICHLOROETHENE	ND	5	.61
VINYL ACETATE	ND	50	.83
VINYL CHLORIDE	ND	5	.58
XYLENES	ND	5	1.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	121	52-149
BROMOFLUOROBENZENE	122	65-135
TOLUENE-D8	125	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: 00K184
METHOD: METHOD 5030A/8260A

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	VOK5906Q	VOK5906L	VOK5906C		
LAB FILE ID:	RKW620	RKW617	RKW618		
DATE EXTRACTED:	11/22/0004:43	11/22/0002:59	11/22/0003:34	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/0004:43	11/22/0002:59	11/22/0003:34	DATE RECEIVED:	11/22/00
PREP. BATCH:	VOK5906	VOK5906	VOK5906		
CALIB. REF:	RKW615	RKW615	RKW615		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	20	23.9	119	20	23.6	118	1	75-125	20
Benzene	ND	20	23.6	118	20	24.5	122	4	75-125	20
Chlorobenzene	ND	20	22.9	114	20	23.3	116	2	75-125	20
Toluene	ND	20	23.7	118	20	24	120	2	74-125	20
Trichloroethene	ND	20	22.7	114	20	24.1	120	6	71-125	20

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichlorethane-d4	50	57.6	115	50	56.7	113	62-139
Bromofluorobenzene	50	60.3	121	50	58.3	117	75-125
Toluene-d8	50	62.4	125	50	62.5	125	75-125

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	NA
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/22/00
Batch No.	: 00K184	Date Extracted:	11/22/00 04:43
Sample ID:	MBLK1W	Date Analyzed:	11/22/00 04:43
Lab Samp ID:	VOK5906Q	Dilution Factor:	1
Lab File ID:	RKW620	Matrix :	WATER
Ext Btch ID:	VOK5906	% Moisture :	NA
Calib. Ref.:	RKW615	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/L)	PRL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	.91
1,1,2,2-TETRACHLOROETHANE	ND	5	1.1
1,1,2-TRICHLOROETHANE	ND	5	.83
1,1-DICHLOROETHANE	ND	5	.65
1,1-DICHLOROETHENE	ND	5	.86
1,2-DICHLOROETHANE	ND	5	.95
1,2-DICHLOROPROPANE	ND	5	.73
2-BUTANONE	ND	50	6.7
2-CHLOROETHYLVINYLETHER	ND	50	1.3
2-HEXANONE	ND	50	5.6
4-METHYL-2-PENTANONE	ND	50	3.6
ACETONE	ND	50	9.6
BENZENE	ND	5	.77
BROMODICHLOROMETHANE	ND	5	.82
BROMOFORM	ND	5	.74
BROMOMETHANE	ND	5	1.9
CARBON DISULFIDE	ND	5	.61
CARBON TETRACHLORIDE	ND	5	.83
CHLOROBENZENE	ND	5	1.1
CHLOROETHANE	ND	5	1.7
CHLOROFORM	ND	5	.67
CHLOROMETHANE	ND	5	.67
CIS-1,2-DICHLOROETHENE	ND	5	.79
CIS-1,3-DICHLOROPROPENE	ND	5	.79
DIBROMOCHLOROMETHANE	ND	5	.71
ETHYLBENZENE	ND	5	1
MTBE	ND	10	.77
METHYLENE CHLORIDE	ND	5	1.4
STYRENE	ND	5	.87
TETRACHLOROETHENE	ND	5	1.1
TOLUENE	ND	5	.99
TRANS-1,2-DICHLOROETHENE	ND	5	.73
TRANS-1,3-DICHLOROPROPENE	ND	5	.82
TRICHLOROETHENE	ND	5	.89
VINYL ACETATE	ND	50	1.4
VINYL CHLORIDE	ND	5	2.5
XYLENES	ND	5	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	121	62-139
BROMOFLUOROBENZENE	122	75-125
TOLUENE-D8	125	75-125

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: 00K184
METHOD: METHOD 5030A/8260A

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	VOK5906Q	VOK5906L	VOK5906C		
LAB FILE ID:	RKW620	RKW617	RKW618		
DATE EXTRACTED:	11/22/0004:43	11/22/0002:59	11/22/0003:34	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/0004:43	11/22/0002:59	11/22/0003:34	DATE RECEIVED:	11/22/00
PREP. BATCH:	VOK5906	VOK5906	VOK5906		
CALIB. REF:	RKW615	RKW615	RKW615		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	20	23.9	119	20	23.6	118	1	65-135	30
Benzene	ND	20	23.6	118	20	24.5	122	4	65-135	30
Chlorobenzene	ND	20	22.9	114	20	23.3	116	2	65-135	30
Toluene	ND	20	23.7	118	20	24	120	2	64-135	30
Trichloroethene	ND	20	22.7	114	20	24.1	120	6	61-135	30

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
1,2-Dichlorethane-d4	50	57.6	115	50	56.7	113	52-149
Bromofluorobenzene	50	60.3	121	50	58.3	117	65-135
Toluene-d8	50	62.4	125	50	62.5	125	65-135

