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MCAS EL TORO
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Technical Memorandum

Groundwater Monitoring Report
Petroleum Storage Facilities at Various Locations
Marine Corps Air Station
El Toro, California

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Acronyms and Abbreviations

BTEX	benzene, toluene, ethylbenzene, and total xylenes
CA LUFT	California Leaking Underground Fuel Tank
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DO	Delivery Order
EPA	United States Environmental Protection Agency
ft/ft	feet per foot
MCAS	Marine Corps Air Station
msl	mean sea level
MTBE	methyl tert-butyl ether
OHM	OHM Remediation Services Corp.
PPE	personal protective equipment
SWDIV	Southwest Division Naval Facilities Engineering Command
TCE	trichloroethene
TPH	total petroleum hydrocarbons
UST	underground storage tank
VOC	volatile organic compound

Executive Summary

This Technical Memorandum, *Groundwater Monitoring Report, Petroleum Storage Facilities at Various Locations, Marine Corps Air Station, El Toro* presents data on groundwater conditions at the Marine Corps Air Station (MCAS), El Toro, California. The groundwater monitoring activities presented in this report were performed by OHM Remediation Services (OHM) personnel from March 1997 through May 1997.

This report presents information pertaining to groundwater elevations and groundwater quality in the vicinity of active and former petroleum storage sites at MCAS, El Toro.

The report presents groundwater conditions at MCAS, El Toro from specific sampling events that occurred between March 1997 and May 1997 (April 1997 sampling event). The sampling events were performed at Tank Farms 1, 2, 3, 4, 5, 6, 555, and Former Underground Storage Tank Sites 390A and 390B. The well network for the sampling program included wells installed by OHM and selected wells from the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Program. The CERCLA wells were included due to their proximity to petroleum storage sites and utilization as an upgradient or downgradient data control point.

A total of 42 monitoring wells and two piezometers were utilized by OHM for water level measurements and analytical samples. These monitoring locations include 22 wells and two piezometers installed by OHM in 1996 and 20 wells previously installed under the CERCLA Program. The monitoring wells ranged in depth from 67 to 256 feet (one CERCLA well total depth was 495 feet), and the piezometers ranged from 40 to 60 feet in depth.

Section 1
Introduction

This *Technical Memorandum, Groundwater Monitoring Report, Petroleum Storage Facilities at Various Locations, Marine Corps Air Station, El Toro* was prepared by OHM Remediation Services Corp. (OHM). Groundwater monitoring and reporting activities were conducted under Southwest Division Naval Facilities Engineering Command (SWDIV) Remedial Action Contract No. N68711-93-D-1459, Delivery Order (DO) 50.

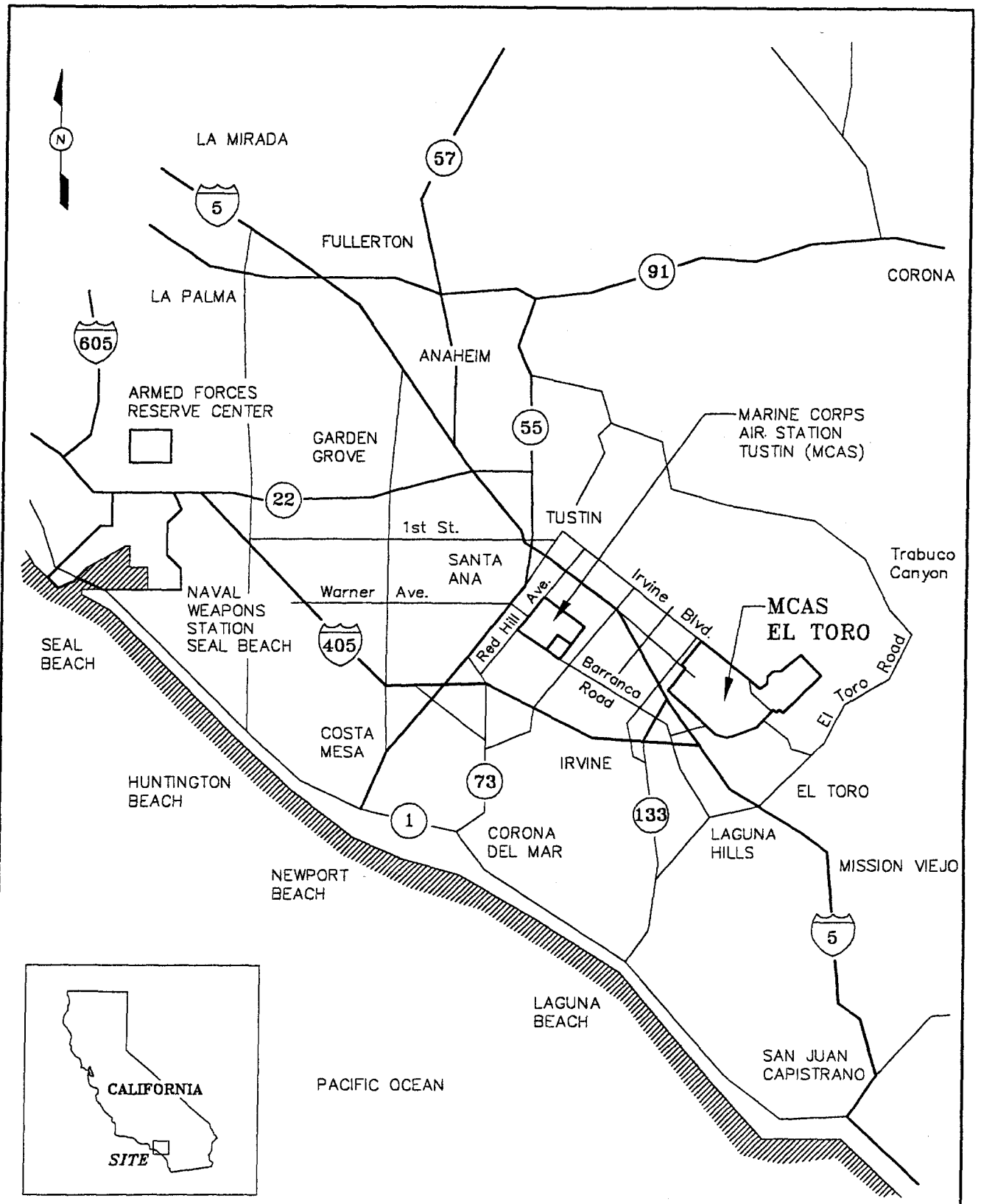
This Technical Memorandum presents groundwater elevations and groundwater quality data collected from March 1997 through May 1997 at Tank Farms 1, 2, 3, 4, 5, 6, 555, and Former Underground Storage Tank (UST) Site 390A and 390B (USTs 390A and 390B). The well network for the sampling program included wells installed by OHM and selected wells from the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Program. The CERCLA wells were included due to their proximity to the petroleum storage sites and utilized as upgradient or downgradient data control points.

1.1 Site Description

Marine Corps Air Station (MCAS) El Toro is located approximately 45 miles southeast of Los Angeles in Orange County, California, 1 mile north of the intersection of Interstate 5 (Santa Ana Freeway) and Interstate 405 (San Diego Freeway) (Figure 1-1, Site Vicinity Map). The Town of Lake Forest is less than 2 miles southeast; East Irvine is approximately 1 mile to the northwest. The Third Marine Aircraft Wing and support operations are based at MCAS, El Toro.

The Station covers approximately 4,700 acres. Figure 1-2, Monitoring Well Locations and Petroleum Storage Facilities - Site Map, presents a regional map of the Station and identifies the subject tank farms, USTs 390A and 390B and the monitoring well locations.

MCAS, El Toro is located on the southeastern edge of the Tustin Plain, which slopes gently to the west-southwest. MCAS crosses the Tustin Plain and extends eastward into the Santa Ana Mountains. Land surface elevations in the site vicinity are approximately 215 feet above mean sea level (msl) in the western corner, and rise to approximately 800 feet above msl approaching the eastern corner. The topography across the active operational area of the MCAS is relatively flat.



OHM Remediation Services Corp. A Subsidiary of OHM Corporation SAN DIEGO, CA				DRAWN BY B. COHEN	DATE 09/12/97	SITE VICINITY MAP		
				CHECKED BY	DATE			
				APPROVED BY	DATE	MARINE CORPS AIR STATION EL TORO, CALIFORNIA		
PROJECT SWDIV				PROJECT MANAGER	DATE			
AUTOCAD FILE No. 18292053.DWG	PLOT SCALE 1=1	SHEET 1	OF 1	SCALE NONE	DOCUMENT CONTROL No. SW4356	OHM PROJECT No. 18292	FIGURE No. FIG 1-1	REVISION 0

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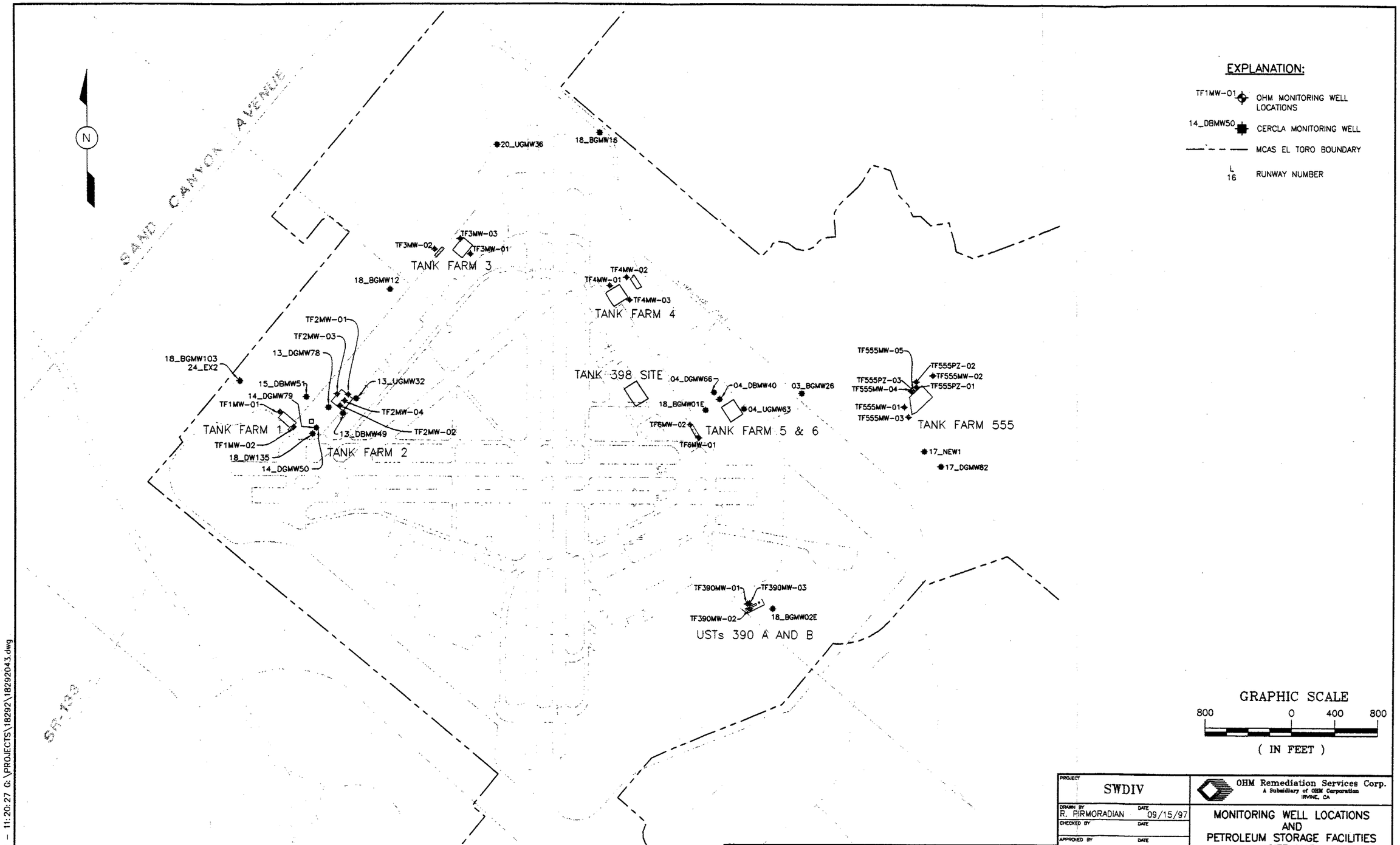

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PROJECT: SWDIV			OHM Remediation Services Corp. A Subsidiary of OHM Corporation IRVINE, CA			
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Section 2
Groundwater Monitoring Program

The objectives of the groundwater monitoring program are as follows:

- Monitor and document the organic and inorganic groundwater quality at various petroleum storage sites.
- Monitor and document the groundwater elevations at the various petroleum storage sites.
- Evaluate trends in groundwater quality and recommend adjustments to the sampling program.

The purpose of this Technical Memorandum is to present the groundwater monitoring and analytical data which was collected from the April 1997 sampling event for the MCAS, El Toro UST Program. This sampling program utilized a network of conventional monitoring wells that included a total of 22 monitoring wells and two piezometers. They were drilled and installed by OHM (OHM wells) between May 1996 and April 1997. This network also included a group of 20 previously installed monitoring wells (CERCLA wells) constructed for the Phase I and II Remedial Investigation for MCAS, El Toro (SWDIV 1993). Table 2-1, Groundwater Monitoring Wells and Piezometers for Various Tanks and Tank Farms — UST Drilling and Monitoring Program MCAS, El Toro, presents well completion and as-built data for the wells and piezometers installed by OHM and others. The monitoring well locations at each specific tank farm are presented in figures in Section 5 through Section 8.

2.1 Background

The monitoring network for the UST program is in part the result of the verification drilling activities associated with existing and former tank farm locations in addition to USTs 390A and 390B at MCAS, El Toro. Separate groundwater monitoring events on a quarterly basis were authorized by SWDIV for the purpose of collecting analytical data over a period of time to establish analytical trends. Prior to the first sampling event, OHM recommended that specific CERCLA wells be included in the monitoring well network to enhance the data evaluation at each site and reduce the need for drilling additional monitoring wells. The CERCLA wells included in Table 2-1 were approved by SWDIV for water level measurements, sampling, and analyses.

Table 2-1
Groundwater Monitoring Wells and Piezometers for Various Tanks and Tank Farms
UST Drilling and Monitoring Program MCAS El Toro

		Construction Details by Depth (details per well completion logs and reported in feet unless otherwise noted)												Reference Point Elevation[a]			
Well ID Number	OHM Monitoring Wells	Date Installed	Total depth feet (bgs)	Borehole Diameter (inches)	Screen Diameter (inches)	Screen Slot Size	Screen Material	Screened Interval feet (bgs)	Blank Casing feet (bgs)	Blank Casing Material	Sand Pack (bgs)	Bentonite Seal#	Grout/ Concrete Seal	NAD 83 Northing	NAD 83 Easting	Casing	Surface
TANK FARM 1																	
TF1MW-01	•	7/16/96	150.0	11.5	4	0.020	SS	109.5-149.3	0-109.5	LCS	106.25-150	100.8-106.25	0-100.8	2192380.97	6106834.89	259.42	259.91
TF1MW-02	•	7/18/96	150.5	11.5	4	0.020	SS	110-150	0-110	LCS	106.8-150.5	102.33-106.8	0-102.33	2192090.43	6107082.40	263.68	264.03
18_DW135								115-135						2191968.23	6107437.92	268.32	269.00
14_DBMW50					4	0.020	SS	120-160	0-120	SCH 40 PVC				2192079.40	6107506.38	270.84	270.28
14_DGMW79					4	0.020	SS	118-158	0-118	SCH 40 PVC				2192200.06	6107417.21	268.08	268.99
18_BGMW103														2192973.52	6106078.95	252.15	251.22
24_EX2		4/6/96	215.0		6	0.020	SS	109-211.5	0-109	SCH 40 PVC	102.2-215	100.0-102.2	0-100	2192961.68	6106086.45	252.58	251.34
TANK FARM 2																	
TF2MW-01	•	5/9/96	163.5	11.5	6	0.020	SS	120-160	0-120	LCS	116.5-163.5	112.5-116.5	0-112.5	2192698.99	6108101.39	283.52	283.97
TF2MW-02	•	5/14/96	158.0	11.5	6	0.020	SS	115-155.33	0-115.3	LCS	112-158	108.25-112	0-108.25	2192500.14	6107942.65	278.80	279.53
TF2MW-03	•	5/16/96	162.0	11.5	6	0.020	SS	120-160	0-120	LCS	116-162	109.5-116	0-109.5	2192705.90	6107907.81	279.67	280.32
TF2MW-04	•	5/22/96	161.2	11.5	6	0.020	SS	120-160	0-120	LCS	116.5-161.2	111.5-116.5	0-111.5	2192586.34	6108025.82	280.88	281.42
13_UGMW32					4	0.020	SS	144-184	0-144	SCH 40 PVC				2192630.62	6108238.02	285.25	285.40
13_DBMW49					4	0.020	SS	142-182	0-142	SCH 40 PVC				2192534.44	6107997.88	280.67	280.04
13_DGMW78					4	0.020	SS	127-167	0-127	SCH 40 PVC				2192465.47	6107731.67	276.16	276.42
15_DBMW51					4	0.020	SS	125-165	0-125					2192664.04	6107322.15	269.45	269.79
TANK FARM 3																	
TF3MW-01	•	7/31/96	211.0	11	4	0.020	SS	169.5-209.5	0-169.5	LCS	163-211	156-163	0-156	2195332.55	6110359.68	322.86	333.45
TF3MW-02	•	8/6/96	200.0	11	4	0.020	SS	159-199	0-159	LCS	150-200	143-150	0-143	2195422.13	6109697.16	318.39	319.36
TF3MW-03	•	8/9/96	207.5	11	4	0.020	SS	165.5-205.5	0-165.5	LCS	159.5-207.5	153-159.5	0-153	2195616.10	6110170.46	329.13	329.92
TANK FARM 4																	
TF4MW-01	•	9/6/96	247.0	10	4	0.020	SS	201-241	0-201	LCS	197.4-247	192-197.4	0-192	2194744.18	6112968.30	378.84	379.29
TF4MW-02	•	9/11/96	253.0	10	4	0.020	SS	207-247	0-207	LCS	202.3-253	195.8-202.3	0-195.8	2194900.25	6113277.27	384.70	385.27
TF4MW-03	•	8/6/96	243.0	13	6	0.020	SS	202.5-242.5	0-202.5	LCS	197-243	192-197	0-192	2194479.50	6113332.33	384.07	384.53
18_BGMW12					4	0.020	SS	165-205	0-165	SCH 40 PVC				2194672.84	6108873.29	304.48	304.89
18_BGMW16					5	0.020	SS	223-263	0-223	SCH 40 PVC				2197586.29	6112784.73	376.58	375.82
20_UGMW36					4	0.020	SS	183-223	0-183	SCH 40 PVC				2197362.81	6110862.10	338.70	338.12
TANK FARM 6																	
TF6MW-01	•	8/20/96	225.0	11	4	0.020	SS	184.5-224.5	0-184.5	LCS	180-225	173.5-180	0-173.5	2191894.56	6114631.01	383.57	383.89
TF6MW-02	•	9/5/96	230.0	11	4	0.020	SS	190-230	0-190	LCS	184-230	179-184	0-179	2192141.55	6114465.03	384.65	384.93
04_DGMW66					5	0.020	SS	250-290	0-250	SCH 80 PVC				2192752.64	6114911.10	401.57	401.11
18_BGMW01E					4	0.020	SS	205-225	0-205	SCH 40 PVC				2192417.12	6114757.49	392.08	391.44
04_UGMW63					5	0.020	SS	235-275	0-235	SCH 80 PVC				2192442.20	6115456.81	404.13	403.42
04_DBMW40					5	0.020	SS	220-260	0-220	SCH 80 PVC				2192622.68	6115011.43	400.46	400.01
TANK FARM 555																	
TF555MW-01	•	7/23/96	223.0	10	4	0.020	SS	179-219	0-179	LCS	174-223	168-174	0-168	2192482.03	6118439.11	424.12	424.49
TF555MW-02	•	7/25/96	100.0	8.75	4	0.020	SS	25-60	0-25	LCS	22-61	18.1-22.2	0-18.1	2193073.06	6118965.34	458.24	458.48
TF555MW-03	•	8/2/96	221.0	8.75	4	0.020	SS	180-220	0-180	LCS	178-221	174.3-178	0-174.3	2192295.65	6118517.72	422.91	423.37
TF555MW-04	•	8/7/96	120.0	11	4	0.020	SS	89.5-109.5	0-89.5	LCS	84.5-112	80-84.5	0-80	2192760.82	6118568.62	437.01	437.39
TF555MW-05	•	8/14/96	67.0	11	4	0.020	SS	49.5-64.5	0-49.5	LCS	48-64.5	43.5-48	0-43.5	2192791.63	6118575.78	437.63	437.99
TF555PZ-01	•	7/17/96	60.0	9	2	0.020	SCH 40 PVC	25-50	0-25	SCH 40 PVC	22-52	18-22	0-18	2192857.12	6118659.77	441.99	442.62
TF555PZ-02	•	7/17/96	60.0	9	2	0.020	SCH 40 PVC	25-50	0-25	SCH 40 PVC	22.5-55	17-22.5	0-17	2192956.20	6118658.78	445.12	444.55
TF555PZ-03	•	8/13/96	40.0	9	2	0.020	SCH 40 PVC	25-40	0-25	SCH 40 PVC	21-40	16.5-21	0-16.5	2192798.58	6118581.25	438.02	438.33
17_NEW1								186-226						2191650.59	6118812.71	431.34	431.36
03_UGMW26					5	0.020	SS	230-270	0-230	SCH 80 PVC				2192733.25	6116532.63	419.82	419.39
17_DGMW82					5	0.020	SS	235-255	0-235	SCH 80 PVC				2191368.28	6119115.93	442.50	441.69
UST SITE 390 A&B																	
T390MW-01	•	7/23/96	201.0	11	4	0.020	SS	158-198	0-158	LCS	153-201	146-153	0-146	2188781.84	6115522.68	379.80	380.20
T390MW-02	•	9/9/96	192.0	11	4	0.020	SS	151.5-191.5	0-151.5	LCS	145-192	139-145	0-139	2188690.09	6115571.36	380.41	380.87
T390MW-03	•	9/18/96	191.0	11	4	0.020	SS	149-189	0-149	LCS	144.5-191	139-144.5	0-139	2188787.20	6115560.11	380.85	381.21
18_BGMW02E					5	0.020	SS	198-233	0-198	SCH 80 PVC				2188691.86	6115992.03	391.62	390.93

Explanation
(a) - Reference point northing, easting, and elevation data collected by Towill Surveying of Tustin, California.
NAD 83 - Northing and easting coordinate system for Marine Corps Air Station El Toro.
SS - stainless steel
SCH 40 PVC - schedule 40 polyvinyl casing
LCS - low carbon steel
bgs - below ground surface
ID - identification
** - Datum mean sea level (msl)*
 # - Bentonite seal may include #0/30, #1/20, or #60 transition sand. See well construction logs for details.
PZ-01 - Piezometer
NA - Not available

Non OHM wells were referenced from:

Marine Corps Air Station El Toro, El Toro, California, Installation Restoration Program, Phase I Remedial Investigation Draft Technical Memorandum, " May 1993, Volume II Prepared by Southwest Naval Facilities Engineering Command with Jacobs Engineering Corp. Inc.

Draft Phase II Remedial Investigation Report Operable Unit 2B-Site 1" Marine Corps Air Station El Toro, California, Volume III of V Appendices F-O

2.2 Groundwater Level Measurements

Depth to water measurements presented in this report were collected by OHM personnel on March 28 and 31, 1997 and converted to groundwater elevation data. This data was utilized to evaluate the hydraulic gradient and the groundwater flow conditions at the various tank farms and one UST site at MCAS, El Toro. Table 2-2, Water Level Measurements and Groundwater Elevations, presents the groundwater elevations for the subject wells and piezometers.

Site maps utilized for the presentation of the groundwater surface contours are presented in Section 5 through Section 8. These site specific contour maps were then transferred to a regional well location site map and utilized to estimate the regional groundwater gradient at the El Toro Site (see Figure 2-1, Regional Groundwater Contour Map — December 13 and 16, 1996).

Prior to collecting groundwater level measurements, each sampling location, including the CERCLA wells, was surveyed by a California-licensed well surveyor. Surveying points included Northing and Easting coordinates (NAD 83 and NAD 27), top of casing, and ground surface elevations, based on mean sea level. Well survey information is presented on site figures located in Section 5 through Section 8. Survey data is also presented in Table 2-1.

For the sampling events presented in this report, the depth to groundwater was measured from the top of casing, unless otherwise indicated, and then recorded in the Depth to Water Logs included as Appendix A of this report. The measurements were collected with a Solinst® water level meter with an accuracy of ± 0.01 feet. The water level meter was decontaminated between each well with a solution of Liquinox™ and distilled water followed by two distilled water rinses.

2.3 Groundwater Sample Collection

During this sampling event, groundwater samples were collected from a combined total of 42 OHM and CERCLA monitoring wells and two piezometers. Samples were collected at the following tank farms and UST site and are presented in this report:

- Tank Farm 1 - two OHM and four CERCLA wells
- Tank Farm 2 - four OHM wells and four CERCLA wells
- Tank Farm 3 - three OHM wells
- Tank Farm 4 - three OHM and two CERCLA wells

Table 2-2
Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Screen Interval (feet bgs)	Depth to Water (feet bgs)	TOC Elevation (feet msl)	Ground Surface Elevation (feet msl)	Water Elevation (feet msl)
TF1MW-01	10-Sep-96	109.5-149.5	110.41	259.42	259.91	**149.01**
	13-Dec-96		110.22	259.42	259.91	**149.20**
	14-Jan-97		110.00	259.42	259.91	**149.42**
	28-Mar-97		109.31	259.42	259.91	**150.11**
	19-May-97		109.57	259.42	259.91	**149.85**
TF1MW-02	23-Jul-96	110 -150	112.90	263.68	264.03	**150.78**
	11-Sep-96		113.20	263.68	264.03	**150.48**
	13-Dec-96		113.10	263.68	264.03	**150.58**
	14-Jan-97		112.87	263.68	264.03	**150.81**
	28-Mar-97		112.19	263.68	264.03	**151.49**
	14-May-97		112.47	263.68	264.03	**151.21**
	19-May-97		112.48	263.68	264.03	**151.20**
18_DW135	6-Sep-96	115-135	116.85	268.32	269.00	**151.47**
	13-Dec-96		117.00	268.32	269.00	**151.32**
	14-Jan-97		116.75	268.32	269.00	**151.57**
	28-Mar-97		115.98	268.32	269.00	**152.34**
	19-May-97		116.20	268.32	269.00	**152.12**
14_DBMW50	6-Sep-96	120-160	119.45	270.84	270.28	**151.39**
	13-Dec-96		119.60	270.84	270.28	**151.24**
	10-Jan-97		118.50	270.84	270.28	**152.34**
	28-Mar-97		118.60	270.84	270.28	**152.24**
	19-May-97		118.80	270.84	270.28	**152.04**
14_DGMW79	13-Dec-96	118-158	118.15	268.80	268.99	**150.65**
	28-Mar-97		NM	268.80	268.99	**NM**
	14-May-97		NM	268.80	268.99	**NM**
	19-May-97		117.29	268.80	268.99	**151.51**
18_BGMW103	10-Sep-96	395-495	125.30	252.15	251.22	**126.85**
	13-Dec-96		107.05	252.15	251.22	**145.10**
	14-Jan-97		106.90	252.15	251.22	**145.25**
	28-Mar-97		117.10	252.15	251.22	**135.05**
	14-May-97		120.51	252.15	251.22	**131.64**
	19-May-97		120.94	252.15	251.22	**131.21**
24_EX2	9-Sep-96	109.5-211.5	106.68	252.58	251.34	**145.90**
	13-Dec-96		105.94	252.58	251.34	**146.64**
	13-Jan-97		105.20	252.58	251.34	**147.38**
TF2MW-01	14-May-96	120-160	131.78	283.52	283.97	**151.74**
	29-Aug-96		132.37	283.52	283.97	**151.15**
	4-Sep-96		132.37	283.52	283.97	**151.15**
	13-Dec-96		132.60	283.52	283.97	**150.92**
	23-Dec-96		132.67	283.52	283.97	**150.85**
	17-Jan-97		110.00	283.52	283.97	**173.52**
	28-Jan-97		127.24	283.52	283.97	**156.28**
	28-Mar-97		131.58	283.52	283.97	**151.94**
	19-May-97		131.42	283.52	283.97	**152.10**

Table 2-2
Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Screen Interval (feet bgs)	Depth to Water (feet bgs)	TOC Elevation (feet msl)	Ground Surface Elevation (feet msl)	Water Elevation (feet msl)
TF2MW-02	16-May-96	115-155	127.75	278.80	279.53	**151.05**
	30-Aug-96		127.35	278.80	279.53	**151.45**
	13-Dec-96		127.75	278.80	279.53	**151.05**
	28-Jan-97		127.24	278.80	279.53	**151.56**
	31-Dec-96		127.60	278.80	279.53	**151.20**
	28-Mar-97		128.68	278.80	279.53	**150.12**
	19-May-97		126.46	278.80	279.53	**152.34**
TF2MW-03	20-May-96	120-160	128.20	279.67	280.32	**151.47**
	13-Dec-96		129.44	279.67	280.32	**150.23**
	24-Dec-96		129.15	279.67	280.32	**150.52**
	10-Jan-97		128.80	279.67	280.32	**150.87**
	28-Mar-97		128.12	279.67	280.32	**151.55**
	19-May-97		128.22	279.67	280.32	**151.45**
TF2MW-04	24-May-96	120-160	129.15	280.88	281.42	**151.73**
	30-Aug-96		132.32	280.88	281.42	**148.56**
	13-Dec-96		129.65	280.88	281.42	**151.23**
	13-Jan-97		129.20	280.88	281.42	**151.68**
	28-Mar-97		128.66	280.88	281.42	**152.22**
	19-May-97		128.64	280.88	281.42	**152.24**
13_UGMW32	3-Sep-96	144-184	133.88	285.25	285.40	**151.37**
GS	13-Dec-96		133.73	285.25	285.40	**151.52**
	27-Dec-96		133.36	285.25	285.40	**151.89**
	28-Mar-97		132.73	285.25	285.40	**152.52**
	19-May-97		132.91	285.25	285.40	**152.34**
13_DBMW49	4-Sep-96	142-182	129.43	280.67	280.04	**151.24**
	13-Dec-96		128.58	280.67	280.04	**152.09**
	27-Dec-96		128.38	280.67	280.04	**152.29**
	28-Mar-97		128.03	280.67	280.04	**152.64**
	19-May-97		128.40	280.67	280.04	**152.27**
13_DGMW78	4-Sep-96	127-167	125.00	276.16	276.42	**151.16**
GS	13-Dec-96		125.78	276.16	276.42	**150.38**
	10-Jan-97		125.06	276.16	276.42	**151.10**
	28-Mar-97		128.03	276.16	276.42	**148.13**
	19-May-97		128.40	276.16	276.42	**147.76**
15_DBMW51	5-Sep-96	125-165	119.80	269.45	269.79	**149.65**
	13-Dec-96		119.92	269.45	269.79	**149.53**
	20-Dec-96		119.68	269.45	269.79	**149.77**
	28-Mar-97		118.64	269.45	269.79	**150.81**
	19-May-97		118.85	269.45	269.79	**150.60**
TF3MW-01	31-Oct-96	169.5-209.5	178.47	332.86	333.45	**154.39**
	5-Nov-96		178.45	332.86	333.45	**154.41**
	13-Dec-96		177.88	332.86	333.45	**154.98**
	20-Jan-97		177.41	332.86	333.45	**155.45**
	28-Mar-97		176.75	332.86	333.45	**156.11**
	20-May-97		176.80	332.86	333.45	**156.06**

Table 2-2
Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Screen Interval (feet bgs)	Depth to Water (feet bgs)	TOC Elevation (feet msl)	Ground Surface Elevation (feet msl)	Water Elevation (feet msl)
TF3MW-02	13-Aug-96	159-199	165.95	318.38	319.36	**152.43**
	12-Sep-96		166.10	318.38	319.36	**152.28**
	13-Dec-96		166.02	318.38	319.36	**152.36**
	15-Jan-97		165.70	318.38	319.36	**152.68**
	28-Mar-97		164.77	318.38	319.36	**153.61**
	20-May-97		164.94	318.38	319.36	**153.44**
TF3MW-03	27-Aug-96	165.5-205.5	193.50	329.13	329.92	**135.63**
	18-Sep-96		175.60	329.13	329.92	**153.53**
	13-Dec-96		175.53	329.13	329.92	**153.60**
	15-Jan-97		175.33	329.13	329.92	**153.80**
	16-Jan-97		175.33	329.13	329.92	**153.80**
	28-Mar-97		174.34	329.13	329.92	**154.79**
	20-May-97		174.58	329.13	329.92	**154.55**
TF4MW-01	9-Sep-96	201-241	206.04	378.84	379.29	**172.80**
	27-Sep-96		205.91	378.84	379.29	**172.93**
	16-Dec-96		205.62	378.84	379.29	**173.22**
	31-Dec-96		205.29	378.84	379.29	**173.55**
	28-Mar-94		204.36	378.84	379.29	**174.48**
	20-May-97		204.02	378.84	379.29	**174.82**
TF4MW-02	16-Sep-96	201-241	210.80	384.97	385.27	**174.17**
	4-Oct-96		208.28	384.97	385.27	**176.69**
	16-Dec-96		209.20	384.97	385.27	**175.77**
	31-Dec-96		208.84	384.97	385.27	**176.13**
	28-Mar-97		208.11	384.97	385.27	**176.86**
	20-May-97		208.54	384.97	385.27	**176.43**
TF4MW-03	3-Sep-96	202.5-242.5	208.42	384.07	384.53	**175.65**
	3-Oct-96		209.64	384.07	384.53	**174.43**
	16-Dec-96		208.00	384.07	384.53	**176.07**
	6-Jan-97		207.71	384.07	384.53	**176.36**
	28-Mar-97		206.77	384.07	384.53	**177.30**
	20-May-97		206.22	384.07	384.53	**177.85**
18_BGMW12	16-Dec-96	165-205	154.54	304.48	304.89	**149.94**
	28-Mar-97	NM				
	20-May-97	NM				
18_BGMW16	2-Oct-96	223-263	216.18	376.58	375.82	**160.40**
	16-Dec-96		216.04	376.58	375.82	**160.54**
	30-Dec-96		215.60	376.58	375.82	**160.98**
	28-Mar-97		214.62	376.58	375.82	**161.96**
	20-May-97		214.69	376.58	375.82	**161.89**
20_UGMW36	7-Oct-96	183-223	184.76	338.70	338.12	**153.94**
	16-Dec-96		185.52	338.70	338.12	**153.18**
	30-Dec-96		185.11	338.70	338.12	**153.59**
	28-Mar-97		184.07	338.70	338.12	**154.63**
	20-May-97		184.10	338.70	338.12	**154.60**

Table 2-2
Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Screen Interval (feet bgs)	Depth to Water (feet bgs)	TOC Elevation (feet msl)	Ground Surface Elevation (feet msl)	Water Elevation (feet msl)
TF6MW-01	27-Aug-96	184.5-204.5	193.50	383.57	383.89	**190.07**
	16-Sep-96		192.49	383.57	383.89	**191.08**
	13-Dec-96		191.92	383.57	383.89	**191.65**
	16-Jan-97		191.61	383.57	383.89	**191.96**
	31-Mar-97		190.73	383.57	383.89	**192.84**
	14-May-97		190.56	383.57	383.89	**193.01**
TF6MW-02	9-Sep-96	190 - 230	196.82	384.65	384.93	**187.83**
	16-Sep-96		196.65	384.65	384.93	**188.00**
	13-Dec-96		196.26	384.65	384.93	**188.39**
	20-Jan-97		196.25	384.65	384.93	**188.40**
	31-Mar-97		194.20	384.65	384.93	**190.45**
	14-May-97		194.97	384.65	384.93	**189.68**
04_DGMW66	16-Sep-96	250-290	211.90	401.57	401.11	**189.67**
	13-Dec-96		210.56	401.57	401.11	**191.01**
	17-Jan-97		210.08	401.57	401.11	**191.49**
	31-Mar-97		209.72	401.57	401.11	**191.85**
	14-May-97		209.69	401.57	401.11	**191.88**
18_BGMW01E	13-Sep-96	205-225	203.65	392.08	391.44	**188.43**
	13-Dec-96		203.26	392.08	391.44	**188.82**
	17-Jan-97		203.10	392.08	391.44	**188.98**
	31-Mar-97		202.11	392.08	391.44	**189.97**
	14-May-97		201.86	392.08	391.44	**190.22**
04_UGMW63	13-Sep-96	235-275	210.40	404.13	403.42	**193.73**
	13-Dec-96		209.68	404.13	403.42	**194.45**
	17-Jan-97		209.10	404.13	403.42	**195.03**
	31-Mar-97		208.44	404.13	403.42	**195.69**
	14-May-97		207.95	404.13	403.42	**196.18**
04_DGMW40	13-Sep-96	220-260	210.30	400.46	400.01	**190.16**
	13-Dec-96		209.50	400.46	400.01	**190.96**
	16-Jan-97		208.90	400.46	400.01	**191.56**
	31-Mar-97		208.53	400.46	400.01	**191.93**
	14-May-97		208.40	400.46	400.01	**192.06**
TF555MW-01	7-Aug-96	179-219	187.44	424.12	424.49	**236.68**
	24-Sep-96		187.04	424.12	424.49	**237.08**
GS	13-Dec-96		186.89	424.12	424.49	**237.23**
	4-Feb-97		185.60	424.12	424.49	**238.52**
	31-Mar-97		195.22	424.12	424.49	**228.90**
	14-May-97		194.96	424.12	424.49	**229.16**
TF555MW-02	6-Aug-96	25-60	25.15	458.24	458.48	**433.09**
	25-Sep-96		25.12	458.24	458.48	**433.12**
	13-Dec-96		25.15	458.24	458.48	**433.09**
	29-Jan-97		24.90	458.24	458.48	**433.34**
	31-Mar-97		24.54	458.24	458.48	**433.70**
	14-May-97		24.68	458.24	458.48	**433.56**

Table 2-2
Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

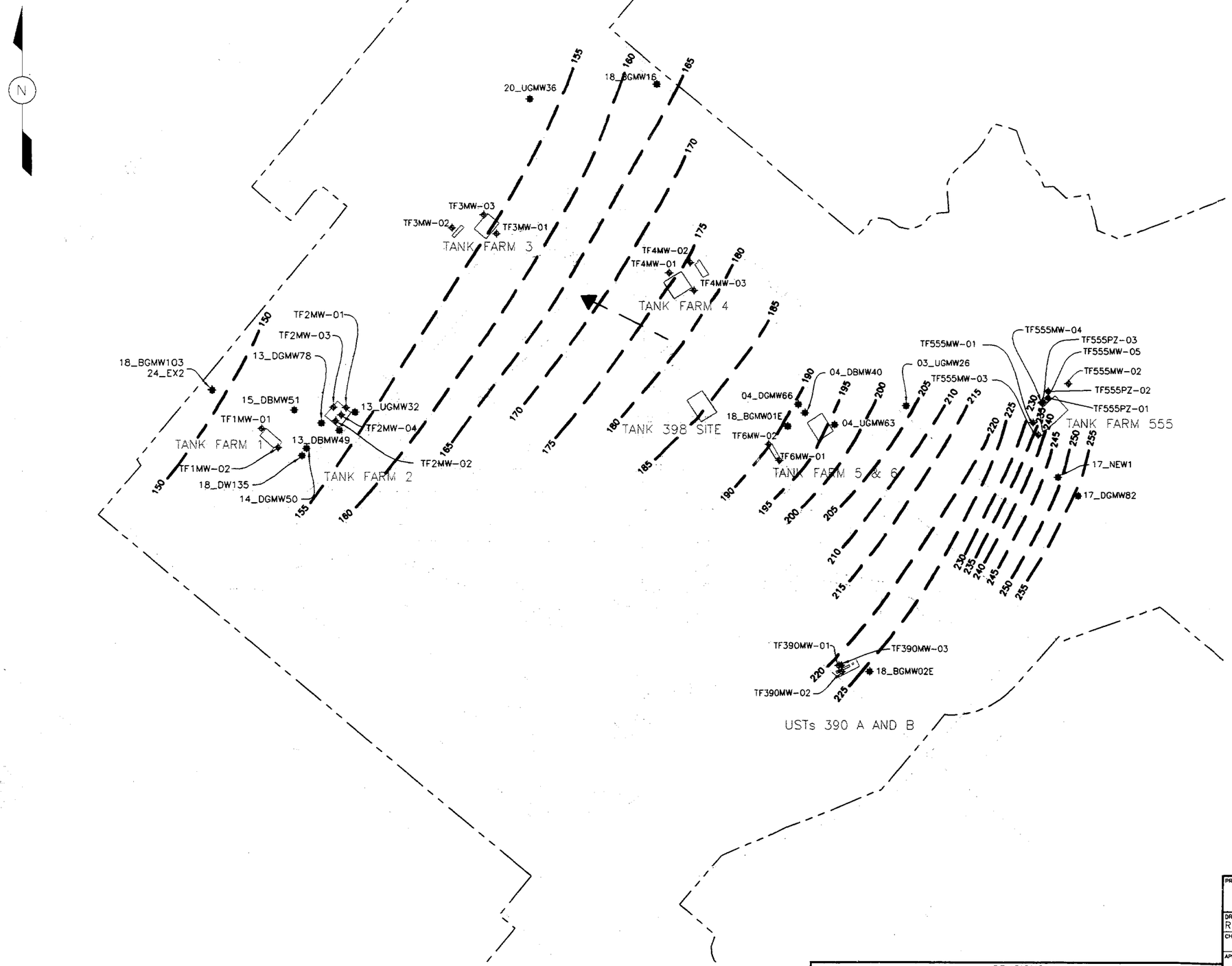
Well Number	Date Measured	Screen Interval (feet bgs)	Depth to Water (feet bgs)	TOC Elevation (feet msl)	Ground Surface Elevation (feet msl)	Water Elevation (feet msl)
TF555MW-03	7-Aug-96	180-220	184.50	422.91	423.37	**238.41**
	24-Sep-96		183.95	422.91	423.37	**238.96**
GS	13-Dec-96		183.33	422.91	423.37	**239.58**
	4-Feb-97		182.50	422.91	423.37	**240.41**
	31-Mar-97		182.12	422.91	423.37	**240.79**
	14-May-97		182.26	422.91	423.37	**240.65**
TF555MW-04	12-Aug-96	89.6-109.6	23.58	437.01	437.39	**413.43**
	26-Sep-96		23.82	437.01	437.39	**413.19**
GS	13-Dec-96		24.09	437.01	437.39	**412.92**
	22-Jan-97		23.61	437.01	437.39	**413.40**
	31-Mar-97		23.63	437.01	437.39	**413.38**
	14-May-97		23.60	437.01	437.39	**413.41**
TF555MW-05	28-Aug-96	49.5-64.5	42.55	437.63	437.99	**395.08**
	25-Sep-96		42.56	437.63	437.99	**395.07**
	13-Dec-96		42.58	437.63	437.99	**395.05**
	22-Jan-97		42.42	437.63	437.99	**395.22**
	31-Mar-97		42.46	437.63	437.99	**395.17**
	14-May-97		42.48	437.63	437.99	**395.15**
TF555PZ-01	24-Oct-96	25-50	25.74	441.99	442.62	**416.25**
	31-Mar-97		25.54	441.99		**416.45**
	14-May-97		25.62	441.99		**416.37**
	13-Dec-96		25.89	441.99	442.62	**416.10**
	22-Jan-97		25.70	441.99	442.62	**416.29**
TF555PZ-02	24-Oct-96	25-50	29.22	445.12	445.12	**415.90**
	31-Mar-97		29.28	445.12	445.12	**415.84**
	14-May-97		29.34	445.12	445.12	**415.78**
	13-Dec-96		29.56	445.12	445.12	**415.56**
	22-Jan-97		29.40	445.12	445.12	**415.72**
TF555PZ-03	27-Sep-96	25-40	dry	445.12	438.02	**dry**
	31-Mar-97		29.28	445.12		**415.84**
	14-May-97		29.34	445.12		**415.78**
	13-Dec-96		dry	445.12	438.02	**dry**
17_NEW1	20-Sep-96	186-226	184.70	431.95	431.36	**247.25**
	13-Dec-96		183.69	431.95	431.36	**248.26**
	31-Jan-97		182.90	431.95	431.36	**249.05**
	31-Mar-97		182.44	431.95	431.36	**249.51**
	14-May-97		182.40	431.95	431.36	**249.55**
03_UGMW26	23-Sep-96	230-270	217.85	419.82	419.39	**201.97**
GS	13-Dec-96		216.79	419.82	419.39	**203.03**
	7-Feb-97		216.38	419.82	419.39	**203.44**
	31-Mar-97		215.82	419.82	419.39	**204.00**
	14-May-97		215.80	419.82	419.39	**204.02**

Table 2-2
Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Screen Interval (feet bgs)	Depth to Water (feet bgs)	TOC Elevation (feet msl)	Ground Surface Elevation (feet msl)	Water Elevation (feet msl)
17_DGMW82	23-Sep-96	235-255	183.10	442.50	441.69	**259.40**
	13-Dec-96		185.67	442.50	441.69	**256.83**
	30-Jan-97		182.25	442.50	441.69	**260.25**
	31-Mar-97		184.84	442.50	441.69	**257.66**
	14-May-97		184.62	442.50	441.69	**257.88**
T390MW-01	5-Aug-96	158-198	160.28	379.80	380.20	**219.52**
	19-Sep-96		159.90	379.80	380.20	**219.90**
	26-Sep-96		159.70	379.80	380.20	**220.10**
	27-Sep-96		159.79	379.80	380.20	**220.01**
	13-Dec-96		159.06	379.80	380.20	**220.74**
	21-Jan-97		159.54	379.80	380.20	**220.26**
	28-Mar-97		158.18	379.80	380.20	**221.62**
	20-May-97		157.82	379.80	380.20	**221.98**
T390MW-02	16-Sep-96	151.5-191.5	160.00	380.41	380.87	**220.41**
	19-Sep-96		159.73	380.41	380.87	**220.68**
	26-Sep-96		159.54	380.41	380.87	**220.87**
	27-Sep-96		159.61	380.41	380.87	**220.80**
	13-Dec-96		158.85	380.41	380.87	**221.56**
	28-Mar-97		158.00	380.41	380.87	**222.41**
	20-May-97		157.42	380.41	380.87	**222.99**
T390MW-03	18-Sep-96	149-189	161.40	380.85	381.21	**219.45**
	19-Sep-96		160.70	380.85	381.21	**220.15**
	26-Sep-96		160.40	380.85	381.21	**220.45**
	27-Sep-96		160.46	380.85	381.21	**220.39**
	13-Dec-96		159.75	380.85	381.21	**221.10**
	28-Mar-97		158.80	380.85	381.21	**222.05**
	20-May-97		158.53	380.85	381.21	**222.32**
18_BGMW02E	19-Sep-96	198-223	165.61	391.72	390.97	**226.11**
	27-Sep-96		166.19	391.72	390.97	**225.53**
	13-Dec-96		165.36	391.72	390.97	**226.36**
	21-Jan-97		159.80	391.72	390.97	**231.92**
	28-Mar-96		164.24	391.72	390.97	**227.48**
	20-May-96		163.87	391.72	390.97	**227.85**

Explanation

MSL - mean sea level
NA - not available
TOC - top of casing
GS - ground surface
RP - recording point (Unless otherwise indicated, the wells were measured from the TOC. If measurements were collected from the GS, the well number column was noted with a "GS".)



EXPLANATION:

- TF1MW-01 — OHM MONITORING WELL LOCATIONS
- 14_DBMW50 — CERCLA MONITORING WELL
- MCAS EL TORO BOUNDARY
- L 16 — RUNWAY NUMBER
- 160 — GROUNDWATER LEVEL CONTOUR (FEET ABOVE MEAN SEA LEVEL)
- 160 — INFERRED GROUNDWATER LEVEL CONTOUR (FEET ABOVE MEAN SEA LEVEL)
- INFFERED GROUNDWATER FLOW DIRECTION

GRAPHIC SCALE

800 0 400 800

(IN FEET)

REVISIONS			
REV. No.	DESCRIPTION	DATE	APPROVED

PROJECT: SWDIV			OHM Remediation Services Corp. A Subsidiary of OHM Corporation IRVINE, CA			
DRAWN BY: R. PIRMORADIAN	DATE: 09/12/97		REGIONAL GROUNDWATER CONTOUR MAP MARCH 28 AND 31, 1996			
CHECKED BY	DATE					
APPROVED BY	DATE					
PROJECT MANAGER	DATE		MARINE CORPS AIR STATION EL TORO, CALIFORNIA			
AUTOCAD FILE No. 18292S23.DWG						
SCALE: 1"=800'	SHEET 1	OF 1	DOCUMENT CONTROL No. SW4356	OHM PROJECT No. 18292	DRAWING No. FIG 2-1	REVISION 0

Sept 12, 1997 – 15:13:02 G:\PROJECTS\18292\18292S23.dwg

- Tank Farm 5 and 6 - two OHM and four CERCLA wells
- USTs 390A and 390B - three OHM wells and one CERCLA well
- Tank Farm 555 - two piezometers, five OHM, and three CERCLA wells

Prior to sampling, each well was purged with a 2-inch Grundfos submersible pump. Temperature, pH, conductivity, turbidity, and dissolved oxygen were measured for each well purged. Each well was sampled when approximately three well volumes were purged from the well, and the parameters were within 10 percent of the prior measurement for three consecutive readings. The well was sampled using the 2-inch Grundfos submersible pump. Groundwater samples were collected with a slow and steady flow rate between 0.5-2.5 gallons per minute. Copies of the groundwater sampling logs are provided in Appendix B, Groundwater Sampling Logs.

Groundwater samples were collected for analysis and tested for the parameters listed in Section 4.1 and submitted to California-certified laboratories (see Section 4 for laboratories used for analysis). Samples for total petroleum hydrocarbons (TPH) as gasoline, benzene, toluene, ethylbenzene, and total xylenes (BTEX), volatile organic compound (VOC), and total organic compound were collected first, followed by TPH extractables, metals, and general chemistry. Sample containers were provided by the laboratories in accordance with method requirements.

The samples were uniquely identified by using a sequential numbering system for the project. Each sample was labeled, taped with a custody seal, placed in a Ziploc™ bag and then stored with a trip blank in a plastic cooler with ice. Chain-of-custody forms were completed for samples collected and samples were picked up daily by the laboratories.

2.4 Equipment Decontamination Procedures and Equipment Rinsates

The Grundfos submersible pump, associated tubing and field meters were all decontaminated after each well was sampled. Equipment rinsates were collected prior to the sampling of each monitoring well. Four field duplicates, 20 trip blanks and 35 equipment rinsates were collected during the groundwater sampling event at the frequency specified in the *Preliminary Draft Project Plan, In Situ Treatment Systems Underground Storage Tank Program* (OHM 1996). Decontamination and rinsate procedures are outlined below.

The following decontamination and rinsate collection procedures were followed:

1. Placed the submersible pump with discharge tubing into a 55-gallon drum containing approximately 45 gallons of a solution of Liquinox™ and water.
2. Ran the pump at approximately 5 gallons per minute until the Liquinox™ and water solution was purged through the discharge tubing and into a decontamination water holding tank.

3. Washed the outside of the discharge tubing with a solution of Liquinox™ and water.
4. Rinsed the outside of the discharge tubing with distilled water, twice.
5. Placed the submersible pump with discharge tubing into a 55-gallon drum containing approximately 45 gallons of distilled water.
6. Ran the pump at approximately 5 gallons per minute until the water solution was purged through the discharge tubing and into the decontamination water holding tank.
7. Placed the submersible pump with discharge tubing into a 5-gallon bucket containing distilled water supplied by the laboratory.
8. Ran the pump, adding distilled water to the bucket as necessary until 10 gallons of distilled water was purged through the discharge tubing and into the decontamination water holding tank.
9. Collected the equipment rinsate for laboratory analysis.

Section 3
Waste Management

The waste that was generated during the groundwater sampling field activities included purge water from the wells and personal protective equipment (PPE) such as gloves and plastics. Purge water was collected in a 500-gallon poly tank mounted on a trailer. At the end of each day, the purge water was transferred to a 21,000-gallon baker type tank at the central treatment facility compound located on site. Accumulated purge water would then be pumped through the OHM carbon adsorption treatment system. Treated water samples were collected prior to discharge to the onsite golf course. PPE such as gloves and plastics were bagged and disposed of as industrial waste in a Class III landfill.

Section 4
Laboratory Analysis

Water samples were sent to EMAX Laboratories, Inc. (formerly known as CKY, Inc.) in Torrance, California. This laboratory is certified by the California Environmental Laboratory Accreditation Program.

4.1 Laboratory Methods

Analytical methods were performed according to SW-846 (Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, latest revision), *California Leaking Underground Fuel Tank (CA LUFT) Manual* (State Water Resources Control Board 1989) and United States Environmental Protection Agency (EPA) Methods for Chemical Analysis of Water and Wastes. Specific analyses performed for each sample is presented in analytical summary tables for each tank farm in the following sections.

The following is a list of parameters and methods performed for the April quarterly groundwater sampling event:

- BTEX and methyl tert-butyl ether (MTBE) by EPA Method 8020
- total petroleum hydrocarbons as gasoline, JP5 and/or diesel by EPA Method 8015/ CA LUFT Modified
- total phosphate by EPA Method 365.2 or 300.0
- volatile organic compounds including MTBE by EPA Method 8260A

4.2 Analytical Data Evaluation

The analytical laboratory data for the water samples in this report were submitted to Laboratory Data Consultants, Inc., located in Carlsbad, California, for independent data validation. Analytical results were qualified based upon compliance with method protocols and the modified National Functional Guidelines for Organic and Inorganic Data Review (USEPA 1994) and laboratory-specific quality control criteria. Approximately 10 percent of the data was subjected to EPA Level D data validation. EPA Level C data validation was performed on the remaining data. Groundwater analytical data associated with this report are usable as qualified.

Section 5
Tank Farms 1 and 2

For the purpose of presenting the groundwater occurrence and analytical results, tank farms within a reasonable aerial extent have been combined in a monitoring network map. In this section, Tank Farm 1 and 2 have been combined as a monitoring well network (Figure 5-1, Tank Farms 1 and 2 — Monitoring Well Location Map). This combined map was utilized to better define groundwater gradients and flow direction, as well as identify impacted groundwater and its lateral extent.

5.1 Groundwater Occurrence

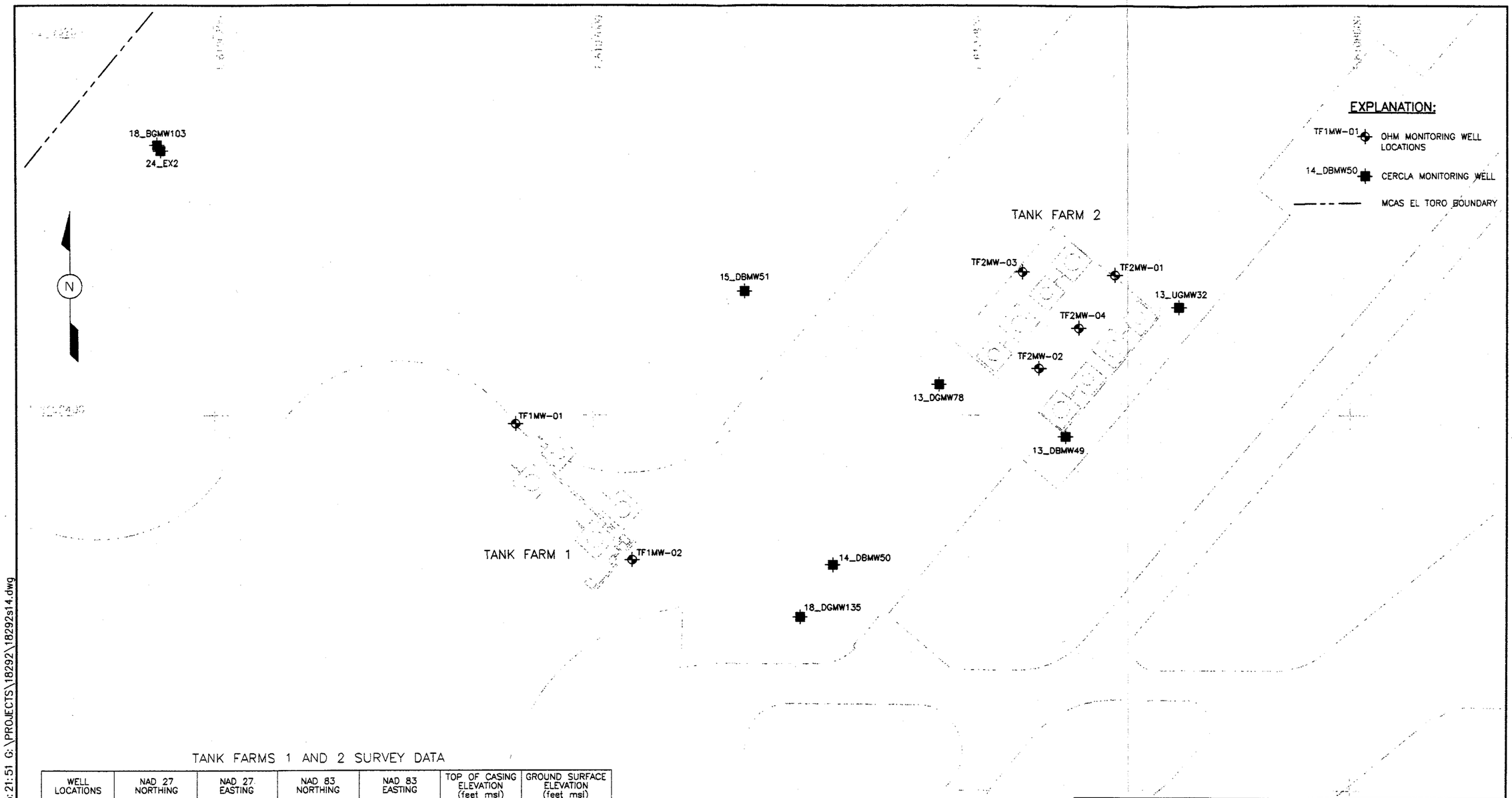
At Tank Farm 1 and 2, 15 wells were measured for depth to water on March 28, 1997, six were OHM groundwater monitoring wells (TF1MW-01, TF1MW-02, TF2MW-01, TF2MW-02, TF2MW-03, TF2MW-04), and nine were existing CERCLA wells (18_DW135, 14_DGMW50, 14_DGMW79, 18_BGMW103, 24_EX2, 13_UGMW32, 13_DBMW49, 13_DGMW78, and 15_DBMW51). Groundwater elevations across Tank Farm 1 and 2 ranged from approximately 147 feet above msl to approximately 153 feet above msl. The groundwater gradient across the two tank farms was approximately 0.0026 feet per foot (ft/ft), and the flow direction was to the northwest (see Figure 5-2, Tank Farms 1 and 2 — Groundwater Contour Map).

The groundwater potential at CERCLA well 18_BGMW103 deviated from the general groundwater gradient approximately 12 feet from the general groundwater gradient across the site. This deviation may have been the result of a deeper screen zone (395-495 feet bgs) placed in a lower aquifer as described by others in previous groundwater monitoring reports. OHM noted this groundwater fluctuation in a previous groundwater monitoring report (OHM 1997) and will continue to monitor for groundwater elevation fluctuation in this well.

5.2 Analytical Results

Section 4.1 summarizes laboratory methods for this sampling period. Table 5-1, Analytical Summary for Tank Farm 1, and Table 5-2, Analytical Summary for Tank Farm 2, identify the laboratory analyses performed at Tank Farms 1 and 2. Appendix C, Analytical Laboratory Reports, Chain-of-Custody Forms, and Laboratory Validation Reports, Groundwater Analytical Results, provides the previous groundwater sampling events reported concentrations in addition to the April analytical results for the laboratory methods analyzed. Figure 5-3, Tank Farms 1 and 2 TPH and BTEX Concentration Map, exhibits the TPH, BTEX, and MTBE results from the June 1996 sampling event through the April 1997 sampling event.

In addition to the above mentioned investigations, a substantial amount of work has been conducted by others at the site in conjunction with characterization of the regional VOC groundwater contamination. Those investigations have produced regional maps identifying the onsite and off-site extent of VOC impacted groundwater (Bechtel 1996). The regional maps indicate that Tank Farm 1 and Tank Farm 2 are located within the northeast portion of the study area defined as the "interim-action area of concern." Therefore, OHM included VOC sampling at Tank Farms 1 and 2.



TANK FARMS 1 AND 2 SURVEY DATA

WELL LOCATIONS	NAD 27 NORTHING	NAD 27 EASTING	NAD 83 NORTHING	NAD 83 EASTING	TOP OF CASING ELEVATION (feet msl)	GROUND SURFACE ELEVATION (feet msl)
TF1MW-01	551935.94	1545427.59	2192380.97	6106834.89	259.42	259.91
TF1MW-02	551645.40	1545675.10	2192090.43	6107082.40	263.68	264.03
18_DW135	551523.20	1546030.62	2191968.23	6107437.92	268.32	269.00
14_DBMW50	551634.37	1546099.08	2192079.40	6107506.38	270.84	270.28
18_BGMW103	552528.49	1544671.65	2192973.52	6106078.95	252.15	251.22
24_EX2	552516.64	1544679.15	2192961.68	6106086.45	252.58	251.34
TF2MW-01	552253.98	1546694.08	2192698.99	6108101.39	283.52	283.97
TF2MW-02	552055.12	1546535.34	2192500.14	6107942.65	278.80	279.53
TF2MW-03	552260.88	1546500.50	2192705.90	6107907.81	279.67	280.32
TF2MW-04	552141.32	1546618.51	2192586.34	6108025.82	280.88	281.42
13_UGMW32	552185.60	1546830.71	2192630.62	6108238.02	285.25	285.40
13_DBMW49	551909.42	1546590.57	2192534.44	6107997.88	280.67	280.04
13_DGMW78	552020.45	1546324.36	2192465.47	6107731.67	276.16	276.42
15_DBMW51	552219.01	1545914.85	2192664.04	6107322.15	269.45	269.79

msl - mean sea level

GRAPHIC SCALE

200 0 100 200

(IN FEET)

REVISIONS

REV. No.	DESCRIPTION	DATE	APPROVED

PROJECT: SWDIV

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

DRAWN BY: R. PIRMORADIAN DATE: 09/12/97
CHECKED BY DATE
APPROVED BY DATE
PROJECT MANAGER DATE
AUTOCAD FILE No. 18292S14.DWG

TANK FARMS 1 AND 2
MONITORING WELL LOCATION MAP

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.	REVISION
1"=200'	1	1	SW4356	18292	FIG 5-1	0

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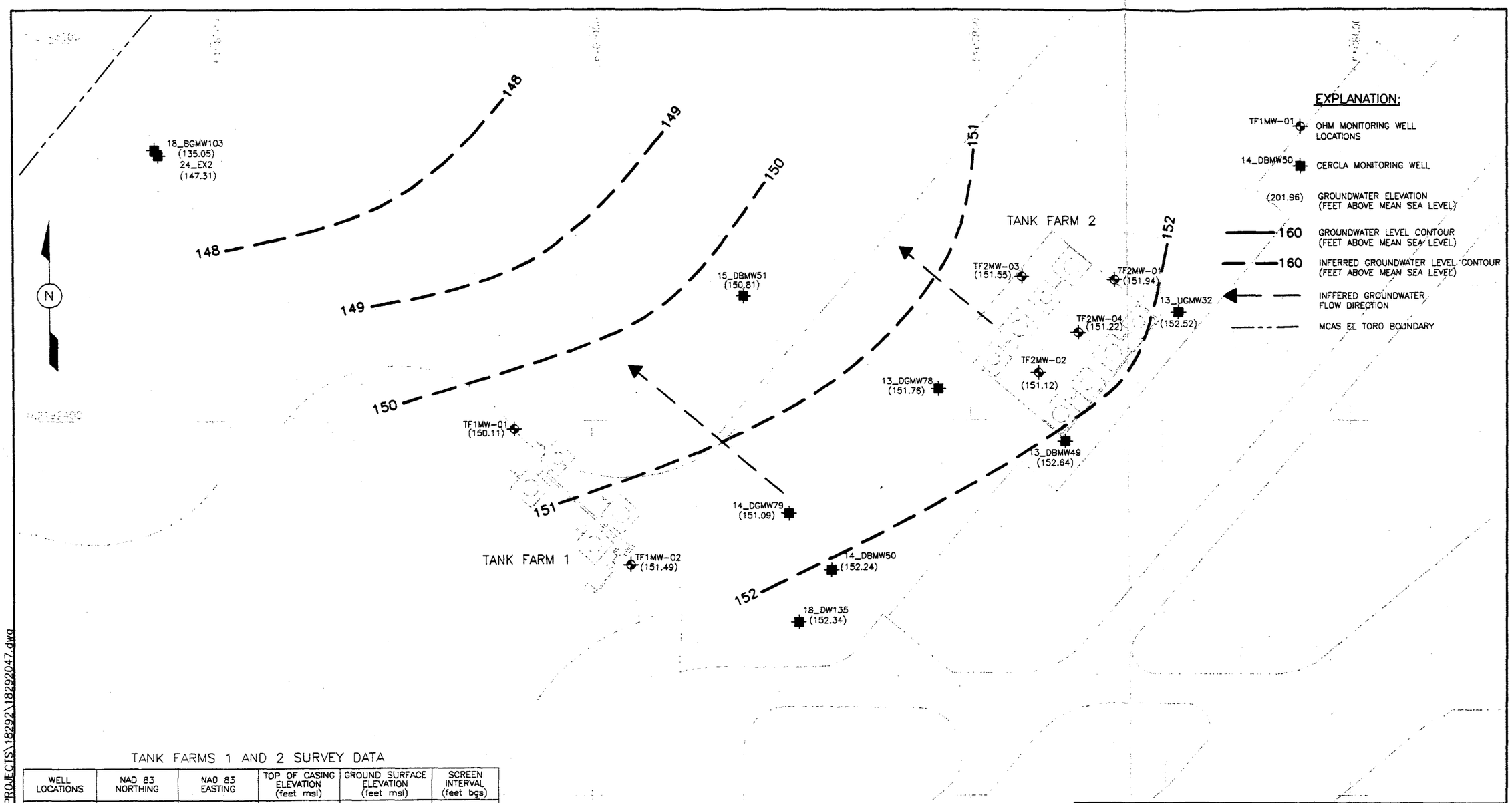

TANK FARMS 1 AND 2 SURVEY DATA

WELL LOCATIONS	NAD 83 NORTHING	NAD 83 EASTING	TOP OF CASING ELEVATION (feet msl)	GROUND SURFACE ELEVATION (feet msl)	SCREEN INTERVAL (feet bgs)
TF1MW-02	2192090.43	6107082.40	263.68	264.03	110-150
18_DW135	2191968.23	6107437.92	268.32	269.00	115-135
14_DBMW50	2192079.40	6107506.38	270.84	270.28	120-160
18_BGMW103	2192973.52	6106078.95	252.15	251.22	NA*
24_EX2	2192961.68	6106086.45	252.58	251.34	109-211.5
TF2MW-01	2192698.99	6108101.39	283.52	283.97	120-160
TF2MW-02	2192500.14	6107942.65	278.80	279.53	115-155.33
TF2MW-03	2192705.90	6107907.81	279.67	280.32	120-160
TF2MW-04	2192586.34	6108025.82	280.88	281.42	120-160
13_UGMW32	2192630.62	6108238.02	285.25	285.40	144-184
13_DBMW49	2192534.44	6107997.88	280.67	280.04	142-182
13_DGMW78	2192465.47	6107731.67	276.16	276.42	127-167
14_DGMW79	2192200.06	6107417.21	268.08	268.99	118-158
15_DBMW51	2192664.04	6107322.15	269.45	269.79	125-165

msl - mean sea level
bgs - below ground surface
NA - not available

* deep well , well installed to 500' bgs.

GRAPHIC SCALE

200 0 100 200

(IN FEET)

REVISIONS

REV. No.	DESCRIPTION	DATE	APPROVED

CONTRACT NAME	SWDIV		
DRAWN BY	R. PIRMORADIAN	DATE	09/12/97
CHECKED BY		DATE	
APPROVED BY		DATE	
PROJECT MANAGER		DATE	
AUTOCAD FILE No.	18292047.DWG		

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

TANK FARMS 1 AND 2
GROUNDWATER CONTOUR MAP
MARCH 28, 1997

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.
1"=200'	1	1	SW4356	18292	FIG 5-2

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EXPLANATION OF ANALYTICAL TABLES

Analytical Methods
EPA Method 310.1 - alkalinity
EPA Method 350.1 / 350.2 / 350.3 - ammonia
EPA Method 8020 - BTEX and methyl tertiary butyl ether (MTBE)
EPA Method 300.0 - chloride
EPA Method 6010A - iron and potassium
EPA Method 353.2 - nitrate-nitrite
EPA Method 150.1 / 9045 - pH
EPA Method 300.0 / 375.2 /375.4 - sulfate
EPA Method 160.1 - total dissolved solids
SM 9215B / SM 9215C / SM 9215D - total heterotrophic plate count
EPA Method 351.2 / 351.4 - total Kjeldahl nitrogen (TKN)
EPA Method 415.1 / 415.2 - total organic compounds
EPA Method 8015/ CA LUFT Modified - total petroleum hydrocarbons as gasoline, JP5 and/or diesel
EPA Method 365.2 - total phosphorous
EPA Method 160.2 - total suspended solids
EPA Method 8260A - volatile organic compounds and MTBE

Abbreviations:

CA LUFT - California Leaking Underground Fuel Farms
EPA - Environmental Protection Agency
TPH - Total Petroleum Hydrocarbons
µg/L - micrograms per liter
mg/L - milligrams per liter
µmhos/cm - micro mhmos per centimeter
cfu/ml - colony forming units per milliliter
U - not detected above or equal to the stated reported limit
J - estimated value
UJ - not detected at the estimated reporting limit
R - rejected
P - fuel pattern does not match that of laboratory standard
PJ - fuel pattern of the estimated value does not match that of the laboratory standard
NA - not analyzed

Table 5-1
Analytical Summary for Tank Farm 1
MCAS El Toro, Santa Ana, California

Sample Number	Sample Location	Sample Date	EPA 8020	TPH AS GASOLINE	TPH-EXTRAC TABLE	EPA 8260A	EPA 120.1	EPA 130.2	EPA 150.1	EPA 160.1	EPA 160.2	EPA 310.1	EPA 325.2	EPA 340.2	EPA 350.1 / EPA 350.3	EPA 351.4	EPA 353.2 / EPA 353.3	EPA 365.2	EPA 375.2 / EPA 375.3
96-TF1-W-833	14_DBMW50	9/6/96	X	X	X	X													
96-TF1-W-834	Trip Blank	9/6/96	X	X		X													
96-TF1-W-835	18_DW135	9/6/96	X	X	X	X													
96-TF1-W-836	Trip Blank	9/9/96	X	X		X													
96-TF1-W-837	Equipment Rinsate	9/9/96	X	X	X	X													
96-TF1-W-838	24_EX2	9/9/96	X	X	X	X													
96-TF1-W-849	Trip Blank	9/10/96	X	X															
96-TF1-W-850	Equipment Rinsate	9/10/96	X	X	X				X	X	X	X			X	X	X	X	X
96-TF1-W-851	TF1MW-01	9/10/96	X	X	X				X	X	X	X			X	X	X	X	X
96-TF1-W-866	Trip Blank	9/11/96	X	X		X													
96-TF1-W-867	18_DGMW103	9/11/96	X	X	X	X													
96-TF1-W-868	Equipment Rinsate	9/11/96	X	X	X				X	X	X	X			X	X	X	X	X
96-TF1-W-869	TF1MW-02	9/11/96	X	X	X				X	X	X	X			X	X	X	X	X
97-TF1-W-1501	14_DBMW50	1/10/97	X	X	X	X													
97-TF1-W-1506	Equipment Rinsate	1/13/97	X	X	X														
97-TF1-W-1507	24_EX2	1/13/97	X	X	X	X													
97-TF1-W-1508	Equipment Rinsate	1/13/97	X	X	X														
97-TF1-W-1512	Equipment Rinsate	1/14/97	X	X	X	X													
97-TF1-W-1513	18_DGMW103	1/14/97	X	X	X	X													
97-TF1-W-1514	18_DGMW103 (Dup)	1/14/97	X	X	X	X													
97-TF1-W-1515	TF1MW-02	1/14/97	X	X	X	X	X	X					X	X			X	X	X
97-TF1-W-1516	Equipment Rinsate	1/14/97	X	X	X	X													
97-TF1-W-1517	TF1MW-01	1/14/97	X	X	X	X	X	X					X	X			X	X	X
97-TF1-W-1518	Equipment Rinsate	1/14/97	X	X	X	X													
97-TF1-W-1519	18_DW135	1/14/97	X	X	X	X													
97-TF1-W-1520	Trip Blank	1/14/97	X	X		X													
17486-237	Equipment Rinsate	4/21/97		X	X	X													
17486-238	18_DW135	4/21/97		X	X	X													
17486-241	Trip Blank	4/21/97		X		X													
17486-242	14_DBMW50	4/21/97		X	X	X													
17486-251	Equipment Rinsate	4/21/97		X	X	X													
17486-243	Trip Blank	4/22/97		X		X													
17486-244	24_EX2	4/22/97		X	X	X													
17486-245	Equipment Rinsate	4/22/97		X	X	X													
17486-246	TF1MW-02	4/22/97		X	X	X													
17486-248	Trip Blank	4/23/97		X		X													
17486-249	Equipment Rinsate	4/23/97		X	X	X													
17486-250	18_DGMW103	4/23/97		X	X	X													
17486-259	Trip Blank	4/28/97		X		X													
17486-260	Equipment Rinsate	4/28/97		X	X	X													
17486-261	TF1MW-01	4/28/97		X	X	X													
17486-262	TF1MW-01	4/28/97		X	X	X													

Table 5-1
Analytical Summary for Tank Farm 1
MCAS El Toro, Santa Ana, California

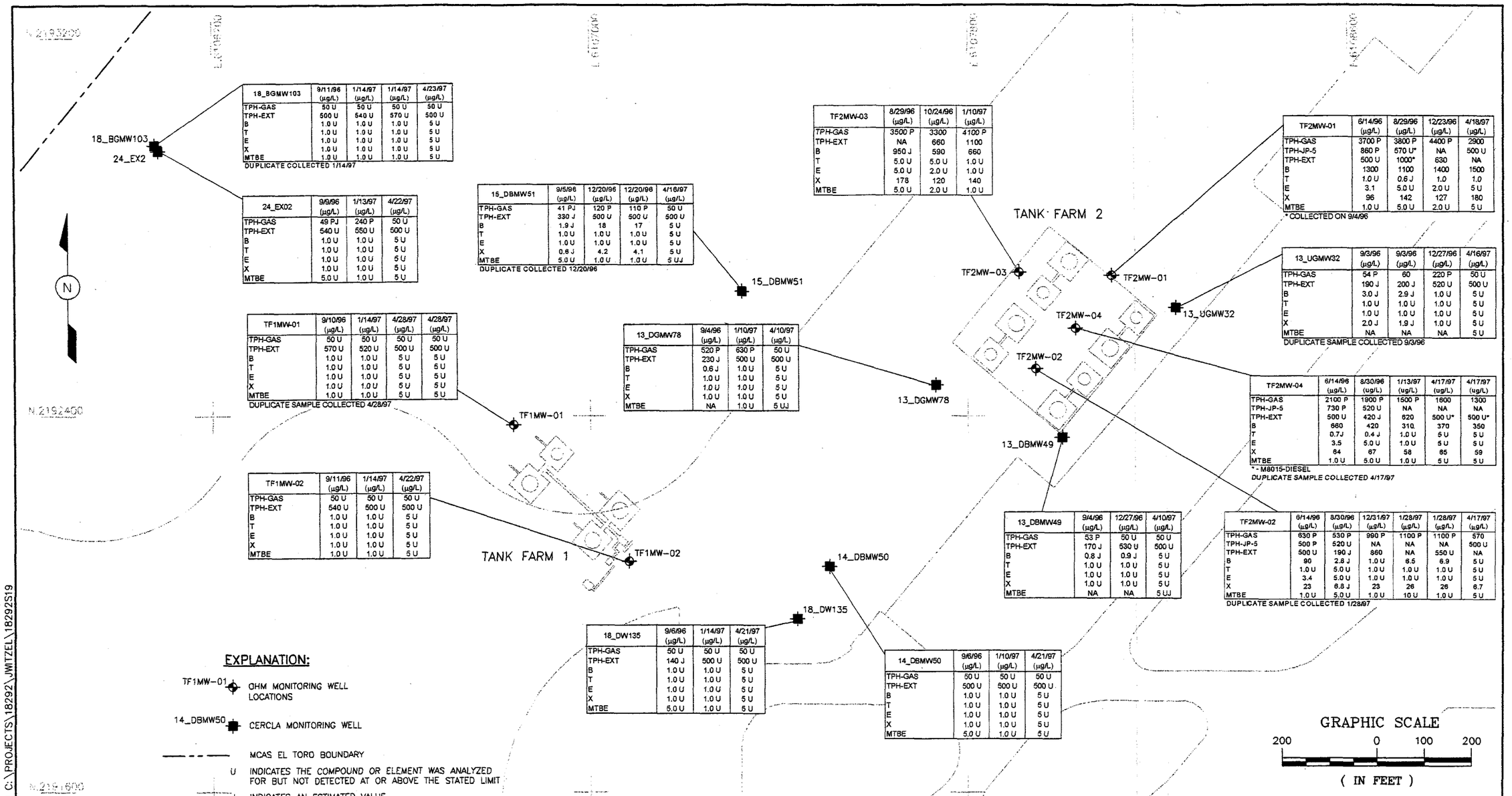
Sample Number	Sample Location	Sample Date	EPA 405.1	EPA 410.4	EPA 415.2	EPA 450.1	EPA 6010A	EPA 7470A	SM 9215-B/C
96-TF1-W-833	14_DBMW50	9/6/96							
96-TF1-W-834	Trip Blank	9/6/96							
96-TF1-W-835	18_DW135	9/6/96							
96-TF1-W-836	Trip Blank	9/9/96							
96-TF1-W-837	Equipment Rinsate	9/9/96							
96-TF1-W-838	24_EX2	9/9/96							
96-TF1-W-849	Trip Blank	9/10/96							
96-TF1-W-850	Equipment Rinsate	9/10/96			X		X		X
96-TF1-W-851	TF1MW-01	9/10/96			X		X		X
96-TF1-W-866	Trip Blank	9/11/96							
96-TF1-W-867	18_DGMW103	9/11/96							
96-TF1-W-868	Equipment Rinsate	9/11/96			X		X		X
96-TF1-W-869	TF1MW-02	9/11/96			X		X		X
97-TF1-W-1501	14_DBMW50	1/10/97							
97-TF1-W-1506	Equipment Rinsate	1/13/97							
97-TF1-W-1507	24_EX2	1/13/97							
97-TF1-W-1508	Equipment Rinsate	1/13/97							
97-TF1-W-1512	Equipment Rinsate	1/14/97							
97-TF1-W-1513	18_DGMW103	1/14/97							
97-TF1-W-1514	18_DGMW103 (Dup)	1/14/97							
97-TF1-W-1515	TF1MW-02	1/14/97	X	X		X	X	X	
97-TF1-W-1516	Equipment Rinsate	1/14/97							
97-TF1-W-1517	TF1MW-01	1/14/97	X	X		X	X	X	
97-TF1-W-1518	Equipment Rinsate	1/14/97							
97-TF1-W-1519	18_DW135	1/14/97							
97-TF1-W-1520	Trip Blank	1/14/97							
17486-237	Equipment Rinsate	4/21/97							
17486-238	18_DW135	4/21/97							
17486-241	Trip Blank	4/21/97							
17486-242	14_DBMW50	4/21/97							
17486-251	Equipment Rinsate	4/21/97							
17486-243	Trip Blank	4/22/97							
17486-244	24_EX2	4/22/97							
17486-245	Equipment Rinsate	4/22/97							
17486-246	TF1MW-02	4/22/97							
17486-248	Trip Blank	4/23/97							
17486-249	Equipment Rinsate	4/23/97							
17486-250	18_DGMW103	4/23/97							
17486-259	Trip Blank	4/28/97							
17486-260	Equipment Rinsate	4/28/97							
17486-261	TF1MW-01	4/28/97							
17486-262	TF1MW-01	4/28/97							

Table 5-2
Analytical Summary for Tank Farm 2
MCAS El Toro, Santa Ana, California

OHM Sample Number	Sample Location	Date Collected	EPA 8020	TPH AS GASOLINE	TPH-EXTRACTABLE	EPA 8260A	EPA 120.1	EPA 130.2	EPA 150.1	EPA 160.1	EPA 160.2	EPA 300.0	EPA 310.1	EPA 325.2	EPA 340.2	EPA 350.1 / EPA 350.1 / EPA 350.3	EPA 351.2 / EPA 351.4	EPA 353.2 / EPA 353.3	EPA 365.2	EPA 375.2 / EPA 375.3 / EPA 375.4	EPA 405.1	EPA 410.4	EPA 415.1 / EPA 415.2	EPA 450.1
96-TF2-W-670	TF2MW-01	6/14/96	X	X	X				X	X	X		X			X	X	X	X	X			X	
96-TF2-W-688	TF2MW-04	6/14/96	X	X	X				X	X	X		X			X	X	X	X	X			X	
96-TF2-W-689	TF2MW-02	6/14/96	X		X				X	X	X		X			X	X	X	X	X			X	
96-TF2-W-761	Trip Blank	8/28/96	X	X		X																		
96-TF2-W-762	Equipment Rinsate	8/28/96	X	X		X																		
96-TF2-W-763	TF2MW-03	8/29/96		X		X																		
96-TF2-W-782	Trip Blank	8/29/96	X	X																				
96-TF2-W-783	Equipment Rinsate	8/29/96	X	X		X																		
96-TF2-W-784	TF2MW-01	8/29/96		X		X																		
96-TF2-W-800	Trip Blank	8/30/96		X		X																		
96-TF2-W-801	Equipment Rinsate	8/30/96		X	X	X																		
96-TF2-W-802	TF2MW-04	8/30/96		X	X	X																		
96-TF2-W-803	Equipment Rinsate	8/30/96		X	X	X																		
96-TF2-W-804	TF2MW-02	8/30/96		X	X	X																		
96-TF2-W-815	Trip Blank	9/3/96	X	X		X																		
96-TF2-W-816	13_UGMW32	9/3/96	X	X	X	X																		
96-TF2-W-817	13_UGMW-32	9/3/96	X	X	X	X																		
96-TF2-W-821	13_DBMW49	9/4/96	X	X	X	X																		
96-TF2-W-822	13_DGMW78	9/4/96	X	X	X	X																		
96-TF2-W-823	TF2MW-01	9/4/96			X																			
96-TF2-W-830	15_BDMW51	9/5/96	X	X	X	X																		
96-TF2-W-831	Trip Blank	9/5/96	X	X		X																		
96-TF2-W-1453	Equipment Rinsate	12/16/96	X	X	X	X																		
96-TF2-W-1454	Trip Blank	12/16/96	X	X		X																		
96-TF2-W-1455	Trip Blank	12/20/96	X	X		X																		
96-TF2-W-1456	15_BDMW51	12/20/96	X	X	X	X																		
96-TF2-W-1457	15_BDMW51	12/20/96	X	X	X	X																		
96-TF2-W-1458	Trip Blank	12/23/96	X	X		X																		
96-TF2-W-1459	TF2MW-01	12/23/96	X	X	X	X																		
96-TF2-W-1460	Equipment Rinsate	12/24/96	X	X	X	X																		
96-TF2-W-1461	Trip Blank	12/24/96	X	X		X																		
96-TF2-W-1462	TF2MW-03	12/24/96	X	X	X	X																		
96-TF2-W-1467	Trip Blank	12/27/96	X	X		X																		
96-TF2-W-1468	13_UGMW32	12/27/96	X	X	X	X																		
96-TF2-W-1469	13_DBMW49	12/27/96	X	X	X	X																		
96-TF2-W-1470	Trip Blank	12/31/96	X	X		X																		
96-TF2-W-1471	Equipment Rinsate	12/31/96	X	X	X	X																		
96-TF2-W-1472	TF2MW-02	12/31/96	X	X	X	X	X	X													X	X		
97-TF2-W-1497	Trip Blank	1/10/97	X	X		X																		
97-TF2-W-1498	13_DGMW78	1/10/97	X	X	X	X																		
97-TF2-W-1499	Equipment Rinsate	1/10/97	X	X																				
97-TF2-W-1500	TF2MW-03	1/10/97	X	X	X	X	X	X						X	X			X	X	X	X	X		X
97-TF2-W-1502	Trip Blank	1/13/97	X	X		X																		
97-TF2-W-1503	Equipment Rinsate	1/13/97	X	X	X																			
97-TF2-W-1504	TF2MW-04	1/13/97	X	X	X	X	X	X						X	X			X	X	X	X	X		X
97-TF2-W-1505	SOURCE BLANK	1/13/97	X	X	X																			
97-TF2-W-1534	TF2MW-01	1/17/97					X	X						X	X			X	X	X	X	X		X
97-TF2-W-1546	Trip Blank	1/28/97	X	X		X																		
97-TF2-W-1547	TF2MW-02	1/28/97	X	X		X								X	X			X	X	X				
97-TF2-W-1548	TF2MW-02 (Dup)	1/28/97	X	X	X	X	X	X						X	X			X	X	X	X	X		X
97-TF2-W-1549	Equipment Rinsate	1/28/97	X	X	X	X																		
17486-198	Trip Blank	4/10/97		X		X																		
17486-199	13_DGMW78	4/10/97		X	X	X																		
17486-200	13_DBMW49	4/10/97		X	X	X																		
17486-220	Trip Blank	4/16/97		X		X																		
17486-221	Equipment Rinsate	4/16/97		X	X																			
17486-222	13_UGMW32	4/16/97		X	X	X																		
17486-223	Equipment Rinsate	4/16/97		X	X																			
17486-224	15_DBMW51	4/16/97		X	X	X																		
17486-225	Trip Blank	4/17/97		X		X																		
17486-226	Equipment Rinsate	4/17/97		X	X	X																		
17486-227	Equipment Rinsate	4/17/97		X	X	X																		
17486-228	TF2MW-02	4/17/97		X	X	X																		
17486-229	TF2MW-04	4/17/97		X	X	X																		
17486-230	TF2MW-04	4/17/97		X	X	X																		
17486-231	Trip Blank	4/18/97		X		X																		
17486-232	Equipment Rinsate	4/18/97		X	X																			
17486-233	Equipment Rinsate	4/18/97		X	X																			
17486-234	TF2MW-01	4/18/97		X	X	X																		
17486-235	TF2MW-03	4/18/97		X	X	X			X	X	X	X	X			X			X	X			X	

Table 5-2
Analytical Summary for Tank Farm 2
MCAS El Toro, Santa Ana, California

OHM Sample Number	Sample Location	Date Collected	EPA 6010A	EPA 7470A	SM 9215-B
96-TF2-W-670	TF2MW-01	6/14/96	X		X
96-TF2-W-688	TF2MW-04	6/14/96	X		X
96-TF2-W-689	TF2MW-02	6/14/96	X		X
96-TF2-W-761	Trip Blank	8/28/96			
96-TF2-W-762	Equipment Rinsate	8/28/96			
96-TF2-W-763	TF2MW-03	8/29/96			
96-TF2-W-782	Trip Blank	8/29/96			
96-TF2-W-783	Equipment Rinsate	8/29/96			
96-TF2-W-784	TF2MW-01	8/29/96			
96-TF2-W-800	Trip Blank	8/30/96			
96-TF2-W-801	Equipment Rinsate	8/30/96			
96-TF2-W-802	TF2MW-04	8/30/96			
96-TF2-W-803	Equipment Rinsate	8/30/96			
96-TF2-W-804	TF2MW-02	8/30/96			
96-TF2-W-815	Trip Blank	9/3/96			
96-TF2-W-816	13_UGMW32	9/3/96			
96-TF2-W-817	13_UGMW-32	9/3/96			
96-TF2-W-821	13_DBMW49	9/4/96			
96-TF2-W-822	13_DGMW78	9/4/96			
96-TF2-W-823	TF2MW-01	9/4/96			
96-TF2-W-830	15_BDMW51	9/5/96			
96-TF2-W-831	Trip Blank	9/5/96			
96-TF2-W-1453	Equipment Rinsate	12/16/96			
96-TF2-W-1454	Trip Blank	12/16/96			
96-TF2-W-1455	Trip Blank	12/20/96			
96-TF2-W-1456	15_BDMW51	12/20/96			
96-TF2-W-1457	15_BDMW51	12/20/96			
96-TF2-W-1458	Trip Blank	12/23/96			
96-TF2-W-1459	TF2MW-01	12/23/96			
96-TF2-W-1460	Equipment Rinsate	12/24/96			
96-TF2-W-1461	Trip Blank	12/24/96			
96-TF2-W-1462	TF2MW-03	12/24/96			
96-TF2-W-1467	Trip Blank	12/27/96			
96-TF2-W-1468	13_UGMW32	12/27/96			
96-TF2-W-1469	13_DBMW49	12/27/96			
96-TF2-W-1470	Trip Blank	12/31/96			
96-TF2-W-1471	Equipment Rinsate	12/31/96			
96-TF2-W-1472	TF2MW-02	12/31/96	X	X	
97-TF2-W-1497	Trip Blank	1/10/97			
97-TF2-W-1498	13_DGMW78	1/10/97			
97-TF2-W-1499	Equipment Rinsate	1/10/97			
97-TF2-W-1500	TF2MW-03	1/10/97	X	X	
97-TF2-W-1502	Trip Blank	1/13/97			
97-TF2-W-1503	Equipment Rinsate	1/13/97			
97-TF2-W-1504	TF2MW-04	1/13/97	X	X	
97-TF2-W-1505	SOURCE BLANK	1/13/97			
97-TF2-W-1534	TF2MW-01	1/17/97	X	X	
97-TF2-W-1546	Trip Blank	1/28/97			
97-TF2-W-1547	TF2MW-02	1/28/97			
97-TF2-W-1548	TF2MW-02 (Dup)	1/28/97	X	X	
97-TF2-W-1549	Equipment Rinsate	1/28/97			
17486-198	Trip Blank	4/10/97			
17486-199	13_DGMW78	4/10/97			
17486-200	13_DBMW49	4/10/97			
17486-220	Trip Blank	4/16/97			
17486-221	Equipment Rinsate	4/16/97			
17486-222	13_UGMW32	4/16/97			
17486-223	Equipment Rinsate	4/16/97			
17486-224	15_DBMW51	4/16/97			
17486-225	Trip Blank	4/17/97			
17486-226	Equipment Rinsate	4/17/97			
17486-227	Equipment Rinsate	4/17/97			
17486-228	TF2MW-02	4/17/97			
17486-229	TF2MW-04	4/17/97			
17486-230	TF2MW-04	4/17/97			
17486-231	Trip Blank	4/18/97			
17486-232	Equipment Rinsate	4/18/97			
17486-233	Equipment Rinsate	4/18/97			
17486-234	TF2MW-01	4/18/97			
17486-235	TF2MW-03	4/18/97			



18_BGMW103	9/11/96 (µg/L)	1/14/97 (µg/L)	1/14/97 (µg/L)	4/23/97 (µg/L)
TPH-GAS	50 U	50 U	50 U	50 U
TPH-EXT	500 U	540 U	570 U	500 U
B	1.0 U	1.0 U	1.0 U	5 U
T	1.0 U	1.0 U	1.0 U	5 U
E	1.0 U	1.0 U	1.0 U	5 U
X	1.0 U	1.0 U	1.0 U	5 U
MTBE	1.0 U	1.0 U	1.0 U	5 U

DUPLICATE COLLECTED 1/14/97

24_EX02	9/9/96 (µg/L)	1/13/97 (µg/L)	4/22/97 (µg/L)
TPH-GAS	49 PJ	240 P	50 U
TPH-EXT	540 U	550 U	500 U
B	1.0 U	1.0 U	5 U
T	1.0 U	1.0 U	5 U
E	1.0 U	1.0 U	5 U
X	1.0 U	1.0 U	5 U
MTBE	5.0 U	1.0 U	5 U

15_DBMW51	9/5/96 (µg/L)	12/20/96 (µg/L)	12/20/96 (µg/L)	4/16/97 (µg/L)
TPH-GAS	41 PJ	120 P	110 P	50 U
TPH-EXT	330 J	500 U	500 U	500 U
B	1.9 J	18	17	5 U
T	1.0 U	1.0 U	1.0 U	5 U
E	1.0 U	1.0 U	1.0 U	5 U
X	0.6 J	4.2	4.1	5 U
MTBE	5.0 U	1.0 U	1.0 U	5 UJ

DUPLICATE COLLECTED 12/20/96

TF1MW-01	9/10/96 (µg/L)	1/14/97 (µg/L)	4/28/97 (µg/L)	4/28/97 (µg/L)
TPH-GAS	50 U	50 U	50 U	50 U
TPH-EXT	570 U	520 U	500 U	500 U
B	1.0 U	1.0 U	5 U	5 U
T	1.0 U	1.0 U	5 U	5 U
E	1.0 U	1.0 U	5 U	5 U
X	1.0 U	1.0 U	5 U	5 U
MTBE	1.0 U	1.0 U	5 U	5 U

DUPLICATE SAMPLE COLLECTED 4/28/97

TF1MW-02	9/11/96 (µg/L)	1/14/97 (µg/L)	4/22/97 (µg/L)
TPH-GAS	50 U	50 U	50 U
TPH-EXT	540 U	500 U	500 U
B	1.0 U	1.0 U	5 U
T	1.0 U	1.0 U	5 U
E	1.0 U	1.0 U	5 U
X	1.0 U	1.0 U	5 U
MTBE	1.0 U	1.0 U	5 U

13_DGMW78	9/4/96 (µg/L)	1/10/97 (µg/L)	4/10/97 (µg/L)
TPH-GAS	520 P	630 P	50 U
TPH-EXT	230 J	500 U	500 U
B	0.6 J	1.0 U	5 U
T	1.0 U	1.0 U	5 U
E	1.0 U	1.0 U	5 U
X	1.0 U	1.0 U	5 U
MTBE	NA	1.0 U	5 UJ

13_DBMW49	9/4/96 (µg/L)	12/27/96 (µg/L)	4/10/97 (µg/L)
TPH-GAS	53 P	50 U	50 U
TPH-EXT	170 J	530 U	500 U
B	0.8 J	0.9 J	5 U
T	1.0 U	1.0 U	5 U
E	1.0 U	1.0 U	5 U
X	1.0 U	1.0 U	5 U
MTBE	NA	NA	5 UJ

18_DW135	9/6/96 (µg/L)	1/14/97 (µg/L)	4/21/97 (µg/L)
TPH-GAS	50 U	50 U	50 U
TPH-EXT	140 J	500 U	500 U
B	1.0 U	1.0 U	5 U
T	1.0 U	1.0 U	5 U
E	1.0 U	1.0 U	5 U
X	1.0 U	1.0 U	5 U
MTBE	5.0 U	1.0 U	5 U

14_DBMW50	9/6/96 (µg/L)	1/10/97 (µg/L)	4/21/97 (µg/L)
TPH-GAS	50 U	50 U	50 U
TPH-EXT	500 U	500 U	500 U
B	1.0 U	1.0 U	5 U
T	1.0 U	1.0 U	5 U
E	1.0 U	1.0 U	5 U
X	1.0 U	1.0 U	5 U
MTBE	5.0 U	1.0 U	5 U

TF2MW-03	8/29/96 (µg/L)	10/24/96 (µg/L)	1/10/97 (µg/L)
TPH-GAS	3500 P	3300	4100 P
TPH-EXT	NA	660	1100
B	950 J	590	660
T	5.0 U	5.0 U	1.0 U
E	5.0 U	2.0 U	1.0 U
X	178	120	140
MTBE	5.0 U	2.0 U	1.0 U

TF2MW-01	6/14/96 (µg/L)	8/29/96 (µg/L)	12/23/96 (µg/L)	4/18/97 (µg/L)
TPH-GAS	3700 P	3800 P	4400 P	2900
TPH-JP-5	860 P	570 U*	NA	500 U
TPH-EXT	500 U	1000*	630	NA
B	1300	1100	1400	1500
T	1.0 U	0.6 J	1.0	1.0
E	3.1	5.0 U	2.0 U	5 U
X	96	142	127	180
MTBE	1.0 U	5.0 U	2.0 U	5 U

* COLLECTED ON 9/4/96

13_UGMW32	9/3/96 (µg/L)	9/3/96 (µg/L)	12/27/96 (µg/L)	4/16/97 (µg/L)
TPH-GAS	54 P	60	220 P	50 U
TPH-EXT	190 J	200 J	520 U	500 U
B	3.0 J	2.9 J	1.0 U	5 U
T	1.0 U	1.0 U	1.0 U	5 U
E	1.0 U	1.0 U	1.0 U	5 U
X	2.0 J	1.9 J	1.0 U	5 U
MTBE	NA	NA	NA	5 U

DUPLICATE SAMPLE COLLECTED 9/3/96

TF2MW-04	6/14/96 (µg/L)	8/30/96 (ug/L)	1/13/97 (ug/L)	4/17/97 (ug/L)	4/17/97 (ug/L)
TPH-GAS	2100 P	1900 P	1500 P	1600	1300
TPH-JP-5	730 P	520 U	NA	NA	NA
TPH-EXT	500 U	420 J	620	500 U*	500 U*
B	660	420	310	370	350
T	0.7 J	0.4 J	1.0 U	5 U	5 U
E	3.5	5.0 U	1.0 U	5 U	5 U
X	64	67	58	85	59
MTBE	1.0 U	5.0 U	1.0 U	5 U	5 U

* - M8015-DIESEL

DUPLICATE SAMPLE COLLECTED 4/17/97

TF2MW-02	6/14/96 (µg/L)	8/30/96 (µg/L)	12/31/97 (µg/L)	1/28/97 (µg/L)	1/28/97 (µg/L)	4/17/97 (µg/L)
TPH-GAS	630 P	530 P	990 P	1100 P	1100 P	570
TPH-JP-5	500 P	520 U	NA	NA	NA	500 U
TPH-EXT	500 U	190 J	860	NA	550 U	NA
B	90	2.8 J	1.0 U	6.5	6.9	5 U
T	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5 U
E	3.4	5.0 U	1.0 U	1.0 U	1.0 U	5 U
X	23	6.8 J	23	26	26	6.7
MTBE	1.0 U	5.0 U	1.0 U	10 U	1.0 U	5 U

DUPLICATE SAMPLE COLLECTED 1/28/97

EXPLANATION:

TF1MW-01 — OHM MONITORING WELL LOCATIONS

14_DBMW50 — CERCLA MONITORING WELL

MCAS EL TORO BOUNDARY

U — INDICATES THE COMPOUND OR ELEMENT 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

UJ — INDICATES THE COMPOUND OR ELEMENT WAS ANALYZED BUT NOT DETECTED. THE SAMPLE DETECTION LIMIT IS AN ESTIMATED VALUE.