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	NA
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/22/00
Batch No.	: 00K184	Date Extracted:	11/22/00 16:57
Sample ID:	MBLK2W	Date Analyzed:	11/22/00 16:57
Lab Samp ID:	VOK6106B	Dilution Factor:	1
Lab File ID:	RKW640	Matrix :	WATER
Ext Btch ID:	VOK6106	% Moisture :	NA
Calib. Ref.:	RKW637	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/L)	PRL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	.91
1,1,2,2-TETRACHLOROETHANE	ND	5	1.1
1,1,2-TRICHLOROETHANE	ND	5	.83
1,1-DICHLOROETHANE	ND	5	.65
1,1-DICHLOROETHENE	ND	5	.86
1,2-DICHLOROETHANE	ND	5	.95
1,2-DICHLOROPROPANE	ND	5	.73
2-BUTANONE	ND	50	6.7
2-CHLOROETHYLVINYLETHER	ND	50	1.3
2-HEXANONE	ND	50	5.6
4-METHYL-2-PENTANONE	ND	50	3.6
ACETONE	ND	50	9.6
BENZENE	ND	5	.77
BROMODICHLOROMETHANE	ND	5	.82
BROMOFORM	ND	5	.74
BROMOMETHANE	ND	5	1.9
CARBON DISULFIDE	ND	5	.61
CARBON TETRACHLORIDE	ND	5	.83
CHLOROBENZENE	ND	5	1.1
CHLOROETHANE	ND	5	1.7
CHLOROFORM	ND	5	.67
CHLOROMETHANE	ND	5	.67
CIS-1,2-DICHLOROETHENE	ND	5	.79
CIS-1,3-DICHLOROPROPENE	ND	5	.79
DIBROMOCHLOROMETHANE	ND	5	.71
ETHYLBENZENE	ND	5	1
MTBE	ND	10	.77
METHYLENE CHLORIDE	ND	5	1.4
STYRENE	ND	5	.87
TETRACHLOROETHENE	ND	5	1.1
TOLUENE	ND	5	.99
TRANS-1,2-DICHLOROETHENE	ND	5	.73
TRANS-1,3-DICHLOROPROPENE	ND	5	.82
TRICHLOROETHENE	ND	5	.89
VINYL ACETATE	ND	50	1.4
VINYL CHLORIDE	ND	5	2.5
XYLENES	ND	5	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	109	62-139
BROMOFLUOROBENZENE	113	75-125
TOLUENE-D8	110	75-125

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: OOK184
METHOD: METHOD 5030A/8260A

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	VOK6106B	VOK6106L	VOK6106C		
LAB FILE ID:	RKW640	RKW638	RKW639		
DATE EXTRACTED:	11/22/0016:57	11/22/0015:47	11/22/0016:22	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/0016:57	11/22/0015:47	11/22/0016:22	DATE RECEIVED:	11/22/00
PREP. BATCH:	VOK6106	VOK6106	VOK6106		
CALIB. REF:	RKW637	RKW637	RKW637		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	20	23.4	117	20	21.7	108	8	75-125	20
Benzene	ND	20	22.2	111	20	19.2	96	14	75-125	20
Chlorobenzene	ND	20	21.7	108	20	21.4	107	1	75-125	20
Toluene	ND	20	23	115	20	21.7	109	6	74-125	20
Trichloroethene	ND	20	21.6	108	20	17	85	24*	71-125	20

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichlorethane-d4	50	49.1	98	50	53.2	106	62-139
Bromofluorobenzene	50	58	116	50	56.7	113	75-125
Toluene-d8	50	58.2	116	50	55.7	111	75-125

METHOD 3050B/6010B
METALS BY ICP

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
SDG NO.	: 00K184	Date Extracted:	11/24/00 12:00
Sample ID:	18609-3263 A	Date Analyzed:	11/27/00 13:36
Lab Samp ID:	K184-02	Dilution Factor:	1
Lab File ID:	I07K068017	Matrix :	SOIL
Ext Btch ID:	IPK070S	% Moisture :	2.3
Calib. Ref.:	I07K068011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	2360	51.2	2.81
Antimony	ND	10.2	3.52
Barium	25.7	1.02	.0409
Beryllium	.0987J	.205	.0102
Cadmium	ND	1.02	.205
Calcium	5510	512	4.46
Chromium	4.2	1.02	.399
Cobalt	1.55	1.02	.328
Copper	22.3	1.02	.686
Iron	3530	20.5	2.02
Magnesium	1650	512	4.31
Manganese	76.2	2.05	.614
Molybdenum	ND	2.05	.86
Nickel	2.08	2.05	.829
Potassium	985	512	110
Silver	ND	2.05	.43
Sodium	165J	512	20
Vanadium	8.44	1.02	.368
Zinc	23.4	1.02	.368

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
SDG NO.	: 00K184	Date Extracted:	11/24/00 12:00
Sample ID:	18609-3263	Date Analyzed:	11/27/00 14:29
Lab Samp ID:	K184-02	Dilution Factor:	1
Lab File ID:	I31K052020	Matrix :	SOIL
Ext Btch ID:	IPK070S	% Moisture :	2.3
Calib. Ref.:	I31K052014	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	.605J	1.02	.216
Lead	1.03	1.02	.175
Selenium	ND	1.02	.397
Thallium	ND	1.02	.559