P — FUEL PATTERN DOES NOT MATCH THAT OF GASOLINE OR JP-5

B — BENZENE

T — TOLUENE

E — ETHYLBENZENE

X — XYLENES

MTBE — METHYL TERTIARY BUTYL ETHER

NA — NOT ANALYZED

µg/L — MICROGRAMS PER LITER

REVISIONS			
REV. No.	DESCRIPTION	DATE	APPROVED

PROJECT: SWDIV

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

DRAWN BY: B. COHEN — DATE: 03/10/97
CHECKED BY — DATE
APPROVED BY — DATE
PROJECT MANAGER — DATE
AUTOCAD FILE No. 18292s19.DWG

TANK FARMS 1 AND 2
TPH AND BTEX CONCENTRATION MAP

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.	REVISION
1"=200'	1	1	SW4356	18292	FIG 5-3	0

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Section 6
Tank Farms 3 and 4

For the purpose of presenting the groundwater occurrence and analytical results, tank farms within a reasonable aerial extent have been combined as a monitoring well network map. In this section Tank Farms 3 and 4 have been combined as a monitoring well network (see Figure 6-1, Tank Farms 3 and 4 — Monitoring Well Location Map). This combined map was utilized to better define groundwater gradients and flow direction, as well as identify impacted groundwater and its lateral extent.

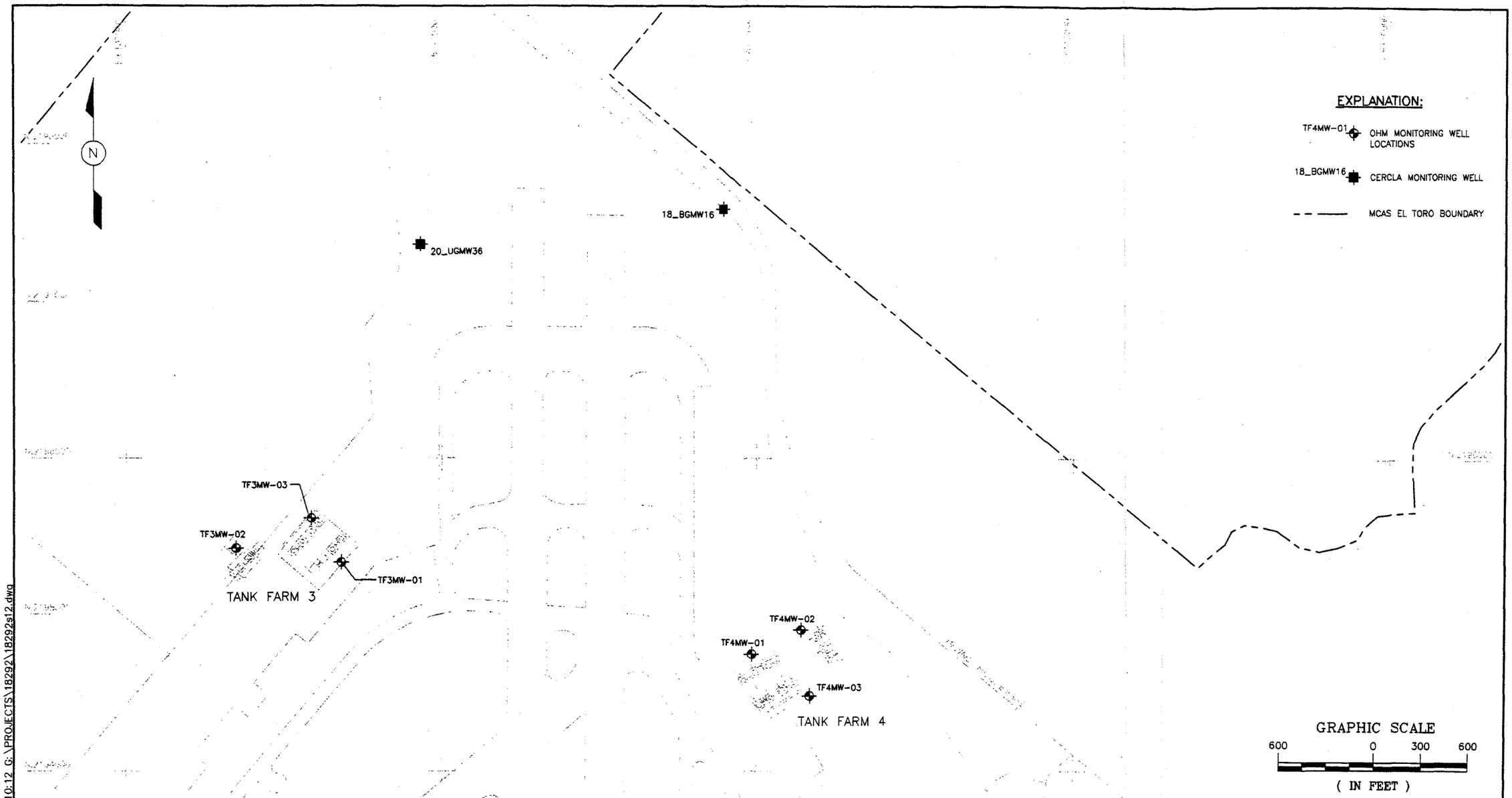
6.1 Groundwater Occurrence

On March 28, 1997, eight wells were measured for depth to water at Tank Farms 3 and 4. Six of the wells were OHM monitoring wells (TF3MW-01, TF3MW-02, TF3MW-03, TF4MW-01, TF4MW-02, and TF4MW-03) and two were CERCLA wells (18_BGMW16, and 20_UGMW36).

Groundwater elevations across the two tank farms ranged from approximately 153 feet above msl to 177 feet above msl. The groundwater gradient across the two sites was approximately 0.006 ft/ft and the groundwater flow direction was to the northwest. Figure 6-2, Tank Farms 3 and 4 — Groundwater Contour Map, presents a groundwater contour map of Tank Farms 3 and 4. The figure also shows well locations in relation to the tanks and the tank farms.

6.2 Analytical Results

Section 4.1 summarizes laboratory methods for this sampling period and Tables 6-1, Analytical Summary for Tank Farm 3, and 6-2, Analytical Summary for Tank Farm 4, identify laboratory analyses performed at Tank Farms 3 and 4. Figure 6-3, Tank Farms 3 and 4 TPH and BTEX Concentration Map, exhibits the TPH, BTEX, and MTBE results from the August 1996 sampling event through the April 1997 sampling event.



TANK FARMS 3 AND 4 SURVEY DATA

WELL LOCATIONS	NAD 27 NORTHING	NAD 27 EASTING	NAD 83 NORTHING	NAD 83 EASTING	TOP OF CASING ELEVATION (feet msl)	GROUND SURFACE ELEVATION (feet msl)
TF3MW-01	554887.57	1548952.31	2195332.55	6110359.68	322.86	333.45
TF3MW-02	554977.15	1548289.79	2195422.13	6109697.16	318.39	319.36
TF3MW-03	555171.12	1548763.09	2195616.10	6110170.46	329.13	329.92
TF4MW-01	554299.23	1551560.92	2194744.18	6112968.30	378.84	379.29
TF4MW-02	554455.30	1551869.88	2194900.25	6113277.27	384.70	385.27
TF4MW-03	554034.55	1551924.95	2194479.50	6113332.33	384.07	384.53
18_BGMW16	557141.35	1551377.31	2197586.29	6112784.73	376.58	375.82
20_UGMW36	556917.86	1549454.70	2197362.81	6110862.10	338.70	338.12

msl - mean sea level

REVISIONS

REV. No.	DESCRIPTION	DATE	APPROVED

PROJECT: SWDIV

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

DRAWN BY: R. PIRMORADIAN DATE: 09/12/97
CHECKED BY DATE
APPROVED BY DATE
PROJECT MANAGER DATE
AUTOCAD FILE No. 18292S12.DWG

TANK FARMS 3 AND 4
MONITORING WELL LOCATION MAP

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.	REVISION
1"=600'	1	1	SW4356	18292	FIG 6-1	0

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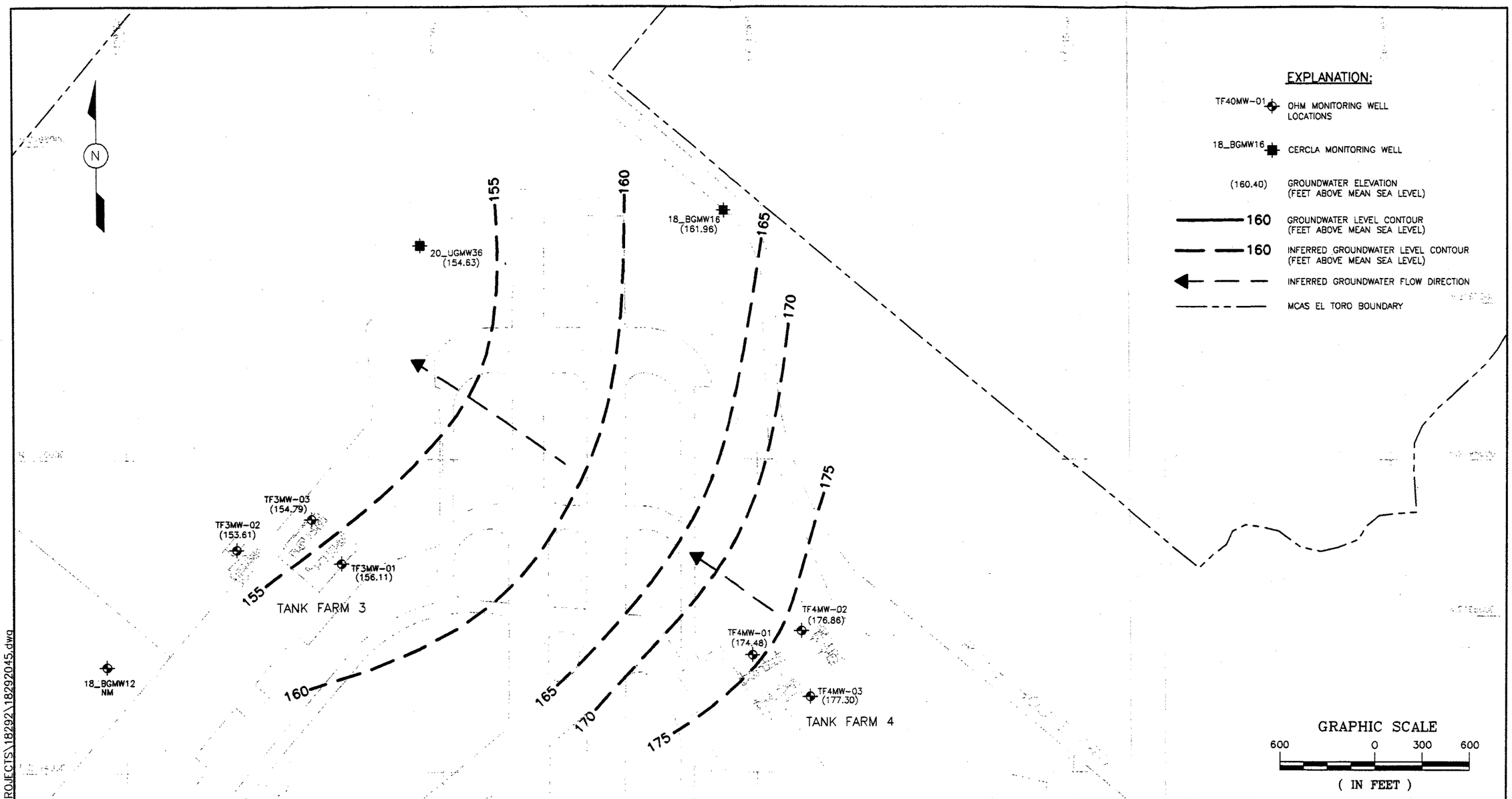
6-2



TANK FARMS 3 AND 4 SURVEY DATA

WELL LOCATIONS	NAD 83 NORTHING	NAD 83 EASTING	TOP OF CASING ELEVATION (feet msl)	GROUND SURFACE ELEVATION (feet msl)	SCREEN INTERVAL (feet bgs)
TF3MW-01	2195332.55	6110359.68	322.86	333.45	169.5-209.5
TF3MW-02	2195422.13	6109697.16	318.39	319.36	159-199
TF3MW-03	2195616.10	6110170.46	329.13	329.92	165.5-205.5
TF4MW-01	2194744.18	6112968.30	378.84	379.29	201-241
TF4MW-02	2194900.25	6113277.27	384.70	385.27	207-247
TF4MW-03	2194479.50	6113332.33	384.07	384.53	202.5-242.5
18_BGMW12	2194672.84	6108873.29	304.48	304.89	165-205
18_BGMW16	2197586.29	6112784.73	376.58	375.82	223-263
20_UGMW36	2197362.81	6110862.10	338.70	338.12	183-223

msl - mean sea level
bgs - below ground surface

REVISIONS

REV. No.	DESCRIPTION	DATE	APPROVED

CONTRACT NAME: SWDIV

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

DRAWN BY: R. PIRMORADIAN DATE: 09/12/97
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APPROVED BY DATE
PROJECT MANAGER DATE
AUTOCAD FILE No.: 18292045.DWG

TANK FARMS 3 AND 4
GROUNDWATER CONTOUR MAP
MARCH 28, 1997

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.
1"=600'	1	1	SW4356	18292	FIG 6-2

Sept 12, 1997 - 11:08:45 G:\PROJECTS\18292\18292045.dwg

EXPLANATION OF ANALYTICAL TABLES

Analytical Methods
EPA Method 310.1 - alkalinity
EPA Method 350.1 / 350.2 / 350.3 - ammonia
EPA Method 8020 - BTEX and methyl tertiary butyl ether (MTBE)
EPA Method 300.0 - chloride
EPA Method 6010A - iron and potassium
EPA Method 353.2 - nitrate-nitrite
EPA Method 150.1 / 9045 - pH
EPA Method 300.0 / 375.2 /375.4 - sulfate
EPA Method 160.1 - total dissolved solids
SM 9215B / SM 9215C / SM 9215D - total heterotrophic plate count
EPA Method 351.2 / 351.4 - total Kjeldahl nitrogen (TKN)
EPA Method 415.1 / 415.2 - total organic compounds
EPA Method 8015/ CA LUFT Modified - total petroleum hydrocarbons as gasoline, JP5 and/or diesel
EPA Method 365.2 - total phosphorous
EPA Method 160.2 - total suspended solids
EPA Method 8260A - volatile organic compounds and MTBE

Abbreviations:

CA LUFT - California Leaking Underground Fuel Farms
EPA - Environmental Protection Agency
TPH - Total Petroleum Hydrocarbons
µg/L - micrograms per liter
mg/L - milligrams per liter
µmhos/cm - micro mhmos per centimeter
cfu/ml - colony forming units per milliliter
U - not detected above or equal to the stated reported limit
J - estimated value
UJ - not detected at the estimated reporting limit
R - rejected
P - fuel pattern does not match that of laboratory standard
PJ - fuel pattern of the estimated value does not match that of the laboratory standard
NA - not analyzed

Table 6-1
Analytical Summary for Tank Farm 3
MCAS El Toro, Santa Ana, California

OHM Sample Number	Sample Location	Date Collected	EPA 8020	TPH AS GASOLINE	TPH AS DIESEL	TPH AS JP-5	TPH-EXTRACTABLE	EPA 120.1	EPA 130.2	EPA 150.1	EPA 160.1	EPA 160.2	EPA 310.1	EPA 325.2	EPA 340.2	EPA 350.1 / EPA 350.3
96-TF3-W-886	Trip Blank	9/12/96	X	X												
96-TF3-W-887	Equipment Rinsate	9/12/96	X	X	X	X	X			X	X	X	X			X
96-TF3-W-888	TF3MW-02	9/12/96	X	X	X	X	X			X	X	X	X			X
96-TF3-W-940	Trip Blank	9/18/96	X	X												
96-TF3-W-941	Equipment Rinsate	9/18/96	X	X	X	X	X			X	X	X	X			X
96-TF3-W-942	TF3MW-03	9/18/96	X	X	X	X	X			X	X	X	X			X
96-TF3-W-1420	Trip Blank	11/6/96	X	X												
96-TF3-W-1421	TF3MW-01	11/6/96	X	X	X	X	X			X	X	X	X			X
97-TF3-W-1521	Trip Blank	1/15/97	X	X												
97-TF3-W-1522	Source Blank	1/15/97	X	X	X	X	X									
97-TF3-W-1523	Equipment Rinsate	1/15/97	X	X	X	X	X									
97-TF3-W-1524	TF3MW-03	1/15/97	X	X	X	X	X	X	X					X	X	
97-TF3-W-1525	Equipment Rinsate	1/15/97	X	X	X	X	X									
97-TF3-W-1529	Equipment Rinsate	1/16/97	X	X	X	X	X									
97-TF3-W-1530	TF3MW-02	1/16/97	X	X	X	X	X	X	X					X	X	
97-TF3-W-1541	Equipment Rinsate	1/20/97	X	X	X	X	X									
97-TF3-W-1542	TF3MW-01	1/20/97	X	X	X	X	X	X	X					X	X	
17486-263	Equipment Rinsate	4/28/97	X	X	X		X									
17486-264	TF3MW-03	4/28/97	X	X	X		X									
17486-265	Trip Blank	4/29/97	X	X												
17486-266	Equipment Rinsate	4/29/97	X	X	X		X									
17486-267	TF3MW-01	4/29/97	X	X	X		X									
17486-268	Equipment Rinsate	4/29/97	X	X	X		X									
17486-269	TF3MW-02	4/29/97	X	X	X		X									

Table 6-1
Analytical Summary for Tank Farm 3
MCAS El Toro, Santa Ana, California

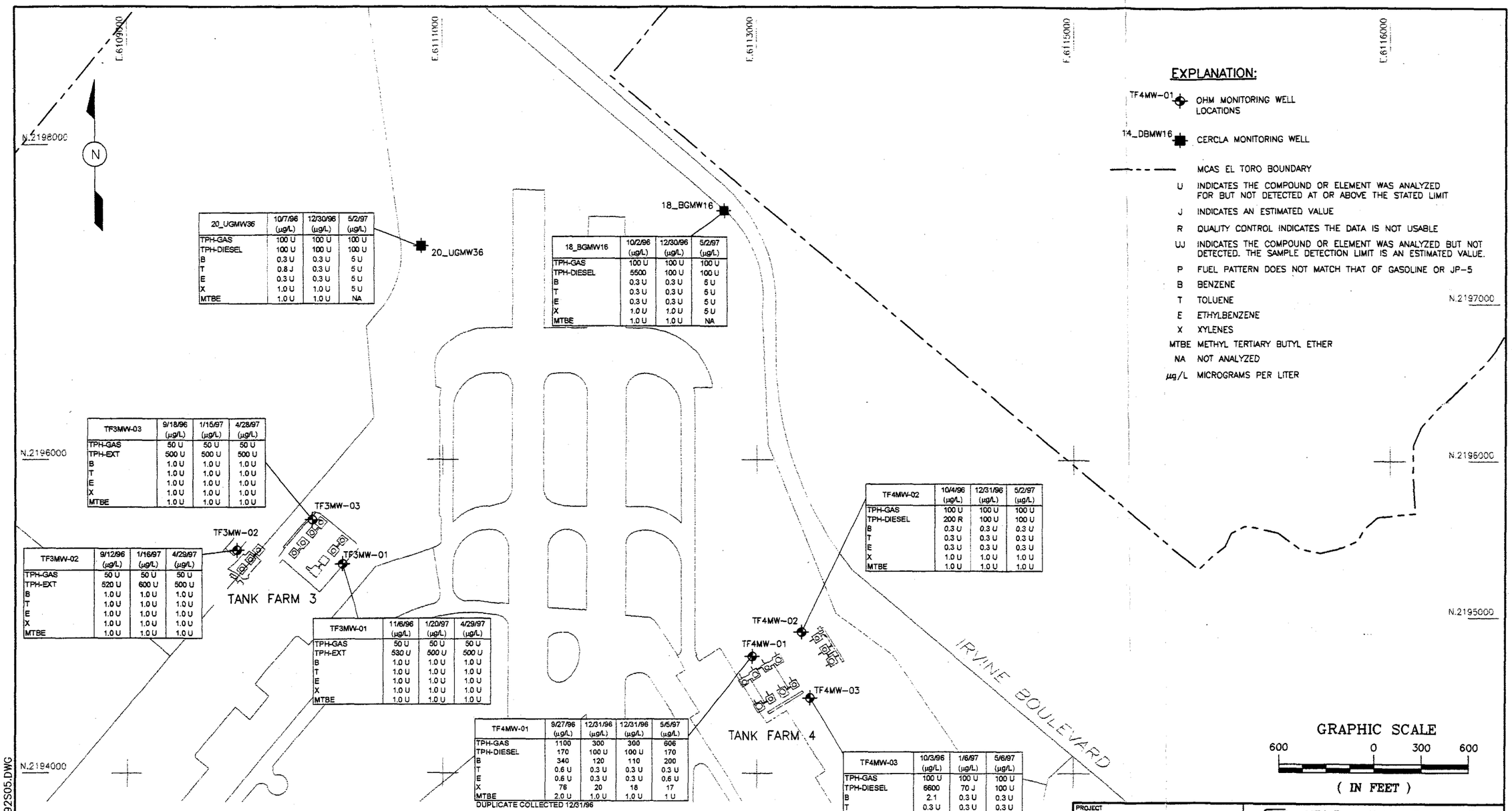
OHM Sample Number	Sample Location	Date Collected	EPA 351.4	EPA 353.2 / EPA 353.3	EPA 365.2	EPA 375.2 / EPA375.3	EPA 405.1	EPA 410.4	EPA 415.2	EPA 450.1	EPA 6010A	EPA 7470A	SM 9215-B/C
96-TF3-W-886	Trip Blank	9/12/96											
96-TF3-W-887	Equipment Rinsate	9/12/96	X	X	X	X			X		X		X
96-TF3-W-888	TF3MW-02	9/12/96	X	X	X	X			X		X		X
96-TF3-W-940	Trip Blank	9/18/96											
96-TF3-W-941	Equipment Rinsate	9/18/96	X	X	X	X			X		X		X
96-TF3-W-942	TF3MW-03	9/18/96	X	X	X	X			X		X		X
96-TF3-W-1420	Trip Blank	11/6/96											
96-TF3-W-1421	TF3MW-01	11/6/96	X	X	X	X			X		X		X
97-TF3-W-1521	Trip Blank	1/15/97											
97-TF3-W-1522	Source Blank	1/15/97											
97-TF3-W-1523	Equipment Rinsate	1/15/97											
97-TF3-W-1524	TF3MW-03	1/15/97		X	X	X	X	X		X	X	X	
97-TF3-W-1525	Equipment Rinsate	1/15/97											
97-TF3-W-1529	Equipment Rinsate	1/16/97											
97-TF3-W-1530	TF3MW-02	1/16/97		X	X	X	X	X		X	X	X	
97-TF3-W-1541	Equipment Rinsate	1/20/97											
97-TF3-W-1542	TF3MW-01	1/20/97		X	X	X	X	X		X	X	X	
17486-263	Equipment Rinsate	4/28/97											
17486-264	TF3MW-03	4/28/97											
17486-265	Trip Blank	4/29/97											
17486-266	Equipment Rinsate	4/29/97											
17486-267	TF3MW-01	4/29/97											
17486-268	Equipment Rinsate	4/29/97											
17486-269	TF3MW-02	4/29/97											

Table 6-2
Analytical Summary for Tank Farm 4
MCAS El Toro, Santa Ana, California

OHM Sample Number	Sample Location	Date Collected	EPA 8020	TPH AS GASOLINE	TPH AS DIESEL	EPA 8260A	EPA 120.1	EPA 130.1	EPA 160.1	EPA 160.2	EPA 300.0 / EPA 9250	EPA 310.1	EPA 350.2	EPA 351.2	EPA 353.2 / EPA 353.3	EPA 365.2
96-TF4-W-262	Trip Blank	9/27/96	X	X												
96-TF4-W-263	Equipment Rinsate	9/27/96	X	X	X				X	X	X	X	X	X	X	X
96-TF4-W-264	TF4MW-01	9/27/96	X	X	X				X	X	X	X	X	X	X	X
96-TF4-W-265	Trip Blank	10/2/96	X	X		X										
96-TF4-W-266	18_BGMW16	10/2/96	X	X	X	X										
96-TF4-W-273	Trip Blank	10/3/96	X	X												
96-TF4-W-274	Equipment Rinsate	10/3/96	X	X	X				X	X	X	X	X	X	X	X
96-TF4-W-275	TF4MW-03	10/3/96	X	X	X				X	X	X	X	X	X	X	X
96-TF4-W-267	Trip Blank	10/4/96	X	X												
96-TF4-W-268	Equipment Rinsate	10/4/96	X	X	X				X	X	X	X	X	X	X	X
96-TF4-W-269	TF4MW-02	10/4/96	X	X	X				X	X	X	X	X	X	X	X
96-TF4-W-270	Trip Blank	10/7/96	X	X		X										
96-TF4-W-271	Equipment Rinsate	10/7/96	X	X	X	X										
96-TF4-W-272	20_UGMW36	10/7/96	X	X	X	X										
96-TF4-W-368	Trip Blank	12/30/96	X	X												
96-TF4-W-369	Equipment Rinsate	12/30/96	X	X	X	X										
96-TF4-W-370	18_BGMW16	12/30/96	X	X	X	X										
96-TF4-W-371	Equipment Rinsate	12/30/96	X	X	X	X										
96-TF4-W-372	20_UGMW36	12/30/96	X	X	X	X										
96-TF4-W-373	Trip Blank	12/31/96	X	X												
96-TF4-W-374	Equipment Rinsate	12/31/96	X	X	X											
96-TF4-W-375	TF4MW-01	12/31/96	X	X	X		X	X			X					
96-TF4-W-376	TF4MW-01 (Dup)	12/31/96	X	X	X		X	X			X					
96-TF4-W-377	Equipment Rinsate	12/31/96	X	X	X											
96-TF4-W-378	TF4MW-02	12/31/96	X	X	X		X	X			X					
97-TF4-W-379	Trip Blank	1/6/97	X	X												
97-TF4-W-380	Equipment Rinsate	1/6/97	X	X	X											
97-TF4-W-381	TF4MW-03	1/6/97	X	X	X		X	X			X					
18292-418	Equipment Rinsate	5/2/97		X	X	X										
18292-419	20_UGMW36	5/2/97		X	X	X										
18292-420	18_BGMW16	5/2/97		X	X	X										
18292-421	TF4MW-02	5/2/97	X	X	X											
18292-422	Trip Blank	5/5/97	X	X												
18292-423	Equipment Rinsate	5/5/97	X	X	X											
18292-424	Equipment Rinsate	5/5/97	X	X	X											
18292-425	TF4MW-01	5/5/97	X	X	X											
18292-428	Equipment Rinsate	5/5/97	X	X	X											
18292-430	Equipment Rinsate	5/5/97	X	X	X											
18292-431	Source Blank	5/5/97				X										
18292-432	Equipment Rinsate	5/5/97	X	X	X											
18292-433	Trip Blank	5/6/97		X	X	X										
18292-434	TF4MW-03	5/6/97	X	X	X											

Table 6-2
Analytical Summary for Tank Farm 4
MCAS El Toro, Santa Ana, California

OHM Sample Number	Sample Location	Date Collected	EPA 375.4	EPA 405.1	EPA 410.4	EPA 415.1	EPA 450.1 / EPA 9020	EPA 6010A	EPA 7470A	EPA 9045	SM 9215-B/C
96-TF4-W-262	Trip Blank	9/27/96									
96-TF4-W-263	Equipment Rinsate	9/27/96				X		X		X	X
96-TF4-W-264	TF4MW-01	9/27/96				X		X		X	X
96-TF4-W-265	Trip Blank	10/2/96									
96-TF4-W-266	18_BGMW16	10/2/96									
96-TF4-W-273	Trip Blank	10/3/96									
96-TF4-W-274	Equipment Rinsate	10/3/96	X			X		X		X	X
96-TF4-W-275	TF4MW-03	10/3/96	X			X		X		X	X
96-TF4-W-267	Trip Blank	10/4/96									
96-TF4-W-268	Equipment Rinsate	10/4/96	X			X		X		X	X
96-TF4-W-269	TF4MW-02	10/4/96	X			X		X		X	X
96-TF4-W-270	Trip Blank	10/7/96									
96-TF4-W-271	Equipment Rinsate	10/7/96									
96-TF4-W-272	20_UGMW36	10/7/96									
96-TF4-W-368	Trip Blank	12/30/96									
96-TF4-W-369	Equipment Rinsate	12/30/96									
96-TF4-W-370	18_BGMW16	12/30/96									
96-TF4-W-371	Equipment Rinsate	12/30/96									
96-TF4-W-372	20_UGMW36	12/30/96									
96-TF4-W-373	Trip Blank	12/31/96									
96-TF4-W-374	Equipment Rinsate	12/31/96									
96-TF4-W-375	TF4MW-01	12/31/96	X	X	X		X	X	X		
96-TF4-W-376	TF4MW-01 (Dup)	12/31/96	X	X	X		X	X	X		
96-TF4-W-377	Equipment Rinsate	12/31/96									
96-TF4-W-378	TF4MW-02	12/31/96	X	X	X		X	X	X		
97-TF4-W-379	Trip Blank	1/6/97									
97-TF4-W-380	Equipment Rinsate	1/6/97									
97-TF4-W-381	TF4MW-03	1/6/97	X	X	X		X	X	X		
18292-418	Equipment Rinsate	5/2/97									
18292-419	20_UGMW36	5/2/97									
18292-420	18_BGMW16	5/2/97									
18292-421	TF4MW-02	5/2/97									
18292-422	Trip Blank	5/5/97									
18292-423	Equipment Rinsate	5/5/97									
18292-424	Equipment Rinsate	5/5/97									
18292-425	TF4MW-01	5/5/97									
18292-428	Equipment Rinsate	5/5/97									
18292-430	Equipment Rinsate	5/5/97									
18292-431	Source Blank	5/5/97									
18292-432	Equipment Rinsate	5/5/97									
18292-433	Trip Blank	5/6/97									
18292-434	TF4MW-03	5/6/97									



20_UGMW36	10/7/96 (µg/L)	12/30/96 (µg/L)	5/2/97 (µg/L)
TPH-GAS	100 U	100 U	100 U
TPH-DIESEL	100 U	100 U	100 U
B	0.3 U	0.3 U	5 U
T	0.8 J	0.3 U	5 U
E	0.3 U	0.3 U	5 U
X	1.0 U	1.0 U	5 U
MTBE	1.0 U	1.0 U	NA

18_BGMW16	10/2/96 (µg/L)	12/30/96 (µg/L)	5/2/97 (µg/L)
TPH-GAS	100 U	100 U	100 U
TPH-DIESEL	5500	100 U	100 U
B	0.3 U	0.3 U	5 U
T	0.3 U	0.3 U	5 U
E	0.3 U	0.3 U	5 U
X	1.0 U	1.0 U	5 U
MTBE	1.0 U	1.0 U	NA

TF3MW-03	9/18/96 (µg/L)	1/15/97 (µg/L)	4/28/97 (µg/L)
TPH-GAS	50 U	50 U	50 U
TPH-EXT	500 U	500 U	500 U
B	1.0 U	1.0 U	1.0 U
T	1.0 U	1.0 U	1.0 U
E	1.0 U	1.0 U	1.0 U
X	1.0 U	1.0 U	1.0 U
MTBE	1.0 U	1.0 U	1.0 U

TF3MW-02	9/12/96 (µg/L)	1/16/97 (µg/L)	4/29/97 (µg/L)
TPH-GAS	50 U	50 U	50 U
TPH-EXT	520 U	600 U	500 U
B	1.0 U	1.0 U	1.0 U
T	1.0 U	1.0 U	1.0 U
E	1.0 U	1.0 U	1.0 U
X	1.0 U	1.0 U	1.0 U
MTBE	1.0 U	1.0 U	1.0 U

TF3MW-01	11/6/96 (µg/L)	1/20/97 (µg/L)	4/29/97 (µg/L)
TPH-GAS	50 U	50 U	50 U
TPH-EXT	530 U	500 U	500 U
B	1.0 U	1.0 U	1.0 U
T	1.0 U	1.0 U	1.0 U
E	1.0 U	1.0 U	1.0 U
X	1.0 U	1.0 U	1.0 U
MTBE	1.0 U	1.0 U	1.0 U

TF4MW-02	10/4/96 (µg/L)	12/31/96 (µg/L)	5/2/97 (µg/L)
TPH-GAS	100 U	100 U	100 U
TPH-DIESEL	200 R	100 U	100 U
B	0.3 U	0.3 U	0.3 U
T	0.3 U	0.3 U	0.3 U
E	0.3 U	0.3 U	0.3 U
X	1.0 U	1.0 U	1.0 U
MTBE	1.0 U	1.0 U	1.0 U

TF4MW-01	9/27/96 (µg/L)	12/31/96 (µg/L)	12/31/96 (µg/L)	5/5/97 (µg/L)
TPH-GAS	1100	300	300	606
TPH-DIESEL	170	100 U	100 U	170
B	340	120	110	200
T	0.6 U	0.3 U	0.3 U	0.3 U
E	0.6 U	0.3 U	0.3 U	0.6 U
X	76	20	18	17
MTBE	2.0 U	1.0 U	1.0 U	1 U

DUPLICATE COLLECTED 12/31/96

TF4MW-03	10/3/96 (µg/L)	1/6/97 (µg/L)	5/6/97 (µg/L)
TPH-GAS	100 U	100 U	100 U
TPH-DIESEL	6600	70 J	100 U
B	2.1	0.3 U	0.3 U
T	0.3 U	0.3 U	0.3 U
E	1.5	0.3 U	0.3 U
X	1.0 U	1.0 U	1.0 U
MTBE	1.0 U	1.0 U	1.0 U

REVISIONS

REV. No.	DESCRIPTION	DATE	APPROVED

PROJECT: SWDIV

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

DRAWN BY: B. COHEN — DATE: 03/10/97
CHECKED BY — DATE
APPROVED BY — DATE
PROJECT MANAGER — DATE
AUTOCAD FILE No. 18292S20.DWG

TANK FARMS 3 AND 4
TPH AND BTEX CONCENTRATION MAP

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.	REVISION
1"=600'	1	1	SW4356	18292	FIG 6-3	0

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Section 7
Tank Farms 555, 5 and 6

For the purpose of presenting the groundwater occurrence and analytical results, tank farms, within a reasonable aerial extent have been combined as a monitoring networking map. In this section, Tank Farms 555, 5 and 6 have been combined as a monitoring well network. See Figure 7-1, Tank Farms 555, 5 and 6 — Monitoring Well Location Map. This combined map was utilized to better define groundwater gradients and flow direction, as well as identify impacted groundwater and its lateral extent.

7.1 Groundwater Occurrence

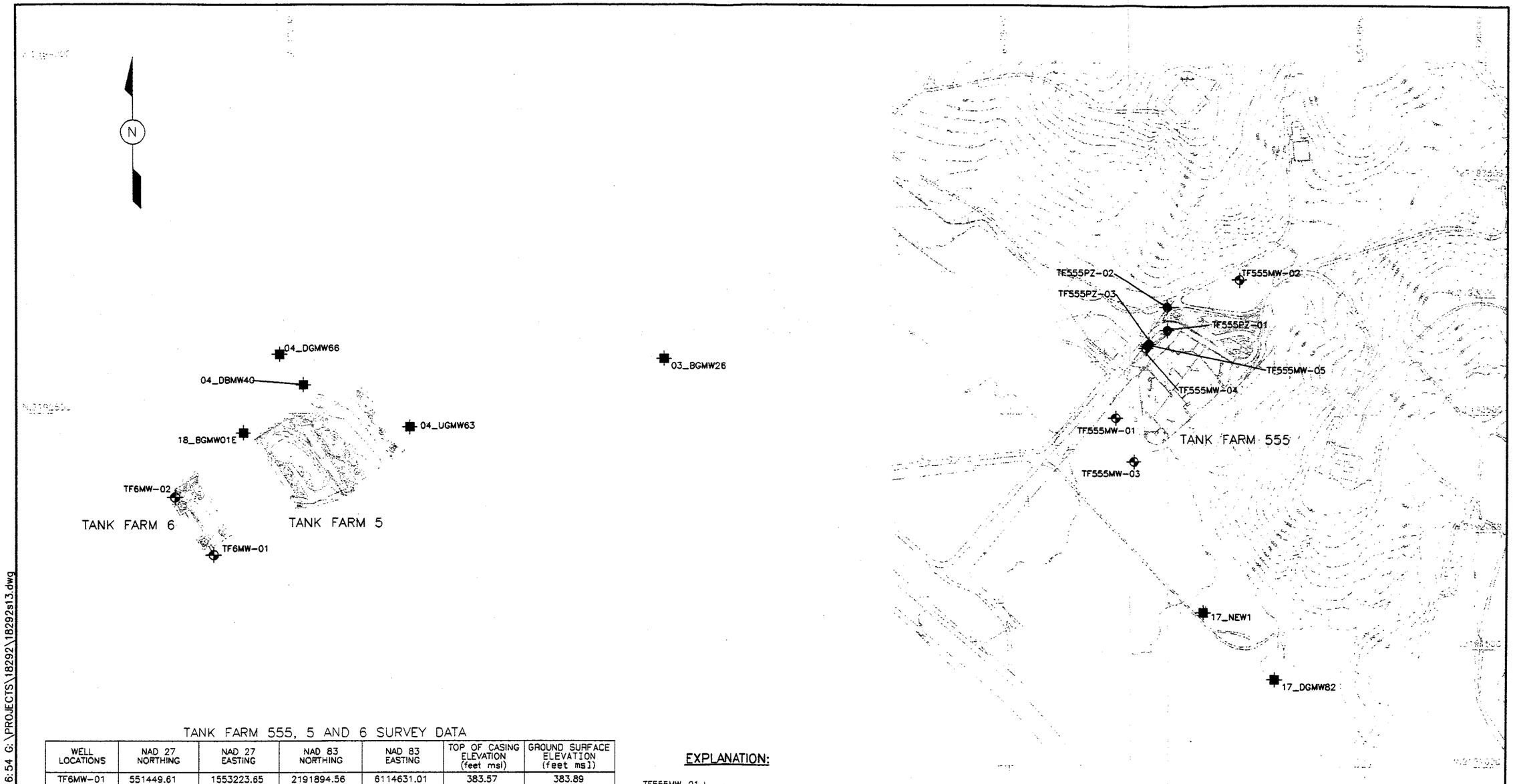
OHM measured seven OHM wells, two OHM piezometers, and seven CERCLA wells on March 31, 1997. The OHM wells sampled were TF555MW-01, TF555MW-02, TF555MW-03, TF555MW-04, TF555MW-05, TF6MW-01 and TF6MW-02. The two piezometers were TF555PZ-01, TF555PZ-02. The CERCLA wells sampled were 04_DGMW66, 18_BGMW01E, 04_UGMW63, 04_DGMW40, 17_NEW1, 03_BGMW26, and 17_DGMW82.

In Wells TF555MW-02, TF555MW-04, TF555MW-05, TF555PZ-01 and, TF555PZ-02 groundwater was encountered from 25-43 feet bgs. These wells are located in the foothills to the northeast of the station. In the previous groundwater report presented by OHM (OHM 1997), OHM provided a brief introduction to a shallow groundwater zone situated in the Vaqueros and Sespe Formations. The bedrock was encountered during the installation of the groundwater wells at Tank Farm 555. The groundwater gradient in the foothills was 0.039 ft/ft to the south.

In Wells, TF555MW-01, TF555MW-03, 03_BGMW26, 17_DGMW82, and 17_NEW1 groundwater elevations ranged from 204 feet to 258 feet bgs. These wells were installed in alluvium deposits at the base of the foothills, see Figure 7-2, Tank Farms 555, 5 and 6 — Groundwater Contour Map. The groundwater gradient in the southeast section of Tank Farm 555 was 0.0002 ft/ft to the northwest.

In Wells, TF6MW-01, TF6MW-02, 04_DGMW66, 18_DGMW01E, 04_UGMW63, 04_DBMW40, and 03_BGMW26 groundwater was encountered from 189 to 204 feet bgs. These wells were installed in alluvium deposits in the vicinity of Tank Farm 6, see Figure 7-2, Tank Farms 555, 5 and 6 — Groundwater Contour Map. The groundwater gradient in the vicinity of Tank Farm 6 was 0.008 ft/ft to the northwest.

The inferred contact between the bedrock and alluvium is identified in Figure 7-2. Tank Farm 555, 5 and 6 were presented together in order to emphasize the variation in groundwater occurrence between wells in the bedrock and in the alluvium.



TANK FARM 555, 5 AND 6 SURVEY DATA

WELL LOCATIONS	NAD 27 NORTHING	NAD 27 EASTING	NAD 83 NORTHING	NAD 83 EASTING	TOP OF CASING ELEVATION (feet msl)	GROUND SURFACE ELEVATION (feet msl)
TF6MW-01	551449.61	1553223.65	2191894.56	6114631.01	383.57	383.89
TF6MW-02	551696.60	1553057.67	2192141.55	6114465.03	384.65	384.93
04_DGMW66	552307.70	1553503.72	2192752.64	6114911.10	401.57	401.11
18_BGMW01E	551972.17	1553350.12	2192417.12	6114757.49	392.08	391.44
04_UGMW63	551997.26	1554049.43	2192442.20	6115456.81	404.13	403.42
04_DBMW40	552177.74	1553604.06	2192622.68	6115011.43	400.46	400.01
TF555MW-01	552037.13	1557031.71	2192482.03	6118439.11	424.12	424.49
TF555MW-02	552628.16	1557557.92	2193073.06	6118965.34	458.24	458.48
TF555MW-03	551850.74	1557110.32	2192295.85	6118517.72	422.91	423.37
TF555MW-04	552335.92	1557161.21	2192780.82	6118568.62	437.01	437.39
TF555MW-05	552346.73	1557168.37	2192791.63	6118575.78	437.63	437.99
TF555PZ-01	552412.22	1557252.36	2192857.12	6118659.77	441.99	442.62
TF555PZ-02	552511.30	1557251.37	2192956.20	6118658.78	445.12	444.55
TF555PZ-03	552353.68	1557173.84	2192798.58	6118581.25	438.02	438.33
17_NEW1	551205.68	1557405.31	2191650.59	6118812.71	431.95	431.36
03_BGMW26	552288.32	1555125.24	2192733.25	6116532.63	419.82	419.39
17_DGMW82	NA	NA	2191368.28	6119115.93	442.50	441.69

msl - mean sea level
NA - not available

EXPLANATION:

TF555MW-01 — OHM MONITORING WELL LOCATIONS

TF555PZ-01 — PIEZOMETER WELL LOCATIONS

18_BGMW01E — CERCLA MONITORING WELL

GRAPHIC SCALE
400 0 200 400
(IN FEET)

REVISIONS

REV. No.	DESCRIPTION	DATE	APPROVED

PROJECT	SWDIV
DRAWN BY	R. PIRMORADIAN
DATE	09/12/97
CHECKED BY	
DATE	
APPROVED BY	
DATE	
PROJECT MANAGER	
DATE	
AUTOCAD FILE No.	18292S13.DWG

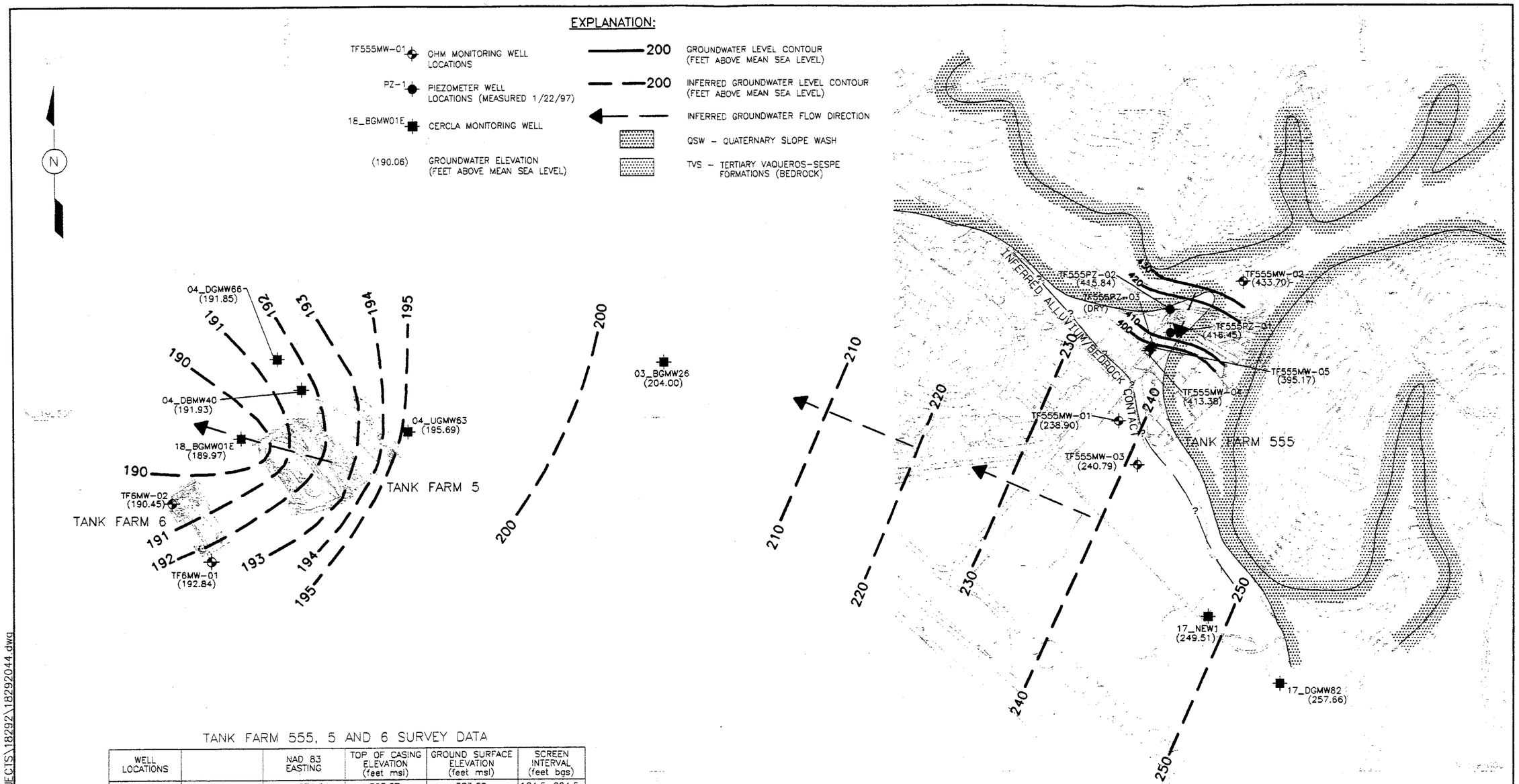
OHM Remediation Services Corp.
A Subsidiary of OHM Corporation
IRVINE, CA

TANK FARMS 555, 5 AND 6
MONITORING WELL LOCATION MAP

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.	REVISION
1"=400'	1	1	SW4356	18292	FIG 7-1	0

Sept 12, 1997 - 16:16:54 G:\PROJECTS\18292\18292s13.dwg



TANK FARM 555, 5 AND 6 SURVEY DATA

WELL LOCATIONS		NAD 83 EASTING	TOP OF CASING ELEVATION (feet msl)	GROUND SURFACE ELEVATION (feet msl)	SCREEN INTERVAL (feet bgs)
TF6MW-01	2191894.56	6114631.01	383.57	383.89	184.5-224.5
TF6MW-02	2192141.55	6114465.03	384.65	384.93	190-230
04_DGMW66	2192752.64	6114911.10	401.57	401.11	250-290
18_BGMW01E	2192417.12	6114757.49	392.08	391.44	205-225
04_UGMW63	2192442.20	6115456.81	404.13	403.42	235-275
04_DBMW40	2192622.68	6115011.43	400.46	400.01	220-260
TF555MW-01	2192482.03	6118439.11	424.12	424.49	179-219
TF555MW-02	2193073.06	6118965.34	458.24	458.48	25-60
TF555MW-03	2192295.65	6118517.72	422.91	423.37	180-220
TF555MW-04	2192780.82	6118566.62	437.01	437.39	89.6-109.6
TF555MW-05	2192791.63	6118575.78	437.63	437.99	49.5-64.5
TF555PZ-01	2192857.12	6118659.77	441.99	442.62	25-50
TF555PZ-02	2192956.20	6118658.78	445.12	444.55	25-50
TF555PZ-03	2192798.58	6118581.25	438.02	438.33	25-40
17_NEW1	2191650.59	6118812.71	431.95	431.36	186-226
03_BGMW26	2192733.25	6116532.63	419.82	419.39	230-270
17_DGMW82	2191368.28	6119115.93	442.50	441.69	235-255

msl - mean sea level
bgs - below ground surface

GRAPHIC SCALE

400 0 200 400

(IN FEET)

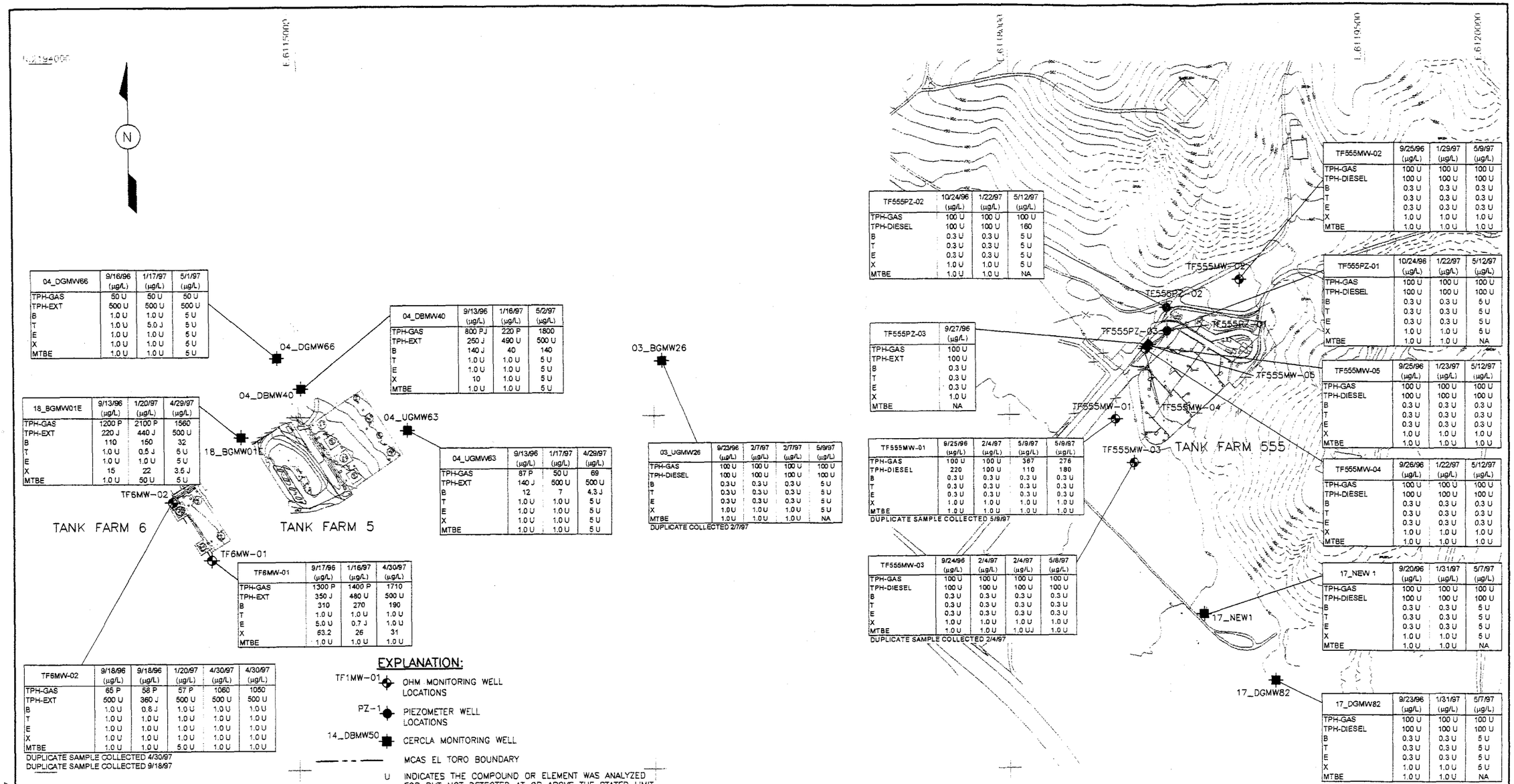
REVISIONS			
REV. No.	DESCRIPTION	DATE	APPROVED

CONTRACT NAME: SWDIV			OHM Remediation Services Corp. A Subsidiary of OHM Corporation SAN DIEGO, CA		
DRAWN BY: R. PIRMORADIAN	DATE: 09/12/97		TANK FARMS 555, 5 AND 6 GROUNDWATER CONTOUR MAP MARCH 31, 1996		
CHECKED BY	DATE				
APPROVED BY	DATE				
PROJECT MANAGER	DATE		MARINE CORPS AIR STATION EL TORO, CALIFORNIA		
AUTOCAD FILE No. 18292044.DWG					
SCALE 1"=400'	SHEET 1	OF 1	DOCUMENT CONTROL No. SW4356	OHM PROJECT No. 18292	DRAWING No. FIG 7-2

Sept 12, 1997 - 14:30:37 G:\PROJECTS\18292\18292044.dwg

7.2 Analytical Results

Section 4.1 summarizes laboratory methods for this sampling period and Tables 7-1, Analytical Summary for Tank Farm 555, and 7-2, Analytical Summary for Tank Farms 5 and 6, identify laboratory analyses performed at Tank Farms 555, 5 and 6. Appendix C, Summary of Analytical Results, provides analytical results for all laboratory methods analyzed. Figure 7-3, Tank Farms 555, 5 and 6 TPH and BTEX Concentration Map, exhibits the TPH, BTEX, and MTBE results from the August 1996 sampling event through the April 1997 sampling event.



04_DGMW66	9/16/96 (µg/L)	1/17/97 (µg/L)	5/1/97 (µg/L)
TPH-GAS	50 U	50 U	50 U
TPH-EXT	500 U	500 U	500 U
B	1.0 U	1.0 U	5 U
T	1.0 U	5.0 J	5 U
E	1.0 U	1.0 U	5 U
X	1.0 U	1.0 U	5 U
MTBE	1.0 U	1.0 U	5 U

04_DBMW40	9/13/96 (µg/L)	1/16/97 (µg/L)	5/2/97 (µg/L)
TPH-GAS	800 PJ	220 P	1800
TPH-EXT	250 J	490 U	500 U
B	140 J	40	140
T	1.0 U	1.0 U	5 U
E	1.0 U	1.0 U	5 U
X	10	1.0 U	5 U
MTBE	1.0 U	1.0 U	5 U

18_BGMW01E	9/13/96 (µg/L)	1/20/97 (µg/L)	4/29/97 (µg/L)
TPH-GAS	1200 P	2100 P	1560
TPH-EXT	220 J	440 J	500 U
B	110	150	32
T	1.0 U	0.5 J	5 U
E	1.0 U	1.0 U	5 U
X	15	22	3.5 J
MTBE	1.0 U	50 U	5 U

04_UGMW63	9/13/96 (µg/L)	1/17/97 (µg/L)	4/29/97 (µg/L)
TPH-GAS	87 P	50 U	69
TPH-EXT	140 J	500 U	500 U
B	12	7	4.3 J
T	1.0 U	1.0 U	5 U
E	1.0 U	1.0 U	5 U
X	1.0 U	1.0 U	5 U
MTBE	1.0 U	1.0 U	5 U

03_UGMW26	9/23/96 (µg/L)	2/7/97 (µg/L)	2/7/97 (µg/L)	5/9/97 (µg/L)
TPH-GAS	100 U	100 U	100 U	100 U
TPH-DIESEL	100 U	100 U	100 U	100 U
B	0.3 U	0.3 U	0.3 U	5 U
T	0.3 U	0.3 U	0.3 U	5 U
E	0.3 U	0.3 U	0.3 U	5 U
X	1.0 U	1.0 U	1.0 U	5 U
MTBE	1.0 U	1.0 U	1.0 U	NA

DUPLICATE COLLECTED 2/7/97

TF6MW-01	9/17/96 (µg/L)	1/16/97 (µg/L)	4/30/97 (µg/L)
TPH-GAS	1300 P	1400 P	1710
TPH-EXT	350 J	480 U	500 U
B	310	270	190
T	1.0 U	1.0 U	1.0 U
E	5.0 U	0.7 J	1.0 U
X	63.2	26	31
MTBE	1.0 U	1.0 U	1.0 U

TF6MW-02	9/18/96 (µg/L)	9/18/96 (µg/L)	1/20/97 (µg/L)	4/30/97 (µg/L)	4/30/97 (µg/L)
TPH-GAS	65 P	58 P	57 P	1060	1050
TPH-EXT	500 U	360 J	500 U	500 U	500 U
B	1.0 U	0.8 J	1.0 U	1.0 U	1.0 U
T	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
E	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
X	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U

DUPLICATE SAMPLE COLLECTED 4/30/97
DUPLICATE SAMPLE COLLECTED 9/18/97

TF555PZ-02	10/24/96 (µg/L)	1/22/97 (µg/L)	5/12/97 (µg/L)
TPH-GAS	100 U	100 U	100 U
TPH-DIESEL	100 U	100 U	160
B	0.3 U	0.3 U	5 U
T	0.3 U	0.3 U	5 U
E	0.3 U	0.3 U	5 U
X	1.0 U	1.0 U	5 U
MTBE	1.0 U	1.0 U	NA

TF555PZ-03	9/27/96 (µg/L)
TPH-GAS	100 U
TPH-EXT	100 U
B	0.3 U
T	0.3 U
E	0.3 U
X	1.0 U
MTBE	NA

TF555MW-01	9/25/96 (µg/L)	2/4/97 (µg/L)	5/9/97 (µg/L)	5/9/97 (µg/L)
TPH-GAS	100 U	100 U	367	276
TPH-DIESEL	220	100 U	110	180
B	0.3 U	0.3 U	0.3 U	0.3 U
T	0.3 U	0.3 U	0.3 U	0.3 U
E	0.3 U	0.3 U	0.3 U	0.3 U
X	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	1.0 U	1.0 U	1.0 U	1.0 U

DUPLICATE SAMPLE COLLECTED 5/9/97

TF555MW-03	9/24/96 (µg/L)	2/4/97 (µg/L)	2/4/97 (µg/L)	5/8/97 (µg/L)
TPH-GAS	100 U	100 U	100 U	100 U
TPH-DIESEL	100 U	100 U	100 U	100 U
B	0.3 U	0.3 U	0.3 U	0.3 U
T	0.3 U	0.3 U	0.3 U	0.3 U
E	0.3 U	0.3 U	0.3 U	0.3 U
X	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	1.0 U	1.0 U	1.0 UJ	1.0 U

DUPLICATE SAMPLE COLLECTED 2/4/97

TF555MW-02	9/25/96 (µg/L)	1/29/97 (µg/L)	5/9/97 (µg/L)
TPH-GAS	100 U	100 U	100 U
TPH-DIESEL	100 U	100 U	100 U
B	0.3 U	0.3 U	0.3 U
T	0.3 U	0.3 U	0.3 U
E	0.3 U	0.3 U	0.3 U
X	1.0 U	1.0 U	1.0 U
MTBE	1.0 U	1.0 U	1.0 U

TF555PZ-01	10/24/96 (µg/L)	1/22/97 (µg/L)	5/12/97 (µg/L)
TPH-GAS	100 U	100 U	100 U
TPH-DIESEL	100 U	100 U	100 U
B	0.3 U	0.3 U	5 U
T	0.3 U	0.3 U	5 U
E	0.3 U	0.3 U	5 U
X	1.0 U	1.0 U	5 U
MTBE	1.0 U	1.0 U	NA

TF555MW-05	9/25/96 (µg/L)	1/23/97 (µg/L)	5/12/97 (µg/L)
TPH-GAS	100 U	100 U	100 U
TPH-DIESEL	100 U	100 U	100 U
B	0.3 U	0.3 U	0.3 U
T	0.3 U	0.3 U	0.3 U
E	0.3 U	0.3 U	0.3 U
X	1.0 U	1.0 U	1.0 U
MTBE	1.0 U	1.0 U	1.0 U

TF555MW-04	9/26/96 (µg/L)	1/22/97 (µg/L)	5/12/97 (µg/L)
TPH-GAS	100 U	100 U	100 U
TPH-DIESEL	100 U	100 U	100 U
B	0.3 U	0.3 U	0.3 U
T	0.3 U	0.3 U	0.3 U
E	0.3 U	0.3 U	0.3 U
X	1.0 U	1.0 U	1.0 U
MTBE	1.0 U	1.0 U	1.0 U

17_NEW 1	9/20/96 (µg/L)	1/31/97 (µg/L)	5/7/97 (µg/L)
TPH-GAS	100 U	100 U	100 U
TPH-DIESEL	100 U	100 U	100 U
B	0.3 U	0.3 U	5 U
T	0.3 U	0.3 U	5 U
E	0.3 U	0.3 U	5 U
X	1.0 U	1.0 U	5 U
MTBE	1.0 U	1.0 U	NA

17_DGMW82	9/23/96 (µg/L)	1/31/97 (µg/L)	5/7/97 (µg/L)
TPH-GAS	100 U	100 U	100 U
TPH-DIESEL	100 U	100 U	100 U
B	0.3 U	0.3 U	5 U
T	0.3 U	0.3 U	5 U
E	0.3 U	0.3 U	5 U
X	1.0 U	1.0 U	5 U
MTBE	1.0 U	1.0 U	NA

EXPLANATION:

- TF1MW-01 — OHM MONITORING WELL LOCATIONS
- PZ-1 — PIEZOMETER WELL LOCATIONS
- 14_DBMW50 — CERCLA MONITORING WELL
- MCAS EL TORO BOUNDARY
- U — INDICATES THE COMPOUND OR ELEMENT 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
- UJ — INDICATES THE COMPOUND OR ELEMENT WAS ANALYZED BUT NOT DETECTED. THE SAMPLE DETECTION LIMIT IS AN ESTIMATED VALUE.
- P — FUEL PATTERN DOES NOT MATCH THAT OF GASOLINE OR JP-5
- B — BENZENE
- T — TOLUENE
- E — ETHYLBENZENE
- X — XYLENES
- MTBE — METHYL TERTIARY BUTYL ETHER
- NA — NOT ANALYZED
- µg/L — MICROGRAMS PER LITER

GRAPHIC SCALE

400 0 200 400

(IN FEET)

REVISIONS			
REV. No.	DESCRIPTION	DATE	APPROVED

PROJECT: SWDIV			OHM Remediation Services Corp. A Subsidiary of OHM Corporation IRVINE, CA			
DRAWN BY: B. COHEN	DATE: 03/10/97		TANK FARMS 555, 5 AND 6 TPH AND BTEX CONCENTRATION MAP			
CHECKED BY	DATE					
APPROVED BY	DATE					
PROJECT MANAGER	DATE		MARINE CORPS AIR STATION EL TORO, CALIFORNIA			
AUTOCAD FILE No. 18292S22.DWG						
SCALE 1"=400'	SHEET 1	OF 1	DOCUMENT CONTROL No. SW4356	OHM PROJECT No. 18292	DRAWING No. FIG 7-3	REVISION 0

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EXPLANATION OF ANALYTICAL TABLES

Analytical Methods
EPA Method 310.1 - alkalinity
EPA Method 350.1 / 350.2 / 350.3 - ammonia
EPA Method 8020 - BTEX and methyl tertiary butyl ether (MTBE)
EPA Method 300.0 - chloride
EPA Method 6010A - iron and potassium
EPA Method 353.2 - nitrate-nitrite
EPA Method 150.1 / 9045 - pH
EPA Method 300.0 / 375.2 /375.4 - sulfate
EPA Method 160.1 - total dissolved solids
SM 9215B / SM 9215C / SM 9215D - total heterotrophic plate count
EPA Method 351.2 / 351.4 - total Kjeldahl nitrogen (TKN)
EPA Method 415.1 / 415.2 - total organic compounds
EPA Method 8015/ CA LUFT Modified - total petroleum hydrocarbons as gasoline, JP5 and/or diesel
EPA Method 365.2 - total phosphorous
EPA Method 160.2 - total suspended solids
EPA Method 8260A - volatile organic compounds and MTBE

Abbreviations:

CA LUFT - California Leaking Underground Fuel Farms
EPA - Environmental Protection Agency
TPH - Total Petroleum Hydrocarbons
µg/L - micrograms per liter
mg/L - milligrams per liter
µmhos/cm - micro mhmos per centimeter
cfu/ml - colony forming units per milliliter
U - not detected above or equal to the stated reported limit
J - estimated value
UJ - not detected at the estimated reporting limit
R - rejected
P - fuel pattern does not match that of laboratory standard
PJ - fuel pattern of the estimated value does not match that of the laboratory standard
NA - not analyzed

Table 7-1
Analytical Summary for Tank Farm 555
MCAS El Toro, Santa Ana, California

OHM Sample Number	Sample Location	Date Collected	EPA 8020	TPH AS GASOLINE	TPH AS DIESEL	EPA 8260A	EPA 120.1	EPA 130.1	EPA 150.1 / EPA 9045	EPA 160.1	EPA 160.2	EPA 300.0 / EPA 9250	EPA 310.1	EPA 350.2 / EPA 350.3	EPA 351.2	EPA 353.2 / EPA 353.3	EPA 365.2	EPA 375.4	EPA 405.1	EPA 410.4	EPA 415.1
96-TF555-W-235	Trip Blank	9/20/96	X	X		X															
96-TF555-W-236	17_NEW01	9/20/96	X	X	X	X															
96-TF555-W-237	Trip Blank	9/23/96	X	X		X															
96-TF555-W-238	17_DGMW82	9/23/96	X	X	X	X															
96-TF555-W-239	03_BGMW26	9/23/96	X	X	X	X															
96-TF555-W-247	Trip Blank	9/24/96	X	X																	
96-TF555-W-248	Equipment Rinsate	9/24/96	X	X	X				X	X	X	X	X	X	X	X	X	X			X
96-TF555-W-249	TF555MW-03	9/24/96	X	X	X				X	X	X	X	X	X	X	X	X	X			X
96-TF555-W-250	Trip Blank	9/24/96	X	X																	
96-TF555-W-251	Equipment Rinsate	9/24/96	X	X	X				X	X	X	X	X	X	X	X	X	X			X
96-TF555-W-252	TF555MW-01	9/25/96	X	X	X				X	X	X	X	X	X	X	X	X	X			X
96-TF555-W-253	Trip Blank	9/25/96	X	X																	
96-TF555-W-254	Equipment Rinsate	9/25/96	X	X	X				X	X	X	X	X	X	X	X	X	X			X
96-TF555-W-255	TF555MW-02	9/25/96	X	X	X				X	X	X	X	X	X	X	X	X	X			X
96-TF555-W-256	Trip Blank	9/25/96	X	X																	
96-TF555-W-257	Equipment Rinsate	9/25/96	X	X	X				X	X	X	X	X	X	X	X	X	X			X
96-TF555-W-258	TF555MW-05	9/25/96	X	X	X				X	X	X	X	X	X	X	X	X	X			X
96-TF555-W-260	Equipment Rinsate	9/26/96	X	X	X				X	X	X	X	X	X	X	X	X	X			X
96-TF555-W-261	TF555MW-04	9/26/96	X	X	X				X	X	X	X	X	X	X	X	X	X			X
96-TF555-W-265	Trip Blank	9/27/96	X	X																	
96-TF555-W-266	TF555PZ-03	9/27/96	X	X	X																
96-TF555-W-285	Trip Blank	10/24/96	X	X		X															
96-TF555-W-286	TF555PZ-02	10/24/96	X	X	X	X															
96-TF555-W-287	Equipment Rinsate	10/24/96	X	X	X	X										X					
96-TF555-W-288	TF555PZ-01	10/24/96	X	X	X	X															
97-TF555-W-390	Trip Blank	1/22/97	X	X																	
97-TF555-W-391	Equipment Rinsate	1/22/97	X	X	X																
97-TF555-W-392	TF555PZ-02	1/22/97	X	X	X		X	X				X							X	X	
97-TF555-W-393	Equipment Rinsate	1/22/97	X	X	X																
97-TF555-W-394	TF555MW-04	1/22/97	X	X	X		X	X				X							X	X	
97-TF555-W-395	Equipment Rinsate	1/22/97	X	X	X																
97-TF555-W-396	TF555PZ-01	1/22/97	X	X	X		X	X				X							X	X	
97-TF555-W-397	Equipment Rinsate	1/22/97	X	X	X																
97-TF555-W-398	TF555MW-05	1/23/97	X	X	X		X	X				X							X	X	
97-TF555-W-401	Trip Blank	1/29/97	X	X																	
97-TF555-W-402	Equipment Rinsate	1/29/97	X	X	X																
97-TF555-W-403	TF555MW-02	1/29/97	X	X	X		X	X				X				X			X	X	
97-TF555-W-404	Trip Blank	1/31/97	X	X		X															
97-TF555-W-405	17_DGMW82	1/31/97	X	X	X	X															
97-TF555-W-406	17_NEW01	1/31/97	X	X	X	X															
97-TF555-W-407	Trip Blank	2/4/97	X	X																	
97-TF555-W-408	Equipment Rinsate	2/4/97	X	X	X																
97-TF555-W-409	TF555MW-03	2/4/97	X	X	X		X	X				X							X	X	
97-TF555-W-410	TF555MW-03 (Dup)	2/4/97	X	X	X		X	X				X							X	X	
97-TF555-W-411	Equipment Rinsate	2/4/97	X	X	X																
97-TF555-W-412	TF555MW-01	2/4/97	X	X	X		X	X				X							X	X	
97-TF555-W-413	03_BGMW26	2/7/97	X	X	X	X															
97-TF555-W-414	03_BGMW26 (Dup)	2/7/97	X	X	X	X															
97-TF555-W-415	Trip Blank	2/7/97	X			X															
97-TF555-W-416	Equipment Rinsate	2/7/97	X	X	X	X															
18292-442	Trip Blank	5/7/97		X		X															
18292-443	Equipment Rinsate	5/7/97		X	X	X															
18292-444	Equipment Rinsate	5/7/97		X	X	X															
18292-445	17_NEW01	5/7/97		X	X	X				X		X	X					X			
18292-446	17_DGMW82	5/7/97		X	X	X				X		X	X					X			
18292-447	Trip Blank	5/8/97	X	X																	
18292-448	TF555MW-03	5/8/97	X	X	X					X		X	X					X			
18292-451	DI Unit	5/8/97				X															
18292-452	DI Unit	5/8/97				X															
18292-449	TF555MW-01	5/9/97	X	X	X					X		X	X			X		X			
18292-450	TF555MW-01 (Dup)	5/9/97	X	X	X					X		X	X			X		X			
18292-453	Trip Blank	5/9/97	X	X		X															
18292-454	Equipment Rinsate	5/9/97	X	X	X	X															
18292-455	03_BGMW26	5/9/97		X	X	X				X		X	X					X			
18292-456	TF555MW-02	5/9/97	X	X	X					X		X	X			X		X			
18292-457	Equipment Rinsate	5/9/97	X	X	X																
18292-458	Trip Blank	5/12/97	X	X		X															
18292-459	Equipment Rinsate	5/12/97	X	X	X	X															
18292-460	Equipment Rinsate	5/12/97	X	X	X	X															
18292-461	TF555PZ-02	5/12/97		X	X	X				X		X	X			X		X			
18292-462	TF555PZ-01	5/12/97		X	X	X				X		X	X					X			
18292-463	TF555MW-04	5/12/97	X	X	X					X		X	X					X			
18292-464	TF555MW-05	5/12/97	X	X	X					X		X	X					X			

Table 7-1
Analytical Summary for Tank Farm 555
MCAS El Toro, Santa Ana, California

OHM Sample Number	Sample Location	Date Collected	EPA 450.1	EPA 6010A	EPA 7470A	SM 9215-B/C
96-TF555-W-235	Trip Blank	9/20/96				
96-TF555-W-236	17_NEW01	9/20/96				
96-TF555-W-237	Trip Blank	9/23/96				
96-TF555-W-238	17_DGMW82	9/23/96				
96-TF555-W-239	03_BGMW26	9/23/96				
96-TF555-W-247	Trip Blank	9/24/96				
96-TF555-W-248	Equipment Rinsate	9/24/96		X		X
96-TF555-W-249	TF555MW-03	9/24/96		X		X
96-TF555-W-250	Trip Blank	9/24/96				
96-TF555-W-251	Equipment Rinsate	9/24/96		X		X
96-TF555-W-252	TF555MW-01	9/25/96		X		X
96-TF555-W-253	Trip Blank	9/25/96				
96-TF555-W-254	Equipment Rinsate	9/25/96		X		X
96-TF555-W-255	TF555MW-02	9/25/96		X		X
96-TF555-W-256	Trip Blank	9/25/96				
96-TF555-W-257	Equipment Rinsate	9/25/96		X		X
96-TF555-W-258	TF555MW-05	9/25/96		X		X
96-TF555-W-260	Equipment Rinsate	9/26/96		X		X
96-TF555-W-261	TF555MW-04	9/26/96		X		X
96-TF555-W-265	Trip Blank	9/27/96				
96-TF555-W-266	TF555PZ-03	9/27/96				
96-TF555-W-285	Trip Blank	10/24/96				
96-TF555-W-286	TF555PZ-02	10/24/96				
96-TF555-W-287	Equipment Rinsate	10/24/96				
96-TF555-W-288	TF555PZ-01	10/24/96				
97-TF555-W-390	Trip Blank	1/22/97				
97-TF555-W-391	Equipment Rinsate	1/22/97				
97-TF555-W-392	TF555PZ-02	1/22/97	X	X	X	
97-TF555-W-393	Equipment Rinsate	1/22/97				
97-TF555-W-394	TF555MW-04	1/22/97	X	X	X	
97-TF555-W-395	Equipment Rinsate	1/22/97				
97-TF555-W-396	TF555PZ-01	1/22/97	X	X	X	
97-TF555-W-397	Equipment Rinsate	1/22/97				
97-TF555-W-398	TF555MW-05	1/23/97	X	X	X	
97-TF555-W-401	Trip Blank	1/29/97				
97-TF555-W-402	Equipment Rinsate	1/29/97				
97-TF555-W-403	TF555MW-02	1/29/97	X	X	X	
97-TF555-W-404	Trip Blank	1/31/97				
97-TF555-W-405	17_DGMW82	1/31/97				
97-TF555-W-406	17_NEW01	1/31/97				
97-TF555-W-407	Trip Blank	2/4/97				
97-TF555-W-408	Equipment Rinsate	2/4/97				
97-TF555-W-409	TF555MW-03	2/4/97	X	X	X	
97-TF555-W-410	TF555MW-03 (Dup)	2/4/97		X	X	
97-TF555-W-411	Equipment Rinsate	2/4/97				
97-TF555-W-412	TF555MW-01	2/4/97		X	X	
97-TF555-W-413	03_BGMW26	2/7/97				
97-TF555-W-414	03_BGMW26 (Dup)	2/7/97				
97-TF555-W-415	Trip Blank	2/7/97				
97-TF555-W-416	Equipment Rinsate	2/7/97				
18292-442	Trip Blank	5/7/97				
18292-443	Equipment Rinsate	5/7/97				
18292-444	Equipment Rinsate	5/7/97				
18292-445	17_NEW01	5/7/97		X		
18292-446	17_DGMW82	5/7/97		X		
18292-447	Trip Blank	5/8/97				
18292-448	TF555MW-03	5/8/97		X		
18292-451	DI Unit	5/8/97				
18292-452	DI Unit	5/8/97				
18292-449	TF555MW-01	5/9/97		X		
18292-450	TF555MW-01 (Dup)	5/9/97		X		
18292-453	Trip Blank	5/9/97				
18292-454	Equipment Rinsate	5/9/97				
18292-455	03_BGMW26	5/9/97		X		
18292-456	TF555MW-02	5/9/97		X		
18292-457	Equipment Rinsate	5/9/97				
18292-458	Trip Blank	5/12/97				
18292-459	Equipment Rinsate	5/12/97				
18292-460	Equipment Rinsate	5/12/97				
18292-461	TF555PZ-02	5/12/97		X		
18292-462	TF555PZ-01	5/12/97		X		
18292-463	TF555MW-04	5/12/97		X		
18292-464	TF555MW-05	5/12/97		X		

Table 7-2
Analytical Summary for Tank Farms 5 and 6
MCAS El Toro, Santa Ana, California

OHM Sample Number	Sample Location	Date Collected	EPA 8020	TPH AS GASOLINE	TPH-EXTRACTABLE	EPA 8260A	EPA 120.1	EPA 130.2	EPA 150.1	EPA 160.1	EPA 160.2	EPA 300.0 / EPA 9250 / EPA 325.2	EPA 310.1	EPA 340.2	EPA 350.1 / EPA 350.3
96-TF6-W-919	Trip Blank	9/13/96	X	X		X									
96-TF6-W-920	Equipment Rinsate	9/13/96	X	X	X	X									
96-TF6-W-921	04_DBMW40	9/13/96	X	X	X	X									
96-TF6-W-922	04_UGMW63	9/13/96	X	X	X	X									
96-TF6-W-923	18_BGMW01E	9/13/96	X	X	X	X									
96-TF6-W-931	04_DGMW66	9/16/96	X	X	X	X									
96-TF6-W-932	Trip Blank	9/16/96	X	X		X									
96-TF6-W-933	Equipment Rinsate	9/16/96	X	X	X				X	X	X		X		X
96-TF6-W-934	TF6-MW-01	9/17/96	X	X	X				X	X	X		X		X
96-TF6-W-936	Trip Blank	9/17/96	X	X											
96-TF6-W-937	Equipment Rinsate	9/17/96	X	X	X				X	X	X		X		X
96-TF6-W-938	TF6MW-02	9/18/96	X	X	X				X	X	X		X		X
96-TF6-W-939	TF6MW-02	9/18/96	X	X	X				X	X	X		X		X
96-TF6-W-943	Trip Blank	9/18/96	X	X											
97-TF6-W-1526	Trip Blank	1/16/97	X	X											
97-TF6-W-1527	Equipment Rinsate	1/16/97	X	X	X										
97-TF6-W-1528	TF6MW-01	1/16/97	X	X	X		X	X				X		X	
97-TF6-W-1531	Equipment Rinsate	1/16/97	X	X	X										
97-TF6-W-1532	04_DBMW40	1/16/97	X	X	X	X									
97-TF6-W-1533	Trip Blank	1/17/97	X	X											
97-TF6-W-1535	Equipment Rinsate	1/17/97	X	X	X	X									
97-TF6-W-1536	04_DGMW66	1/17/97	X	X	X	X									
97-TF6-W-1537	04_UGMW63	1/17/97	X	X	X	X									
97-TF6-W-1538	Trip Blank	1/20/97	X	X											
97-TF6-W-1539	Equipment Rinsate	1/20/97	X	X	X	X									
97-TF6-W-1540	18_BGMW01E	1/20/97	X	X	X	X									
97-TF6-W-1543	Equipment Rinsate	1/20/97	X	X	X										
97-TF6-W-1544	TF6MW-02	1/20/97	X	X	X	X	X	X						X	
17486-270	Trip Blank	4/29/97		X		X									
17486-271	Equipment Rinsate	4/29/97		X	X	X									
17486-272	04_UGMW63	4/29/97		X	X	X				X		X	X		
17486-273	Equipment Rinsate	4/29/97		X	X	X									
17486-274	18_BGMW01E	4/29/97		X	X	X				X		X	X		
17486-275	Trip Blank	4/30/97	X	X											
17486-276	Equipment Rinsate	4/30/97	X	X	X										
17486-277	TF6MW-02	4/30/97	X	X	X					X		X	X		
17486-278	TF6MW-02	4/30/97	X	X	X					X		X	X		
17486-279	Equipment Rinsate	4/30/97	X	X	X										
17486-280	TF6MW-01	4/30/97	X	X	X					X		X	X		
17486-281	Equipment Rinsate	4/30/97	X	X	X										
17486-294	Trip Blank	5/1/97		X		X									
17486-296	04_DGMW66	5/1/97		X	X	X				X		X	X		
17486-297	Equipment Rinsate	5/1/97		X	X	X									
17486-298	Equipment Rinsate	5/1/97		X	X	X									
17486-299	Equipment Rinsate	5/1/97		X	X	X									
17486-306	Trip Blank	5/2/97		X		X									
17486-307	04_DBMW40	5/2/97		X	X	X				X		X	X		

Table 7-2
Analytical Summary for Tank Farms 5 and 6
MCAS El Toro, Santa Ana, California

OHM Sample Number	Sample Location	Date Collected	EPA 351.4	EPA 353.2 / EPA 353.3	EPA 365.2	EPA 375.3 / EPA 375.4	EPA 405.1	EPA 410.4	EPA 415.2	EPA 450.1	EPA 6010A	EPA 7470A	SM 9215-B/C
96-TF6-W-919	Trip Blank	9/13/96											
96-TF6-W-920	Equipment Rinsate	9/13/96											
96-TF6-W-921	04_DBMW40	9/13/96											
96-TF6-W-922	04_UGMW63	9/13/96											
96-TF6-W-923	18_BGMW01E	9/13/96											
96-TF6-W-931	04_DGMW66	9/16/96											
96-TF6-W-932	Trip Blank	9/16/96											
96-TF6-W-933	Equipment Rinsate	9/16/96	X		X	X			X		X		
96-TF6-W-934	TF6-MW-01	9/17/96	X	X	X	X			X		X		X
96-TF6-W-936	Trip Blank	9/17/96											
96-TF6-W-937	Equipment Rinsate	9/17/96	X	X	X	X			X		X		X
96-TF6-W-938	TF6MW-02	9/18/96	X	X	X	X			X		X		X
96-TF6-W-939	TF6MW-02	9/18/96	X	X	X	X			X		X		X
96-TF6-W-943	Trip Blank	9/18/96											
97-TF6-W-1526	Trip Blank	1/16/97											
97-TF6-W-1527	Equipment Rinsate	1/16/97											
97-TF6-W-1528	TF6MW-01	1/16/97		X	X	X	X	X		X	X	X	
97-TF6-W-1531	Equipment Rinsate	1/16/97											
97-TF6-W-1532	04_DBMW40	1/16/97											
97-TF6-W-1533	Trip Blank	1/17/97											
97-TF6-W-1535	Equipment Rinsate	1/17/97											
97-TF6-W-1536	04_DGMW66	1/17/97											
97-TF6-W-1537	04_UGMW63	1/17/97											
97-TF6-W-1538	Trip Blank	1/20/97											
97-TF6-W-1539	Equipment Rinsate	1/20/97											
97-TF6-W-1540	18_BGMW01E	1/20/97											
97-TF6-W-1543	Equipment Rinsate	1/20/97											
97-TF6-W-1544	TF6MW-02	1/20/97		X	X	X	X	X		X	X	X	
17486-270	Trip Blank	4/29/97											
17486-271	Equipment Rinsate	4/29/97											
17486-272	04_UGMW63	4/29/97				X					X		
17486-273	Equipment Rinsate	4/29/97											
17486-274	18_BGMW01E	4/29/97				X					X		
17486-275	Trip Blank	4/30/97											
17486-276	Equipment Rinsate	4/30/97											
17486-277	TF6MW-02	4/30/97				X					X		
17486-278	TF6MW-02	4/30/97				X					X		
17486-279	Equipment Rinsate	4/30/97											
17486-280	TF6MW-01	4/30/97				X					X		
17486-281	Equipment Rinsate	4/30/97											
17486-294	Trip Blank	5/1/97											
17486-296	04_DGMW66	5/1/97				X					X		
17486-297	Equipment Rinsate	5/1/97											
17486-298	Equipment Rinsate	5/1/97											
17486-299	Equipment Rinsate	5/1/97											
17486-306	Trip Blank	5/2/97											
17486-307	04_DBMW40	5/2/97				X					X		

Section 8
USTs 390A and 390B

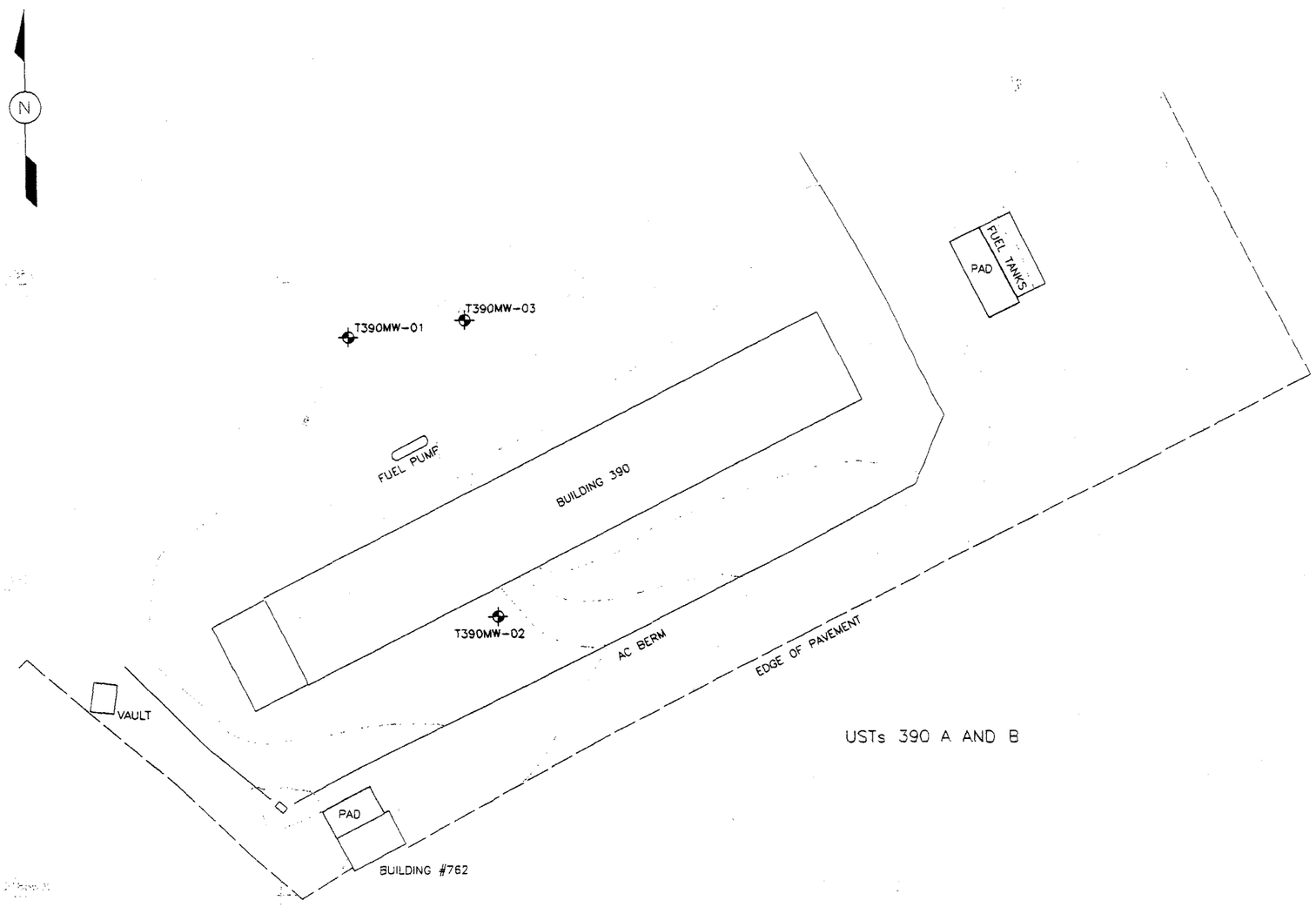
At USTs 390A and 390B, four wells were measured for depth to water in April 1997. Three of the wells were OHM monitoring wells (T390MW-01, T390MW-02 and T390MW-03) and one was a CERCLA well (18_BGMW02E). See Figure 8-1, USTs 390A and 390B — Monitoring Well Location Map.

8.1 Groundwater Occurrence

On March 28, 1997, OHM measured depth to groundwater at USTs 390A and 390B. Groundwater elevations across the site ranged from 222 feet above msl to 227 feet above msl. The groundwater gradient across the site is 0.012 ft/ft and the flow direction is to the west. The flow direction locally does not match the general trend of the other tank farms, however, when incorporated into the regional map, the trend relates with the overall groundwater flow across the Station (see Figure 2-1). Figure 8-2, USTs 390A and 390B Groundwater Contour Map, presents a groundwater contour map of USTs 390A and 390B. The figure also shows well locations in relation to the tanks.

8.2 Analytical Results

Section 4.1 summarizes laboratory methods for this sampling period and Table 8-1, Analytical Summary for USTs 390A and 390B, identifies the laboratory analyses performed at USTs 390A and 390B. Appendix C provides analytical results for all laboratory methods analyzed. Analytical Laboratory Reports, Chain-of-Custody Forms, and Laboratory Validation Reports are provided as Appendix D. Figure 8-3, USTs 390A and 390B TPH and BTEX Concentration Map, exhibits the TPH, BTEX, and MTBE results from the August 1996 sampling event through the April 1997 sampling event.



EXPLANATION:

T390MW-01 OHM MONITORING WELL LOCATIONS

18_BGM02E CERCLA MONITORING WELL

18_BGMW02E

GRAPHIC SCALE

40 0 20 40

(IN FEET)

UST SITE 390 A AND B SURVEY DATA

WELL LOCATIONS	NAD 27 NORTHING	NAD 27 EASTING	NAD 83 NORTHING	NAD 83 EASTING	TOP OF CASING ELEVATION (feet msl)	GROUND SURFACE ELEVATION (feet msl)
T390MW-01	548336.89	1554115.35	2188781.84	6115522.68	379.80	380.20
T390MW-02	NA	NA	2188690.09	6115571.36	380.41	380.87
T390MW-03	NA	NA	2188787.20	6115560.11	380.85	381.21
18_BGMW02E	548246.90	1554584.70	2188691.86	6775992.03	391.62	390.93

msl - mean sea level
NA - not available

REVISIONS

REV. No.	DESCRIPTION	DATE	APPROVED

PROJECT: SWDIV

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

DRAWN BY: R. PIRMORADIAN DATE: 09/12/97
CHECKED BY DATE
APPROVED BY DATE
PROJECT MANAGER DATE
AUTOCAD FILE No. 18292S11.DWG

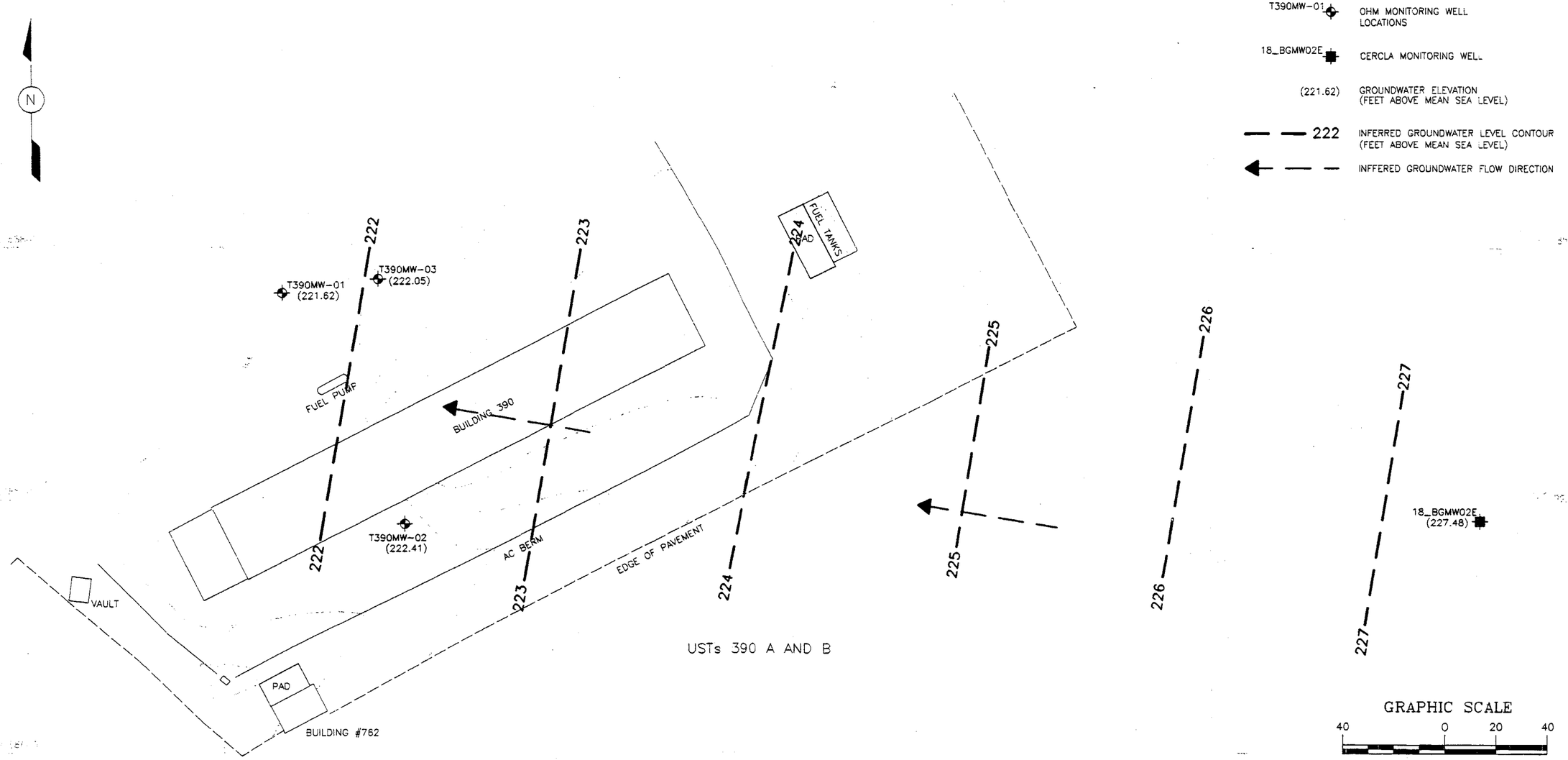
USTs 390 A AND B
MONITORING WELL LOCATION MAP

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.	REVISION
1"=40'	1	1	SW4356	18292	FIG 8-1	0

Sept 12, 1997 - 16:17:57 G:\PROJECTS\18292\18292s11.dwg

8-2



UST SITE 390 A AND B

WELL LOCATIONS	NAD 83 NORTHING	NAD 83 EASTING	TOP OF CASING ELEVATION (feet msl)	GROUND SURFACE ELEVATION (feet msl)	SCREEN INTERVAL (feet bgs)
T390MW-01	2188781.84	6115522.68	379.80	380.20	158-198
T390MW-02	2188690.09	6115571.36	380.41	380.87	151.5-191.5
T390MW-03	2188787.20	6115560.11	380.85	381.21	149-189
18_BGMW02E	2188691.86	6775992.03	391.62	390.93	198-233

msl - mean sea level
bgs - below ground surface

REVISIONS

REV. No.	DESCRIPTION	DATE	APPROVED

CONTRACT NAME: SWDIV

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

DRAWN BY: R. PIRMORADIAN DATE: 09/12/97
CHECKED BY DATE
APPROVED BY DATE
PROJECT MANAGER DATE
AUTOCAD FILE No. 18292046.DWG

USTs 390 A AND B
GROUNDWATER CONTOUR MAP
MARCH 28, 1996

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.
1"=40'	1	1	SW4356	18292	FIG 8-2

PIRMORADIAN

EXPLANATION OF ANALYTICAL TABLES

Analytical Methods
EPA Method 310.1 - alkalinity
EPA Method 350.1 / 350.2 / 350.3 - ammonia
EPA Method 8020 - BTEX and methyl tertiary butyl ether (MTBE)
EPA Method 300.0 - chloride
EPA Method 6010A - iron and potassium
EPA Method 353.2 - nitrate-nitrite
EPA Method 150.1 / 9045 - pH
EPA Method 300.0 / 375.2 /375.4 - sulfate
EPA Method 160.1 - total dissolved solids
SM 9215B / SM 9215C / SM 9215D - total heterotrophic plate count
EPA Method 351.2 / 351.4 - total Kjeldahl nitrogen (TKN)
EPA Method 415.1 / 415.2 - total organic compounds
EPA Method 8015/ CA LUFT Modified - total petroleum hydrocarbons as gasoline, JP5 and/or diesel
EPA Method 365.2 - total phosphorous
EPA Method 160.2 - total suspended solids
EPA Method 8260A - volatile organic compounds and MTBE

Abbreviations:

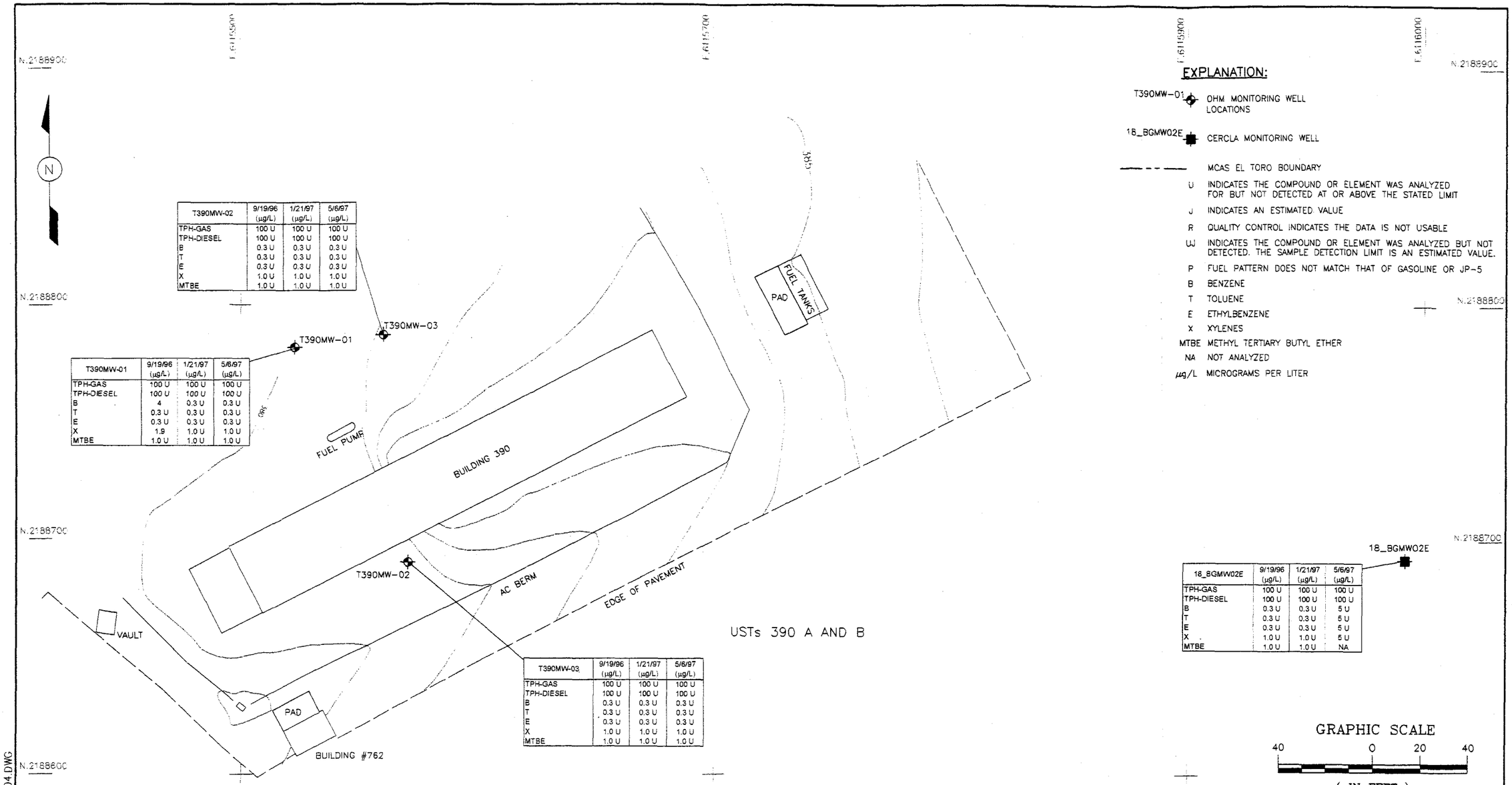
CA LUFT - California Leaking Underground Fuel Farms
EPA - Environmental Protection Agency
TPH - Total Petroleum Hydrocarbons
µg/L - micrograms per liter
mg/L - milligrams per liter
µmhos/cm - micro mhmos per centimeter
cfu/ml - colony forming units per milliliter
U - not detected above or equal to the stated reported limit
J - estimated value
UJ - not detected at the estimated reporting limit
R - rejected
P - fuel pattern does not match that of laboratory standard
PJ - fuel pattern of the estimated value does not match that of the laboratory standard
NA - not analyzed

Table 8-1
Analytical Summary for USTs 390 A and B
MCAS El Toro, Santa Ana, California

OHM Sample Number	Sample Location	Date Collected	EPA 8020	TPH AS GASOLINE	TPH AS DIESEL	EPA 8260A	EPA 120.1	EPA 130.2	EPA 150.1	EPA 160.1	EPA 160.2	EPA 300.0	EPA 310.1	EPA 314A	EPA 350.3	EPA 351.3
96-T390-W-198	Trip Blank	9/19/96	X	X												
96-T390-W-199	Equipment Rinsate	9/19/96	X	X	X				X	X	X	X	X		X	X
96-T390-W-200	T390MW-01	9/19/96	X	X	X				X	X	X	X	X		X	X
96-T390-W-201	Trip Blank	9/19/96	X	X												
96-T390-W-202	Equipment Rinsate	9/19/96	X	X	X				X	X	X	X	X		X	X
96-T390-W-203	T390MW-03	9/19/96	X	X	X				X	X	X	X	X		X	X
96-T390-W-221	Trip Blank	9/19/96	X	X		X										
96-T390-W-222	18_BGMW02E	9/19/96	X	X	X	X										
96-T390-W-223	Equipment Rinsate	9/19/96	X	X	X				X	X	X	X	X		X	X
96-T390-W-224	T390MW-02	9/19/96	X	X	X				X	X	X	X	X		X	X
97-T390-W-382	Trip Blank	1/21/97	X	X		X										
97-T390-W-383	Equipment Rinsate	1/21/97	X	X	X											
97-T390-W-384	T390MW-01	1/21/97	X	X	X		X	X				X		X		
97-T390-W-385	Equipment Rinsate	1/21/97	X	X	X											
97-T390-W-386	18_BGMW02E	1/21/97	X	X	X	X										
97-T390-W-387	Equipment Rinsate	1/21/97	X	X	X	X										
97-T390-W-388	Equipment Rinsate	1/21/97	X	X	X											
97-T390-W-389	T390MW-02	1/21/97	X	X	X		X	X				X		X		
97-T390-W-390	T390MW-03	1/21/97	X	X	X		X	X				X		X		
18292-433	Trip Blank	5/6/97		X	X	X										
18292-435	T390MW-01	5/6/97	X	X	X											
18292-436	Equipment Rinsate	5/6/97	X	X	X											
18292-437	T390MW-02	5/6/97	X	X	X											
18292-438	T390MW-03	5/6/97	X	X	X											
18292-439	18_BGMW02E	5/6/97		X	X	X										

Table 8-1
Analytical Summary for USTs 390 A and B
MCAS El Toro, Santa Ana, California

OHM Sample Number	Sample Location	Date Collected	EPA 353.2 / EPA 353.3)	EPA 365.2	EPA 405.1	EPA 410.4	EPA 415.1	EPA 450.1	EPA 6010A	EPA 7470A	SM 9215-B
96-T390-W-198	Trip Blank	9/19/96									
96-T390-W-199	Equipment Rinsate	9/19/96	X	X			X		X		X
96-T390-W-200	T390MW-01	9/19/96	X	X			X		X		X
96-T390-W-201	Trip Blank	9/19/96									
96-T390-W-202	Equipment Rinsate	9/19/96	X	X			X		X		X
96-T390-W-203	T390MW-03	9/19/96	X	X			X		X		X
96-T390-W-221	Trip Blank	9/19/96									
96-T390-W-222	18_BGMW02E	9/19/96									
96-T390-W-223	Equipment Rinsate	9/19/96	X	X			X		X		X
96-T390-W-224	T390MW-02	9/19/96	X	X			X		X		X
97-T390-W-382	Trip Blank	1/21/97									
97-T390-W-383	Equipment Rinsate	1/21/97									
97-T390-W-384	T390MW-01	1/21/97			X	X		X	X	X	
97-T390-W-385	Equipment Rinsate	1/21/97									
97-T390-W-386	18_BGMW02E	1/21/97									
97-T390-W-387	Equipment Rinsate	1/21/97									
97-T390-W-388	Equipment Rinsate	1/21/97									
97-T390-W-389	T390MW-02	1/21/97			X	X		X	X	X	
97-T390-W-390	T390MW-03	1/21/97			X	X		X	X	X	
18292-433	Trip Blank	5/6/97									
18292-435	T390MW-01	5/6/97									
18292-436	Equipment Rinsate	5/6/97									
18292-437	T390MW-02	5/6/97									
18292-438	T390MW-03	5/6/97									
18292-439	18_BGMW02E	5/6/97									



T390MW-02	9/19/96 (µg/L)	1/21/97 (µg/L)	5/6/97 (µg/L)
TPH-GAS	100 U	100 U	100 U
TPH-DIESEL	100 U	100 U	100 U
B	0.3 U	0.3 U	0.3 U
T	0.3 U	0.3 U	0.3 U
E	0.3 U	0.3 U	0.3 U
X	1.0 U	1.0 U	1.0 U
MTBE	1.0 U	1.0 U	1.0 U

T390MW-01	9/19/96 (µg/L)	1/21/97 (µg/L)	5/6/97 (µg/L)
TPH-GAS	100 U	100 U	100 U
TPH-DIESEL	100 U	100 U	100 U
B	4	0.3 U	0.3 U
T	0.3 U	0.3 U	0.3 U
E	0.3 U	0.3 U	0.3 U
X	1.9	1.0 U	1.0 U
MTBE	1.0 U	1.0 U	1.0 U

T390MW-03	9/19/96 (µg/L)	1/21/97 (µg/L)	5/6/97 (µg/L)
TPH-GAS	100 U	100 U	100 U
TPH-DIESEL	100 U	100 U	100 U
B	0.3 U	0.3 U	0.3 U
T	0.3 U	0.3 U	0.3 U
E	0.3 U	0.3 U	0.3 U
X	1.0 U	1.0 U	1.0 U
MTBE	1.0 U	1.0 U	1.0 U

18_BGMW02E	9/19/96 (µg/L)	1/21/97 (µg/L)	5/6/97 (µg/L)
TPH-GAS	100 U	100 U	100 U
TPH-DIESEL	100 U	100 U	100 U
B	0.3 U	0.3 U	5 U
T	0.3 U	0.3 U	5 U
E	0.3 U	0.3 U	5 U
X	1.0 U	1.0 U	5 U
MTBE	1.0 U	1.0 U	NA

REVISIONS

REV. No.	DESCRIPTION	DATE	APPROVED

PROJECT: SWDIV

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

DRAWN BY: B. COHEN DATE: 03/10/97
CHECKED BY DATE
APPROVED BY DATE
PROJECT MANAGER DATE
AUTOCAD FILE No. 18292S21.DWG

USTs 390 A AND B
TPH AND BTEX CONCENTRATION MAP

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.	REVISION
1"=40'	1	1	SW4356	18292	FIG 8-3	0

C:\CAD-DGNS\OHM\18292\18292S04.DWG

Section 9
Conclusions and Recommendations

9.1 Regional Groundwater Occurrence

Groundwater flow in the alluvial aquifer underlying the Station is generally from southeast to northwest. The regional groundwater contour map (Figure 2-1) shows a general gradient of approximately 0.016 ft/ft from the southeast to the northwest. This decrease in gradient may be due to an increase in aquifer transmissivity or an increase in aquifer thickness to the north.

OHM has tentatively identified a separate shallow bedrock aquifer system, in the vicinity of Tank Farm 555, after examining information gathered during the well installation program conducted from April through May 1996. The hydraulic gradient in this area is approximately 0.039 ft/ft to the south and the water levels appear to drop over 140 feet between bedrock and alluvium.

9.2 Regional Analytical Results

Tank Farms 1, 2, 4, 5, 6, and 555 showed varying levels of groundwater contamination by hydrocarbons. The analytical results at Tank Farms 1, 2, and 6 (for OHM wells and CERCLA wells) have indicated the presence of VOCs, which include 1,1 dichloroethene, 1,2 dichloroethane, carbon tetrachloride and trichloroethene (TCE). Tank Farms 3, 555 and USTs 390A and 390B showed no evidence of groundwater contamination by hydrocarbons during this sampling event.

A summary of the analytical results for VOCs, TPH, and BTEX at each tank farm follows:

Tank Farm 1 — The April 1997 sampling event reported CERCLA Well 24_EX2 was not impacted with TPH as gasoline this sampling event, however, the previous sampling event reported 240 µg/L. This reported concentration is more consistent with historical findings at this well. CERCLA Well 18_DW135 was previously reported to be impacted with TPH extractables; however, there were no reported concentrations of TPH extractables in Well 18_DW135 during this sampling event.

Volatile organic compounds were reported at detectable concentrations in the Tank Farm 1 vicinity. Carbon tetrachloride was reported at TF1MW-01 at 15 µg/L, TF1MW-02 at 13 µg/L, 18_DW135 at 13 µg/L, 14_DBMW50 at 9.2 µg/L, and 24_EX2 at 5.2 µg/L. These reported concentrations were equivalent to previously reported concentrations by OHM and others. Trichloroethene was reported in Well TF1MW-01, TF1MW-02, 18_DW135, and 24_EX2. The reported concentrations ranged from 23 µg/L to 770 µg/L. The reported concentration of TCE in CERCLA Well 24_EX2 increased from 69 µg/L to 770 µg/L since the August 1996 sampling event. OHM will continue to monitor the TCE concentrations in

this area, in future groundwater sampling events. 1,1 Dichloroethene was reported at 4.1 μg/L in CERCLA well24_EX2. Previous sampling events reported estimated values for 1,1 DCE in this well.

Tank Farm 2 — The April 1997 groundwater sampling event reported that OHM monitoring wells were impacted with TPH as gasoline, and BTEX compounds.

TPH as gasoline was reported at a range of concentrations from 570 μg/L in Well TF2MW-02 to 2,900 μg/L in Well TF2MW-01. These reported concentrations were compared to the previous OHM sampling event, which reported 120 μg/L in Well 15_DBMW51 to 4,400 μg/L in Well TF2MW-01.

TPH as diesel was not detected during this sampling event. However, TPH extractables were reported at concentrations that ranged from 620 μg/L in Well TF2MW-02 to 1,100 μg/L in Well TF2MW-03 in the previous quarter.

The BTEX concentrations were as follows:

- Benzene ranged from 370 μg/L in Well TF2MW-04 to 1,500 μg/L in Well TF2MW-01,
- Xylenes (total) ranged from 6.7 μg/L in Well TF2MW-02 to 180 μg/L in Well TF2MW-01, and
- Toluene was reported at 1.0 μg/L in Well TF2MW-01.

Tank Farm 3 — The April sampling event reported no detectable concentrations of petroleum fuel products or BTEX compounds in the groundwater samples. These findings are consistent with the previous groundwater sampling event conducted in August and December 1996.

Tank Farm 4 — Reported detectable concentrations of petroleum and BTEX compounds were identified in OHM Monitoring Well TF4MW-01. TPH as gasoline was reported at 606 μg/L and TPH as diesel was reported at 170 μg/L. Benzene was reported at 200 μg/L, ethylbenzene was reported at 0.6 μg/L, and total xylenes were reported at 17 μg/L. During the August 1996 sampling event, petroleum fuel products, and BTEX compounds were reported in Well TF4MW-01. However, during the December 1996, only BTEX compounds were reported at detectable concentrations. These reported BTEX concentrations have been consistent throughout the sampling events.

OHM Well TF4MW-03 reported no detectable concentrations of either petroleum fuel products or BTEX compounds. The reported concentrations of petroleum fuel products and BTEX compounds has gradually decreased in this well since the first round of sampling conducted in August 1996.

Tank Farm 5 — CERCLA Wells 04_DBMW40, 04_UGMW63, and 18_BGMW01E reported concentrations of petroleum fuel products and BTEX compounds. TPH as gasoline

was reported above detection limits in the three wells with concentrations ranging from 69 µg/L to 1,800 µg/L. TPH as diesel was reported above detection limits in Well 18_BGMW01E with 500 µg/L.

BTEX compounds with reported concentrations above detection limits were benzene, and xylenes. The concentrations of benzene in CERCLA Wells 04_DBMW40, 04_UGMW63, and 18_BGMW01E ranged from 4.3 µg/L to 140 µg/L. The reported benzene concentration in Well 04_DBMW40 (140 µg/L) was slightly elevated than concentrations reported in previous sampling events, and the reported concentration of benzene (4.3 µg/L) in Well 18_BGMW01E was slightly lower than previous sampling events conducted by OHM.

Tank Farm 6 — OHM monitoring wells reported detectable concentrations of TPH as gasoline and BTEX compounds. The reported concentrations of TPH as gasoline in TF6MW-01 were equivalent to previously reported concentrations in that well. The reported concentrations of TF6MW-02 were elevated from previously reported concentrations. TPH as gasoline was previously reported at approximately 50 to 70 µg/L and during this sampling event the reported concentration was at 1,060 µg/L and 1,050 µg/L (duplicate sample).

The reported BTEX concentrations in Well TF6MW-01 were equivalent to previously reported concentrations. No BTEX compounds were reported in well TF6MW-02.

Tank Farm 555 — In previous groundwater sampling events only one reported concentration of petroleum fuel product was reported above the detection limit. During this sampling event TPH as diesel was reported in Monitoring Well TF555MW-01 and piezometer TF555PZ-02 with concentrations ranging from 110 µg/L to 160 µg/L. A duplicate sample was collected at Well TF555MW-01 and TPH was reported above the detection limit with 182 µg/L. TPH as gasoline was also reported above the detection limit in Well TF555MW-01 with 367 µg/L, and the duplicate sample reported 276 µg/L. In August 1996, diesel was reported in Well TF555MW-01 with 220 µg/L.

No BTEX compounds were reported above the detection limit in wells at Tank Farm 555.

USTs 390A and 390B — No reported concentrations above detection limits of petroleum fuel products nor BTEX compounds were identified in groundwater samples collected at USTs 390A and 390B.

Section 10
References

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Appendix A
Depth to Groundwater Logs

TF1MW-01

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual conditions.
TF1MW-01	10-Sep-96 13-Dec-96 14-Jan-97	1:45	109.5-149.5	110.41 110.22 110.00	110.65	259.42 259.42 259.42	259.91 259.91 259.91	
TF1 MW-01	3/28/97	0740		109.31	109.73			well not labeled, Labeled it MW-01
TF1 MW-01	5/19/97	0850		109.57	110.03			
TF1MW-01	7/31/97	0934		109.99	110.42			
TF1-MW01	8/20/97	0900		109.97	110.40			

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
TF1MW-02	23-Jul-96 11-Sep-96 13-Dec-96 14-Jan-97	12:36	110 -150	112.90 113.20 113.10 112.87	113.47	263.68 263.68 263.68 263.68	264.03 264.03 264.03 264.03	
TF1 MW-02	3/28/97	0755		112.19	112.55			B
TF1 MW-02	5/14/97	1030		112.47	112.77			B
TF1MW-02	5/14/97	0840		112.48	112.84			B
TF1MW-02	7/31/97	0927		112.84	113.22			
TF1MW-02	8/20/97	0910		112.88	113.18			

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
18_DW135	6-Sep-96 13-Dec-96 14-Jan-97		115-135	116.85 117.00 116.75		268.32 268.32 268.32	269.00 269.00 269.00	
18_DW135	3/28/97	0835		115.98	116.61			well not labeled. Labeled well 18_DW135 (R)
—	—	—		—	—			Flush mounted well (R)
18_DW135	5/19/97	0920		116.20	116.88			(R)
18-DW135	7/31/97	0922		116.56	117.16			(M3)
18-DW135	8/20/97	0930		116.50	117.10			(M4)

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
24_EX2	9-Sep-96 13-Dec-96 13-Jan-97	1:35	109-211	106.68 105.94 105.20		252.58 252.58 252.58	251.34 251.34 251.34	TOC is 1' above ground surface
(B)								
24_EX2 ~~3/28/97~~	3/28/97	8:13		105.27	104.03			DW
24-EX2	5/14/97	1105		105.70	NA			BW Casing above ground.
24-EX2	5/19/97	0900		105.71	NA			B
24-EX2	7/31/97	1108		106.09	NA			MB
24-EX2	8/21/97	0945		106.06	NA			MB

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	Total Depth (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
18_BGMW103	10-Sep-96 13-Dec-96 14-Jan-97	1:35	395-495	125.30 107.05 106.90			252.15 252.15 252.15	251.22 251.22 251.22	Screen zoned in deeper aquifer make note of varying elevations.
18-BGMW103	3/28/97	0756		117.10	116.27	NA			DW
18-BGMW103	5/14/97	1114		120.51	NA	NA - too deep			R casing is above ground.
18-BGMW103	5/19/97	0905		120.44	NA	NA - too deep			R
18-BGMW03	7/31/97	1100		123.08	NA	NA			
18-BGMW03	8/20/97	0958		123.01	NA	NA			

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
14_DBMW50	6-Sep-96 13-Dec-96 10-Jan-97	12:22	120-160	119.45 119.60 118.50		270.84 270.84 270.84	270.28 270.28 270.28	
14_DBMW50	3/28/97	0810		118.60	NA			B
14-DBMW50	5/9/97	0915		118.80	NA			B
14-DBMW50	7/31/97	0916		119.18	NA			MB
14-DBMW50	8/20/97	1010		119.16	NA			MB

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	Total Depth (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations
14_DGMW79	13-Dec-96	12:10	118-158	118.15			268.80	268.99	
14-DGMW79	3/28/97	0900		NA	NA	NA			Not on map. (B)
14-DGMW79	5/14/97	0935		NA	NA	NA			Could not find (B)
14-DGMW79	5/14/97	0955		117.29	117.51	164.75			(B). well under water. well not labeled
14-DGMW-79	7/31/97	1122		117.69	118.01	163.51			(B) well under water
14-DGMW-79	8/20/97	1020		117.71	118.03	163.51			(B)

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	Total Depth (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
TF2MW-04	24-May-96		120-160	129.15			280.88	281.42	
	30-Aug-96			132.32			280.88	281.42	perhaps GS elevation
	13-Dec-96	2:22		129.35	130.20		280.88	281.42	
	13-Jan-97			129.20			280.88	281.42	
TF2MW-04	3/28/97	9:54		128.66	129.20	159.82			2" of standing water (DW)
TF2MW-04	5/19/97	1150		128.64	129.21	159.75			(PD) standing water present
TF2MW-04	7/31/97	0851		129.07	129.62	159.78			(MB) 1" standing water in well vault
TF2MW-04	8/21/97	1045		129.10	129.65	159.86			(MB) OK

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	Total Depth (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
TF2MW-02	16-May-96		115-155	127.75			278.80	279.53	
	30-Aug-96			127.35			278.80	279.53	
	13-Dec-96	2:30		127.75	128.51		278.80	279.53	
	28-Jan-97			127.24			278.80	279.53	
	31-Dec-96			127.60			278.80	279.53	
TF2MW-02	3/28/97	9:25		126.68	127.41	154.90			DW
TF2MW-02	5/19/97	1137		126.46	127.51	154.85			B
TF2MW-02	7/31/97	0841		127.13	127.89	154.79			MP
TF2MW02	8/21/97	1055		127.17	127.93	154.83			MP

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
TF2MW-01	14-May-96		120-160	131.78		283.52	283.97	
	29-Aug-96			132.37		283.52	283.97	
	13-Dec-96	2:03		132.60		283.52	283.97	
	23-Dec-96			132.67		283.52	283.97	
TF2MW-01	3/28/97	9:00		131.58	132.03			4" of standing water (AW)
TF2MW-01	5/19/97	1105		131.42	132.21			Standing water present (BW)
TF2-MW-01	7/31/97	0815		132.20	132.72			(MB)
TF2-MW-01	8/20/97	1105		132.21	132.73			

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	Total Depth (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual well conditions.
TF2MW-03	20-May-96 13-Dec-96 24-Dec-96 10-Jan-97	1:56	120-160	128.20 129.44 129.15 128.80	129.77		279.67 279.67 279.67 279.67	280.32 280.32 280.32 280.32	
TF2MW-03	3/28/97	8:48		128.12	129.77	160.41			DW
TF2MW-03	5/19/97	1020		128.22	128.87	160.15			B well cap very hard to get off.
TF2-MW-03	7/31/97	0825		128.69	129.35	160.31			MB
TF2MW03	8/20/97	1115		128.68	129.34	160.31			MB

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	Total Depth (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well conditions, well cap, lock, well vault) make note of any unusual well observations.
13_UGMW3	3-Sep-96 13-Dec-96 27-Dec-96	11:50	144-184	133.88 133.36	133.73		285.25 285.25 285.25	285.40 285.40 285.40	
13-UGMW32	3/28/97	0930		132.73	132.91	188.45			Aphid-like insect infestation. (B)
13-UGMW32	5/19/97	1110		132.91	133.20	189.10			B
13-UGMW32	7/31/97	0800		133.50	133.77	189.41			
13-UGMW32	8/20/97	1130		133.50	133.77	189.41			

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual conditions.
13_DBMW49	4-Sep-96 13-Dec-96 27-Dec-96	11:35	142-182	129.43 128.58 128.38		280.67 280.67 280.67	280.04 280.04 280.04	
13-DBMW49	3/28/97	0920		128.03	NA			R
13-DBMW49	5/19/97	1125		128.40	NA			R
13-DBMW-49	7/31/97	0810		129.02	NA			MMB
13-DBMW-49	8/20/97	1145		129.00	NA			MMB

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	Total Depth (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
13_DGMW78	4-Sep-96 13-Dec-96 10-Jan-97	11:25	127-167	125.00 125.06	125.78	B 172.72	276.16 276.16 276.16	276.42 276.42 276.42	
13-DGMW78	3/28/97	0905		124.40	124.68	~~178.78~~			B
13-DGMW79	5/19/97	1015		124.51	124.81	171.72			B
13-DGMW-79	7/31/97	0834		124.96	~~124.76~~ 125.26	171.79			YMP
13-DGMW-79	8/20/97	1200		124.95	125.25	179.78			YMP

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	Total Depth (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
15_DBMW51	5-Sep-96 13-Dec-96 20-Dec-96	12:05	125-165	119.80 119.92 119.68		(B) 6	269.45 269.45 269.45	269.79 269.79 269.79	
15_DBMW51	3/28/97	0850		118.64	119.13	169.75			well cap missing. Standing water
—	—	—		—	—	—			surrounding well. (B)
15_DBMW51	5/19/97	0931		118.85	119.31	169.60			(B) Standing water present.
15-DBMW51	7/31/97	0906		119.22	119.69	169.52			(B)
15-DBMW51	8/20/97	1215		119.24	119.71	169.51			(B)

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	Total Depth (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual conditions.
TF3MW-01	31-Oct-96		169.5-209.5	178.47			332.86	333.45	
	5-Nov-96			178.45			332.86	333.45	
	13-Dec-96		1:40	177.88			332.86	333.45	
	20-Jan-97			177.41			332.86	333.45	
TF3MW-01	3/28/97	1118		176.75	177.34	209.15			1/2" of water inside casing DW
TF3MW01	5/20/97	0955		176.80	177.20				MM OK
TF3MW01	7/31/97	1254		177.28	177.83	208.98			MM OK
TF3MW01	8/21/97	1210		177.20	177.85	209.99			MM

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	Total Depth (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
TF3MW-02	13-Aug-96		159-199	165.95			318.38	319.36	
	12-Sep-96			166.10			318.38	319.36	
	13-Dec-96	1:25		166.02			318.38	319.36	Casing difference 1"
	15-Jan-97			165.70			318.38	319.36	
TF3MW-02	3/28/97	10:58		164.77	165.75	197.99			DW
TF3MW-02	5/20/97	1000		164.94	165.92				MB
TF3MW-02	7/31/97	1235		165.34	166.33	197.80			MB
TF3MW-02	8/21/97	1218		165.26	166.25	197.92			MB

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	Total Depth (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
TF3MW-03	27-Aug-96		165.5-205.5	193.50			329.13	329.92	
	18-Sep-96			175.60			329.13	329.92	
	13-Dec-96			175.53			329.13	329.92	casing difference 11"
	15-Jan-97			175.33			329.13	329.92	
	16-Jan-97			175.33			329.13	329.92	
TF3MW-03	3/20/97	11:06		174.34	175.13				DU
TF3MW-03	5/20/97	1010		174.58	175.37				UMA
TF3MW-03	7/31/97	1248		174.72	175.51				UMB
TF3MW-03	8/21/97	1030		174.70	175.49				UMD

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	Total Depth (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual conditions.
18_BGMW12	16-Dec-96	8:50	165-205	154.54	154.90		304.48	304.89	
18-BGMW12	3/28/97	1030		NA	NA	NA			Could not find (B)
18-BGMW12	5/20/97	1020		NA	NA	NA			(MR)
18-BGMW12	8/21/97	800		NA	NA	NA			

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	Total Depth (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
TF4MW-01	9-Sep-96		201-241	206.04			378.84	379.29	
	27-Sep-96			205.91			378.84	379.29	
	16-Dec-96	8:12		205.62	206.05		378.84	379.29	
	31-Dec-96			205.29			378.84	379.29	
TF4MW-01	3/28/97	1155		204.36	204.81	238.30			well not labeled. Labeled TF4MW-01 (B)
									4 inches of standing water. (B)
TF4MW-01	5/20/97	1026		204.02	204.51				(MP)
TF4MW-01	7/31/97	1335		204.77	205.22	238.22			(MP) OK
TF4MW01	8/21/97	1310		204.76	205.20	238.26			(MP)

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	Total Depth (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
TF4MW-02	16-Sep-96 4-Oct-96 16-Dec-96 31-Dec-96	8:25	201-241	210.80 208.28 209.20 208.84	209.42		384.97 384.97 384.97 384.97	385.27 385.27 385.27 385.27	
TF4MW-02	3/28/97	1203		208.11	NA	244.45			(DW) well not Labeled
(RJ) ~~TF4MW-02~~	~~5/20/97~~	~~1030~~		~~208.54~~					1½ inch water above casing. water was bailed out & measurements was taken. (B) (DW)
TF4MW02	5/20/97	1030		208.54	208.86				(MB)
TF4MW-02	7/31/97	1400		208.41	208.68	244.19			(MB) OK
TF4MW02	8/21/97	1318		208.44	208.71	244.20			(MB)

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	Total Depth (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
TF4MW-03	3-Sep-96		201-241	208.42			384.07	384.53	
	3-Oct-96			209.64			384.07	384.53	
	16-Dec-96	8:00		208.00	208.45		384.07	384.53	
	6-Jan-97			207.71			384.07	384.53	
TF4 MW-03	3/28/97	1140		206.77	207.25	241.50			well Not labeled. Labeled TF4MW-03 (8)
TF4MW03	5/21/97	1035		206.22	206.80				MP
TF4MW-03	7/31/97	1347		207.08	207.56	241.95			MP OK
TF4MW-03	8/21/97	1330		206.99	207.47	241.98			MP

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
18_BGMW16	2-Oct-96 16-Dec-96 30-Dec-96	9:16	223-263	216.18 216.04 215.60		376.58 376.58 376.58	375.82 375.82 375.82	casing difference 6 .75 "
18_BGMW16	3/28/97	1055		214.62	NA			No pipe in well; duct tape over hole in well cap (R)
18-BGMW-16	5/20/97	1030		214.69	NA			New Well Cap on Well (MR)
18-BGMW-16	7/31/97	1328		215.24	NA			(MR) OK
18-BGMW-16	8/21/97	1345		215.08	NA			(MR)

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
20_UGMW36	7-Oct-96 16-Dec-96 30-Dec-96	9:08	183-223	184.76 185.52 185.11		338.70 338.70 338.70	338.12 338.12 338.12	casing difference 5.75 "
20_UGMW 36	3/28/97	1030		184.07	NA			No pipe or "T"; hole in well cap. (B)
20_UGMW36	5/28/97	1010		184.10	NA			New Well Cap on (MB)
20-UGMW-36	9/31/97	1321		184.36	NA			(MB) ok
20-UGMW-36	8/21/97	1400		184.32	NA			(MB)

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well conditions, well cap, lock, well vault) make note of any unusual observations.
TF6MW-01	27-Aug-96		184.5-204.5	193.50		383.57	383.89	
	16-Sep-96			192.49		383.57	383.89	
	13-Dec-96		10:50	191.92		383.57	383.89	no locking cap, casing difference 4"
	16-Jan-97			191.61		383.57	383.89	
	~~3/31/97~~	~~8:18~~						~~1" of water inside casing~~
TF6mw-01	3/31/97	0900		190.73	191.07			well not labeled | standing
—	—	—		—	—			water present (2" in). Labeled well
—	—	—		—	—			TF6mw01 (R)
TF6mw-01	5/14/97	1425		190.56	190.67			(R)
TF6MW-01	8/1/97	0830		190.52	190.88			(MR) OK
TF6MW-01	8/21/97	0730		190.58	190.87			(MR) OK

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
TF6MW-02	9-Sep-96 16-Sep-96 13-Dec-96 20-Jan-97	10:43	190 - 230	196.82 196.65 196.26 196.25		384.65 384.65 384.65 384.65	384.93 384.93 384.93 384.93	no locking cap, casing difference 3.7"
TF6MW-02	3/31/97	0855		194.20	194.49			(B) Standing water present (3') (B)
—	—	—		—	—			well not labeled!
TF6MW-02	5/14/97	1335		194.97	195.30			(B) Standing water present
TF6MW-02	8/1/97	0803		194.91	195.22			(MB) OK
TF6MW-02	8/21/97	0740		194.94	195.24			(MB) OK

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
18_DGMW01E	13-Sep-96 13-Dec-96 17-Jan-97	11:30	205-225	203.65 203.26 203.10		392.08 392.08 392.08	392.08 392.08 392.08	casing difference 8"
18_BGMW01E	3/31/97	0843		202.11	NA			
18-BGMW01E	5/14/97	1325		201.86	NA			
18-BGMW01E	8/1/97	0809		201.78	NA			OK
18-BGMW01E	8/21/97	0750		201.81	NA			

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
04_DBMW40	13-Sep-96 13-Dec-96 16-Jan-97	11:23	220-260	210.30 209.50 208.90		400.46 400.46 400.46	400.01 400.01 400.01	need slip cap, casing difference 4.9"
04-DBMW40	3/31/97	0930		208.53	NA			No well cap. Zip lock bag used. B
04-DBMW40	5/14/97	1307		208.40	NA			B well cap there.
04-DBMW40	8/1/97	0818		208.57	NA			MB OK
04-DBMW40	8/21/97	0800		208.50	NA			MR OK

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
04_UGMW63	13-Sep-96 13-Dec-96 17-Jan-97	11:15	235-275	210.40 209.68 209.10		404.13 404.13 404.13	403.42 403.42 403.42	casing difference 7"
04-UGMW63	3/31/97	0920		208.44	NA			B
04-UGMW63	5/14/97	1415		207.95	NA			B
04-UGMW63	8/1/97	0829		208.24	NA			B OK
04-UGMW63	8/21/97	0810		208.20	NA			B

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
04_DGMW66	17-Sep-96 13-Dec-96 17-Jan-97	11:35	250-290	211.90 210.56 210.08		401.57 401.57 401.57	401.11 401.11 401.11	no lock, slip cap, casing difference 5"
04_DGMW66	3/31/97	0835		209.72	NA			BZ
04-DGMW66	5/14/97	1300		209.69	NA			BZ
04-DGMW66	8/1/97	0814		209.88	NA			MB OK
04-DGMW66	8/21/97	0815		209.87	NA			MB

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well conditions, well cap, lock, well vault) make note of any unusual conditions.
TF555MW-01	7-Aug-96		179-219	187.44		424.12	424.49	
	24-Sep-96			187.04		424.12	424.49	
	13-Dec-96	9:10			186.89	424.12	424.49	casing difference 4"
	4-Feb-97			185.60		424.12	424.49	
TF555MW01	3/31/97	8:50		185.22	185.52			No water inside casing (DW)
TF555MW01	5/14/97	1256		184.96	185.26			(MP)
TF555MW01	8/1/97	1020		184.01	184.41			(MP) OK
TF555MW01	8/21/97	0830		184.12	184.52			MM

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual conditions.
TF555MW-02	6-Aug-96		25-60	25.15		458.24	458.48	
	25-Sep-96			25.12		458.24	458.48	
	13-Dec-96	10:35		25.15	25.38	458.24	458.48	
	29-Jan-97			24.90		458.24	458.48	
TF555MW-02	3/31/97	8:03	NA		24.86			½" of water inside casing
TF555-MW02	5/14/97	1250	NA		25.00			
TF555-MW02	8/1/97	1050	NA		25.22			OK
TF555-MW02	8/21/97	0838	NA		25.21			

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (Well conditions, well cap, lock, well vault) make note of any unusual observations.
TF555MW-03	7-Aug-96		180-220	184.50		422.91	423.37	
	24-Sep-96			183.95		422.91	423.37	
	13-Dec-96	9:25			183.88	422.91	423.37	casing difference 6"
	4-Feb-97			182.50		422.91	423.37	
TF555MW-03	3/31/97	8:42		182.12	182.62			No water inside casing
TF555MW03	5/14/97	1247		182.26	182.76			OK
TF555MW03	8/1/97	1024		180.89	181.38			OK
TF555MW03	8/21/97	0845		180.94	181.37			

TF555MW-04

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations.
TF555MW-04	12-Aug-96		189.6-109.6	23.58		437.01	437.39	
	26-Sep-96			23.82		437.01	437.39	
	13-Dec-96	10:10			24.09	437.01	437.39	
	22-Jan-97			23.61		437.01	437.39	
TF555MW04	3/31/97	8:31		23.~~45~~ 63	24.02			BGW
TF555MW04	5/19/97	1240		23.60	24.00			MB
TF555MW04	8/1/97	1111		42.45	42.82			MB SHOULD BE OK TF555MW-05
TF555MW04	8/21/97	0855		23.61	23.98			MB

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well conditions, well cap, lock, well vault) make note of any unusual observations.
TF555MW-05	28-Aug-96		49.5-64.5	42.55		437.63	437.99	
	25-Sep-96			42.56		437.63	437.99	
	13-Dec-96	10:15		42.58	42.94	437.63	437.99	
	22-Jan-97			42.42		437.63	437.99	
TF555MW05	3/31/97	8:27		42.46	42.85			1" of water inside casing (DW)
TF555MW05	5/14/97	1235		42.48	42.88			(MP)
TF555MW05	8/1/97	1120		23.61	23.98			(MP) SHOULD BE TF555MW04
TF555MW05	8/21/97	0900		42.46	42.83			

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual conditions
TF555PZ-01	24-Sep-96 13-Dec-96 22-Jan-97	10:20	25-50	25.74 25.89 25.70	26.50	441.99 441.99 441.99	442.62 442.62 442.62	
TF555PZ-01	3/31/97	8:18		25.54	26.50			1" of water inside casing
TF555PZ01	5/14/97	1230		25.62	26.48			
TF555PZ01	8/1/97	1105		25.71	26.34			OK
TF555PZ01	8/21/97	0905		25.68	26.31			

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of an unusual observations
TF555PZ-02	24-Oct-96 13-Dec-96 22-Jan-97	10:27	25-50	29.22 29.56 29.40	30.14	445.12 445.12 445.12	444.55 444.55 444.55	
TF555PZ-02	3/31/97	8:14		29.28	29.82			1" of water inside casing
TF555PZ02	5/14/97	1225		29.34	29.94			
TF555PZ02	8/1/97	1100		29.33	29.97			OK
TF555PZ02	8/21/97	0910		29.34	29.94			

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of an unusual observations
TF555PZ-03	27-Sep-96 13-Dec-96		25-40	NM NM		445.12 445.12	444.55 444.55	no water in piezometer
TF555PZ-03	3/31/97	8:25		NM	NM			no water inside casing Dry
TF555PZ03	5/14/97	1220		NM	NM			DRY MB
TF555PZ03	8/1/97	1160		NM	NM			DRY MB
TF555PZ03	8/21/97	0920		NM	NM			DRY MB

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MSL)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual observations
17_NEW1	20-Sep-96 13-Dec-96 31-Jan-97	8:30	186-226	184.70 183.69 182.90		431.95 431.95 431.95	431.36 431.36 431.36	casing difference 7.5"
17-NEW1	3/31/97	9:05		182.44	181.84			No water inside casing
17-NEW1	5/14/97	1215		182.40	181.80			
17-NEW1	8/1/97	0957		181.01	180.40			OK
17-NEW1	8/21/97	0928		181.40	180.80			

TF555 17_DGMW82

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual conditions
17_DGMW82	23-Sep-96 13-Dec-96 30-Jan-97	8:40	235-255	183.10 185.67 182.25		442.50 442.50 442.50	441.69 441.69 441.69	
17-DGMW82	3/31/97	9:17		184.84	183.86			
17-DGMW82	5/19/97	1211		184.62	183.64			
17-DGMW82	8/1/97	~~1050~~ 1140		183.72	183.74			
17-DGMW82	8/21/97	1000 0940		183.76	183.78			

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well conditions, well cap, lock, well vault) make note of any unusual conditions.
03_BGMW26	23-Sep-96		230-270	217.85		419.82	419.39	
	13-Dec-96	10:48			216.79	419.82	419.39	
	7-Feb-97			216.38		419.82	419.39	
03-BGMW26								
② ~~2/31/97~~	3/31/97	0958		215.82	215.26			B
03-BGMW26	5/14/97	1206		215.80	215.24			MR
03-BGMW26	8/1/97	~~1000~~ 1148		215.27	214.87			MR OK
03-BGMW26	8/21/97	0950		215.34	214.74			MR

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make not of any unusual observations.
T390MW-02	16-Sep-96		151.5-191.5	160.00		380.41	380.87	
	19-Sep-96			159.73		380.41	380.87	
	26-Sep-96			159.54		380.41	380.87	
	27-Sep-96			159.61		380.41	380.87	
	13-Dec-96	12:47		158.85		380.41	380.87	
	21-Jan-97			156.70		380.41	380.87	
T390MW-02	3/28/97	1410		158.00	158.46			Day inside casing (DW)
T390-MW-02	5/20/97	0950		157.42	158.08			(MR) ALL GOOD.
T390-MW-02	8/1/97	0851		157.06	157.56			(MR) OK
T390-MW-02	8/21/97	1040		157.10	157.60			(MR)

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well, vault) note any unusual conditions
T390MW-01	5-Aug-96		158-198	160.28		379.80	380.20	
	19-Sep-96			159.90		379.80	380.20	
	26-Sep-96			159.70		379.80	380.20	
	27-Sep-96			159.79		379.80	380.20	
	13-Dec-96	12:33		159.06		379.80	380.20	casing difference 5"
	21-Jan-97			159.54		379.80	380.20	
T390MW-01	3/28/97	1408		158.18	158.52			Strong odor (B)
T390-MW-01	5/20/97	0928		157.82	158.24			NO ODOR (MB)
T390-MW-01	8/11/97	0842		157.29	157.72			NO ODOR (MB) OK
T390-MW-01	8/21/97	0848		157.16	157.56			(MB) OK

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	Ground Surface Elevation (feet MS)	Comments (well condition, well cap, lock, well vault) make note of any unusual conditions of the well
T390MW-03	18-Sep-96		149-189	161.40		380.85	381.21	
	19-Sep-96			160.70		380.85	381.21	
	26-Sep-96			160.40		380.85	381.21	
	27-Sep-96			160.46		380.85	381.21	
	13-Dec-96	12:40		159.75		380.85	381.21	casing difference 4"
	21-Jan-97			159.94		380.85	381.21	
T390MW-03	3/28/97	1415		158.80	159.18			B
T390-MW-03	5/20/97	0942		158.53	158.89			MB
T390-MW-03	8/1/97	0846		158.00	158.35			MB OK
T390-MW-03	8/21/97	1100		158.08	158.43			MB

Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Time Sampled	Screen Interval (feet bgs)	Depth to Water TOC (feet bgs)	Depth to Water GS (feet bgs)	TOC Elevation (feet MS)	GS Elevation (feet MS)	Comments (well condition, well cap, lock well vault) make note of any unusual conditions of the well.
18_BGMW02E	19-Sep-96 27-Sep-96 13-Dec-96 21-Jan-97	1:00	198-223	165.61 166.19 165.36 159.80		391.72 391.72 391.72 391.72	390.97 390.97 390.97 390.97	casing difference 5.7"
18-BGMW02E	3/28/97	1400		164.24	NA			B
18-BGMW-02E	5/20/97	0919		163.87	NA			MB.
18-BGMW-02E	8/1/97	0859		163.31	NA.			OK
18-BGMW-02E	8/21/97	1115		163.38	NA			

Appendix B
Groundwater Sampling Logs

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: MW 01
Delivery Order: DO 24
Project Number: 17486

Date: 4/28/97
Site Location: TF1 MW-01

OHM Field Representative: Brian Sasterfield

Sample Number: 17486-26~~2~~1 (R)
COC Number: 201934

Static Water Level:(swl) 109.51
Total Depth:(td) 149.31
Measuring Device: water level serial number: 1017
Measuring Point: TOC GS
Casing Material: Steele

Subcontractor: Lang
Rig Number: 471
Sampling Pump: 1/2 hp Grundfos
Pump Number: A

Water Column: (wc) 39.8 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 25.99 = (wc)(d*)
Total Gallons to Purge: 77.97 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 112

Pump Depth: 148
Feet Discharge Pipe: 147

Number of Bottles Collected: 5
Duplicate Collected: Yes No
Duplicate Sample Number: 17486-262
Rinsate Sample Number: 17486-260
MS/MSD: Yes No

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
0930	—	—	—	—	—	—	—	Arrived on Site. Overcast;
	—	—	—	—	—	—	—	high 60°F; 3-5 from SE
0940	2	~~0~~	—	—	—	—	—	Pump started; well cap off
0944	(R) ~~8~~ 2	(R) ~~NA~~ 8	NA	NA	NA	19.4	NA	Baseline / YSI malfunction
(R) ~~1010~~ 1005		40	2.79	9.69	73.4	1.90	NA	Clear, No odor (Hydrack)
1015		60	2.27	8.46	73.1	1.46	NA	clear, no odor.
1025		80	2.40	7.79	73.9	2.07	NA	Clear, no odor
1035		100	2.42	7.82	74.2	2.60	NA	Clear, no odor
1041	—	112	—	—	—	—	—	Sample taken (B) ~~17 Dup~~
	—	—	—	—	—	—	—	~~Stopped Sampling~~ (R)
1042	—	—	—	—	—	—	—	Dup taken
1046	—	—	—	—	—	—	—	Stopped Sampling
1105	Pulling pump = pipe + pump covered w/ small termite-like bugs. Same bugs in + around well; well cap was							
	off, the bugs were going down into the well. (R)							

1110 Strong rotten odor to pump + pipe. (R)

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TFMW-02
Delivery Order: D024
Project Number: 17486

Date: 4/22/97
Site Location: Tank Farm #1

OHM Field Representative: Brian Satterfield

Sample Number: 17486-246
COC Number: 201899

Static Water Level:(swl) 112.31
Total Depth:(td) 149.99
Measuring Device: water level serial number: 1017
Measuring Point: TOC GS
Casing Material: PVC

Subcontractor: Lane
Rig Number: 471
Sampling Pump: 1/2 hp Grundfos
Pump Number: B

Water Column: (wc) 37.68 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 24.60 = (wc)(d*)
Total Gallons to Purge: 73.82 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 86

Pump Depth: 149
Feet Discharge Pipe: 148

Number of Bottles Collected: 5
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: 17486-245
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp ~~F~~ °C	Turbidity (NTU)	%DO	Comments
1110	—	—	—	—	—	—	—	Arrived on site. clear, sunny
	—	—	—	—	—	—	—	no wind, mid 70's.
1140	—	—	—	—	—	—	—	Pump + pipe in well.
1245	2	Ø	2.80	8.16	26.65	12.4	7.8	Pump started/Baseline
1255	↑	20	2.78	8.02	26.60	5.30	1.0	clear, no odor
1305		40	2.87	7.22	26.88	2.08	10.8	Clear, no odor
1315		60	2.91	6.71	26.82	2.40	23.7	clear, no odor
1325	↓	80	2.94	6.56	26.71	2.87	34.7	Clear, no odor
1328	↓	86	—	—	—	—	—	Sample taken
1331	—	—	—	—	—	—	—	Stopped Sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: 18-B6MW103
Delivery Order: DO 24
Project Number: 17486

Date: 4/23/97
Site Location: Tank Farm #1

OHM Field Representative: Brian Sandstrand

Sample Number: 17486-250
COC Number: 201891

Static Water Level:(swl) 118.87
Total Depth:(td) 500 (from last quarter)
Measuring Device: water level serial number: 1017
Measuring Point: TOC GS
Casing Material: Stainless Steele

Subcontractor: Lane
Rig Number: 471
Sampling Pump: 1/2 hp Grundfos
Pump Number: B

Water Column: (wc) 381.13 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 248.88 = (wc)(d*)
Total Gallons to Purge: 746.63 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 1325

Pump Depth: 290
Feet Discharge Pipe: 289

Number of Bottles Collected: 5
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: 17486-249
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
0820	—	—	—	—	—	—	—	Arrived on site, Sunny Clear
	—	—	—	—	—	—	—	5-7 mph from SE; high 60°F.
0935	5	~~0~~	(B) ~~8~~ 0.82	8.16	24.87	9.10	5.2	Pump Started / Baseline
0945		50	0.79	8.18	25.06	8.70	2.8	Clear, No odor
1000		125	0.79	8.10	25.41	31.9	0.6	cloudy; No odor
1015		200	0.92	7.23	26.53	177.9	35.3	cloudy; yellish; no odor
1030		275	0.93	7.16	26.95	162.3	40.6	cloudy; No odor
1045		350	0.94	7.11	27.50	72.1	41.6	somewhat cloudy; No odor
1100		425	0.96	7.03	27.89	>200	43.8	Cloudy; yellowish; no odor
1115		500	0.97	6.98	28.24	>200	45.7	Cloudy; yellowish; No odor
1130		575	0.97	6.94	28.44	166.9	45.8	cloudy; No odor
1145		650	0.97	6.91	28.18	122.4	47.7	Cloudy; No odor
1200		725	0.97	6.92	27.98	64.7	48.9	Slightly cloudy; No odor
1215	↓	800	0.98	6.98	28.26	53.3	49.2	Slightly cloudy; No odor

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Job Number: 17486 ; 0024
Date: 4/23/97
OHM Representatives: Brian Sandstrand
Well Identification: 18-B6MW103
Site Location: Tank Farm #1

Time	Pumping Rate	Gallons purged	EC	pH	Temp F°	Turbidity	%DO	Comments
1230	5	875	0.98	6.80	28.00	31.1	50.8	slightly cloudy; No odor
1245		950	0.98	6.59	27.95	25.8	53.9	Clear; No odor
1300		1025	0.98	6.73	27.98	27.0	53.6	Clear; No odor
1315		1100	0.99	6.67	27.63	32.4	54.7	Clear; No odor
1330		1175	0.99	6.77	27.39	29.7	55.0	Clear; No odor
1345		1250	0.99	6.81	27.45	29.4	55.0	Clear; No odor
1400		1325	0.99	6.79	27.42	29.7	54.9	Clear; No odor
1401	—	—	—	—	—	—	—	Sample taken
1403	—	—	—	—	—	—	—	Stopped Sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

24 Ex 2 (B)

Well Identification: ~~18-86MW103~~
Delivery Order: 0024
Project Number: 17486

Date: 4/21/97 + 4/22/97
Site Location: Tank Farm #1

OHM Field Representative: Brian Satterfield

Sample Number: 17486-244
COC Number: 201899

Static Water Level:(swl) 105.45
Total Depth:(td) 212.27
Measuring Device: water level serial number: 1017
Measuring Point: TOC GS
Casing Material: PVC

Subcontractor: Lane
Rig Number: 471
Sampling Pump: 1/2 hp Grundfos pump
Pump Number: A

Water Column: (wc) 106.82 = td-swl
Well Diameter: (d) 6
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 156.92 = (wc)(d*)
Total Gallons to Purge: 470.76 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 475

Pump Depth: 200
Feet Discharge Pipe: 199

Number of Bottles Collected: 5
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: 17486-235
MS/MSD: Yes (No)

	Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp (F°/C°)	Turbidity (NTU)	%DO	Comments
4/21/97	1305	—	—	—	—	—	—	—	Arrived on site. Clear, sunny,
		—	—	—	—	—	—	—	No wind; high 70°F.
		—	—	—	—	—	—	—	Probably only time to put
		—	—	—	—	—	—	—	pipe into hole today.
	1325	—	—	—	—	—	—	—	Started to put pipe in well
	1420	—	—	—	—	—	—	—	Pipe pump in well.
4/22/97	0730	—	—	—	—	—	—	—	Arrival on site. Overcast, no wind
		—	—	—	—	—	—	—	high 60°F.
	0745	5	0	3.15	7.03	23.40	24.6	80.6	Pump Started/Baseline
	0800		75	3.01	7.17	23.64	7.53	72.7	Clear, No odor
	0815		150	2.92	7.23	23.75	5.67	71.5	Clear, No odor
	0830		225	2.94	7.23	23.78	3.77	74.8	Clear, No odor
	0845		300	2.98	7.21	23.87	2.67	75.4	Clear, No odor
	0900		375	2.96	7.21	23.89	2.65	74.1	Clear, No odor

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Job Number: 17486-
Well Identification: ~~18-BGMW103~~ 24EX2 (B)
Date: 4/22/97
Site Location: Tank Farm 1
OHM Representatives: Brian Sasterfield

Time	Pumping Rate	Gallons purged	EC	pH	Temp F°	Turbidity	%DO	Comments
0915	5	450	2.94	7.23	23.95	4.37	70.4	Clear, no odor
~~0930~~ 0920	↓	(B) ~~525~~ 475	2.98	7.20	23.54	3.01	71.3	Clear, no odor
0927	—	—	—	—	—	—	—	Sample taken
0926	—	—	—	—	—	—	—	Stopped sampling
1005	—	—	—	—	—	—	—	Left site for Base.