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
SDG NO.	: 00K184	Date Extracted:	11/24/00 12:00
Sample ID:	18609-3265	Date Analyzed:	11/27/00 13:46
Lab Samp ID:	K184-04	Dilution Factor:	1
Lab File ID:	I07K068019	Matrix :	SOIL
Ext Btch ID:	IPK070S	% Moisture :	14.3
Calib. Ref.:	I07K068011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	10500	58.3	3.21
Antimony	ND	11.7	4.01
Barium	188	1.17	.0467
Beryllium	.393	.233	.0117
Cadmium	ND	1.17	.233
Calcium	3020	583	5.09
Chromium	14.2	1.17	.455
Cobalt	4.56	1.17	.373
Copper	8.56	1.17	.782
Iron	15100	23.3	2.3
Magnesium	5100	583	4.91
Manganese	142	2.33	.7
Molybdenum	1.24J	2.33	.98
Nickel	7.52	2.33	.945
Potassium	3060	583	125
Silver	ND	2.33	.49
Sodium	856	583	22.8
Vanadium	34.5	1.17	.42
Zinc	46	1.17	.42

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
SDG NO.	: 00K184	Date Extracted:	11/24/00 12:00
Sample ID:	18609-3265	Date Analyzed:	11/27/00 14:39
Lab Samp ID:	K184-04	Dilution Factor:	1
Lab File ID:	I31K052022	Matrix :	SOIL
Ext Btch ID:	IPK070S	% Moisture :	14.3
Calib. Ref.:	I31K052014	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	1.93	1.17	.246
Lead	2.67	1.17	.2
Selenium	ND	1.17	.453
Thallium	1.67	1.17	.637

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
SDG NO.	: 00K184	Date Extracted:	11/24/00 12:00
Sample ID:	18609-3266 A	Date Analyzed:	11/27/00 14:26
Lab Samp ID:	K184-05	Dilution Factor:	1
Lab File ID:	I07K068027	Matrix :	SOIL
Ext Btch ID:	IPK070S	% Moisture :	5.4
Calib. Ref.:	I07K068023	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	4210	52.9	2.91
Antimony	ND	10.6	3.64
Barium	82.4	1.06	.0423
Beryllium	.194J	.211	.0106
Cadmium	ND	1.06	.211
Calcium	3590	529	4.61
Chromium	6.88	1.06	.412
Cobalt	2.63	1.06	.338
Copper	5.98	1.06	.708
Iron	6690	21.1	2.08
Magnesium	2630	529	4.45
Manganese	131	2.11	.634
Molybdenum	1.02J	2.11	.888
Nickel	5.76	2.11	.856
Potassium	1680	529	113
Silver	ND	2.11	.444
Sodium	376J	529	20.6
Vanadium	17.1	1.06	.381
Zinc	21.4	1.06	.381

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
SDG NO.	: 00K184	Date Extracted:	11/24/00 12:00
Sample ID:	18609-3266 A	Date Analyzed:	11/27/00 15:19
Lab Samp ID:	K184-05	Dilution Factor:	1
Lab File ID:	I31K052030	Matrix :	SOIL
Ext Btch ID:	IPK070S	% Moisture :	5.4
Calib. Ref.:	I31K052026	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.15	1.06	.223
Lead	1.53	1.06	.181
Selenium	ND	1.06	.41
Thallium	.836J	1.06	.577

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
SDG NO.	: 00K184	Date Extracted:	11/24/00 12:00
Sample ID:	18609-3268 A	Date Analyzed:	11/27/00 14:37
Lab Samp ID:	K184-07	Dilution Factor:	1
Lab File ID:	I07K068029	Matrix :	SOIL
Ext Btch ID:	IPK070S	% Moisture :	11.5
Calib. Ref.:	I07K068023	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	7460	56.5	3.11
Antimony	ND	11.3	3.89
Barium	88	1.13	.0452
Beryllium	.358	.226	.0113
Cadmium	.238J	1.13	.226
Calcium	1890	565	4.93
Chromium	10.6	1.13	.441
Cobalt	5.09	1.13	.362
Copper	5.73	1.13	.757
Iron	9930	22.6	2.23
Magnesium	4970	565	4.76
Manganese	166	2.26	.678
Molybdenum	1.87J	2.26	.949
Nickel	6.42	2.26	.915
Potassium	3070	565	121
Silver	ND	2.26	.475
Sodium	325J	565	22
Vanadium	21	1.13	.407
Zinc	30.7	1.13	.407

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
SDG NO.	: 00K184	Date Extracted:	11/24/00 12:00
Sample ID:	18609-3268	Date Analyzed:	11/27/00 15:29
Lab Samp ID:	K184-07	Dilution Factor:	1
Lab File ID:	I31K052032	Matrix :	SOIL
Ext Btch ID:	IPK070S	% Moisture :	11.5
Calib. Ref.:	I31K052026	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	1.55	1.13	.238
Lead	2.83	1.13	.193
Selenium	ND	1.13	.438
Thallium	.936J	1.13	.617

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
SDG NO.	: 00K184	Date Extracted:	11/24/00 12:00
Sample ID:	18609-3270	Date Analyzed:	11/27/00 14:42
Lab Samp ID:	K184-09	Dilution Factor:	1
Lab File ID:	I07K068030	Matrix :	SOIL
Ext Btch ID:	IPK070S	% Moisture :	6.6
Calib. Ref.:	I07K068023	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	2620	53.5	2.94
Antimony	ND	10.7	3.68
Barium	35.3	1.07	.0428
Beryllium	.116J	.214	.0107
Cadmium	ND	1.07	.214
Calcium	3460	535	4.67
Chromium	5.52	1.07	.418
Cobalt	1.72	1.07	.343
Copper	10.7	1.07	.717
Iron	4050	21.4	2.11
Magnesium	1790	535	4.51
Manganese	81.1	2.14	.642
Molybdenum	ND	2.14	.899
Nickel	2.36	2.14	.867
Potassium	1090	535	115
Silver	ND	2.14	.45
Sodium	143J	535	20.9
Vanadium	9.48	1.07	.385
Zinc	21.5	1.07	.385

RL: Reporting Limit

7010

METHOD 3050B/6010B
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
SDG NO.	: 00K184	Date Extracted:	11/24/00 12:00
Sample ID:	18609-3270	Date Analyzed:	11/27/00 15:34
Lab Samp ID:	K184-09	Dilution Factor:	1
Lab File ID:	I31K052033	Matrix :	SOIL
Ext Btch ID:	IPK070S	% Moisture :	6.6
Calib. Ref.:	I31K052026	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	1.22	1.07	.226
Lead	.853J	1.07	.183
Selenium	ND	1.07	.415
Thallium	ND	1.07	.585

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
SDG NO.	: 00K184	Date Extracted:	11/24/00 12:00
Sample ID:	18609-3271	Date Analyzed:	11/27/00 14:47
Lab Samp ID:	K184-10	Dilution Factor:	1
Lab File ID:	I07K068031	Matrix :	SOIL
Ext Btch ID:	IPK070S	% Moisture :	27.2
Calib. Ref.:	I07K068023	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	9770	68.7	3.78
Antimony	ND	13.7	4.73
Barium	155	1.37	.0549
Beryllium	.401	.275	.0137
Cadmium	.324J	1.37	.275
Calcium	9190	687	5.99
Chromium	11.6	1.37	.536
Cobalt	6.23	1.37	.44
Copper	24.2	1.37	.92
Iron	14100	27.5	2.71
Magnesium	7090	687	5.78
Manganese	277	2.75	.824
Molybdenum	2.08J	2.75	1.15
Nickel	8.03	2.75	1.11
Potassium	4710	687	147
Silver	ND	2.75	.577
Sodium	483J	687	26.8
Vanadium	28.5	1.37	.495
Zinc	63.9	1.37	.495

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
SDG NO.	: 00K184	Date Extracted:	11/24/00 12:00
Sample ID:	18609-3271 A	Date Analyzed:	11/27/00 15:39
Lab Samp ID:	K184-10	Dilution Factor:	1
Lab File ID:	I31K052034	Matrix :	SOIL
Ext Btch ID:	IPK070S	% Moisture :	27.2
Calib. Ref.:	I31K052026	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	1.97	1.37	.29
Lead	2.11	1.37	.235
Selenium	ND	1.37	.533
Thallium	1.15J	1.37	.75

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
SDG NO.	: 00K184	Date Extracted:	11/24/00 12:00
Sample ID:	18609-3272	Date Analyzed:	11/27/00 14:52
Lab Samp ID:	K184-11	Dilution Factor:	1
Lab File ID:	I07K068032	Matrix :	SOIL
Ext Btch ID:	IPK070S	% Moisture :	26.8
Calib. Ref.:	I07K068023	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	16700	68.3	3.76
Antimony	ND	13.7	4.7
Barium	209	1.37	.0546
Beryllium	.741	.273	.0137
Cadmium	ND	1.37	.273
Calcium	10200	683	5.96
Chromium	17.7	1.37	.533
Cobalt	8.67	1.37	.437
Copper	25.5	1.37	.915
Iron	22500	27.3	2.69
Magnesium	11200	683	5.75
Manganese	353	2.73	.82
Molybdenum	1.27J	2.73	1.15
Nickel	10.7	2.73	1.11
Potassium	6380	683	146
Silver	ND	2.73	.574
Sodium	980	683	26.6
Vanadium	49.1	1.37	.492
Zinc	93.6	1.37	.492

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
SDG NO.	: 00K184	Date Extracted:	11/24/00 12:00
Sample ID:	18609-3272 K	Date Analyzed:	11/27/00 15:44
Lab Samp ID:	K184-11	Dilution Factor:	1
Lab File ID:	I31K052035	Matrix :	SOIL
Ext Btch ID:	IPK070S	% Moisture :	26.8
Calib. Ref.:	I31K052026	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	4.91	1.37	.288
Lead	3.96	1.37	.234
Selenium	ND	1.37	.53
Thallium	2.01	1.37	.746

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
SDG NO.	: 00K184	Date Extracted:	11/24/00 12:00
Sample ID:	18609-3273 A	Date Analyzed:	11/27/00 14:21
Lab Samp ID:	K184-12	Dilution Factor:	1
Lab File ID:	I07K068026	Matrix :	SOIL
Ext Btch ID:	IPK070S	% Moisture :	16.7
Calib. Ref.:	I07K068023	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	8530	60	3.3
Antimony	ND	12	4.13
Barium	269	1.2	.048
Beryllium	.44	.24	.012
Cadmium	.674J	1.2	.24
Calcium	4770	600	5.23
Chromium	12.2	1.2	.468
Cobalt	4.78	1.2	.384
Copper	8.46	1.2	.804
Iron	12200	24	2.36
Magnesium	4840	600	5.05
Manganese	241	2.4	.72
Molybdenum	ND	2.4	1.01
Nickel	11.3	2.4	.972
Potassium	2760	600	128
Silver	ND	2.4	.504
Sodium	865	600	23.4
Vanadium	24.9	1.2	.432
Zinc	39.5	1.2	.432