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: 14-DBMW50
Delivery Order: Do 24
Project Number: 17486

Date: 4/21/97
Site Location: Tank Farm #1

OHM Field Representative: Brian Sandefield

Sample Number: 17486-236
COC Number: 20183#5 (B)

Static Water Level:(swl) 118.58
Total Depth:(td) 166.14
Measuring Device: water level serial number: 1017
Measuring Point: (TOC) GS
Casing Material: PVC

Subcontractor: Lane
Rig Number: 471
Sampling Pump: 1/2 hp Grundfos pump
Pump Number: ~~NA~~ (B) NA

Water Column: (wc) 47.56 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 31.06 = (wc)(d*)
Total Gallons to Purge: 93.17 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 110

Pump Depth: NA
Feet Discharge Pipe: NA

Number of Bottles Collected: 5
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: ~~17486-235~~ (P)
MS/MSD: Yes (NO)

pump in well (B)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp ~~°F~~ °C (B)	Turbidity (NTU)	%DO	Comments
0900	—	—	—	—	—	—	—	Arrived on site. clear,
	—	—	—	—	—	—	—	sunny, no wind, low 70°F.
0920	—	—	—	—	—	—	—	Pump in well trying to make
	—	—	—	—	—	—	—	it work.
1003	—	—	—	—	—	—	—	Pump started / Pump in well ok (B)
1010	2	~~0~~	2.57	7.16	23.99	11.35	14.9	Baseline
1020	↓	20	2.48	7.13	24.44	66.3	6.6	Slight cloudy; no odor
1030		40	2.39	7.11	24.98	23.6	6.3	clear - no odor
1040		60	2.33	7.10	25.30	8.97	5.7	clear - no odor
1050		80	2.28	7.10	25.24	7.93	5.5	Clear - no odor
1100		(B) 100	2.25	7.08	25.60	5.0	5.4	Clear - no odor
1105		~~110~~ 110	—	—	—	—	—	sample taken; sulfur odor
1108	—	—	—	—	—	—	—	Stopped sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: 18_DGMW135
Delivery Order: 0024
Project Number: 17486

Date: 4/24/97
Site Location: Tank Farm #1

OHM Field Representative: Brian Satterfield

Sample Number: 17486-238
COC Number: 201830 5 (B)

Static Water Level:(swl) 116.16
Total Depth:(td) 135.55
Measuring Device: water level serial number: 1017
Measuring Point: TOC GS
Casing Material: PVC

Subcontractor: Lane
Rig Number: 471
Sampling Pump: 42 hp Grundfos pump
Pump Number: B

Water Column: (wc) 19.39 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 12.66 = (wc)(d*)
Total Gallons to Purge: 37.99 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 50

Pump Depth: 134'
Feet Discharge Pipe: 133'

Number of Bottles Collected: 5
Duplicate Collected: Yes No
Duplicate Sample Number: NA
Rinsate Sample Number: 17486-237
MS/MSD: Yes No

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp ~~F~~ °C (B)	Turbidity (NTU)	%DO	Comments
1130	—	—	—	—	—	—	—	Arrived on site. clear, sunny,
	—	—	—	—	—	—	—	5-7mph from SW; Low 70°F
1200								Pump/pipe placed in well
1205	2	—	—	—	—	—	—	Pump started
1208	↓	6	2.89	7.06	27.51	8.38	81.7	Baseline; clear
1215		20	2.89	6.49	27.31	6.47	78.8	clear, No odor
1225		40	2.88	6.71	27.34	7.18	75.9	Clear, No odor
1230	—	50	—	—	—	—	—	Sample taken
1233	—		—	—	—	—	—	Stopped Sampling

OHM Remediation Services

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TF2-MW-04
Delivery Order: 24
Project Number: 17486

Date: 4/17/97
Site Location: TANK FARM

OHM Field Representative: MARK BANUELOS

Sample Number: 17486-229, ~~230~~
COC Number: 201876

Static Water Level:(swl) 128.66
Total Depth:(td) 159.82
Measuring Device: SoLinst serial number: 101017
Measuring Point: TOC GS
Casing Material: Steel

Subcontractor: LAYNE
Rig Number: 471
Sampling Pump: 1/2 Hp Grundfos Pump
Pump Number: Pump "B"

Water Column: (wc) 31.16 = td-swl
Well Diameter: (d) 6"
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 46 = (wc)(d*)
Total Gallons to Purge: 138 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged:

Pump Depth: 156'
Feet Discharge Pipe: 155'

Number of Bottles Collected: 5 / 5
Duplicate Collected: Yes No
Duplicate Sample Number: 17486-230
Rinsate Sample Number: 17486-227
MS/MSD: Yes No

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
1125	MOB to Well Set Rig ON TF2-MW-04							MB
1130	LUNCH							MB
1200	Start Installing Piper Pump, Standing Water in Well Box 1 1/2"							MB
1253	Start Pump							MB
1254	2	2	3.07	6.39	25.80	25.1	7.6	BASELINE READING MB
1316	2	46	2.95	6.08	25.38	14.4	3.6	MB
1339	2	92	2.94	6.04	25.51	8.3	3.0	MB
1402	2	138	2.95	6.30	25.45	4.7	2.95	MB
1410	Sample							
1412	Sample Field Duplicate							
1415	Stop Pumping							

ORIGINAL

OHM Remediation Services

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TF2-MW-02
Delivery Order: 24
Project Number: 17486

Date: 4/17/97
Site Location: Tank Farm 2

OHM Field Representative: Mark Banuelos

Sample Number: # 17486-228
COC Number: 201876

Static Water Level: (swl) 126.72
Total Depth: (td) 154.66
Measuring Device: Solinst serial number: #
Measuring Point: (TOC) GS
Casing Material: Steel

Subcontractor: Layne
Rig Number: 471
Sampling Pump: 1/2 Hp Grundfos
Pump Number: Pump # A.

Water Column: (wc) 27.94 = td-swl
Well Diameter: (d) 6"
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume: (cv) 41 = (wc)(d*)
Total Gallons to Purge: 123 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 129

Pump Depth: 152'
Feet Discharge Pipe: 151'

Number of Bottles Collected: 5
Duplicate Collected: Yes (No)
Duplicate Sample Number: #
Rinsate Sample Number: # 17486-226
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
0840	Arrive on site, Prepare for Groundwater Sampling							MB.
0850	Sound Well							MB.
0859	Install 1/2 stainless steel Pipe & 1/2 Hp Grundfos Pump							MB.
0930	Start Pump							MB.
0932	2	4	3.36	6.92	24.88	20.8	9.1	Baseline Reading MB.
0950	2	41	3.25	6.25	25.28	2.1	6.0	MB
1011	2	81	3.17	6.01	25.54	1.6	3.1	MB.
1032	2	123	3.13	5.89	25.84	1.1	1.6	
1035	Sample							
1039	Stop Pump							

ORIGINAL

OHM Remediation Services

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: 15-BDMW-51
Delivery Order: 24
Project Number: 17486

Date: 4/16/97
Site Location: TANK FARM 2

OHM Field Representative: MARK BAÑUELOS

Sample Number: # 17486-224
COC Number: # 201875

Static Water Level: (swl) 118.69
Total Depth: (td) 169.70
Measuring Device: Solinst serial number: #
Measuring Point: TOC GS
Casing Material:

Subcontractor: LAYNE
Rig Number: 471
Sampling Pump: 1/2 Hp GRUNDFOS
Pump Number: # B

Water Column: (wc) 51.01 = td-swl
Well Diameter: (d) 4"
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume: (cv) 33 = (wc)(d*)
Total Gallons to Purge: 99 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 113

Pump Depth: 161.1
Feet Discharge Pipe: 160'

Number of Bottles Collected: 5
Duplicate Collected: Yes (No)
Duplicate Sample Number:
Rinsate Sample Number: # 17486-223
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
1200	Start Setting up, Installing Pipe + Pump							MB.
1220	Start Pump							MB
	2	4	4.78	6.85	29.95	17.9	630.1	BASELINE READING MB
1237	2	33	3.23	6.44	26.56	35.1	4.5	MB
(MP) 1234 54	2	66	2.99	6.20	26.91	14.1	7.1	MB
(MP) ~~1251~~ 1311	2	99	3.41	6.15	27.08	4.7	11.3.	MB
1314		Sample						MB
1318		Stop Pump						MB

ORIGINAL

OHM Remediation Services

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: 134GMW-32
Delivery Order: 24
Project Number: 17486

Date: 4/16/97
Site Location: TANK FARM 2

OHM Field Representative: MARK BANNELOS

Sample Number: 17486-222
COC Number: 201875

Static Water Level: (swl) 132.86
Total Depth: (td) 189.32
Measuring Device: SOLINST serial number: #
Measuring Point: (TOC) GS
Casing Material:

Subcontractor: LAYNE
Rig Number:
Sampling Pump: 1/2 Hp GRUNDFOS PUMP
Pump Number: #A

Water Column: (wc) 56.46 = td-swl
Well Diameter: (d) 4"
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume: (cv) 36 = (wc)(d*)
Total Gallons to Purge: 108 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 112

Pump Depth: 181'
Feet Discharge Pipe: 180'

Number of Bottles Collected: 5
Duplicate Collected: Yes (No)
Duplicate Sample Number:
Rinsate Sample Number: 17486-221
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
0838	SOUND WELL FOR DEPTH + WATER LEVEL							MB
0900	INSTALL PUMP + PIPE 180' OF PIPE							MB.
0925	SO START PUMP							MB.
~~0925~~	2	2	1.63	7.32	22.73	51	17.1	BASELINE READING
0943	~~36~~ 2	36	1.59	7.22	24.19	15	8.5	MB
1001	~~72~~ 2	72	1.54	7.20	24.89	7.	9.4.	MB
1019	~~108~~ 2	108	1.56	7.17	24.81	5	5.3.	MB
1024		112	SAMPLE					MB.

ORIGINAL

OHM Remediation Services

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: 13D3 MW-49
Delivery Order: DO 24
Project Number: 17486

Date: 4/10/97
Site Location: TF 2

OHM Field Representative: Brian Sadderfield

Sample Number: 17486-200
COC Number: 201815

Static Water Level:(swl) 128.27
Total Depth:(td) 189.21
Measuring Device: _____ serial number: _____
Measuring Point: TOC GS
Casing Material: PVC

Subcontractor: Cape
Rig Number: 471
Sampling Pump: NA - pump in well
Pump Number: NA

Water Column: (wc) 60.94 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 39.79 = (wc)(d*)
Total Gallons to Purge: 119.38 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 125

Pump Depth: NA
Feet Discharge Pipe: NA

Number of Bottles Collected: 7
Duplicate Collected: Yes (NO)
Duplicate Sample Number: NA
Rinsate Sample Number: NA - pump in well.
MS/MSD: Yes (NO)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp ~~F~~ C°	Turbidity (NTU)	%DO	Comments
1130	—	—	—	—	—	—	—	Arrive on Site. Clear,
	—	—	—	—	—	—	—	Sunny 5-7 mph from E, mid 70 °F.
1155	5	Ø	2.51	6.08	25.73	1.18	10.7	Baseline
1205	↓	50	2.49	6.39	24.70	0.85	4.0	No odor
1215	↓	100	2.45	6.85	24.71	0.69	Ø	no odor
1220	↓	125	2.44	6.89	24.70	0.67	Ø	No odor
1221	—	—	—	—	—	—	—	Sample taken.
1226	—	—	—	—	—	—	—	Stopped Sampling

ORIGINAL

OHM Remediation Services

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: 1306MW-78
Delivery Order: 0024
Project Number: 17486

Date: 4/10/97
Site Location: TF2

OHM Field Representative: Brian Satterfield

Sample Number: 17486-199
COC Number: 201815

Static Water Level:(swl) 124.43
Total Depth:(td) 171.86
Measuring Device: water level serial number: 001017
Measuring Point: TOC GS
Casing Material: PVC

Subcontractor: Lane
Rig Number: 471
Sampling Pump: ~~1/2~~ B pump in well
Pump Number: NA

Water Column: (wc) 47 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 30.69 = (wc)(d*)
Total Gallons to Purge: 92.07 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 115

Pump Depth: NA
Feet Discharge Pipe: NA

Number of Bottles Collected: 7
Duplicate Collected: Yes No
Duplicate Sample Number: NA
Rinsate Sample Number: NA - pump in well
MS/MSD: Yes No

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp ~~F°~~ C°	Turbidity (NTU)	%DO	Comments
0900	—	—	—	—	—	—	—	Clear, sunny, 3-5mph from
2	—	—	—	—	—	—	—	SE, ~~M~~ Low 70°F.
09~~17~~25	3	0	2.64	6.97	23.31	28.3	9.7	Baseline
0935	↓	30	2.34	6.85	24.42	2.83	7.2	No odor
0945		60	2.33	6.81	24.40	1.69	7.0	NO odor
0955		90	2.32	6.67	24.71	0.99	6.5	NO odor
1000	↓	115	2 ~~1.15~~ 2.15	6.67	24.65	1.21	1.5	NO odor
1002	—	—	—	—	—	—	—	Sample taken
1007	—	—	—	—	—	—	—	Stopped Sampling

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: 13UGMW-32
Delivery Order: D024
Project Number: 17486

Date: 4/10/97
Site Location: TF 2

OHM Field Representative: Brian Sandstrand

Sample Number: 17486-201
COC Number: 201815

Static Water Level:(swl) 132.87
Total Depth:(td) 188.38
Measuring Device: _____ serial number: _____
Measuring Point: TOC GS
Casing Material:

Subcontractor: Lane
Rig Number: 471
Sampling Pump: NA - pump in well
Pump Number: NA

Water Column: (wc) 55.51 = td-swl
Well Diameter: (d) (2) ~~36.24~~ 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) (2) 36.24 = (wc)(d*)
Total Gallons to Purge: 108.74 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: NA

Pump Depth: NA
Feet Discharge Pipe: NA

Number of Bottles Collected: 7
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: NA pump in well
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp ~~F~~ (2) C	Turbidity (NTU)	%DO	Comments
1245	—	—	—	—	—	—	—	Arrived on site: clear, sunny,
	—	—	—	—	—	—	—	No wind, mid 70°F.
1255								~~Begin~~ problem w/
								control box/pump.
1315								pull pump pipe
								Did not sample (B)

ORIGINAL

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TF2-MW-03
Delivery Order: 24
Project Number: 17486

Date: 4/18/97
Site Location: TANK FARM 2

OHM Field Representative: MARK BANUELOS

Sample Number: 17486
COC Number: 201880

Static Water Level:(swl) 128.19
Total Depth:(td) 160.30
Measuring Device: Solinst serial number: 101017
Measuring Point: TOC GS
Casing Material: Steel

Subcontractor: LAYNE
Rig Number: 471
Sampling Pump: 1/2 Hp GRUNDFOS Pump
Pump Number:

Water Column: (wc) 32.11 = td-swl
Well Diameter: (d) 6"
d* (2-Inch = .163) (4-Inch = .653) (6-Inch = 1.469)
Casing Volume:(cv) 47 = (wc)(d*)
Total Gallons to Purge: 141 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged:

Pump Depth: 159'
Feet Discharge Pipe: 158'

Number of Bottles Collected:
Duplicate Collected: Yes No
Duplicate Sample Number:
Rinsate Sample Number: 17486
MS/MSD Yes No

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
1119	Set up site, Sound Well							MB
1130	Set Pipe + Pump in Well							MB
1200	Start Pump							
1202	2	4	4.61	6.89	26.34	14.7	24.1	MB - Baseline Reading
1226	2	47	3.74	6.63	25.36	1.1	2.7	MB
1250	2	94	3.69	6.58	25.34	1.0	2.6	MB
1313	2	141	3.68	6.67	25.34	1.0	2.6	MB
1315	Sample							
1320			Stop Pump					

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TF2-MW-01
Delivery Order: 24
Project Number: 17486

Date: 4/18/97
Site Location: Tank Farm 2

OHM Field Representative: Mark Bannelos

Sample Number: #17486-234
COC Number: 201880

Static Water Level: (swl) 131.69
Total Depth: (td) 160.14
Measuring Device: SoLinst serial number: 101017
Measuring Point: TOC GS
Casing Material:

Subcontractor: Layne
Rig Number: 471
Sampling Pump: 1/2 Hp Grundfos Pump
Pump Number: Pump "A"

Water Column: (wc) 28.45 = td-swl
Well Diameter: (d) 6"
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume: (cv) 42 = (wc)(d*)
Total Gallons to Purge: 126 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged:

Pump Depth: 159'
Feet Discharge Pipe: 158'

Number of Bottles Collected: 5
Duplicate Collected: Yes No
Duplicate Sample Number: —
Rinsate Sample Number: #17486-232
MS/MSD: Yes No

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
0830	MOB to site							
0845	Set up site							
0850	Start Installing Pipe + Pump							
0930	finished Installing Pump + Pipe							
0935	Start Pump							
0938	2	6	3.13	8.22	22.58	22.1	11.8	BASELINE READINGS
0959	2	42	3.39	7.03	25.16	5.5	0.2	slight ODOR / Charcoal GRAY
1020	2	84	3.53	6.81	25.43	2.95	0.17	SLIGHT ODOR / CHARCOAL GRAY
1041	2	126	3.57	6.73	25.63	2.51	2.4	
1043	Sample							
1045	Stop Pump							

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TF3MW02
Delivery Order: DO 24
Project Number: 17486

Date: 4/29/97
Site Location: Tank Farm #3

OHM Field Representative: Brian Scatterfield

Sample Number: 17486-269
COC Number: 201831

Static Water Level:(swl) 164.75
Total Depth:(td) 197.90
Measuring Device: water level serial number: 1029
Measuring Point: TOC GS
Casing Material: Steele

Subcontractor: Layne
Rig Number: 416
Sampling Pump: 1/2 hp Grundfos
Pump Number: C

Water Column: (wc) 33.15 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 21.65 = (wc)(d*)
Total Gallons to Purge: 64.94 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 74

Pump Depth: 195
Feet Discharge Pipe: 194

Number of Bottles Collected: 3
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: 17486-268
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
0900	—	—	—	—	—	—	—	Arrived on Site. Overcast
	—	—	—	—	—	—	—	mid 60° s; 3-5 mph from SE
1005	1	~~0~~	1.94	8.78	69.3	4.28	NA	pump started / Baseline
1020	↓	15	1.94	8.42	69.3	31.4	NA	Clear, no odor
1035	↓	30	2.08	8.17	71.1	40.9	NA	Slightly cloudy.
1100	↓	55	2.01	8.20	71.5	21.9	NA	Clear; no odor; Dtw= 184
1112	↓	67	—	—	—	—	—	well went Dry
1155	—	—	—	—	—	—	—	Dtw= 177
1215	—	—	—	—	—	—	—	Dtw= 175.12 / pump started
1222	↓	74	2.92	7.78	71.6	3.28	NA	Clear, no odor
1222	↓	—	—	—	—	—	—	Sample taken
1225	—	—	—	—	—	—	—	Stopped Sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TF3mw01
Delivery Order: DO 24
Project Number: 17486

Date: 4/29/97
Site Location: Tank Farm #3

OHM Field Representative: Brian Scatterfield

Sample Number: 17486-267
COC Number: 201831

Static Water Level:(swl) 176.89
Total Depth:(td) 209.11
Measuring Device: water level serial number: 1017
Measuring Point: TOC GS
Casing Material: Steele

Subcontractor: Layne
Rig Number: 471
Sampling Pump: 1/2 hp Grundfos
Pump Number: A

Water Column: (wc) 32.22 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 21.04 = (wc)(d*)
Total Gallons to Purge: 63.12 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: ~~70~~ 78 (2)

Pump Depth: 207
Feet Discharge Pipe: 206

Number of Bottles Collected: 3
Duplicate Collected: Yes (NO)
Duplicate Sample Number: NA
Rinsate Sample Number: 17486-266
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
0900	—	—	—	—	—	—	—	Arrival on site. overcast,
	—	—	—	—	—	—	—	mid 60°F; 3-5 mph from SE
1010	2	~~8~~	—	—	—	—	—	Pump started
1015		10	2.55	8.57	67.8	10.19	NA	Baseline; clear, no odor
1025		20	2.85	8.44	70.0	5.98	NA	clear; Slight odor
1035 (1)		40	2.81	8.16	68.2	4.90	NA	Clear; No odor
~~1045~~ 1050		(1) ~~60~~ 70	2.81	8.19	69.8	3.58	NA	Clear; No odor
1054		78	—	—	—	—	—	Sample taken
1058	—	—	—	—	—	—	—	Stopped sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TF3MW-03
Delivery Order: ~~17486~~ DO 24
Project Number: 17486

Date: 4/28/97
Site Location: Tank Farm 3

OHM Field Representative: Brian Satterfield

Sample Number: 17486-264
COC Number: 201935

Static Water Level:(swl) 174.32
Total Depth:(td) 204.20
Measuring Device: water level serial number: 1017
Measuring Point: TOC GS
Casing Material: Steel

Subcontractor: Leine
Rig Number: 471
Sampling Pump: 1/2 hp Grundfos
Pump Number: B

Water Column: (wc) 29.88 = td-swl
Well Diameter: (d) 4
d² (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 19.52 = (wc)(d²)
Total Gallons to Purge: 58.53 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 66

Pump Depth: 173
Feet Discharge Pipe: 172

Number of Bottles Collected: 3
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: 17486-263
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
1200	—	—	—	—	—	—	—	Arrival on site. Clear, sunny,
	—	—	—	—	—	—	—	mid 70° F; no wind.
1255	2	Ø	1.35	8.07	76.3	9.98	NA	Pump started / Baseline
1305	↓	20	1.22	8.29	74.4	11.68	NA	Clear, no odor
1315		40	1.25	8.31	72.8	7.13	NA	Clear, no odor
1325		60	1.20	8.48	71.2	5.0	NA	Clear, no odor
1328		66	—	—	—	—	—	SAMPLE TAKEN
1332	—	—	—	—	—	—	—	Stopped Sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: 20-06MW36
Delivery Order: D050
Project Number: 18292

Date: 5/2/97
Site Location: Tank Farm #4

OHM Field Representative: Brian Satterfield

Sample Number: 18292-419
COC Number: 201898

Static Water Level:(swl) 184.30
Total Depth:(td) 229.40
Measuring Device: water level serial number: 1017
Measuring Point: TOC GS
Casing Material: PVC

Subcontractor: Layne
Rig Number: 471
Sampling Pump: 1/2 hp Grundfos
Pump Number: B

Water Column: (wc) 45.1 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 29.45 = (wc)(d*)
Total Gallons to Purge: 88.35 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 117 1/2

Pump Depth: 228
Feet Discharge Pipe: 227

Number of Bottles Collected: 6
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: 18292-418
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp ~~F~~ °C	Turbidity (NTU)	%DO	Comments
0845	—	—	—	—	—	—	—	Arrive; clear, sunny, no wind, low 70°s
0900	2 1/2	8	1.87	7.67	24.18	86.3	43.0	Pump started / Bailing
0915	~~3~~ 2 1/2	37 1/2	1.97	7.64	24.95	33.4	38.3	slightly clear; no odor
0930	↓	75	1.98	7.36	25.15	15.88	56.7	clear; no odor
0945	↓	112 1/2	1.98	7.25	25.43	4.97	69.8	clear; no odor
0947	↓	117 1/2	—	—	—	—	—	sample taken
0952	—	—	—	—	—	—	—	Stopped Sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: 18-B6MW16
Delivery Order: D050
Project Number: 18292

Date: 5/2/97
Site Location: Tank Farm 4

OHM Field Representative: Brian Scatterfield

Sample Number: 18292-420
COC Number: 201898

Static Water Level:(swl) 214.63
Total Depth:(td) 268.91
Measuring Device: ~~water level~~ serial number: 1029
Measuring Point: TOC GS
Casing Material: PVC

Subcontractor: LayN
Rig Number: 416
Sampling Pump: 1/2 hp Grundfos
Pump Number: D

Water Column: (wc) 54.28 = td-swl
Well Diameter: (d) 6
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 79.74 = (wc)(d*)
Total Gallons to Purge: 239.21 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 075

Pump Depth: 245
Feet Discharge Pipe: ~~244~~ ~~247~~ (R)

Number of Bottles Collected: 6
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: 17486-299
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
1005	—	—	—	—	—	—	—	Arrived. clear, sunny, no wind, low 70°F
1115	2	(R) ~~40~~	1.32	7.74	80.4	10.69	NA	Started Pump / Baseline
1135	↓	40	1.31	7.72	83.1	9.92	NA	clear; no odor
1155	(R) ~~1.3~~	80	1.33	8.09	82.1	5.46	NA	clear; no odor
(R) 1215 ~~1220~~	↓	(R) ~~120~~ ~~140~~ 135	1.32	7.90	78.3	4.06	NA	Clear; no odor
~~1250~~ 1300		275 ~~215~~	1.39	7.88	78.8	3.36	NA	Clear; no odor
1304	—	—	—	—	—	—	—	Sample taken
1310	—	—	—	—	—	—	—	Stopped Sampling

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TF4 MW 02
Delivery Order: Do 50
Project Number: 18292

Date: 5/2/97
Site Location: Tank Farm #4

OHM Field Representative: Brian Scatefrew

Sample Number: 18292-471
COC Number: 201898

Static Water Level:(swl) 208.40
Total Depth:(td) 244.42
Measuring Device: water level serial number: 1017
Measuring Point: TOC GS
Casing Material: Steel

Subcontractor: Layne
Rig Number: 471
Sampling Pump: 1/2 hp Grundfos
Pump Number: A

Water Column: (wc) 36.02 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 23.52 = (wc)(d*)
Total Gallons to Purge: 70.56 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 120

Pump Depth: 242
Feet Discharge Pipe: 241

Number of Bottles Collected: 11
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: 17486-297
MS/MSD: (Yes) No

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp ~~°F~~ °C (B)	Turbidity (NTU)	%DO	Comments
1035	—	—	—	—	—	—	—	Arrival. Clear, sunny, no wind, mid 70s
1145	3	~~0~~	1.66	7.00	25.83	27.7	49.2	Pump Started/Baseline
1200		45	1.65	6.94	27.02	8.41	49.2	Clear, No Odor
1215		90	1.66	7.08	29.58	4.60	42.8	Clear; No odor
1230		120	1.65	7.03	27.12	3.41	39.1	Clear; No odor
1231	—	—	—	—	—	—	—	Sample taken (ms/msd)
1240	—	—	—	—	—	—	—	Stopped Sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TF4MW03
Delivery Order: 50
Project Number: 18292-

Date: 5/5/97 + 5/6/97
Site Location: Tank Farm 4

OHM Field Representative: Brian Satterfield

Sample Number: 18292-426
COC Number: 201894

Static Water Level:(swl) 206.83
Total Depth:(td) 242.05
Measuring Device: water level serial number: 1017
Measuring Point: TOC GS
Casing Material: Steele

Subcontractor: Layne
Rig Number: 416
Sampling Pump: 1/2 hp Grundfos
Pump Number: C

Water Column: (wc) 35.22 = td-swl
Well Diameter: (d) 6
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 59.52 = (wc)(d*)
Total Gallons to Purge: 178.57 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 135

well did not recover to 80% after 20 hours
From 5/5/97 → 5/6/97 (B) (B)

Pump Depth: 239
Feet Discharge Pipe: 238

Number of Bottles Collected: 9
Duplicate Collected: Yes No
Duplicate Sample Number: 18292-427
Rinsate Sample Number: 18292-423
MS/MSD: Yes No

	Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
1/97	0923	—	—	—	—	—	—	—	Arrived; clear, sunny, no wind, mid 70°F
	1015	2	~~0~~	2.15	8.85	79.0	11.79	NA (B)	~~B~~ Pump started/Baseline
	1030	↓	30	2.07	8.40	82.0	11.80	NA	Clear, no odor
	1045		60	2.07	8.32	82.1	8.76	NA	clear; no odor
	1100		90	2.17	8.30	84.4	6.08	NA	clear; no odor
	1115		120	—	—	—	—	—	well went Dry; Dtw = 235
	(B) ~~1130~~ 1240		(B) ~~150~~	—	—	—	—	—	Dtw = 229
	(B) ~~1145~~	↓	(B) ~~180~~	—	—	—	—	—	Dtw = 225.41
6/97	0705	—	—	—	—	—	—	—	Arrived. clear; sunny; no wind; high 60°F @
	0710	1	(B) ~~2~~ 10	2.04	8.51	71.4	4.76	NA	Pump started/baseline Dtw = 215.7
	0715	↓	15	—	—	—	—	—	Sample taken
	0720	—	—	—	—	—	—	—	Stopped sampling

Dtw start = 206.83 water column = 35.22
Dtw end = 215.72
26.33
= 75% Recharge.

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TF4 MW01
Delivery Order: 50
Project Number: 18292

Date: 5/5/97
Site Location: Tank Farm # 4

OHM Field Representative: Brian Sassetrel

Sample Number: 18292-425
COC Number: 201894

Static Water Level:(swl) 204.59
Total Depth:(td) 238.36
Measuring Device: water level serial number: 1089
Measuring Point: ~~TOB~~ GS
Casing Material: Steel

Subcontractor: Layne
Rig Number: 471
Sampling Pump: 1/2 hp Grundfos
Pump Number: 15

Water Column: (wc) 33.77 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 22.05 = (wc)(d*)
Total Gallons to Purge: 66.16 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: ~~70~~ 73

Pump Depth: 237
Feet Discharge Pipe: 236

Number of Bottles Collected: 3
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: 18292-428
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp ~~F~~ °C	Turbidity (NTU)	%DO	Comments
0915	—	—	—	—	—	—	—	Arrived; clear; sunny; [illegible]
1020	2	~~0~~	1.89	7.78	26.7	16.8	13.7	Pump started
1035	—	30	—	—	—	—	—	Well went Dry
1105	—	—	—	—	—	—	—	DTW = 204.76
1105	1	30	1.64	7.31	27.31	13.78	70.9	pump started
1110	↓	35	1.66	7.29	27.43	12.19	68.7	Clear; no odor
1125	↓	50	1.50	7.15	27.21	10.08	38.2	clear; no odor
1140	↓	65	1.48	7.06	27.23	4.19	37.4	DTW = 213.7/clear no odor
1145	↓	70	1.49	7.08	27.43	3.21	36.9	Clear; no odor
1148	↓	73	—	—	—	—	—	Sample taken
1151	—	—	—	—	—	—	—	Stopped sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: 04D6mw66
Delivery Order: 0024
Project Number: 17486

Date: 5/1/97
Site Location: tank Farm 6

OHM Field Representative: Brian Sadsfield

Sample Number: 17486-296
COC Number: 201896

Static Water Level:(swl) 209.61
Total Depth:(td) 265.00
Measuring Device: water level serial number: 1017
Measuring Point: TOC GS
Casing Material: PVC

Subcontractor: Layne
Rig Number: 471
Sampling Pump: 1/2 hp Grundfos
Pump Number:

Water Column: (wc) 55.39 = td-swl
Well Diameter: (d) 6
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 81.37 = (wc)(d*)
Total Gallons to Purge: 244.10 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 257

Pump Depth: 250
Feet Discharge Pipe: 249

Number of Bottles Collected: 9
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: 17486-271
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp °C (F)	Turbidity (NTU)	%DO	Comments
1000	—	—	—	—	—	—	—	Arrived. Clear, sunny, no wind, low 70°s
1140	2½	~~0~~	0.89	7.03	25.87	30.0	86.5	Pump Started/Baseline
1200		50	0.89	7.07	25.99	31.6	88.6	Clear; No odor
1220		100	0.89	7.17	26.08	7.17	87.4	Clear; No odor
1240		(3) ~~7~~ 150	0.89	7.20	26.35	2.96	87.1	Clear; No odor
1300		200	0.89	7.17	26.50	1.90	88.4	Clear; No odor
1320	↓	250	0.89	7.19	26.42	3.03	89.7	Clear; No odor
1323	↓	257	—	—	—	—	—	Sample taken
1330	—	—	—	—	—	—	—	Sample Stopped

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: 04-OBMW40
Delivery Order: Do 24
Project Number: 17486

Date: 4/30/97
Site Location: tank Farm #6

OHM Field Representative: Brian Scutenfield

Sample Number: 17486-307
COC Number: 201817

Static Water Level:(swl) 208.31
Total Depth:(td) 266.05
Measuring Device: water level serial number: 1017
Measuring Point: TOC GS
Casing Material: PVC

Subcontractor: Layne
Rig Number: 416
Sampling Pump: 1/2 hp Grundfos
Pump Number: B ~~D~~ C

Water Column: (wc) 57.74 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 37.70 = (wc)(d*)
Total Gallons to Purge: 113.11 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 122

Pump Depth: 260
Feet Discharge Pipe: 259

Number of Bottles Collected: 9
Duplicate Collected: Yes No
Duplicate Sample Number: NA
Rinsate Sample Number: 17486-281
MS/MSD: Yes No

	Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
10/97	1400	—	—	—	—	—	—	—	Arrived. Set pump + pipe
		—	—	—	—	—	—	—	into well. Purge + sample
		—	—	—	—	—	—	—	on 5/1/97.
		—	—	—	—	—	—	—	Pipe broke about 80 ft
		—	—	—	—	—	—	—	of pipe w/ pump fell
		—	—	—	—	—	—	—	down to bottom of well.
1/97	1045	—	—	—	—	—	—	—	Captured pipe + pump +
		—	—	—	—	—	—	—	pulled both up. Checked well
		—	—	—	—	—	—	—	ok. Decon pipe/pump and
		—	—	—	—	—	—	—	reset back into well.
	1355	—	—	—	—	—	—	—	Pump + pipe in well.
2/97	0715	—	—	—	—	—	—	—	Arrived. Clear, Sunny, no wind, Low 70°F.
	0720	2	Ø	1.18	9.80	69.1	1.84	NA	Pump started / Baseline
	0735	↓	30	1.12	B ~~8.90~~ 8.19	67.7	1.03	NA	Clear, No odor

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Job Number: 04-DBmw40 ↓ 5
Well Identification: 17486
Date: 5/2/97
Site Location: Tank Farm #6
OHM Representatives: Brian Scatefred

Time	Pumping Rate	Gallons purged	EC	pH	Temp F°	Turbidity	%DO	Comments
0750	2	60	1.14	8.04	67.7	1.31	NA	clear, no odor
0805	↓	90	1.06	8.01	67.4	1.98	NA	clear, no odor
0820	↓	120	1.12	8.05	67.7	0.82	NA	clear, no odor
0821	↓	122	—	~~8.05~~ (R)	—	—	—	Sample taken
0830	—	—	—	—	—	—	—	Stopped Sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TF6mw01
Delivery Order: D024
Project Number: 17486

Date: 4/30/97
Site Location: Tank Farm #6

OHM Field Representative: Brian Satterfield

Sample Number: 17486-280
COC Number: 201893

Static Water Level:(swl) 190.61
Total Depth:(td) 224.17
Measuring Device: water level serial number: 1017
Measuring Point: TOC GS
Casing Material: Steele

Subcontractor: Layne
Rig Number: 416
Sampling Pump: 1/2 hp Grundfos
Pump Number: C

Water Column: (wc) 33.56 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 21.92 = (wc)(d*)
Total Gallons to Purge: 65.74 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 90

Pump Depth: 221
Feet Discharge Pipe: 220

Number of Bottles Collected: 10
Duplicate Collected: Yes No
Duplicate Sample Number: NA
Rinsate Sample Number: 17486-279
MS/MSD: Yes No

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
0945	—	—	—	—	—	—	—	Arrived. Overcast mid 60° no wind
1035	↓	Ø	1.10	8.87	73.8	7.30	NA	pump started/Baseline
1055	↓	20	0.99	8.59	73.3	9.21	NA	Clear, no odor
1110	↓	35	0.95	8.50	72.4	5.61	NA	clear, no odor
1125	↓	~~60~~ 50	0.93	8.47	72.7	4.92	NA	well went dry
1215	—	—	—	—	—	—	—	DTW = 193
1220	↓	—	—	—	—	—	—	pump started
1225	↓	55	1.03	8.20	75.0	2.03	NA	clear, no odor
1255	↓	85	1.03	8.05	78.7	3.96	NA	clear, no odor
1300	↓	90	—	—	—	—	—	Sample taken
1310	—	—	—	—	—	—	—	Stopped sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TT6mw02
Delivery Order: DO 24
Project Number: 17486

Date: 4/30/97
Site Location: Tank Farm #6

OHM Field Representative: Brian Satterlee

Sample Number: 17486 - 277
COC Number: 201893

Static Water Level:(swl) 195.14
Total Depth:(td) 230.93
Measuring Device: water level serial number: 1029
Measuring Point: TOC GS
Casing Material: Steel

Subcontractor: Layne
Rig Number: 471
Sampling Pump: 1/2 hp Grundfos
Pump Number: A

Water Column: (wc) 35.79 = td-swl
Well Diameter: (d) 4
d² (2-inch = .163) (4-inch = .653) (8-inch = 1.469)
Casing Volume:(cv) 23.37 = (wc)(d²)
Total Gallons to Purge: 70.4 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 73

Pump Depth: 228
Feet Discharge Pipe: 227

Number of Bottles Collected: 20
Duplicate Collected: Yes No
Duplicate Sample Number: 17486 - 278
Rinsate Sample Number: 17486 - 276
MS/MSD: Yes No

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp ~~F~~ °C	Turbidity (NTU)	%DO	Comments
0930	—	—	—	—	—	—	—	Arrived on site, overcast high 60°F no wind
0930	1/2	0	1.04	8.75	22.84	9.72	17.8	pump started/Baseline
0950	↓	10	0.90	8.27	24.81	6.70	0.6	odor & clear
1010	↓	20	0.90	8.76	25.40	9.90	0.9	Clear; No odor
1030	↓	30	0.92	8.59	26.56	15.02	2.9	Clear; Slight odor
1050	↓	40	0.93	8.27	27.51	14.40	2.9	Clear; Strong odor
1100	↓	45	—	—	—	—	—	well went Dry
1215	—	—	—	—	—	—	—	DTW = 219'
1300	—	—	—	—	—	—	—	DTW = 217
1315	1/2	45	—	—	—	—	—	DTW = 216
1325	↓	50	1.05	7.71	25.31	11.33	-2.7	Clear; Odor
1335	↓	60	1.01	7.81	26.74	6.37	-4.1	Clear; No odor
1345	↓	70	1.01	7.79	26.86	4.21	-0.8	clear; No odor
1350	↓	72.5	—	—	—	—	—	Sample taken
1351	↓	73	—	—	—	—	—	Sample taken (Dup)
1359	—	—	—	—	—	—	—	Stopped Sampling.

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: 18-B6MW015
Delivery Order: DO 24
Project Number: 17486

Date: 4/29/97
Site Location: Tank Farm #6

OHM Field Representative: Brian Sartefield

Sample Number: 17486-274
COC Number: 201892

Static Water Level:(swl) 201.90
Total Depth:(td) 231.50
Measuring Device: water level serial number: 1029
Measuring Point: TOC GS
Casing Material: PVC

Subcontractor: Cayne
Rig Number: 416
Sampling Pump: 1/2 hp Grundfos
Pump Number: D

Water Column: (wc) 29.6 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 19.32 = (wc)(d*)
Total Gallons to Purge: 57.99 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 68

Pump Depth: 228
Feet Discharge Pipe: 227

Number of Bottles Collected: 9
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: 17486-273
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
1320	—	—	—	—	—	—	—	Arrived on site, overcast
	—	—	—	—	—	—	—	Low 70°F, no wind
1425	3 1/2	0	0.98	7.55	76.6	2.12	NA	Pump started / Baseline
1435		35	1.00	7.37	77.0	1.01	NA	Clear, no odor
1440		47.5	1.01	7.38	76.7	1.03	NA	Clear, No odor
1445		60	1.15	7.34	77.3	1.08	NA	Clear, No odor
1447	—	68	—	—	—	—	—	Sample taken
1451	—	—	—	—	—	—	—	Stopped sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: 04-U6MW63
Delivery Order: DO 24
Project Number: 17486

Date: 4/29/97
Site Location: Tank Farm #6

OHM Field Representative: Brian Sandfield

Sample Number: 17486-272
COC Number: 201892

Static Water Level:(swl) 208.29
Total Depth:(td) 280
Measuring Device: water level serial number: 1017
Measuring Point: TOC GS
Casing Material: PVC

Subcontractor: Cayne
Rig Number: 471
Sampling Pump: NA; pump in well
Pump Number: NA

Water Column: (wc) 71.71 = td-swl
Well Diameter: (d) 6
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 105.34 = (wc)(d*)
Total Gallons to Purge: 316.03 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 385

Pump Depth: NA
Feet Discharge Pipe: NA

Number of Bottles Collected: 9
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA; cercla pump in well
Rinsate Sample Number: (B) ~~17486~~ NA
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
1240	—	—	—	—	—	—	—	Arrived, overcast, low 70° no wind
1250	—	—	—	—	—	—	—	Pump started
1255	7	35	1.27	8.22	78.1	22.7	NA	clear
1300 (B)	↓	70	1.07	7.87	76.6	9.16	NA	Clear; no odor
1310		140	1.11	7.48	75.4	3.83	NA	Clear; no odor
1320		210	1.06	7.41	74.6	9.73	NA	Clear; no odor
1330		280	1.13	7.30	75.1	4.10	NA	Clear; no odor
1340	↓	350	1.13	7.27	75.3	2.22	NA	Clear, no odor
1345	↓	385	—	—	—	—	—	Sample taken
1355	—	—	—	—	—	—	—	Stopped sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TF555 Pz03
Delivery Order: 50
Project Number: 18292

Date: ~~5/13/97~~ 5/12/97 (B)
Site Location: Tank Farm 555

OHM Field Representative: Brian Sassenrad

Sample Number: NA
COC Number: NA

Static Water Level:(swl) NA
Total Depth:(td) NA
Measuring Device: water level serial number: (B) N1017
Measuring Point: TOC GS
Casing Material: PCV

Subcontractor: NA
Rig Number: NA
Sampling Pump: NA
Pump Number: NA

Water Column: (wc) NA = td-swl
Well Diameter: (d) 2
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) NA = (wc)(d*)
Total Gallons to Purge: NA = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: NA

Pump Depth: NA
Feet Discharge Pipe: NA

Number of Bottles Collected: NA
Duplicate Collected: Yes No
Duplicate Sample Number: NA
Rinsate Sample Number: NA
MS/MSD: Yes No

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
0700	—	—	—	—	—	—	—	well is Dry
—	—	—	—	—	—	—	—	Did NOT sample (B)

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: 03_B6mw26
Delivery Order: 50
Project Number: 18292

Date: 5/9/97
Site Location: Tank Farm 555

OHM Field Representative: Brian Sassefried

Sample Number: 18292-455
COC Number: 201964

Static Water Level:(swl) 215.64
Total Depth:(td) 276.25
Measuring Device: water level serial number: 1017
Measuring Point: TOC GS
Casing Material: PVC

Subcontractor: Layne
Rig Number: 471
Sampling Pump: 1/2 hp Grundfos
Pump Number: B

Water Column: (wc) 60.61 = td-swl
Well Diameter: (d) ~~4~~ 6 (B)
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) ~~39.58~~ (B) (wc)(d*) 89.04
Total Gallons to Purge: ~~118.93~~ (B) = (cv)(number of casing volumes to be purged) 267.11
Actual Gallons Purged: 273

Pump Depth: 271 / 251
Feet Discharge Pipe: 270 / 250

Number of Bottles Collected: (B) ~~6~~ 8
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: 18292 - 441
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
1000	—	—	—	—	—	—	—	Arrival; clear, sunny, no wind, cool
1155	3	Ø	1.10	8.67	83.4	32.6	NA	Pump started / Baseline
~~1215~~ 1159	—	~~6~~ 0 12	—	—	—	—	NA	Pump shut off; lowered pump to 251
~~1335~~ 1215	3	~~120~~ 12	0.98	8.67	80.3	16.7	NA	Pump started / Baseline
(B) ~~1444~~ 1245	↓	102	0.94	8.11	79.5	5.21	NA	clear, no odor
1300		147	0.95	8.16	79.4	2.81	NA	Clear; no odor
1320		207	0.96	8.12	79.5	3.45	NA	Clear, no odor
1340		267	0.94	8.11	79.7	2.72	NA	Clear; no odor
1342	↓	273	—	—	—	—	—	Sample Taken
1349	—	—	—	—	—	—	—	Stopped sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: 17-NEW1
Delivery Order: 50
Project Number: 18292

Date: 5/7/97
Site Location: Tank Farm 555

OHM Field Representative: Brian Satterfield

Sample Number: 18292-445
COC Number: 202363

Static Water Level:(swl) 182.00
Total Depth:(td) 232 (last Quarter)
Measuring Device: water level serial number: 1029
Measuring Point: TOC GS
Casing Material: PVC

Subcontractor: Layne
Rig Number: 416
Sampling Pump: Cerclin pump in well
Pump Number: NA

Water Column: (wc) 50 = td-swl
Well Diameter: (d) 6
d" (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 73.45 = (wc)(d")
Total Gallons to Purge: 220.35 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged:

Pump Depth: NA
Feet Discharge Pipe: NA

Number of Bottles Collected: 8
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: NA
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
0840	—	—	—	—	—	—	—	Arrived; clear; sunny; no wind; temp 70°F
0850	1	0	2.23	6.48	74.8	29.6	NA	Pump started / Baseline
0910		20	2.11	5.63	80.6	52.9	NA	Slightly cloudy, no odor
0930		40	1.88	6.68	79.5	40.0	NA	Slightly cloudy, no odor
0955		65	1.10	7.12	81.6	107.0	NA	Slightly cloudy, no odor DTW=216
1020		90	1.59	6.86	79.6	53.0	NA	Slightly cloudy, no odor DTW=211
1040		110	1.53	6.50	81.4	45.7	NA	Cloudy, no odor
1050		120	—	—	—	—	—	well Dry. DTW=228
1220		—	—	—	—	—	—	DTW=187.41
1220		120	1.59	6.99	83.5	43.1	NA	Pump started
1240		140	1.57	6.54	83.7	28.4	NA	Clear, no odor
1300		160	1.55	6.35	83.5	24.6	NA	Clear, no odor
1320		180	1.52	5.38	83.5	20.9	NA	Clear, no odor
1340		200	1.53	5.96	83.7	10.7	NA	Clear, No odor

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Job Number: 18292
Well Identification: 17-NEW1
Date: 5/7/97
Site Location: Tank Farm 555
OHM Representatives: Brian Sattefield

Time	Pumping Rate	Gallons purged	EC	pH	Temp F°	Turbidity	%DO	Comments
1405	1	225	1.57	6.37	85.8	4.32	NA	Clear, no odor
1407	↓	227	—	—	—	—	—	Sample taken
1412	—	—	—	—	—	—	—	Stopped sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: 17-D6MW82
Delivery Order: 50
Project Number: 18292

Date: 5/7/07
Site Location: Tank Farm 555

OHM Field Representative: Brian Sattefred

Sample Number: 18292-4246
COC Number: 202363

Static Water Level:(swl) 184.36
Total Depth:(td) 260 (on well tag)
Measuring Device: water level serial number: 1017
Measuring Point: TOC GS
Casing Material: PVC

Subcontractor: Layne
Rig Number: 471
Sampling Pump: centrifugal pump in well
Pump Number: NA

Water Column: (wc) 75.64 = td-swl
Well Diameter: (d) 6
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 111.12 = (wc)(d*)
Total Gallons to Purge: 333.46 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged:

Pump Depth: NA
Feet Discharge Pipe: NA

Number of Bottles Collected: 8
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: NA
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
0800	—	—	—	—	—	—	—	Arrival; clear/sunny/no wind/low 70s
0815	5	~~0.85~~ (3)	0.85	7.28	24.70	4.98	-99.9	Pump started / Baseline
0830	↓	75	0.91	8.35	74.2	3.72	NA	clear; No odor; ~~DTW~~ (8)
0831	—	—	—	—	—	—	—	well went Dry
0936	—	—	—	—	—	—	—	DTW = 221.47
1045	—	—	—	—	—	—	—	DTW = 199 = 81% Recharge
1046	5	75	1.14	7.94	89.3	4.17	NA	Pump started / Baseline
1102	—	155	—	—	—	—	—	well went Dry.
1325	—	—	—	—	—	—	—	DTW = 199 = 81% Recharge
1326	5	155	0.98	~~7.81~~ 7.77	81.1	2.36	NA	Pump started / Baseline
1327	↓	160	—	—	—	—	—	Sample taken
1331	—	—	—	—	—	—	—	Stop for sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TF555MW-01
Delivery Order: 50
Project Number: 18292

Date: 5/8/97
Site Location: Tank Farm 555

OHM Field Representative: Brian Sagstad

Sample Number: 18292-449
COC Number: 202359

Static Water Level:(swl) 184.83
Total Depth:(td) 221.80
Measuring Device: water level serial number: 1017
Measuring Point: ~~TOC~~ GS
Casing Material: Steel

Subcontractor: Layne
Rig Number: 471
Sampling Pump: 1/2 hp Grundfos
Pump Number: A

Water Column: (wc) 36.97 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 24.14 = (wc)(d*)
Total Gallons to Purge: 72.42 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 43

Pump Depth: 220
Feet Discharge Pipe: 219

Number of Bottles Collected: 12
Duplicate Collected: (Yes) No
Duplicate Sample Number: 18292-450
Rinsate Sample Number: 18292-440
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
5/8/97 0800	—	—	—	—	—	—	—	Arrived - clear, warm, no wind, low 70°s
0945	1	~~0~~	2.13	7.12	75.1	76.3	NA	pump started / Baseline
1000		15	2.01	8.38	75.5	18.54	NA	clear, slight odor
(A) ~~1015~~ 1009		(A) ~~30~~ 24	—	—	—	—	—	well went dry
1040		—	—	—	—	—	—	DTW = 208
1109		—	—	—	—	—	—	DTW = 202
1250		—	—	—	—	—	—	DTW = 192.21
1310		—	—	—	—	—	—	DTW = 191.9 = 80% Recharge
1312		24	2.07	7.95	92.0	24.7	NA	pump started / Baseline
1326		38	—	—	—	—	—	well went dry
5/9/97 0730	—	—	—	—	—	—	—	Arrived. overcast, no wind, high 60°s.
0750	1	5	1.97	7.60	70.0	108.9	NA	Baseline / pump started DTW = 184.9
0755	—	—	—	—	—	—	—	Sample taken Slight od
0756	—	—	—	—	—	—	—	Sample taken
0759	—	—	—	—	—	—	—	Stopped sample

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TF555MW-03
Delivery Order: 50
Project Number: 18292

Date: 5/8/97
Site Location: Tank Farm 555

OHM Field Representative: Brian Scatterfield

Sample Number: 18292-44P
COC Number: 202-359

Static Water Level:(swl) 181.65
Total Depth:(td) 220.81
Measuring Device: water level serial number: 1029
Measuring Point: TOC GS
Casing Material: Steele

Subcontractor: Cayne
Rig Number: 416
Sampling Pump: 1/2 hp Grundfos Pump
Pump Number: C

Water Column: (wc) 39.16 = td-swl
Well Diameter: (d) 4
d" (2-inch = .163) (4-inch = .653) (8-inch = 1.469)
Casing Volume:(cv) 25.57 = (wc)(d")
Total Gallons to Purge: 76.71 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 81

Pump Depth: 215
Feet Discharge Pipe: 214

Number of Bottles Collected: 6
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: 18292-443
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
0800	—	—	—	—	—	—	—	Arrived; clear, sunny, no wind, mid 70°s
0950	1	~~0~~	0.52	9.3	74.5	13.0	NA	Pump Started / Baseline
1005		15	0.53	9.17	73.8	8.19	NA	clear; no odor
~~1020~~ 1009		~~30~~ 24	—	—	—	—	—	well went Dry
1040		—	—	—	—	—	—	Dtw = 191
1109		—	—	—	—	—	—	Dtw = 189
1120		—	—	—	—	—	—	Dtw = 184.39
1120		24	0.65	8.73	79.2	720	NA	pump started / Baseline
1135		39	.75	8.08	79.6	16.15	NA	clear, no odor
1137		—	—	—	—	—	—	well went Dry
1235		—	—	—	—	—	—	Dtw = 186.00
1240		39	0.80	7.99	81.4	26.4	NA	pump started / Baseline
1255		55	0.83	8.34	82.1	7.63	NA	Clear, no odor
1220	↓	80	0.84	8.15	83.1	3.76	NA	Clear; no odor

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Job Number: 18292
Date: 5/8/97
OHM Representatives: Brian Satterfield
Well Identification: TP555 MW 03
Site Location: Tank Farm 555

Time	Pumping Rate	Gallons purged	EC	pH	Temp F°	Turbidity	%DO	Comments
1221	1	81	—	—	—	—	—	Sample taken
1227	—	—	—	—	—	—	—	Stopped sampling

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

TF555MW02 (B)

Well Identification: ~~03-B6MW26~~
Delivery Order: 50
Project Number: 18292

Date: 5/9/97
Site Location: Tank Farm 555

OHM Field Representative: Brian Satterfield

Sample Number: 18292-456
COC Number: 201964

Static Water Level:(swl) 24.55
Total Depth:(td) 61.50
Measuring Device: water level serial number: 1029
Measuring Point: TOC GS
Casing Material: Steele

Subcontractor: Layn
Rig Number: 416
Sampling Pump: 1/2 hp Grundfos
Pump Number: D

Water Column: (wc) 36.95 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 24 = (wc)(d*)
Total Gallons to Purge: 72 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 78

Pump Depth: 50
Feet Discharge Pipe: 49

Number of Bottles Collected: 6
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: 18292-444
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
0830	—	—	—	—	—	—	—	Arrived; 0830; slight overcast/no wind/low 70°F
0915	↓	~~0~~	1.80	8.36	70.9	32.2	NA	Pump started/Baseline
0935	↓	20	1.77	6.95	71.4	30.6	NA	Clear; No odor
0955	↓	40	1.86	8.18	71.5	9.62	NA	Clear no odor
1015 (B)	↓	60	—	—	—	—	—	Well went Dry
1035 45	—	@ ~~80~~ 60	—	—	—	—	—	Dtw = 32.4
1220	↓	60	2.09	8.29	81.9	7.6	NA	Pump started/Baseline Dtw = 24.67
1235	↓	75	1.96	7.93	81.9	4.79	NA	Clear, No odor
1238	—	78	—	—	—	—	—	Sample taken
1240	—	—	—	—	—	—	—	Stopped Sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TF555MW-05
Delivery Order: 50
Project Number: 18292

Date: 5/12/97
Site Location: tank Farm 555

OHM Field Representative: Brian Satterfield

Sample Number: 18292-464
COC Number: 201965

Static Water Level:(swl) @ ~~29.18~~ 42.44
Total Depth:(td) @ ~~49.40~~ 64.37
Measuring Device: water level serial number: 1029
Measuring Point: TOC GS
Casing Material: PVC

Subcontractor: Layne
Rig Number: 471
Sampling Pump: yz hp Grundfos
Pump Number: A

Water Column: (wc) 21.93 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 14.32 = (wc)(d*)
Total Gallons to Purge: 42.96 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 47.25

Pump Depth: 63
Feet Discharge Pipe: 62

Number of Bottles Collected: 6
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: 18292-459
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
1130	—	—	—	—	—	—	—	Arrived, overcast, no wind, high 60°F
1245	@ ~~1/2~~ 3/4	@ ~~0~~ ~~0~~	0.42	8.42	88.6	6.16	NA	Baseline / pump started
1300	↓	@ ~~15~~ 11.25	0.37	7.58	85.8	5.30	NA	clear, no odor, Dtw = 47.3
1315	↓	@ ~~30~~ 22.5	0.38	7.31	84.1	2.17	NA	Clear, no odor
1330	↓	@ ~~45~~ 33.75	0.41	7.20	84.4	2.17	NA	Clear, no odor Dtw = 48.5
1345	↓	@ ~~60~~ 45	0.41	7.07	84.1	2.09	NA	Clear, no odor
1347	↓	47.25	—	—	—	—	—	Sample taken
1352	—	—	—	—	—	—	—	Stopped Sampling

ORIGINAL

GROUNDWA[illegible] SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TF555p201
Delivery Order: 50
Project Number: 18292

Date: 5/12/94
Site Location: Tank Farm 555

OHM Field Representative: Brian Sutterfield

Sample Number: 18292-462
COC Number: 201965

Static Water Level:(swl) 25.71
Total Depth:(td) 50.10
Measuring Device: water level serial number: 1029
Measuring Point: TOC GS
Casing Material: P

Subcontractor: Layne
Rig Number: 416
Sampling Pump: 1/2 hp Grundfos
Pump Number: D

Water Column: (wc) 24.39 = td-swl
Well Diameter: (d) 2
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 3.98 = (wc)(d*)
Total Gallons to Purge: 11.93 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 14

Pump Depth: 48
Feet Discharge Pipe: 47

Number of Bottles Collected: 8
Duplicate Collected: Yes No
Duplicate Sample Number: NA
Rinsate Sample Number: 18292-457
MS/MSD: Yes No

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
1030	—	—	—	—	—	—	—	Arrived overcast, no wind, mid 60°F
1245	1/2	0	@ ~~.42~~ 1.44	@ ~~8.42~~ 7.48	@ ~~88.6~~ 80.0	@ ~~616~~ 7200	NA	Pump started / Baseline
1255	↓	@ ~~10~~ 5	1.52	7.39	80.9	123.7	NA	Cloudy; No odor
1305	↓	10	1.52	7.56	81.1	20.2	NA	Clear; No odor
1310	↓	12.5	1.52	7.61	81.2	4.93	NA	Clear; No odor
1313	↓	14	—	—	—	—	—	Sample Taken
1318	—	—	—	—	—	—	—	Stopped Sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TF555B02
Delivery Order: 50
Project Number: 18202

Date: 5/12/07
Site Location: Tank Farm 555

OHM Field Representative: Brian Stafford

Sample Number: 18202-461
COC Number: 201965

Static Water Level:(swl) 29.18
Total Depth:(td) 49.40
Measuring Device: Water level serial number: 1029
Measuring Point: ~~TOC~~ GS
Casing Material: PVC

Subcontractor: Layne
Rig Number: 416
Sampling Pump: 1/2 hp Grundfos
Pump Number: C

Water Column: (wc) 20.22 = td-swl
Well Diameter: (d) 2
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 3.29 = (wc)(d*)
Total Gallons to Purge: 9.89 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 12.50

Pump Depth: 47
Feet Discharge Pipe: 46

Number of Bottles Collected: 8
Duplicate Collected: Yes (No)
Duplicate Sample Number: NA
Rinsate Sample Number: 18202-454
MS/MSD: Yes (No)

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
0800	—	—	—	—	—	—	—	Arrived, overcast, windy, mid 60's
0905	1/2	0	1.22	9.65	69.5	106.7	NA	Pump started/Baseline
0911	↓	3	1.20	8.43	710	306	NA	clear; no odor
0917	↓	6	1.22	7.96	719	15.87	NA	clear; no odor
0923	↓	9	1.06	8.14	719	6.87	NA	clear; no odor
0929	↓	12	1.12	7.95	719	3.91	NA	clear; no odor
0930	↓	12.5	—	—	—	—	—	Sample taken
0937	—	—	—	—	—	—	—	Stopped sampling

OHM Remediation Services

ORIGINAL

GROUNDWATER SAMPLING LOG
MCAS EL TORO, SANTA ANA, CALIFORNIA

Well Identification: TF555MW-04
Delivery Order: 50
Project Number: 18292

Date: 5/12/97
Site Location: Tank Farm 555

OHM Field Representative: Brian Sutherland

Sample Number: 18292-463
COC Number: 201965

Static Water Level:(swl) 23.57
Total Depth:(td) 110.41
Measuring Device: water level serial number: 1017
Measuring Point: TOC GS
Casing Material: Steel

Subcontractor: Layne
Rig Number: 471
Sampling Pump: 1/2 W Grundfos
Pump Number: B

Water Column: (wc) 86.84 = td-swl
Well Diameter: (d) 4
d* (2-inch = .163) (4-inch = .653) (6-inch = 1.469)
Casing Volume:(cv) 56.71 = (wc)(d*)
Total Gallons to Purge: 170.12 = (cv)(number of casing volumes to be purged)
Actual Gallons Purged: 188

Pump Depth: B ~~100~~ 104
Feet Discharge Pipe: 103

Number of Bottles Collected: 6
Duplicate Collected: Yes No
Duplicate Sample Number: NA
Rinsate Sample Number: 18292-460
MS/MSD: Yes No

Time	Pumping Rate (gpm)	Gallons purged	EC ( )	pH	Temp F°	Turbidity (NTU)	%DO	Comments
0930	—	—	—	—	—	—	—	Arrived, overcast, no wind, mid 60°F.
1010	4	Ø	0.71	9.00	71.3	24.2	NA	Baseline/ Pump started/ odor
1025	↓	60	0.37	7.02	71.8	6.61	NA	Clear, No odor
1040	↓	120	0.33	8.88	73.4	2.86	NA	Clear, no odor
1055	↓	180	0.36	8.78	79.5	2.29	NA	Clear, No odor
1057	↓	188	—	—	—	—	—	Sample taken
1104	—	—	—	—	—	—	—	Stopped Sampling

OHM Remediation Services

Appendix C
Summary of Analytical Results

Table C-1
Summary of Analytical Results for Tank Farm 1
MCAS El Toro, Santa Ana, California

OHM Sample Number		96-TF1-W-851	97-TF1-W-1517	17486-261	17486-262	96-TF1-W-869	97-TF1-W-1515	17486-246	96-TF1-W-835	97-TF1-W-1519	17486-238	96-TF1-W-833	97-TF1-W-1501	17486-242	96-TF1-W-867	97-TF1-W-1513	97-TF1-W-1514	17486-250
Sample Location		TF1MW-01	TF1MW-01	TF1MW-01	TF1MW-01 (Dup)	TF1MW-02	TF1MW-02	TF1MW-02	18_DW135	18_DW135	18_DW135	14_DBMW50	14_DBMW50	14_DBMW50	8_DGMW103	18_DGMW103	18_DGMW103 (Dup)	18_DGMW103
Date Collected		09/10/96	01/14/97	04/28/97	04/28/97	09/11/96	01/14/97	04/22/97	09/06/96	01/14/97	04/21/97	09/06/96	01/10/97	04/21/97	09/11/96	01/14/97	01/14/97	04/23/97
	Unit																	
Total Petroleum Hydrocarbons (CA LUFT-8015M)																		
TPH as Diesel	µg/L	570 U	520 U	500 U	500 U	540 U	500 U	500 U	500 U	500 U	500 U	500 U	NA	500 U	500 U	540 U	570 U	500 U
TPH as Gasoline	µg/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
TPH as JP-5	µg/L	570 U	520 U	NA	NA	540 U	500 U	NA	50 U	500 U	NA	500 U	NA	NA	500 U	540 U	570 U	NA
TPH-Extractable	µg/L	570 U	520 U	NA	NA	540 U	500 U	NA	140 J	500 U	NA	500 U	500 U	NA	500 U	540 U	570 U	NA
Volatile Aromatic Compounds (EPA 8020)																		
Benzene	µg/L	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA
Ethylbenzene	µg/L	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA
Methyl tert-butyl ether (MTBE)	µg/L	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	1.0 U	NA	NA	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA
Toluene	µg/L	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA
Xylenes (total)	µg/L	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA
Volatile Organic Compounds (EPA 8260A)																		
1,1,1-Trichloroethane	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
1,1,2,2-Tetrachloroethane	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	NA	5.0 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	5.0 U	NA
1,1,2-Trichloroethane	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
1,1-Dichloroethane	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
1,1-Dichloroethene	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
1,2-Dichloroethane	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
1,2-Dichloroethene (total)	µg/L	NA	NA	5 U	5 U	NA	NA	5 U	NA	NA	5 U	NA	NA	5 U	NA	NA	NA	5 U
1,2-Dichloropropane	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
2-Butanone (MEK)	µg/L	NA	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
2-Chloroethyl vinyl ether	µg/L	NA	10 U	10 UJ	10 UJ	NA	10 U	10 U	10 UJ	10 U	10 UJ	10 UJ	10 U	10 UJ	10 UJ	10 U	10 U	10 UJ
2-Hexanone	µg/L	NA	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	µg/L	NA	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	NA	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
Bromodichloromethane	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
Bromoform	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
Bromomethane	µg/L	NA	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
Carbon tetrachloride	µg/L	NA	19	15	15	NA	16	13	19	18	13	12	10	9.2	5.0 U	5.0 U	5.0 U	5 U
Chlorobenzene	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
Chloroethane	µg/L	NA	10 U	10 U	10 U	NA	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	µg/L	NA	2.2 J	5 U	5 U	NA	1.5 J	1.5 J	1.6 J	1.5 J	5 U	3.7 J	3.3 J	3.8	5.0 U	5.0 U	5.0 U	5 U
Chloromethane	µg/L	NA	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
cis-1,3-Dichloropropene	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
Dibromochloromethane	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
Ethylbenzene	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
Methyl tert-butyl ether (MTBE)	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	NA	NA	5.0 U	5 U
Methylene chloride	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
Styrene	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
Tetrachloroethene	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
Toluene	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
trans-1,2-Dichloroethene	µg/L	NA	5.0 U	NA	5 U	NA	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	5.0 U	NA
trans-1,3-Dichloropropene	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
Trichloroethene	µg/L	NA	23	24	23	NA	30	40	16	19	28	1.2 J	3.0 J	5 U	5.0 U	5.0 U	5.0 U	5 U
Trichlorofluoromethane	µg/L	NA	5.0 U	5 UJ	5 UJ	NA	5.0 U	5 UJ	5.0 U	5.0 U	5 UJ	5.0 U	5.0 U	5 UJ	5.0 U	5.0 U	5.0 U	5 UJ
Vinyl acetate	µg/L	NA	10 U	10 UJ	10 UJ	NA	10 U	10 UJ	10 U	10 U	10 R	10 U	10 U	10 R	10 U	10 U	10 U	10 R
Vinyl Chloride	µg/L	NA	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Xylenes (total)	µg/L	NA	5.0 U	5 U	5 U	NA	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U
Metals (EPA 6010A)																		
Antimony	µg/L	NA	60 U	NA	NA	NA	60 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	µg/L	NA	5.0 U	NA	NA	NA	5.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	µg/L	NA	24	NA	NA	NA	14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	µg/L	NA	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	µg/L	NA	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	µg/L	NA	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	µg/L	NA	20 U	NA	NA	NA	20 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	190	NA	NA	NA	160	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	µg/L	NA	20 U	NA	NA	NA	24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	µg/L	NA	20 U	NA	NA	NA	20 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	µg/L	7400 U	NA	NA	NA	8100 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	µg/L	NA	160	NA	NA	NA	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	µg/L	NA	5.0 U	NA	NA	NA	5.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	µg/L	NA	5.0 U	NA	NA	NA	5.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	µg/L	NA	11	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	µg/L	NA	20 U	NA	NA	NA	20 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L	NA	0.20 U	NA	NA	NA	0.20 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry																		
Specific Conductance (EPA 120.1)	umhos/cm	NA	12000	NA	NA	NA	12000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.2)	mg/L	NA	1400	NA	NA	NA	1400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH (EPA 150.1)	pH units	7.0	NA	NA	NA	7.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	2400	NA	NA	NA	2200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	12	NA	NA	NA	5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity (EPA 310.1)	mg/L	190	NA	NA	NA	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride (EPA 325.2)	mg/L	NA	460 J	NA	NA	NA	340 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride (EPA 340.2)	mg/L	NA	0.21	NA	NA	NA	0.22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia (EPA 350.1 / EPA 350.3)	mg/L	0.1 U	NA	NA	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Kjeldahl Nitrogen (TKN) (EPA 351.4)	mg/L	1.0 U	NA	NA	NA	1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	35	28	NA	NA	26	25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus, Total (EPA 365.2)	mg/L	0.060	0.050	NA	NA	0.070	0.050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (EPA 375.2 / EPA 375.3)	mg/L	820	2000	NA	NA	910	2100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.2)	mg/L	1.0	NA	NA	NA	1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Halides (TOX) (EPA 450.1)	mg/L	NA	0.03	NA	NA	NA	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Microbiology																		
Heterotrophic plate count (SM 9215-C/B)	cfu/mL	9000	NA	NA	NA	200 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table C-1
Summary of Analytical Results for Tank Farm 1
MCAS El Toro, Santa Ana, California

OHM Sample Number		96-TF1-W-838	97-TF1-W-1507	17486-244	96-TF1-W-834	96-TF1-W-836	96-TF1-W-849	96-TF1-W-866	97-TF1-W-1520	17486-241	17486-243	17486-248	17486-259	96-TF1-W-837	96-TF1-W-850	96-TF1-W-868	97-TF1-W-1506	97-TF1-W-1508
Sample Location		24_EX2	24_EX2	24_EX2	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate
Date Collected		09/09/96	01/13/97	04/22/97	09/06/96	09/09/96	09/10/96	09/11/96	01/14/97	04/21/97	04/22/97	04/23/97	04/28/97	09/09/96	09/10/96	09/11/96	01/13/97	01/13/97
	Unit																	
Total Petroleum Hydrocarbons (CA LUFT-8015M)																		
TPH as Diesel	µg/L	540 UJ	NA	500 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	500 UJ	590 U	540 U	NA	NA
TPH as Gasoline	µg/L	49 PJ	240 P	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
TPH as JP-5	µg/L	540 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	500 UJ	590 U	540 U	NA	NA
TPH-Extractable	µg/L	540 UJ	550 U	500 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	500 UJ	590 U	540 U	560 U	500 U
Volatile Aromatic Compounds (EPA 8020)																		
Benzene	µg/L	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether (MTBE)	µg/L	NA	1.0 U	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Volatile Organic Compounds (EPA 8260A)																		
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	NA	NA	NA	5.0 U	NA	NA	NA	NA
1,1,2-Trichloroethane	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
1,1-Dichloroethane	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
1,1-Dichloroethene	µg/L	0.6 J	0.8 J	4.1	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
1,2-Dichloroethane	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
1,2-Dichloroethene (total)	µg/L	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
2-Butanone (MEK)	µg/L	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	NA	NA	NA	NA
2-Chloroethyl vinyl ether	µg/L	10 UJ	10 U	10 U	10 UJ	10 UJ	NA	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ	10 UJ	NA	NA	NA	NA
2-Hexanone	µg/L	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	µg/L	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA	NA	NA	NA
Acetone	µg/L	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	1.9 J	NA	NA	NA	NA
Benzene	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
Bromodichloromethane	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
Bromoform	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
Bromomethane	µg/L	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA	NA	NA	NA
Carbon disulfide	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
Carbon tetrachloride	µg/L	3.6 J	2.4 J	5.2	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
Chlorobenzene	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
Chloroethane	µg/L	10 U	10 U	10 UJ	10 U	10 U	NA	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	NA	NA	NA	NA
Chloroform	µg/L	0.8 J	0.8 J	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
Chloromethane	µg/L	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA	NA	NA	NA
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
Dibromochloromethane	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
Ethylbenzene	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)	µg/L	5.0 U	NA	5 U	5.0 U	5.0 U	NA	NA	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
Methylene chloride	µg/L	5.0 U	2.9 J	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	11 J	5 U	8.9	5.0 U	NA	NA	NA	NA
Styrene	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
Tetrachloroethene	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
Toluene	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	NA	NA	NA	5.0 U	NA	NA	NA	NA
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
Trichloroethene	µg/L	69	460	770	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
Trichlorofluoromethane	µg/L	5.0 U	5.0 U	5 UJ	5.0 U	5.0 U	NA	5.0 U	2.1 J	5 UJ	5 UJ	5 UJ	5 UJ	5.0 U	NA	NA	NA	NA
Vinyl acetate	µg/L	10 U	10 U	10 UJ	10 U	10 U	NA	10 U	10 U	10 R	10 UJ	10 R	10 UJ	10 U	NA	NA	NA	NA
Vinyl Chloride	µg/L	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA	NA	NA	NA
Xylenes (total)	µg/L	5.0 U	5.0 U	5 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	NA	NA	NA	NA
Metals (EPA 6010A)																		
Antimony	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	58	51 U	NA	NA
Molybdenum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1000 U	1000 U	NA	NA
Selenium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry																		
Specific Conductance (EPA 120.1)	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH (EPA 150.1)	pH units	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.7	6.4	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	NA	NA
Alkalinity (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.5 J	10 U	NA	NA
Chloride (EPA 325.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride (EPA 340.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia (EPA 350.1 / EPA 350.3)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA
Total Kjeldahl Nitrogen (TKN) (EPA 351.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.0 U	1.0 U	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.040 U	0.040 U	NA	NA
Phosphorus, Total (EPA 365.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.030 U	0.030 U	NA	NA
Sulfate (EPA 375.2 / EPA 375.3)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.0 U	5.0 U	NA	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.0 U	1.0 U	NA	NA
Total Organic Halides (TOX) (EPA 450.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Microbiology																		
Heterotrophic plate count (SM 9215-C/B)	cfu/mL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	42000	200 U	NA	NA

Table C-1
Summary of Analytical Results for Tank Farm 1
MCAS El Toro, Santa Ana, California

OHM Sample Number		97-TF1-W-1512	97-TF1-W-1516	97-TF1-W-1518	17486-237	17486-251	17486-245	17486-249	17486-260
Sample Location		Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate
Date Collected		01/14/97	01/14/97	01/14/97	04/21/97	04/21/97	04/22/97	04/23/97	04/28/97
	Unit								
Total Petroleum Hydrocarbons (CA LUFT-8015M)									
TPH as Diesel	µg/L	530 U	520 U	510 U	500 U	500 U	500 U	500 U	500 U
TPH as Gasoline	µg/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
TPH as JP-5	µg/L	530 U	520 U	510 U	NA	NA	NA	NA	NA
TPH-Extractable	µg/L	530 U	520 U	510 U	500 U	500 U	500 U	500 U	500 U
Volatile Aromatic Compounds (EPA 8020)									
Benzene	µg/L	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA	NA
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)	µg/L	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA	NA
Toluene	µg/L	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA	NA
Xylenes (total)	µg/L	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA	NA
Volatile Organic Compounds (EPA 8260A)									
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	5.0 U	5.0 U	5.0 U	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene (total)	µg/L	NA	NA	NA	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	2.6 J	5 U	5 U
2-Butanone (MEK)	µg/L	10 U	10 U	10 U	10 UJ	62	10 U	10 U	10 U
2-Chloroethyl vinyl ether	µg/L	10 U	10 U	10 U	10 UJ	10 U	10 U	10 UJ	10 UJ
2-Hexanone	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	10 U	10 U	10 U	77	61	10 U	41	35
Benzene	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	2.2 J	5 U	5 U
Bromoform	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
Carbon tetrachloride	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 UJ	5 U	5 U
Chloroethane	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5.5	5 U	3.0 J
Chloromethane	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether (MTBE)	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
Styrene	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
Toluene	µg/L	5.0 U	5.0 U	5.0 U	5 U	1.0 J	5 U	5 U	5 U
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	µg/L	5.0 U	5.0 U	5.0 U	5 UJ	5 U	5 UJ	5 UJ	5 UJ
Vinyl acetate	µg/L	10 U	10 U	10 U	10 R	10 U	10 UJ	10 R	10 UJ
Vinyl Chloride	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Xylenes (total)	µg/L	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U	5 U
Metals (EPA 6010A)									
Antimony	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Barium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Silver	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry									
Specific Conductance (EPA 120.1)	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
pH (EPA 150.1)	pH units	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Chloride (EPA 325.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride (EPA 340.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia (EPA 350.1 / EPA 350.3)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Kjeldahl Nitrogen (TKN) (EPA 351.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus, Total (EPA 365.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (EPA 375.2 / EPA 375.3)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Halides (TOX) (EPA 450.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Microbiology									
Heterotrophic plate count (SM 9215-C/B)	cfu/mL	NA	NA	NA	NA	NA	NA	NA	NA

Table C-2
Summary of Analytical Results for Tank Farm 2
MCAS El Toro, Santa Ana, California

OHM Sample Number		96-TF2-W-670	96-TF2-W-784	96-TF2-W-823	96-TF2-W-1459	97-TF2-W-1534	17486-234	96-TF2-W-689	96-TF2-W-804	96-TF2-W-1472	97-TF2-W-1547	97-TF2-W-1548	17486-228	96-TF2-W-763	96-TF2-W-1462	97-TF2-W-1500	17486-235	96-TF2-W-688	96-TF2-W-802	97-TF2-W-1504	17486-229
Sample Location		TF2MW-01	TF2MW-01	TF2MW-01	TF2MW-01	TF2MW-01	TF2MW-01	TF2MW-02	TF2MW-02	TF2MW-02	TF2MW-02	TF2MW-02 (Dup)	TF2MW-02	TF2MW-03	TF2MW-03	TF2MW-03	TF2MW-03	TF2MW-04	TF2MW-04	TF2MW-04	TF2MW-04
Date Collected		6/14/96	8/29/96	9/4/96	12/23/96	1/17/97	4/18/97	6/14/96	8/30/96	12/31/96	1/28/97	1/28/97	4/17/97	8/29/96	12/24/96	1/10/97	4/18/97	6/14/96	8/30/96	1/13/97	4/17/97
	Unit																				
Total Petroleum Hydrocarbons (CA LUFT-8015M)																					
TPH as Diesel	µg/L	500 U	NA	570 U	NA	NA	500 U	500 U	520 U	NA	NA	550 U	500 U	NA	NA	NA	500 U	500 U	520 U	NA	500 U
TPH as Gasoline	µg/L	3700 P	3800 P	NA	4400 P	NA	2900	630 P	530 P	990 P	1100 P	1100 P	570	3500 P	3300 P	4100 P	2800	2100 P	1900 P	1500 P	1600
TPH as JP-5	µg/L	860 P	NA	570 U	NA	NA	NA	500 P	520 U	NA	NA	NA	NA	NA	NA	NA	NA	730 P	520 U	NA	NA
TPH-Extractable	µg/L	500 U	NA	1000	630	NA	NA	500 U	190 J	860	NA	NA	NA	NA	660	1100	NA	500 U	420 J	620	NA
Volatile Aromatic Compounds (EPA 8020)																					
Benzene	µg/L	1300	NA	NA	1400	NA	NA	90	NA	1.0 U	6.5	6.4	NA	NA	380	660	NA	660	NA	310	NA
Ethylbenzene	µg/L	3.1	NA	NA	2.0 U	NA	NA	3.4	NA	1.0 U	1.0 U	1.0 U	NA	NA	2.0 U	1.0 U	NA	3.5	NA	1.0 U	NA
Methyl tert-butyl ether (MTBE)	µg/L	1.0 U	NA	NA	2.0 U	NA	NA	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA	NA	2.0 U	1.0 U	NA	1.0 U	NA	1.0 U	NA
Toluene	µg/L	1.0 U	NA	NA	1.0	NA	NA	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA	NA	5.0 U	1.0 U	NA	0.7 J	NA	1.0 U	NA
Xylenes (total)	µg/L	96	NA	NA	127	NA	NA	23	NA	23	26	26	NA	NA	120	140	NA	64	NA	58	NA
Volatile Organic Compounds (EPA 8260A)																					
1,1,1-Trichloroethane	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
1,1,2,2-Tetrachloroethane	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 UJ	5.0 U	5.0 U	NA	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	NA
1,1,2-Trichloroethane	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
1,1-Dichloroethane	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
1,1-Dichloroethene	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
1,2-Dichloroethane	µg/L	NA	23	NA	22	NA	5 U	NA	5.0 U	5.0 U	1.8 J	1.8 J	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	7.2	5 U
1,2-Dichloroethene (total)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U
1,2-Dichloropropane	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
2-Butanone (MEK)	µg/L	NA	10 U	NA	10 U	NA	10 U	NA	10 U	10 U	10 UJ	10 UJ	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U
2-Chloroethyl vinyl ether	µg/L	NA	10 U	NA	10 U	NA	10 U	NA	10 U	10 UJ	10 UJ	10 UJ	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U
2-Hexanone	µg/L	NA	10 UJ	NA	10 U	NA	10 U	NA	10 UJ	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	NA	10 UJ	10 U	10 U
4-Methyl-2-pentanone (MIBK)	µg/L	NA	10 U	NA	10 U	NA	10 U	NA	10 U	10 U	10 UJ	10 UJ	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U
Acetone	µg/L	NA	10 U	NA	4.7 J	NA	10 U	NA	10 U	10 UJ	10 UJ	10 UJ	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U
Benzene	µg/L	NA	1100	NA	890	NA	1500	NA	2.8 J	15	6.0	6.9	5 U	950 J	590	660	620	NA	420	300	370
Bromodichloromethane	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
Bromoform	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
Bromomethane	µg/L	NA	10 U	NA	10 U	NA	10 U	NA	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U
Carbon disulfide	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 UJ	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
Carbon tetrachloride	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
Chlorobenzene	µg/L	NA	5.0 U	NA	1.4 J	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
Chloroethane	µg/L	NA	10 U	NA	10 U	NA	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U
Chloroform	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
Chloromethane	µg/L	NA	10 U	NA	10 U	NA	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U
cis-1,2-Dichloroethene	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
cis-1,3-Dichloropropene	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
Dibromochloromethane	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
Ethylbenzene	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
Freon 113	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U
Methyl tert-butyl ether (MTBE)	µg/L	NA	5.0 U	NA	NA	NA	5 U	NA	5.0 U	NA	10 U	10 U	5 U	5.0 U	NA	NA	5 U	NA	5.0 U	NA	5 U
Methylene chloride	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
Styrene	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
Tetrachloroethene	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
Toluene	µg/L	NA	0.6 J	NA	5.0 U	NA	1.0	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	0.4 J	5.0 U	5 U
trans-1,2-Dichloroethene	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	NA
trans-1,3-Dichloropropene	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
Trichloroethene	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	1.0 J	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
Trichlorofluoromethane	µg/L	NA	5.0 U	NA	5.0 U	NA	5 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	NA	5.0 U	5.0 U	5 U
Vinyl acetate	µg/L	NA	10 U	NA	10 U	NA	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U
Vinyl Chloride	µg/L	NA	10 U	NA	10 U	NA	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U
Xylenes (total)	µg/L	NA	142	NA	118	NA	180	NA	6.8 J	20	21	23	6.7	178	120	130	90	NA	67	47	65
Metals (EPA 6010A)																					
Aluminum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	44 J	NA	NA	NA	NA	NA
Antimony	µg/L	NA	NA	NA	NA	600 U	NA	NA	NA	10 U	NA	60 U	NA	NA	NA	10 U	NA	NA	NA	60 U	NA
Arsenic	µg/L	NA	NA	NA	NA	5.1	NA	NA	NA	4.1 J	NA	5.0 U	NA	NA	NA	5.0 U	NA	NA	NA	5.0 U	NA
Barium	µg/L	NA	NA	NA	NA	100 U	NA	NA	NA	21	NA	22	NA	NA	NA	22	NA	NA	NA	21	NA
Beryllium	µg/L	NA	NA	NA	NA	20 U	NA	NA	NA	2.0 U	NA	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA	2.0 U	NA
Cadmium	µg/L	NA	NA	NA	NA	50 U	NA	NA	NA	3.7 J	NA	4.5	NA	NA	NA	3.7 J	NA	NA	NA	2.0 U	NA
Calcium	µg/L	NA	NA	NA	NA	530000	NA	NA	NA	280000	NA	350000	NA	NA	NA	340000	NA	NA	NA	330000	NA
Chromium	µg/L	NA	NA	NA	NA	100 U	NA	NA	NA	5.3 J	NA	10 U	NA	NA	NA	1.5 J	NA	NA	NA	10 U	NA
Cobalt	µg/L	NA	NA	NA	NA	200 U	NA	NA	NA	18 U	NA	20 U	NA	NA	NA	18 U	NA	NA	NA	20 U	NA
Copper	µg/L	NA	NA	NA	NA	100 U	NA	NA	NA	10 U	NA	10 U	NA	NA	NA	10 U	NA	NA	NA	10 U	NA
Iron	µg/L	1700 J	NA	NA	NA	3600	NA	510 J	NA	520	NA	240	NA	NA	NA	61	NA	270 J	NA	620	NA
Lead	µg/L	NA	NA	NA	NA	3.0 U	NA	NA	NA	3.0 U	NA	3.0 U	NA	NA	NA	3.0 U	NA	NA	NA	3.0 U	NA
Magnesium	µg/L	NA	NA	NA	NA	310000	NA	NA	NA	180000	NA	220000	NA	NA	NA	330000	NA	NA	NA	170000	NA
Manganese	µg/L	NA	NA	NA	NA	680	NA	NA	NA	760	NA	820	NA	NA	NA	1700	NA	NA	NA	220	NA
Molybdenum	µg/L	NA	NA	NA	NA	200 U	NA	NA	NA	14 J	NA	25	NA	NA	NA	15 J	NA	NA	NA	70	NA
Nickel	µg/L	NA	NA	NA	NA	200 U	NA	NA	NA	20 J	NA	27	NA	NA	NA	30 J	NA	NA	NA	20 U	NA
Potassium	µg/L	8800 J	NA	NA	NA	8100	NA	6200 J	NA	5200	NA	3700	NA	NA	NA	4600	NA	7300 J	NA	4500	NA
Selenium	µg/L	NA	NA	NA	NA	29	NA	NA	NA	96	NA	99	NA	NA	NA	5.0 U	NA	NA	NA	5.0 U	NA
Silver	µg/L	NA	NA	NA	NA	50 U	NA	NA	NA	10 U	NA	5.0 U	NA	NA	NA	10 U	NA	NA	NA	5.0 U	NA
Sodium	µg/L	NA	NA	NA	NA	170000	NA	NA	NA	170000	NA	170000	NA	NA	NA	170000	NA	NA	NA	150000	NA
Thallium	µg/L	NA	NA	NA	NA	5.0 U	NA	NA	NA	10 U	NA	5.0 U	NA	NA	NA	10 U	NA	NA	NA	5.0 U	NA
Vanadium	µg/L	NA	NA	NA	NA	100 U	NA	NA	NA	18	NA	24	NA	NA	NA	16	NA	NA	NA	10 U	NA
Zinc	µg/L	NA	NA	NA	NA	200 U	NA	NA	NA	34	NA	20 U	NA	NA	NA	16	NA	NA	NA	20 U	NA
Mercury (EPA 7470A)	µg/L	NA	NA	NA	NA	0.20 U	NA	NA	NA	0.20 U	NA	0.20 U	NA	NA	NA	0.20 U	NA	NA	NA	0.20 U	NA
General Chemistry																					
Specific Conductivity (EPA 120.1)	umhos/cm	NA	NA	NA	NA	4100	NA	NA	NA	3500	NA	3500	NA	NA	NA	4200	NA	NA	NA	3300	NA
Hardness as CaCO3 (EPA 130.2)	mg/L	NA	NA	NA	NA	2700	NA	NA	NA	1500	NA	1500	NA	NA	NA	2300	NA	NA	NA	2400	NA
pH (EPA 150.1)	pH units	7.0	NA	NA	NA	NA	NA	6.3	NA	NA	NA	NA	NA	NA	NA	NA	8.0	6.9	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	3300	NA	NA	NA	NA	NA	2900	NA	NA	NA	NA	NA	NA	NA	NA	3220	2500	NA	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	16	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	24	11	NA	NA	NA
Nitrate (EPA 300.0)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13.9	NA	NA	NA	NA
Alkalinity (EPA 310.1)	mg/L	490	NA	NA	NA	NA	NA	450	NA	NA	NA	NA	NA	NA	NA	NA	NA	560	NA	NA	NA
Alkalinity, Bicarbonate (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	450	NA	NA	NA	NA
Alkalinity, Carbonate (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	NA	NA	NA	NA
Chloride (EPA 325.2)	mg/L	NA	NA	NA	NA	290	NA	NA	NA	NA	390	440 J	NA	NA	NA	330 J	NA	NA	NA	260 J	NA
Fluoride (EPA 340.2)	mg/L	NA	NA	NA	NA	0.11	NA	NA	NA	NA	0.26	0.24	NA	NA	NA	0.14	NA	NA	NA	0.23	NA
Ammonia (EPA 350.1 / EPA 350.2 / EPA 350.3)	mg/L	0.13	NA	NA	NA	NA	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	.1 U	0.024 J	NA	NA	NA
Total Kjeldahl Nitrogen (TKN) (EPA 351.2 / EPA 351.4)	mg/L	1.0 U	NA	NA	NA	NA	NA	1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	1 U	1.0 U	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	13	NA	NA	NA	9.1	NA	20	NA	NA	21	20	NA	NA	NA	15	NA	6.7	NA	6.0	NA
Phosphorus, Total (EPA 365.2)	mg/L	0.080	NA	NA	NA	0.030 U	NA	0.070	NA	NA	0.030 U	0.030 U	NA	NA	NA	0.040	.03 U	0.13	NA	0.030	NA
Sulfate (EPA 375.2 / EPA 375.3 / EPA 375.4)	mg/L	1600	NA	NA	NA	1400	NA	880	NA	NA	770	750	NA	NA	NA	1400	1410	930	NA	820	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	NA	NA	NA	10 U	NA	NA	NA	10 U	NA	10 U	NA	NA	NA	10 U	NA	NA	NA	10 U	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	NA	NA	NA	15	NA	NA	NA	35	NA	15 J	NA	NA	NA	15 J	NA	NA	NA	15	NA
Total Organic Carbon (TOC) (EPA 415.1 / EPA 415.2)	mg/L	2.9	NA	NA	NA	NA	NA	1.8	NA	NA	NA	NA	NA	NA	NA	NA	10	2.9	NA	NA	NA
Total Organic Halides (TOX) (EPA 450.1)	mg/L	NA	NA	NA	NA	0.02 U	NA	NA	NA	NA	NA	0.02 U	NA	NA	NA	0.02	NA	NA	NA	0.03	NA
Microbiology																					
Heterotrophic plate count (SM 9215-B/C)	cfu/mL	1400	NA	NA	NA	NA	NA	2600	NA	NA	NA	NA	NA	NA	NA	NA	NA	3500	NA	NA	NA

Table C-2
Summary of Analytical Results for Tank Farm 2
MCAS El Toro, Santa Ana, California

OHM Sample Number		17486-230	96-TF2-W-821	96-TF2-W-1469	17486-200	96-TF2-W-822	97-TF2-W-1498	17486-199	96-TF2-W-816	96-TF2-W-817	96-TF2-W-1468	17486-222	96-TF2-W-830	96-TF2-W-1456	96-TF2-W-1457	17486-224	96-TF2-W-762	96-TF2-W-783	96-TF2-W-801	96-TF2-W-803	96-TF2-W-1453
Sample Location		TF2MW-04	13_DBMW49	13_DBMW49	13_DBMW49	13_DGMW78	13_DGMW78	13_DGMW78	13_UGMW32	13_UGMW32 (Dup)	13_UGMW32	13_UGMW32	15_BDMW51	15_BDMW51	15_BDMW51 (Dup)	15_DBMW51	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate
Date Collected		4/17/97	9/4/96	12/27/96	4/10/97	9/4/96	1/10/97	4/10/97	9/3/96	9/3/96	12/27/96	4/16/97	9/5/96	12/20/96	12/20/96	4/16/97	8/28/96	8/29/96	8/30/96	8/30/96	12/16/96
	Unit																				
Total Petroleum Hydrocarbons (CA LUFT-8015M)																					
TPH as Diesel	µg/L	500 U	500 U	NA	500 U	500 U	NA	500 U	560 U	560 U	NA	500 U	520 U	NA	NA	500 U	NA	NA	520 U	590 U	NA
TPH as Gasoline	µg/L	1300	53 P	50 U	50 U	520 P	630 P	50 U	54 P	60 P	220 P	50 U	41 JP	120 P	110 P	50 U	50 U	50 U	88 P	50 U	50 U
TPH as JP-5	µg/L	NA	500 U	NA	NA	500 U	NA	NA	560 U	560 U	NA	NA	520 U	NA	NA	NA	NA	NA	520 U	590 U	NA
TPH-Extractable	µg/L	NA	170 J	530 U	NA	230 J	500 U	NA	190 J	200 J	520 U	NA	330 J	500 U	500 U	NA	NA	NA	520 U	590 U	500 U
Volatile Aromatic Compounds (EPA 8020)																					
Benzene	µg/L	NA	0.7 J	0.9 J	NA	1.0 U	1.0 U	NA	2.5	2.6	1.0 U	NA	1.9 J	18	17	NA	1.0	1.0 U	NA	NA	1.0 U
Ethylbenzene	µg/L	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U
Methyl tert-butyl ether (MTBE)	µg/L	NA	NA	NA	NA	NA	1.0 U	NA	NA	NA	NA	NA	NA	1.0 U	1.0 U	NA	NA	NA	NA	NA	1.0 U
Toluene	µg/L	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	NA	1.0 U
Xylenes (total)	µg/L	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	0.8 J	1.0 U	NA	1.0 U	4.2	4.1	NA	1.0 U	1.0 U	NA	NA	1.0 U
Volatile Organic Compounds (EPA 8260A)																					
1,1,1-Trichloroethane	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	2.1 J	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	NA	5.0 U	5.0 U	NA	0.5 J	5.0 U	NA	5.0 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	µg/L	5 U	5.0 U	5.0 U	5 UJ	5.0 U	5.0 U	5 UJ	5.0 U	5.0 U	5.0 U	5 UJ	5.0 U	5.0 U	5.0 U	5 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	µg/L	13	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	1.2 J	1.1 J	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethene (total)	µg/L	5 U	NA	NA	5 U	NA	NA	5 U	NA	NA	NA	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone (MEK)	µg/L	10 U	10 UJ	10 U	10 UJ	10 UJ	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 UJ	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U
2-Chloroethyl vinyl ether	µg/L	10 U	10 UJ	10 R	10 R	10 UJ	10 U	10 R	10 U	10 U	10 R	10 R	10 UJ	10 U	10 U	10 R	10 U	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 U
4-Methyl-2-pentanone (MIBK)	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	10 U	10 UJ	10 U	10 UJ	10 UJ	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 UJ	5.8	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U
Benzene	µg/L	350	0.8 J	5.0 U	5 U	0.6 J	5.0 U	5 U	3.0 J	2.9 J	5.0 U	5 U	1.7 J	17	19	5 U	5.0 U	0.6 J	7.6	4.2 J	5.0 U
Bromodichloromethane	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	8.6	9.0	5.0 U
Bromoform	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane	µg/L	10 U	10 U	10 U	10 UJ	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	11 J	11	5.0 U
Chloromethane	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.7	5.8	5.0 U
Ethylbenzene	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Freon 113	µg/L	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)	µg/L	5 U	NA	NA	5 UJ	NA	NA	5 UJ	NA	NA	NA	5 U	5.0 U	NA	NA	5 UJ	5.0 U	5.0 U	5.0 U	5.0 U	NA
Methylene chloride	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	0.5 J	5.0 U	5.0 U	5.0 U
Styrene	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	µg/L	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichlorofluoromethane	µg/L	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl acetate	µg/L	10 U	10 U	10 U	10 UJ	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U
Vinyl Chloride	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Xylenes (total)	µg/L	59	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	2 J	1.9 J	5.0 U	5 U	0.6 J	3.4 J	3.1 J	5 U	0.4 J	5.0 U	3.3 J	2 J	5.0 U
Metals (EPA 6010A)																					
Aluminum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry																					
Specific Conductivity (EPA 120.1)	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH (EPA 150.1)	pH units	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (EPA 300.0)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, Carbonate (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride (EPA 325.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride (EPA 340.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia (EPA 350.1 / EPA 350.2 / EPA 350.3)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Kjeldahl Nitrogen (TKN) (EPA 351.2 / EPA 351.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus, Total (EPA 365.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (EPA 375.2 / EPA 375.3 / EPA 375.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.1 / EPA 415.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Halides (TOX) (EPA 450.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Microbiology																					
Heterotrophic plate count (SM 9215-B/C)	cfu/mL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table C-2
Summary of Analytical Results for Tank Farm 2
MCAS El Toro, Santa Ana, California