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	11/17/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/17/00
SDG NO.	: 00K184	Date Extracted:	11/24/00 12:00
Sample ID:	18609-3273	Date Analyzed:	11/27/00 15:14
Lab Samp ID:	K184-12	Dilution Factor:	1
Lab File ID:	I31K052029	Matrix :	SOIL
Ext Btch ID:	IPK070S	% Moisture :	16.7
Calib. Ref.:	I31K052026	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	1.73	1.2	.253
Lead	2.74	1.2	.205
Selenium	ND	1.2	.466
Thallium	1.56	1.2	.655

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: IT CORPORATION	Date Collected:	NA
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/24/00
SDG NO.	: 00K184	Date Extracted:	11/24/00 12:00
Sample ID:	MBLK1S	Date Analyzed:	11/27/00 13:15
Lab Samp ID:	IPK070SB	Dilution Factor:	1
Lab File ID:	I07K068013	Matrix :	SOIL
Ext Btch ID:	IPK070S	% Moisture :	NA
Calib. Ref.:	I07K068011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	12.7J	50	2.75
Antimony	ND	10	3.44
Barium	ND	1	.04
Beryllium	ND	.2	.01
Cadmium	ND	1	.2
Calcium	ND	500	4.36
Chromium	.524J	1	.39
Cobalt	.387J	1	.32
Copper	ND	1	.67
Iron	ND	20	1.97
Magnesium	ND	500	4.21
Manganese	ND	2	.6
Molybdenum	ND	2	.84
Nickel	ND	2	.81
Potassium	ND	500	107
Silver	ND	2	.42
Sodium	ND	500	19.5
Vanadium	ND	1	.36
Zinc	ND	1	.36

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY TRACE-ICP

Client	: IT CORPORATION	Date Collected:	NA
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	11/24/00
SDG NO.	: 00K184	Date Extracted:	11/24/00 12:00
Sample ID:	MBLK1S	Date Analyzed:	11/27/00 14:09
Lab Samp ID:	IPK070SB	Dilution Factor:	1
Lab File ID:	I31K052016	Matrix :	SOIL
Ext Btch ID:	IPK070S	% Moisture :	NA
Calib. Ref.:	I31K052014	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	ND	1	.211
Lead	ND	1	.171
Selenium	ND	1	.388
Thallium	ND	1	.546

RL: Reporting Limit

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
SDG NO.: 00K184
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1S				
CONTROL NO.:	IPK070SB	IPK070SL	IPK070SC		
LAB FILE ID:	I07K068013	I07K068014	I07K068015		
DATIME EXTRCTD:	11/24/0012:00	11/24/0012:00	11/24/0012:00	DATE COLLECTED:	NA
DATIME ANALYZD:	11/27/0013:15	11/27/0013:20	11/27/0013:25	DATE RECEIVED:	11/24/00
PREP. BATCH:	IPK070S	IPK070S	IPK070S		
CALIB. REF:	I07K068011	I07K068011	I07K068011		

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Aluminum	12.7J	1000	1010	100	1000	999	99	1	80-120	20
Antimony	ND	500	460	92	500	456	91	1	80-120	20
Barium	ND	100	97.5	97	100	96.7	97	1	80-120	20
Beryllium	ND	100	93.8	94	100	93.2	93	1	80-120	20
Cadmium	ND	100	93	93	100	92.1	92	1	80-120	20
Calcium	ND	5000	4730	95	5000	4710	94	0	80-120	20
Chromium	.524J	100	98.5	98	100	98.5	98	0	80-120	20
Cobalt	.387J	100	96.1	96	100	96.3	96	0	80-120	20
Copper	ND	100	95.5	95	100	94.9	95	1	80-120	20
Iron	ND	1000	974	97	1000	971	97	0	80-120	20
Magnesium	ND	5000	4750	95	5000	4700	94	1	80-120	20
Manganese	ND	100	95.2	95	100	94.6	95	1	80-120	20
Molybdenum	ND	100	96.3	96	100	96.3	96	0	80-120	20
Nickel	ND	100	95.4	95	100	93.8	94	2	80-120	20
Potassium	ND	5000	4770	95	5000	4700	94	2	80-120	20
Silver	ND	100	92.8	93	100	91.9	92	1	80-120	20
Sodium	ND	5000	4830	97	5000	4800	96	1	80-120	20
Vanadium	ND	100	97.2	97	100	96.9	97	0	80-120	20
Zinc	ND	100	96.4	96	100	95.8	96	1	80-120	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
SDG NO.: 00K184
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1S				
CONTROL NO.:	IPK070SB	IPK070SL	IPK070SC		
LAB FILE ID:	I31K052016	I31K052017	I31K052018		
DATIME EXTRCTD:	11/24/0012:00	11/24/0012:00	11/24/0012:00	DATE COLLECTED:	NA
DATIME ANALYZD:	11/27/0014:09	11/27/0014:14	11/27/0014:19	DATE RECEIVED:	11/24/00
PREP. BATCH:	IPK070S	IPK070S	IPK070S		
CALIB. REF:	I31K052014	I31K052014	I31K052014		

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	100	92.4	92	100	89.6	90	3	80-120	20
Lead	ND	100	91.5	92	100	89.5	90	2	80-120	20
Selenium	ND	100	91.8	92	100	89.8	90	2	80-120	20
Thallium	ND	100	97	97	100	94.1	94	3	80-120	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
SDG NO.: 00K184
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL			% MOISTURE:	16.7
DILTN FACTR:	1	1	1		
SAMPLE ID:	18609-3273				
CONTROL NO.:	K184-12	K184-12M	K184-12S		
LAB FILE ID:	I07K068026	I07K068021	I07K068022		
DATIME EXTRCTD:	11/24/0012:00	11/24/0012:00	11/24/0012:00	DATE COLLECTED:	11/17/00
DATIME ANALYZD:	11/27/0014:21	11/27/0013:56	11/27/0014:01	DATE RECEIVED:	11/17/00
PREP. BATCH:	IPK070S	IPK070S	IPK070S		
CALIB. REF:	I07K068023	I07K068011	I07K068011		

ACCESSION:

PARAMETER	SMPL RSLT mg/kg	SPIKE AMT mg/kg	MS RSLT mg/kg	MS % REC	SPIKE AMT mg/kg	MSD RSLT mg/kg	MSD % REC	RPD %	QC LIMIT %	MAX
Aluminum	8530	1200	10900	194*	1200	10600	170*	3	80-120	
Antimony	ND	600	446	74*	600	436	73*	2	80-120	
Barium	269	120	373	87	120	366	81	2	80-120	
Beryllium	.44	120	105	87	120	105	87	0	80-120	
Cadmium	.674J	120	105	87	120	105	87	0	80-120	
Calcium	4770	6000	9840	85	6000	9970	87	1	80-120	
Chromium	12.2	120	121	91	120	121	91	0	80-120	
Cobalt	4.78	120	112	89	120	112	89	0	80-120	
Copper	8.46	120	120	93	120	117	91	2	80-120	
Iron	12200	1200	13800	136*	1200	13000	72*	6	80-120	
Magnesium	4840	6000	10400	92	6000	10300	90	1	80-120	
Manganese	241	120	367	105	120	307	55*	18	80-120	
Molybdenum	ND	120	102	85	120	101	85	1	80-120	
Nickel	11.3	120	115	86	120	114	86	0	80-120	
Potassium	2760	6000	8080	89	6000	7970	87	1	80-120	
Silver	ND	120	104	86	120	102	85	1	80-120	
Sodium	865	6000	6360	91	6000	6390	92	1	80-120	
Vanadium	24.9	120	135	92	120	132	90	2	80-120	
Zinc	39.5	120	152	93	120	149	91	2	80-120	

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
SDG NO.: 00K184
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL			% MOISTURE:	16.7
DILTN FACTR:	1	1	1		
SAMPLE ID:	18609-3273				
CONTROL NO.:	K184-12	K184-12M	K184-12S		
LAB FILE ID:	I31K052029	I31K052024	I31K052025		
DATIME EXTRCTD:	11/24/0012:00	11/24/0012:00	11/24/0012:00	DATE COLLECTED:	11/17/00
DATIME ANALYZD:	11/27/0015:14	11/27/0014:49	11/27/0014:54	DATE RECEIVED:	11/17/00
PREP. BATCH:	IPK070S	IPK070S	IPK070S		
CALIB. REF:	I31K052026	I31K052014	I31K052014		

ACCESSION:

PARAMETER	SMPL RSLT mg/kg	SPIKE AMT mg/kg	MS RSLT mg/kg	MS % REC	SPIKE AMT mg/kg	MSD RSLT mg/kg	MSD % REC	RPD %	QC LIMIT %	MAX
Arsenic	1.73	120	103	84	120	103	84	0	80-120	
Lead	2.74	120	101	82	120	101	82	0	80-120	
Selenium	ND	120	101	84	120	100	83	1	80-120	
Thallium	1.56	120	105	86	120	106	87	1	80-120	

METHOD 7471A
MERCURY BY COLD VAPOR

Client : IT CORPORATION
Project : MCAS EL TORO/18609/D.O. 70
Batch No. : OOK184

Matrix : SOIL
Instrument ID : TI023

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	HGK037SB	ND	1	NA	.1	.02	11/21/0018:38	11/21/0015:00	M00K036008	M00K036006	HGK037S	NA	11/21/00
LCS1S	HGK037SL	.840	1	NA	.1	.02	11/21/0018:41	11/21/0015:00	M00K036009	M00K036006	HGK037S	NA	11/21/00
LCD1S	HGK037SC	.849	1	NA	.1	.02	11/21/0018:44	11/21/0015:00	M00K036010	M00K036006	HGK037S	NA	11/21/00
18609-3263 A	K184-02	ND	1	2.3	.102	.0205	11/21/0019:32	11/21/0015:00	M00K036027	M00K036018	HGK037S	11/17/00	11/17/00
18609-3265 A	K184-04	ND	1	14.3	.117	.0233	11/21/0019:35	11/21/0015:00	M00K036028	M00K036018	HGK037S	11/17/00	11/17/00
18609-3266 A	K184-05	ND	1	5.4	.106	.0211	11/21/0019:48	11/21/0015:00	M00K036032	M00K036030	HGK037S	11/17/00	11/17/00
18609-3268 A	K184-07	ND	1	11.5	.113	.0226	11/21/0019:51	11/21/0015:00	M00K036033	M00K036030	HGK037S	11/17/00	11/17/00
18609-3270 A	K184-09	ND	1	6.6	.107	.0214	11/21/0019:54	11/21/0015:00	M00K036034	M00K036030	HGK037S	11/17/00	11/17/00
18609-3271 A	K184-10	ND	1	27.2	.137	.0275	11/21/0019:56	11/21/0015:00	M00K036035	M00K036030	HGK037S	11/17/00	11/17/00
18609-3272 A	K184-11	ND	1	26.8	.137	.0273	11/21/0020:00	11/21/0015:00	M00K036036	M00K036030	HGK037S	11/17/00	11/17/00
18609-3273 A	K184-12	ND	1	16.7	.12	.024	11/21/0020:03	11/21/0015:00	M00K036037	M00K036030	HGK037S	11/17/00	11/17/00

RL: Reporting Limit

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
SDG NO.: 00K184
METHOD: METHOD 7471A

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1S				
CONTROL NO.:	HGK037SB	HGK037SL	HGK037SC		
LAB FILE ID:	M00K036008	M00K036009	M00K036010		
DATIME EXTRCTD:	11/21/0015:00	11/21/0015:00	11/21/0015:00	DATE COLLECTED:	NA
DATIME ANALYZD:	11/21/0018:38	11/21/0018:41	11/21/0018:44	DATE RECEIVED:	11/21/00
PREP. BATCH:	HGK037S	HGK037S	HGK037S		
CALIB. REF:	M00K036006	M00K036006	M00K036006		

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Mercury	ND	.794	.840	106	.794	.849	107	1	77-120	25

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EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
SDG NO.: 00K184
METHOD: METHOD 7471A

MATRIX:	SOIL			% MOISTURE:	11.0
DILTN FACTR:	1	1	1		
SAMPLE ID:	MW-LF03-CS-061				
CONTROL NO.:	K196-01	K196-01M	K196-01S		
LAB FILE ID:	M00K036011	M00K036012	M00K036013		
DATIME EXTRCTD:	11/21/0015:00	11/21/0015:00	11/21/0015:00	DATE COLLECTED:	11/20/00
DATIME ANALYZD:	11/21/0018:47	11/21/0018:50	11/21/0018:53	DATE RECEIVED:	11/21/00
PREP. BATCH:	HGK037S	HGK037S	HGK037S		
CALIB. REF:	M00K036006	M00K036006	M00K036006		

ACCESSION:

PARAMETER	SMPL RSLT mg/kg	SPIKE AMT mg/kg	MS RSLT mg/kg	MS % REC	SPIKE AMT mg/kg	MSD RSLT mg/kg	MSD % REC	RPD %	QC LIMIT %	MAX RPD %
Mercury	ND	.909	.949	104	.909	.96	106	1	77-120	25

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro

Collection Date: November 17, 2000

LDC Report Date: December 12, 2000

Matrix: Soil/Water

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: NFESC Level C

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 00K184

Sample Identification

18609-3263 A
18609-3265 A
18609-3266 A
18609-3268 A
18609-3269 A
18609-3270 A
18609-3271 A
18609-3272 A
18609-3273 A
18609-3266MS
18609-3266MSD

Introduction

This data review covers 10 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Extractables.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% QC limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as extractable contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

b. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags have been summarized at the end of this report.

IX. Field Duplicates

Samples 18609-3271 and 18609-3272 were identified as field duplicates. No total petroleum hydrocarbons as extractables were detected in any of the samples.

X. Field Blanks

No field blanks were identified in this SDG.

MCAS El Toro
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG 00K184

No Sample Data Qualified in this SDG

MCAS El Toro
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 00K184

No Sample Data Qualified in this SDG

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro

Collection Date: November 17, 2000

LDC Report Date: December 12, 2000

Matrix: Soil/Water

Parameters: Total Petroleum Hydrocarbons as Gasoline

Validation Level: NFESC Level C

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 00K184

Sample Identification

18609-3262 A
18609-3263 A
18609-3265 A
18609-3266 A
18609-3268 A
18609-3269 A
18609-3270 A
18609-3271 A
18609-3272 A
18609-3273 A

Introduction

This data review covers 8 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Gasoline.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% QC limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as gasoline contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

b. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags have been summarized at the end of this report.

IX. Field Duplicates

Samples 18609-3271 and 18609-3272 were identified as field duplicates. No total petroleum hydrocarbons as gasoline were detected in any of the samples.

X. Field Blanks

Sample 18609-3262 was identified as a trip blank. No total petroleum hydrocarbons as gasoline contaminants were found in this blank.

MCAS El Toro
Total Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG 00K184

No Sample Data Qualified in this SDG

MCAS El Toro
Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification Summary - SDG 00K184

No Sample Data Qualified in this SDG

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro

Collection Date: November 17, 2000

LDC Report Date: December 13, 2000

Matrix: Soil/Water

Parameters: Volatiles

Validation Level: NFESC Level C

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 00K184

Sample Identification

18609-3262 A
18609-3263 A
18609-3265 A
18609-3266 A
18609-3268 A
18609-3269 A
18609-3270 A
18609-3271 A
18609-3272 A
18609-3273 A

Introduction

This data review covers 8 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260A for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

Air bubbles were apparent in all of the sample containers for 18609-3262. There should be no air bubbles in the sample containers.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 50.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs) .

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0% for all calibration check compounds (CCCs) and less than or equal to 50.0% for all other compounds.

All of the continuing calibration RRF values were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
LCS2W/LCD2W (18609-3262 MBLK2W)	Trichloroethene	-	-	24 (≤20)	J (all detects) UJ (all non-detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags have been summarized at the end of the report.

XVI. Field Duplicates

Samples 18609-3271 and 18609-3272 were identified as field duplicates. No volatiles were detected in any of the samples.

XVII. Field Blanks

Sample 18609-3262 was identified as a trip blank. No volatile contaminants were found in this blank with the following exceptions:

Trip Blank ID	Compound	Concentration (ug/L)
18609-3262	Methylene chloride	1.4

MCAS El Toro
Volatiles - Data Qualification Summary - SDG 00K184

SDG	Sample	Compound	Flag	A or P	Reason
00K184	18609-3262 A	Trichloroethene	J (all detects) UJ (all non-detects)	P	Laboratory control samples (RPD)

MCAS El Toro
Volatiles - Laboratory Blank Data Qualification Summary - SDG 00K184

No Sample Data Qualified in this SDG

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro

Collection Date: November 17, 2000

LDC Report Date: December 13, 2000

Matrix: Soil

Parameters: Metals

Validation Level: NFESC Level C

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 00K184

Sample Identification

18609-3263 A
18609-3265 A
18609-3266 A
18609-3268 A
18609-3270 A
18609-3271 A
18609-3272 A
18609-3273 A
18609-3273MS
18609-3273MSD

Introduction

This data review covers 10 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010 and 7000 for Metals. The metals analyzed were Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, and Zinc.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994) as there are no current guidelines for the methods stated above.

A table summarizing all data qualification flags is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from specified protocols or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

III. Blanks

Method blanks were reviewed for each matrix as applicable.

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. No contaminant concentrations were found above the reporting limit in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PB (prep blank)	Aluminum Chromium Cobalt	12.7 mg/Kg 0.524 mg/Kg 0.387 mg/Kg	All samples in SDG 00K184
ICB/CCB	Aluminum Beryllium Chromium Cobalt Silver	30.5 ug/L 0.130 ug/L 4 12 ug/L 3.53 ug/L 5.78 ug/L	All samples in SDG 00K184

Sample concentrations were compared to the maximum contaminant concentrations detected in the ICB/CCB/PBs. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
18609-3263	Cobalt	1.55 mg/Kg	1.55U mg/Kg
18609-3270	Cobalt	1.72 mg/Kg	1 72U mg/Kg

IV. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

V. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
18609-3273MS/MSD (All samples in SDG 00K184)	Aluminum	194 (80-120)	170 (80-120)	-	J (all detects)	A
18609-3273MS/MSD (All samples in SDG 00K184)	Antimony Iron Manganese	74 (80-120) 136 (80-120) -	73 (80-120) 72 (80-120) 55 (80-120)	- - -	J (all detects) UJ (all non-detects)	A

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

Although ICP serial dilution analysis was not required by the method, it was performed by the laboratory. The analysis criteria were met with the following exceptions:

Diluted Sample	Analyte	%D (Limits)	Associated Samples	Flag	A or P
18609-3273L	Chromium Zinc	13 (≤10) 11 (≤10)	All samples in SDG 00K184	J (all detects) J (all detects)	A

XI. Sample Result Verification

Raw data were not reviewed for this SDG.

XII. Overall Assessment of Data

Data flags have been summarized at the end of this report.

XIII. Field Duplicates

Samples 18609-3271 and 18609-3272 were identified as field duplicates. No metals were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD
	18609-3271	18609-3272	
Aluminum	9770	16700	52
Arsenic	1.97	4.91	85
Barium	155	209	30
Beryllium	0.401	0.741	60
Cadmium	0.324	1.37U	200
Calcium	9190	10200	10
Chromium	11.6	17.7	42
Cobalt	6.23	8.67	33
Copper	24.2	25.5	5
Iron	14100	22500	46

Analyte	Concentration (mg/Kg)		RPD
	18609-3271	18609-3272	
Lead	2.11	3.96	61
Magnesium	7090	11200	45
Manganese	277	353	24
Nickel	8.03	10.7	29
Potassium	4710	6380	30
Sodium	483	980	68
Thallium	1.15	2.01	54
Vanadium	28.5	49.1	53
Zinc	63.9	93.6	38
Molybdenum	2.08	1.27	48

XIV. Field Blanks

No field blanks were identified in this SDG.

MCAS El Toro
Metals - Data Qualification Summary - SDG 00K184

SDG	Sample	Analyte	Flag	A or P	Reason
00K184	18609-3263 A 18609-3265 A 18609-3266 A 18609-3268 A 18609-3270 A 18609-3271 A 18609-3272 A 18609-3273 A MS/MSD	Aluminum	J (all detects)	A	Matrix spike/Matrix spike duplicates (%R)
00K184	18609-3263 A 18609-3265 A 18609-3266 A 18609-3268 A 18609-3270 A 18609-3271 A 18609-3272 A 18609-3273 A	Antimony Iron Manganese	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicates (%R)
00K184	18609-3263 A 18609-3265 A 18609-3266 A 18609-3268 A 18609-3270 A 18609-3271 A 18609-3272 A 18609-3273 A	Chromium Zinc	J (all detects) J (all detects)	A	ICP serial dilution (%D)

MCAS El Toro
Metals - Laboratory Blank Data Qualification Summary - SDG 00K184

SDG	Sample	Analyte	Modified Final Concentration	A or P
00K184	18609-3263 A	Cobalt	1.55U mg/Kg	A
00K184	18609-3270 A	Cobalt	1.72U mg/Kg	A