OHM Sample Number		96-TF2-W-1460	96-TF2-W-1471	97-TF2-W-1499	97-TF2-W-1503	97-TF2-W-1549	17486-221	17486-223	17486-226	17486-227	17486-232	17486-233	97-TF2-W-1505	96-TF2-W-761	96-TF2-W-782	96-TF2-W-800	96-TF2-W-815	96-TF2-W-831	96-TF2-W-1454	96-TF2-W-1455	96-TF2-W-1458
Sample Location		Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	SOURCE BLANK	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
Date Collected		12/24/96	12/31/96	1/10/97	1/13/97	1/28/97	4/16/97	4/16/97	4/17/97	4/17/97	4/18/97	4/18/97	1/13/97	8/28/96	8/29/96	8/30/96	9/3/96	9/5/96	12/16/96	12/20/96	12/23/96
	Unit																				
Total Petroleum Hydrocarbons (CA LUFT-8015M)																					
TPH as Diesel	µg/L	NA	NA	NA	NA	0.52 U	500 U	500 U	500 U	500 U	500 U	500 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH as Gasoline	µg/L	65 P	54 P	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
TPH as JP-5	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH-Extractable	µg/L	530 U	500 U	NA	500 U	NA	NA	NA	NA	NA	NA	NA	500 U	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Aromatic Compounds (EPA 8020)																					
Benzene	µg/L	2.8	3.8	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	1.0 U	0.3 J	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether (MTBE)	µg/L	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA	NA	NA	NA	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	1.2	3.0	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Volatile Organic Compounds (EPA 8260A)																					
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	5.0 U	NA	NA	5.0 UJ	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	5.0 U	5.0 UJ	NA	NA	5.0 U	NA	NA	NA	NA	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethene (total)	µg/L	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone (MEK)	µg/L	10 U	10 U	NA	NA	10 UJ	NA	NA	10 U	10 U	NA	NA	NA	10 UJ	NA	24 J	24 J	10 UJ	10 U	10 U	10 U
2-Chloroethyl vinyl ether	µg/L	10 U	10 UJ	NA	NA	10 UJ	NA	NA	10 U	10 U	NA	NA	NA	10 UJ	NA	10 UJ	10 UJ	10 UJ	10 U	10 U	10 U
2-Hexanone	µg/L	10 U	10 U	NA	NA	10 U	NA	NA	10 U	10 U	NA	NA	NA	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	µg/L	10 U	10 U	NA	NA	10 UJ	NA	NA	10 U	10 U	NA	NA	NA	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	10 U	10 UJ	NA	NA	10 UJ	NA	NA	64	72	NA	NA	NA	10 UJ	NA	10 UJ	10 UJ	10 UJ	10 U	10 U	10 U
Benzene	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane	µg/L	10 U	10 UJ	NA	NA	10 U	NA	NA	10 U	10 U	NA	NA	NA	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	µg/L	5.0 U	5.0 UJ	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	µg/L	10 U	10 U	NA	NA	10 U	NA	NA	10 U	10 U	NA	NA	NA	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	4.3 J	4.3 J	5.0 U	5.0 U	5.0 U	5.0 U
Chloromethane	µg/L	10 U	10 U	NA	NA	10 U	NA	NA	10 U	10 U	NA	NA	NA	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	µg/L	5.0 U	0.5 J	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Freon 113	µg/L	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)	µg/L	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	NA	NA
Methylene chloride	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	3.3 J	NA	2.7 J	2.6 J	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	NA	NA	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichlorofluoromethane	µg/L	5.0 U	5.0 U	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl acetate	µg/L	10 U	10 U	NA	NA	10 U	NA	NA	10 U	10 U	NA	NA	NA	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U
Vinyl Chloride	µg/L	10 U	10 U	NA	NA	10 U	NA	NA	10 U	10 U	NA	NA	NA	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U
Xylenes (total)	µg/L	5.0 U	1.9	NA	NA	5.0 U	NA	NA	5 U	5 U	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Metals (EPA 6010A)																					
Aluminum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry																					
Specific Conductivity (EPA 120.1)	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH (EPA 150.1)	pH units	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (EPA 300.0)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, Carbonate (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride (EPA 325.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride (EPA 340.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia (EPA 350.1 / EPA 350.2 / EPA 350.3)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Kjeldahl Nitrogen (TKN) (EPA 351.2 / EPA 351.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus, Total (EPA 365.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (EPA 375.2 / EPA 375.3 / EPA 375.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.1 / EPA 415.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Halides (TOX) (EPA 450.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Microbiology																					
Heterotrophic plate count (SM 9215-B/C)	cfu/mL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table C-2
Summary of Analytical Results for Tank Farm 2
MCAS El Toro, Santa Ana, California

OHM Sample Number		96-TF2-W-1461	96-TF2-W-1467	96-TF2-W-1470	97-TF2-W-1497	97-TF2-W-1502	97-TF2-W-1546	17486-198	17486-220	17486-225	17486-231
Sample Location		Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
Date Collected		12/24/96	12/27/96	12/31/96	1/10/97	1/13/97	1/28/97	4/10/97	4/16/97	4/17/97	4/18/97
	Unit										
Total Petroleum Hydrocarbons (CA LUFT-8015M)											
TPH as Diesel	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH as Gasoline	µg/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
TPH as JP-5	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH-Extractable	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Aromatic Compounds (EPA 8020)											
Benzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)	µg/L	1.0 U	NA	1.0 UJ	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Toluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Xylenes (total)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Volatile Organic Compounds (EPA 8260A)											
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5 U	5 U	5 U	5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U	NA	NA	NA	5 U
1,1,2-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 UJ	5 UJ	5 U	5 U
1,1-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene (total)	µg/L	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	NA
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
2-Butanone (MEK)	µg/L	10 U	10 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 U	10 U
2-Chloroethyl vinyl ether	µg/L	10 U	10 R	10 UJ	10 U	10 U	10 UJ	10 R	10 R	10 U	10 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	µg/L	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
Acetone	µg/L	10 U	10 U	10 UJ	10 U	10 U	10 UJ	10 UJ	10 UJ	10 U	10 U
Benzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
Bromodichloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
Bromoform	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
Bromomethane	µg/L	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 UJ	10 U	10 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
Carbon tetrachloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
Chlorobenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
Chloroethane	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
Chloromethane	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
Ethylbenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
Freon 113	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Methyl tert-butyl ether (MTBE)	µg/L	NA	NA	NA	NA	NA	NA	5 UJ	5 UJ	5 U	5 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	8.0	6.1	8.1	5 U
Styrene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
Tetrachloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
Toluene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA	NA	5 U
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
Trichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
Vinyl acetate	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 UJ	10 U	10 U
Vinyl Chloride	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Xylenes (total)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U	5 U
Metals (EPA 6010A)											
Aluminum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry											
Specific Conductivity (EPA 120.1)	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH (EPA 150.1)	pH units	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (EPA 300.0)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, Carbonate (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride (EPA 325.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride (EPA 340.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia (EPA 350.1 / EPA 350.2 / EPA 350.3)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Kjeldahl Nitrogen (TKN) (EPA 351.2 / EPA 351.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus, Total (EPA 365.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (EPA 375.2 / EPA 375.3 / EPA 375.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.1 / EPA 415.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Halides (TOX) (EPA 450.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Microbiology											
Heterotrophic plate count (SM 9215-B/C)	cfu/mL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table C-3
Summary of Analytical Results for Tank Farm 3
MCAS El Toro, Santa Ana, California

OHM Sample Number		96-TF3-W-1421	97-TF3-W-1542	17486-267	96-TF3-W-888	97-TF3-W-1530	17486-269	96-TF3-W-942	97-TF3-W-1524	17486-264	96-TF3-W-887
Sample Location		TF3MW-01	TF3MW-01	TF3MW-01	TF3MW-02	TF3MW-02	TF3MW-02	TF3MW-03	TF3MW-03	TF3MW-03	Equipment Rinsate
Date Collected		11/06/96	01/20/97	04/29/97	09/12/96	01/16/97	04/29/97	09/18/96	01/15/97	04/28/97	09/12/96
	Unit										
Total Petroleum Hydrocarbons (CA LUFT-8015M)											
TPH as Diesel	µg/L	530 U	500 U	500 U	520 U	600 U	500 U	560 U	500 U	500 U	500 U
TPH as Gasoline	µg/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
TPH as JP-5	µg/L	530 U	500 U	NA	520 U	600 U	NA	560 U	500 U	NA	500 U
TPH-Extractable	µg/L	530 U	500 U	NA	520 U	600 U	NA	500 U	500 U	NA	500 U
Volatile Aromatic Compounds (EPA 8020)											
Benzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether (MTBE)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Metals (EPA 6010A)											
Antimony	µg/L	NA	60 U	NA	NA	60 U	NA	NA	60 U	NA	NA
Arsenic	µg/L	NA	5.0 U	NA	NA	7.0	NA	NA	5.6	NA	NA
Barium	µg/L	NA	20	NA	NA	46	NA	NA	21	NA	NA
Beryllium	µg/L	NA	2.0 U	NA	NA	2.0 U	NA	NA	2.0 U	NA	NA
Cadmium	µg/L	NA	2.0 U	NA	NA	5.0 U	NA	NA	5.0 U	NA	NA
Calcium	µg/L	NA	350000	NA	NA	270000	NA	NA	98000	NA	NA
Chromium	µg/L	NA	10 U	NA	NA	20	NA	NA	10 U	NA	NA
Cobalt	µg/L	NA	20 U	NA	NA	20 U	NA	NA	20 U	NA	NA
Copper	µg/L	NA	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA
Iron	µg/L	900	430	NA	860	4300	NA	590	1300	NA	41 U
Lead	µg/L	NA	3.0 U	NA	NA	3.0 U	NA	NA	3.0 U	NA	NA
Magnesium	µg/L	NA	310000	NA	NA	200000	NA	NA	80000	NA	NA
Manganese	µg/L	NA	32	NA	NA	90	NA	NA	42	NA	NA
Molybdenum	µg/L	NA	21	NA	NA	20 U	NA	NA	20 U	NA	NA
Nickel	µg/L	NA	20 U	NA	NA	20 U	NA	NA	20 U	NA	NA
Potassium	µg/L	5900	3800	NA	9600	5700	NA	5900	3500	NA	1000 U
Selenium	µg/L	NA	250	NA	NA	180	NA	NA	21	NA	NA
Silver	µg/L	NA	5.0 U	NA	NA	5.0 U	NA	NA	5.0 U	NA	NA
Sodium	µg/L	NA	210000	NA	NA	220000	NA	NA	170000	NA	NA
Thallium	µg/L	NA	5.0 U	NA	NA	5.0 U	NA	NA	5.0 U	NA	NA
Vanadium	µg/L	NA	14	NA	NA	27	NA	NA	20	NA	NA
Zinc	µg/L	NA	120	NA	NA	26	NA	NA	20 U	NA	NA
Mercury (EPA 7470A)	µg/L	NA	0.20 U	NA	NA	0.39	NA	NA	0.20 U	NA	NA
General Chemistry											
Specific Conductance (EPA 120.1)	umhos/cm	NA	5300	NA	NA	3500	NA	NA	1600	NA	NA
Hardness as CaCO3 (EPA 130.2)	mg/L	NA	1700	NA	NA	510	NA	NA	570	NA	NA
pH (EPA 150.1)	pH units	7.2	NA	NA	7.3	NA	NA	7.6	NA	NA	6.5
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	3600	NA	NA	2400	NA	NA	1100	NA	NA	4.0 U
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	18 J	NA	NA	2.0 J	NA	NA	7.0	NA	NA	4.0 U
Alkalinity (EPA 310.1)	mg/L	180	NA	NA	220	NA	NA	520	NA	NA	3.0 J
Chloride (EPA 325.2)	mg/L	NA	320	NA	NA	390	NA	NA	68	NA	NA
Fluoride (EPA 340.2)	mg/L	NA	0.28	NA	NA	0.38	NA	NA	0.31	NA	NA
Ammonia (EPA 350.1 / EPA 350.3)	mg/L	0.1 U	NA	NA	0.1 U	NA	NA	0.1 U	NA	NA	0.1 U
Total Kjeldahl Nitrogen (TKN) (EPA 351.4)	mg/L	1.0 U	NA	NA	1.0 U	NA	NA	1.0 U	NA	NA	1.0 U
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	28	21	NA	12	15	NA	3.3	4.1	NA	0.11
Phosphorus, Total (EPA 365.2)	mg/L	0.10	0.060	NA	0.090	0.14	NA	0.11	0.040	NA	0.030 U
Sulfate (EPA 375.2 / EPA 375.3)	mg/L	2000	1700	NA	930	980	NA	300	190	NA	5.0 U
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	10 U	NA	NA	15	NA	NA	10 U	NA	NA
Total Organic Carbon (TOC) (EPA 415.2)	mg/L	1.4	NA	NA	1.8	NA	NA	2.0	NA	NA	1.0 U
Total Organic Halides (TOX) (EPA 450.1)	mg/L	NA	0.02 U	NA	NA	0.02 U	NA	NA	0.02 U	NA	NA
Microbiology											
Heterotrophic plate count (SM 9215-B/C)	cfu/mL	5000	NA	NA	24000	NA	NA	2000	NA	NA	16000

Table C-3
Summary of Analytical Results for Tank Farm 3
MCAS El Toro, Santa Ana, California

OHM Sample Number		96-TF3-W-941	97-TF3-W-1523	97-TF3-W-1525	97-TF3-W-1529	97-TF3-W-1541	17486-266	17486-268	17486-263	97-TF3-W-1522	96-TF3-W-1420
Sample Location		Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Source Blank	Trip Blank
Date Collected		09/18/96	01/15/97	01/15/97	01/16/97	01/20/97	04/29/97	04/29/97	04/28/97	01/15/97	11/06/96
	Unit										
Total Petroleum Hydrocarbons (CA LUFT-8015M)											
TPH as Diesel	µg/L	570 U	500 U	530 U	530 U	500 U	500 U	500 U	500 U	560 U	NA
TPH as Gasoline	µg/L	50 U	50 U	50 U	50 U	52 P	70	93	50 U	50 U	50 U
TPH as JP-5	µg/L	570 U	500 U	530 U	530 U	500 U	NA	NA	NA	560 U	NA
TPH-Extractable	µg/L	500 U	500 U	530 U	530 U	500 U	NA	NA	NA	560 U	NA
Volatile Aromatic Compounds (EPA 8020)											
Benzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether (MTBE)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Metals (EPA 6010A)											
Antimony	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	94	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	µg/L	1000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry											
Specific Conductance (EPA 120.1)	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH (EPA 150.1)	pH units	6.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	4.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity (EPA 310.1)	mg/L	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride (EPA 325.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride (EPA 340.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia (EPA 350.1 / EPA 350.3)	mg/L	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Kjeldahl Nitrogen (TKN) (EPA 351.4)	mg/L	1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	0.040 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus, Total (EPA 365.2)	mg/L	0.030 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (EPA 375.2 / EPA 375.3)	mg/L	5.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.2)	mg/L	1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Halides (TOX) (EPA 450.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Microbiology											
Heterotrophic plate count (SM 9215-B/C)	cfu/mL	200 U	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table C-3
Summary of Analytical Results for Tank Farm 3
MCAS El Toro, Santa Ana, California

OHM Sample Number		96-TF3-W-886	96-TF3-W-940	97-TF3-W-1521	17486-265
Sample Location		Trip Blank	Trip Blank	Trip Blank	Trip Blank
Date Collected		09/12/96	09/18/96	01/15/97	04/29/97
	Unit				
Total Petroleum Hydrocarbons (CA LUFT-8015M)					
TPH as Diesel	µg/L	NA	NA	NA	NA
TPH as Gasoline	µg/L	50 U	50 U	50 U	50 U
TPH as JP-5	µg/L	NA	NA	NA	NA
TPH-Extractable	µg/L	NA	NA	NA	NA
Volatile Aromatic Compounds (EPA 8020)					
Benzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether (MTBE)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Metals (EPA 6010A)					
Antimony	µg/L	NA	NA	NA	NA
Arsenic	µg/L	NA	NA	NA	NA
Barium	µg/L	NA	NA	NA	NA
Beryllium	µg/L	NA	NA	NA	NA
Cadmium	µg/L	NA	NA	NA	NA
Calcium	µg/L	NA	NA	NA	NA
Chromium	µg/L	NA	NA	NA	NA
Cobalt	µg/L	NA	NA	NA	NA
Copper	µg/L	NA	NA	NA	NA
Iron	µg/L	NA	NA	NA	NA
Lead	µg/L	NA	NA	NA	NA
Magnesium	µg/L	NA	NA	NA	NA
Manganese	µg/L	NA	NA	NA	NA
Molybdenum	µg/L	NA	NA	NA	NA
Nickel	µg/L	NA	NA	NA	NA
Potassium	µg/L	NA	NA	NA	NA
Selenium	µg/L	NA	NA	NA	NA
Silver	µg/L	NA	NA	NA	NA
Sodium	µg/L	NA	NA	NA	NA
Thallium	µg/L	NA	NA	NA	NA
Vanadium	µg/L	NA	NA	NA	NA
Zinc	µg/L	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L	NA	NA	NA	NA
General Chemistry					
Specific Conductance (EPA 120.1)	umhos/cm	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.2)	mg/L	NA	NA	NA	NA
pH (EPA 150.1)	pH units	NA	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	NA	NA	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	NA	NA	NA	NA
Alkalinity (EPA 310.1)	mg/L	NA	NA	NA	NA
Chloride (EPA 325.2)	mg/L	NA	NA	NA	NA
Fluoride (EPA 340.2)	mg/L	NA	NA	NA	NA
Ammonia (EPA 350.1 / EPA 350.3)	mg/L	NA	NA	NA	NA
Total Kjeldahl Nitrogen (TKN) (EPA 351.4)	mg/L	NA	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	NA	NA	NA	NA
Phosphorus, Total (EPA 365.2)	mg/L	NA	NA	NA	NA
Sulfate (EPA 375.2 / EPA 375.3)	mg/L	NA	NA	NA	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.2)	mg/L	NA	NA	NA	NA
Total Organic Halides (TOX) (EPA 450.1)	mg/L	NA	NA	NA	NA
Microbiology					
Heterotrophic plate count (SM 9215-B/C)	cfu/mL	NA	NA	NA	NA

Table C-4
Summary of Analytical Results for Tank Farm 4
MCAS El Toro, Santa Ana, California

OHM Sample Number		96-TF4-W-264	96-TF4-W-375	96-TF4-W-376	18292-425	96-TF4-W-269	96-TF4-W-378	18292-421	96-TF4-W-275	97-TF4-W-381	18292-434	96-TF4-W-266	96-TF4-W-370	18292-420	96-TF4-W-272	96-TF4-W-372	18292-419	96-TF4-W-263
Sample Location		TF4MW-01	TF4MW-01	TF4MW-01 (Dup)	TF4MW-01	TF4MW-02	TF4MW-02	TF4MW-02	TF4MW-03	TF4MW-03	TF4MW-03	18_BGMW16	18_BGMW16	18_BGMW16	20_UGMW36	20_UGMW36	20_UGMW36	Equipment Rinsate
Date Collected		09/27/96	12/31/96	12/31/96	05/05/97	10/04/96	12/31/96	05/02/97	10/03/96	01/06/97	05/06/97	10/02/96	12/30/96	05/02/97	10/07/96	12/30/96	05/02/97	09/27/96
	Unit																	
Total Petroleum Hydrocarbons (CA LUFT-8015M)																		
TPH as Diesel	µg/L	170	100 U	100 U	170	200 R	100 U	100 U	6600	70 J	100 U	5500	100 U	100 U	100 U	100 U	100 U	100 U
TPH as Gasoline	µg/L	1100	300	300	606	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Volatile Aromatic Compounds (EPA 8020)																		
Benzene	µg/L	340	120	110	200	.3 U	.3 U	.3 U	2.1	.3 U	.3 U	.3 U	.3 U	NA	.3 U	.3 U	NA	.3 U
Ethylbenzene	µg/L	.6 U	.3 U	.3 U	.6	.3 U	.3 U	.3 U	1.5	.3 U	.3 U	.3 U	.3 U	NA	.3 U	.3 U	NA	.3 U
Methyl tert-butyl ether (MTBE)	µg/L	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
Toluene	µg/L	.6 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	NA	.3 U	.3 U	NA	.3 U
Xylenes (total)	µg/L	76	20	18	17	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U
EPA 8260A																		
1,1,1-Trichloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
1,1,2,2-Tetrachloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
1,1,2-Trichloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
1,1-Dichloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
1,1-Dichloroethene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
1,2-Dichloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
1,2-Dichloroethene (total)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
2-Butanone (MEK)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	NA
2-Chloroethyl vinyl ether	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	NA
2-Hexanone	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	NA
4-Methyl-2-pentanone (MIBK)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	NA
Acetone	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	NA
Benzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Bromodichloromethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Bromoform	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Bromomethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Carbon disulfide	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Carbon tetrachloride	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Chlorobenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Chloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Chloroform	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Chloromethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
cis-1,2-Dichloroethene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
cis-1,3-Dichloropropene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Dibromochloromethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Ethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Methylene chloride	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Styrene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Tetrachloroethene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Toluene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	0.8 J	5 U	5 U	NA
trans-1,2-Dichloroethene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
trans-1,3-Dichloropropene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Trichloroethene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Trichlorofluoromethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 UJ	5 U	5 U	5 UJ	NA
Vinyl acetate	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	NA
Vinyl Chloride	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Xylenes (total)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	NA
Metals (EPA 6010A)																		
Aluminum	µg/L	NA	102 U	172 U	NA	NA	718 U	NA	NA	199	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	µg/L	NA	60 U	60 U	NA	NA	60 U	NA	NA	60 U	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	µg/L	NA	10 U	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA
Barium	µg/L	NA	200 U	200 U	NA	NA	200 U	NA	NA	200 U	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	µg/L	NA	5 U	5 U	NA	NA	5 U	NA	NA	5 U	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	µg/L	NA	5 U	5 U	NA	NA	5 U	NA	NA	5 U	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	µg/L	NA	92300	89600	NA	NA	159000	NA	NA	131000 J	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	µg/L	NA	10 U	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	µg/L	NA	50 U	50 U	NA	NA	50 U	NA	NA	50 U	NA	NA	NA	NA	NA	NA	NA	NA
Copper	µg/L	NA	25 U	25 U	NA	NA	25 U	NA	NA	25 U	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	1160	235	181	NA	1460	3950	NA	1520	1590	NA	NA	NA	NA	NA	NA	NA	20 U
Lead	µg/L	NA	3 U	3 U	NA	NA	3 U	NA	NA	44.9	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	µg/L	NA	87100	85200	NA	NA	98400	NA	NA	114000	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	NA	84.3	79.8	NA	NA	66	NA	NA	171	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	µg/L	NA	52.8	50 U	NA	NA	56.7	NA	NA	56.5	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	µg/L	NA	40 U	40 U	NA	NA	40 U	NA	NA	40 U	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	µg/L	4150	5540 U	5160 U	NA	6880	4260 U	NA	4070	6730 U	NA	NA	NA	NA	NA	NA	NA	1000 U
Selenium	µg/L	NA	17.4	12.8	NA	NA	21.1	NA	NA	51.0	NA	NA	NA	NA	NA	NA	NA	NA
Silver	µg/L	NA	10 U	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	µg/L	NA	237000	236000	NA	NA	217000	NA	NA	191000 J	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	µg/L	NA	10 U	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	µg/L	NA	50 U	50 U	NA	NA	50 U	NA	NA	50 U	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	µg/L	NA	20 U	20 U	NA	NA	20 U	NA	NA	20 U	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L	NA	.2 U	.31	NA	NA	.32	NA	NA	.2 U	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry																		
Specific Conductance (EPA 120.1)	umhos/cm	NA	3165	1983	NA	NA	2866	NA	NA	33900	NA	NA	NA	NA	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.1)	mg/L	NA	589	574	NA	NA	802	NA	NA	796	NA	NA	NA	NA	NA	NA	NA	NA
pH (EPA 150.1 / EPA 9045)	pH units	8.1	NA	NA	NA	7.8 J	NA	NA	8.00 J	NA	NA	NA	NA	NA	NA	NA	NA	5.2
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	1300	NA	NA	NA	1700	NA	NA	1450	NA	NA	NA	NA	NA	NA	NA	NA	10 U
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	11	NA	NA	NA	15	NA	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA	10 U
Fluoride (EPA 300.0)	mg/L	NA	1 U	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (EPA 300.0)	mg/L	4.7	3.30	3.32	NA	4.21	5.10	NA	6.05	2.91	NA	NA	NA	NA	NA	NA	NA	.5 U
Chloride (EPA 300.0 / EPA 9250)	mg/L	NA	171	168	NA	NA	181	NA	NA	211	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity (EPA 310.1)	mg/L	445	NA	NA	NA	313	NA	NA	379	NA	NA	NA	NA	NA	NA	NA	NA	10 U
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	0.05 U	NA	NA	NA	.12	NA	NA	.05 U	NA	NA	NA	NA	NA	NA	NA	NA	0.05 U
Phosphorus, Total (EPA 365.2)	mg/L	.2 U	1 U	1 U	NA	.05 U	1 U	NA	.05 U	1 U	NA	NA	NA	NA	NA	NA	NA	.2 U
Sulfate (EPA 375.4)	mg/L	487	746	691	NA	429	664	NA	547	693	NA	NA	NA	NA	NA	NA	NA	1 U
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	13	12	NA	NA	12	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	15	20	NA	NA	20	NA	NA	22	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.1)	mg/L	5 U	NA	NA	NA	5 U	NA	NA	5 U	NA	NA	NA	NA	NA	NA	NA	NA	5 U
Total Organic Halides (TOX) (EPA 450.1 / EPA 9020)	µg/L	NA	50 U	50 U	NA	NA	50 U	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA
Microbiology																		
Heterotrophic plate count (SM 9215-B/C)	cfu/mL	7600	NA	NA	NA	200	NA	NA	2600	NA	NA	NA	NA	NA	NA	NA	NA	150

Table C-4
Summary of Analytical Results for Tank Farm 4
MCAS El Toro, Santa Ana, California

OHM Sample Number		96-TF4-W-268	96-TF4-W-271	96-TF4-W-274	96-TF4-W-369	96-TF4-W-371	96-TF4-W-374	96-TF4-W-377	97-TF4-W-380	18292-418	18292-423	18292-424	18292-428	18292-430	18292-432	18292-431	96-TF4-W-262	96-TF4-W-265
Sample Location		Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Source Blank	Trip Blank	Trip Blank
Date Collected		10/04/96	10/07/96	10/03/96	12/30/96	12/30/96	12/31/96	12/31/96	01/06/97	05/02/97	05/05/97	05/05/97	05/05/97	05/05/97	05/05/97	05/05/97	09/27/96	10/02/96
	Unit																	
Total Petroleum Hydrocarbons (CA LUFT-8015M)																		
TPH as Diesel	µg/L	340	100 U	100 U	100 U	100 U	100 U	100 U	90 J	100 U	100 U	100 U	100 U	100 U	100 U	NA	NA	NA
TPH as Gasoline	µg/L	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	241	110	NA	100 U	100 U
Volatile Aromatic Compounds (EPA 8020)																		
Benzene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	NA	.3 U	.3 U	.3 U	.3 U	.3 U	NA	.3 U	.3 U
Ethylbenzene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	NA	.3 U	.3 U	.3 U	.3 U	.3 U	NA	.3 U	.3 U
Methyl tert-butyl ether (MTBE)	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U
Toluene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	NA	.3 U	.3 U	.3 U	.3 U	.3 U	NA	.3 U	.3 U
Xylenes (total)	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U
EPA 8260A																		
1,1,1-Trichloroethane	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
1,1,2,2-Tetrachloroethane	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
1,1,2-Trichloroethane	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
1,1-Dichloroethane	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
1,1-Dichloroethene	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
1,2-Dichloroethane	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
1,2-Dichloroethene (total)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA	NA
1,2-Dichloropropane	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
2-Butanone (MEK)	µg/L	NA	10 U	NA	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA	10 U	NA	10 U
2-Chloroethyl vinyl ether	µg/L	NA	10 U	NA	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA	10 U	NA	10 U
2-Hexanone	µg/L	NA	10 U	NA	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA	10 U	NA	10 U
4-Methyl-2-pentanone (MIBK)	µg/L	NA	10 U	NA	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA	10 U	NA	10 U
Acetone	µg/L	NA	9.0 J	NA	10 U	8.7 J	NA	NA	NA	31	NA	NA	NA	NA	NA	9.3 J	NA	10 U
Benzene	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
Bromodichloromethane	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
Bromoform	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
Bromomethane	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
Carbon disulfide	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
Carbon tetrachloride	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
Chlorobenzene	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
Chloroethane	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
Chloroform	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	1.3 J	NA	NA	NA	NA	NA	5 U	NA	5 U
Chloromethane	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
cis-1,2-Dichloroethene	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
cis-1,3-Dichloropropene	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
Dibromochloromethane	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
Ethylbenzene	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
Methylene chloride	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	4.0 J	NA	2.8 J
Styrene	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
Tetrachloroethene	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
Toluene	µg/L	NA	1.0 J	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
trans-1,2-Dichloroethene	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U
trans-1,3-Dichloropropene	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
Trichloroethene	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
Trichlorofluoromethane	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 UJ	NA	NA	NA	NA	NA	5 UJ	NA	5 U
Vinyl acetate	µg/L	NA	10 U	NA	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA	10 U	NA	10 U
Vinyl Chloride	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
Xylenes (total)	µg/L	NA	5 U	NA	5 U	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	5 U	NA	5 U
Metals (EPA 6010A)																		
Aluminum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	20 U	NA	20 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	µg/L	1000 U	NA	1000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry																		
Specific Conductance (EPA 120.1)	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH (EPA 150.1 / EPA 9045)	pH units	5.8 J	NA	5.90 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	10 U	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	10 U	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride (EPA 300.0)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (EPA 300.0)	mg/L	.2 U	NA	1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride (EPA 300.0 / EPA 9250)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity (EPA 310.1)	mg/L	10 U	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	0.05 U	NA	.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus, Total (EPA 365.2)	mg/L	.05 U	NA	.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (EPA 375.4)	mg/L	1 U	NA	1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.1)	mg/L	5 U	NA	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Halides (TOX) (EPA 450.1 / EPA 9020)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Microbiology																		
Heterotrophic plate count (SM 9215-B/C)	cfu/mL	1 U	NA	1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table C-4
Summary of Analytical Results for Tank Farm 4
MCAS El Toro, Santa Ana, California

OHM Sample Number		96-TF4-W-267	96-TF4-W-270	96-TF4-W-273	96-TF4-W-368	96-TF4-W-373	97-TF4-W-379	18292-422	18292-433
Sample Location		Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
Date Collected	Unit	10/04/96	10/07/96	10/03/96	12/30/96	12/31/96	01/06/97	05/05/97	05/06/97
Total Petroleum Hydrocarbons (CA LUFT-8015M)									
TPH as Diesel	µg/L	NA	NA	NA	NA	NA	NA	NA	100 U
TPH as Gasoline	µg/L	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Volatile Aromatic Compounds (EPA 8020)									
Benzene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	NA
Ethylbenzene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	NA
Methyl tert-butyl ether (MTBE)	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
Toluene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	NA
Xylenes (total)	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
EPA 8260A									
1,1,1-Trichloroethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
1,1,2,2-Tetrachloroethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
1,1,2-Trichloroethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
1,1-Dichloroethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
1,1-Dichloroethene	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
1,2-Dichloroethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
1,2-Dichloroethene (total)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
2-Butanone (MEK)	µg/L	NA	10 U	NA	NA	NA	NA	NA	10 U
2-Chloroethyl vinyl ether	µg/L	NA	10 U	NA	NA	NA	NA	NA	10 UJ
2-Hexanone	µg/L	NA	10 U	NA	NA	NA	NA	NA	10 U
4-Methyl-2-pentanone (MIBK)	µg/L	NA	10 U	NA	NA	NA	NA	NA	10 U
Acetone	µg/L	NA	10 U	NA	NA	NA	NA	NA	10 UJ
Benzene	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
Bromodichloromethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
Bromoform	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
Bromomethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
Carbon disulfide	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
Carbon tetrachloride	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
Chlorobenzene	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
Chloroethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
Chloroform	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
Chloromethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 UJ
cis-1,2-Dichloroethene	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
cis-1,3-Dichloropropene	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
Dibromochloromethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
Ethylbenzene	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
Methylene chloride	µg/L	NA	1.2 J	NA	NA	NA	NA	NA	2.4 J
Styrene	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
Tetrachloroethene	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
Toluene	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
trans-1,2-Dichloroethene	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
trans-1,3-Dichloropropene	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
Trichloroethene	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
Trichlorofluoromethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 UJ
Vinyl acetate	µg/L	NA	10 U	NA	NA	NA	NA	NA	10 U
Vinyl Chloride	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
Xylenes (total)	µg/L	NA	5 U	NA	NA	NA	NA	NA	5 U
Metals (EPA 6010A)									
Aluminum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Barium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Copper	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Lead	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Silver	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry									
Specific Conductance (EPA 120.1)	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
pH (EPA 150.1 / EPA 9045)	pH units	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride (EPA 300.0)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (EPA 300.0)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Chloride (EPA 300.0 / EPA 9250)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus, Total (EPA 365.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (EPA 375.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Halides (TOX) (EPA 450.1 / EPA 9020)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Microbiology									
Heterotrophic plate count (SM 9215-B/C)	cfu/mL	NA	NA	NA	NA	NA	NA	NA	NA

Table C-5
Summary of Analytical Results for Tank Farm 555
MCAS El Toro, Santa Ana, California

OHM Sample Number		96-TF555-W-252	97-TF555-W-412	18292-449	18292-450	96-TF555-W-255	97-TF555-W-403	18292-456	96-TF555-W-249	97-TF555-W-409	97-TF555-W-410	18292-448	96-TF555-W-261	97-TF555-W-394	18292-463	96-TF555-W-258	97-TF555-W-398	18292-464	96-TF555-W-288	97-TF555-W-396
Sample Location		TF555MW-01	TF555MW-01	TF555MW-01	TF555MW-01 (Dup)	TF555MW-02	TF555MW-02	TF555MW-02	TF555MW-03	TF555MW-03	TF555MW-03 (Dup)	TF555MW-03	TF555MW-04	TF555MW-04	TF555MW-04	TF555MW-05	TF555MW-05	TF555MW-05	TF555PZ-01	TF555PZ-01
Date Collected	Unit	9/25/96	2/4/97	5/9/97	5/9/97	9/25/96	1/29/97	5/9/97	9/24/96	2/4/97	2/4/97	5/8/97	9/26/96	1/22/97	5/12/97	9/25/96	1/23/97	5/12/97	10/24/96	1/22/97
Total Petroleum Hydrocarbons (CA LUFT-8015M)																				
TPH as Diesel	µg/L	220	100 U	110	180	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
TPH as Gasoline	µg/L	100 U	100 U	367	276	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Volatile Aromatic Compounds (EPA 8020)																				
Benzene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U
Ethylbenzene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U
Methyl tert-butyl ether (MTBE)	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U
Xylenes (total)	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Volatile Organic Compounds (EPA 8260A)																				
1,1,1-Trichloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
1,1,2,2-Tetrachloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
1,1,2-Trichloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
1,1-Dichloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
1,1-Dichloroethene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
1,2-Dichloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
1,2-Dichloroethene (total)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
2-Butanone (MEK)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	NA
2-Chloroethyl vinyl ether	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 UJ	NA
2-Hexanone	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	NA
4-Methyl-2-pentanone (MIBK)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	NA
Acetone	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 UJ	NA
Benzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Bromodichloromethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Bromoform	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Bromomethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Carbon disulfide	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Carbon tetrachloride	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Chlorobenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Chloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Chloroform	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Chloromethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
cis-1,2-Dichloroethene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
cis-1,3-Dichloropropene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Dibromochloromethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Ethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Methylene chloride	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Styrene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Tetrachloroethene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Toluene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
trans-1,2-Dichloroethene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
trans-1,3-Dichloropropene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Trichloroethene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Trichlorofluoromethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 UJ	NA
Vinyl acetate	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	NA
Vinyl Chloride	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Xylenes (total)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA
Metals (EPA 6010A)																				
Aluminum	µg/L	NA	122 U	NA	NA	NA	50 U	NA	NA	50.8 U	50 U	NA	NA	86.6	NA	NA	2130	NA	NA	255
Antimony	µg/L	NA	60 U	NA	NA	NA	60 U	NA	NA	60 U	60 U	NA	NA	60 U	NA	NA	60 U	NA	NA	60 U
Arsenic	µg/L	NA	10 U	NA	NA	NA	10 U	NA	NA	12.7	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA	10 U
Barium	µg/L	NA	200 U	NA	NA	NA	200 U	NA	NA	200 U	200 U	NA	NA	200 U	NA	NA	200 U	NA	NA	200 U
Beryllium	µg/L	NA	5 U	NA	NA	NA	5 U	NA	NA	5 U	5 U	NA	NA	5 U	NA	NA	5 U	NA	NA	5 U
Cadmium	µg/L	NA	5 U	NA	NA	NA	5 U	NA	NA	5 U	5 U	NA	NA	5 U	NA	NA	5 U	NA	NA	5 U
Calcium	µg/L	NA	55200	73500	71900	NA	85600	103000	NA	71300	80400	75400	NA	27200	24300	NA	46700	53800	NA	121000
Chromium	µg/L	NA	10 U	NA	NA	NA	10 U	NA	NA	10 U	10 U	NA	NA	10 U	NA	NA	23.3	NA	NA	10 U
Cobalt	µg/L	NA	50 U	NA	NA	NA	50 U	NA	NA	50 U	50 U	NA	NA	50 U	NA	NA	50 U	NA	NA	50 U
Copper	µg/L	NA	25 U	NA	NA	NA	25 U	NA	NA	25 U	25 U	NA	NA	25 U	NA	NA	25 U	NA	NA	25 U
Iron	µg/L	1270	486	158	141	93	228	20 U	340	144	156	20 U	709	685	177	60.5	2600	44.7	NA	239
Lead	µg/L	NA	3 U	NA	NA	NA	3 U	NA	NA	3 U	3 U	NA	NA	3 U	NA	NA	3 U	NA	NA	3 U
Magnesium	µg/L	NA	27800	34100	34000	NA	40500	39400	NA	20400	23200	19800	NA	28200	26000	NA	42200	44300	NA	72300
Manganese	µg/L	NA	371	276	343	NA	87.7	41.7	NA	13.7	15.9	10.2	NA	66.4	47.5	NA	61.2	34.8	NA	24.2
Molybdenum	µg/L	NA	69.8	NA	NA	NA	50 U	NA	NA	50 U	50 U	NA	NA	50 U	NA	NA	50 U	NA	NA	50 U
Nickel	µg/L	NA	40 U	NA	NA	NA	40 U	NA	NA	40 U	40 U	NA	NA	40 U	NA	NA	40 U	NA	NA	40 U
Potassium	µg/L	4580	4080	3580	3470	5240	5100	4050	4110	3750	4500	2560	5970	6070	5110	5310	7150	5480	NA	8130
Selenium	µg/L	NA	14.4	NA	NA	NA	28.5	NA	NA	36.8	21.8	NA	NA	5 U	NA	NA	5.96 U	NA	NA	13.8 U
Silver	µg/L	NA	10 U	NA	NA	NA	10 U	NA	NA	10 U	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA	10 U
Sodium	µg/L	NA	176000	188000	205000	NA	92100	97900	NA	84400	97300	82700	NA	156000	139000	NA	126000	117000	NA	148000
Thallium	µg/L	NA	10 U	NA	NA	NA	10 U	NA	NA	10 U	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA	10 U
Vanadium	µg/L	NA	50 U	NA	NA	NA	50 U	NA	NA	50 U	50 U	NA	NA	50 U	NA	NA	50 U	NA	NA	50 U
Zinc	µg/L	NA	20 U	NA	NA	NA	39.3	NA	NA	20 U	20 U	NA	NA	20 U	NA	NA	20 U	NA	NA	20 U
Mercury (EPA 7470A)	µg/L	NA	.2 U	NA	NA	NA	.2 U	NA	NA	0.2	.2 U	NA	NA	.2 U	NA	NA	.328	NA	NA	.2 U
General Chemistry																				
Specific Conductance (EPA 120.1)	umhos/cm	NA	1291	NA	NA	NA	1103	NA	NA	1007	1003	NA	NA	952	NA	NA	1080	NA	NA	1740
Hardness as CaCO3 (EPA 130.1)	mg/L	NA	253	NA	NA	NA	381	NA	NA	262	296	NA	NA	184.2	NA	NA	290	NA	NA	600
pH (EPA 150.1 / EPA 9045)	pH units	7.4	NA	NA	NA	7.5	NA	NA	7.4	NA	NA	NA	8.0	NA	NA	7.3	NA	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	810	NA	770	975	810	NA	875	715	NA	NA	270	620	NA	630	795	NA	680	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	179	NA	NA	NA	10 U	NA	NA	37	NA	NA	NA	10 U	NA	NA	9	NA	NA	NA	NA
Fluoride (EPA 300.0)	mg/L	NA	1 U	.5 U	.5 U	NA	1 U	.5 U	NA	1 U	1 U	.5 U	NA	0.8	.5 U	NA	1.0	.5 U	NA	0.7
Nitrate (EPA 300.0)	mg/L	2.45 J	1.0	1.36	1.96	2.74 J	2.25	2.72	18.7 J	15	15	13.9	.5 U	.2 U	.5 U	1.53 J	1.0	1.30	NA	3.2
Chloride (EPA 300.0 / EPA 325.2 / EPA 9250)	mg/L	NA	84	115	119	NA	165	181	NA	103	105	127	NA	95.7	33	NA	133	37	NA	374
Sulfate (EPA 375.2 / EPA 375.3)	mg/L	52.3	106	91	104	92	100	108	38.9	75	71	42	144	138	109	151	126	79	NA	93.1
Alkalinity (EPA 310.1)	mg/L	473	NA	NA	NA	299	NA	NA	227	NA	NA	NA	221	NA	NA	247	NA	NA	NA	NA
Alkalinity, Bicarbonate (EPA 310.1)	mg/L	NA	NA	467	516	NA	NA	268	NA	NA	NA	216	NA	NA	223	NA	NA	262	NA	NA
Alkalinity, Carbonate (EPA 310.1)	mg/L	NA	NA	10 U	10 U	NA	NA	10 U	NA	NA	NA	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	.05 U	NA	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	NA	NA	NA	0.05	NA	NA	.05 U	NA	NA	NA	NA
Total Kjeldahl Nitrogen (TKN) (EPA 351.4)	mg/L	NA	NA	NA	NA	.1 U	.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus, Total (EPA 365.2)	mg/L	.05 U	1 U	NA	NA	.05 U	1 U	NA	.05 U	1 U	1 U	NA	.05 U	0.4 U	NA	.05 U	1 U	NA	NA	0.4 U
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	25 U	NA	NA	NA	1 U	NA	NA	25 U	25 U	NA	NA	25 U	NA	NA	25 U	NA	NA	25 U
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	10 U	NA	NA	NA	10 U	NA	NA	19	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA	10
Total Organic Carbon (TOC) (EPA 415.2)	mg/L	5 UJ	NA	NA	NA	5 UJ	NA	NA	5 UJ	NA	NA	NA	5 U	NA	NA	5 UJ	NA	NA	NA	NA
Total Organic Halides (TOX) (EPA 450.1)	mg/L	NA	NA	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	NA	0.07
Microbiology																				
Heterotrophic plate count (SM 9215-B/C)	cfu/mL	6700	NA	NA	NA	2000	NA	NA	1800	NA	NA	NA	1500	NA	NA	2300	NA	NA	NA	NA

Table C-5
Summary of Analytical Results for Tank Farm 555
MCAS El Toro, Santa Ana, California

OHM Sample Number		18292-462	96-TF555-W-286	97-TF555-W-392	18292-461	96-TF555-W-266	96-TF555-W-239	97-TF555-W-413	97-TF555-W-414	18292-455	96-TF555-W-238	97-TF555-W-405	18292-446	96-TF555-W-236	97-TF555-W-406	18292-445	96-TF555-W-248	96-TF555-W-251	96-TF555-W-254	96-TF555-W-257
Sample Location		TF555PZ-01	TF555PZ-02	TF555PZ-02	TF555PZ-02	TF555PZ-03	03_UGMW26	03_UGMW26	03_UGMW26 (Dup)	03_UGMW26	17_DGMW82	17_DGMW82	17_DGMW82	17_NEW01	17_NEW01	17_NEW01	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate
Date Collected		5/12/97	10/24/96	1/22/97	5/12/97	9/27/96	9/23/96	2/7/97	2/7/97	5/9/97	9/23/96	1/31/97	5/7/97	9/20/96	1/31/97	5/7/97	9/24/96	9/24/96	9/25/96	9/25/96
	Unit																			
Total Petroleum Hydrocarbons (CA LUFT-8015M)																				
TPH as Diesel	µg/L	100 U	100 U	100 U	160	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
TPH as Gasoline	µg/L	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Volatile Aromatic Compounds (EPA 8020)																				
Benzene	µg/L	NA	.3 U	.3 U	NA	.3 U	.3 U	.3 U	.3 U	NA	.3 U	.3 U	NA	.3 U	.3 U	NA	.3 U	.3 U	.3 U	.3 U
Ethylbenzene	µg/L	NA	.3 U	.3 U	NA	.3 U	.3 U	.3 U	.3 U	NA	.3 U	.3 U	NA	.3 U	.3 U	NA	.3 U	.3 U	.3 U	.3 U
Methyl tert-butyl ether (MTBE)	µg/L	NA	1 U	1 U	NA	NA	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U	1 U	NA	1 U	1 U	1 U	1 U
Toluene	µg/L	NA	.3 U	.3 U	NA	.3 U	.3 U	.3 U	.3 U	NA	.3 U	.3 U	NA	.3 U	.3 U	NA	.3 U	.3 U	.3 U	.3 U
Xylenes (total)	µg/L	NA	1 U	1 U	NA	1 U	1 U	1 U	1 U	NA	1 U	1 U	NA	1 U	1 U	NA	1 U	1 U	1 U	1 U
Volatile Organic Compounds (EPA 8260A)																				
1,1,1-Trichloroethane	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
1,1,2-Trichloroethane	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
1,1-Dichloroethane	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
1,1-Dichloroethene	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
1,2-Dichloroethane	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
1,2-Dichloroethene (total)	µg/L	NA	NA	NA	NA	NA	NA	5 U	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
2-Butanone (MEK)	µg/L	10 U	10 U	NA	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA	NA	NA	NA
2-Chloroethyl vinyl ether	µg/L	10 R	10 UJ	NA	10 R	NA	10 UJ	10 U	10 U	10 R	10 UJ	10 U	10 U	10 U	10 U	10 U	NA	NA	NA	NA
2-Hexanone	µg/L	10 U	10 U	NA	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	µg/L	10 U	10 U	NA	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA	NA	NA	NA
Acetone	µg/L	10 UJ	10 UJ	NA	10 UJ	NA	10 U	10 UJ	10 UJ	10 UJ	10 U	10 UJ	10 U	10 U	10 UJ	10 U	NA	NA	NA	NA
Benzene	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Bromodichloromethane	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Bromoform	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Bromomethane	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Carbon disulfide	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Carbon tetrachloride	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Chlorobenzene	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Chloroethane	µg/L	5 UJ	5 U	NA	5 UJ	NA	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Chloroform	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	1.2 J	0.6 J	0.89 J	5 U	5 U	5 U	NA	NA	NA	NA
Chloromethane	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
cis-1,2-Dichloroethene	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
cis-1,3-Dichloropropene	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Dibromochloromethane	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Ethylbenzene	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Methylene chloride	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	1.5 J	2.6 J	5 U	5 U	5 UJ	5 U	2.2 J	5 U	NA	NA	NA	NA
Styrene	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Tetrachloroethene	µg/L	5 U	5 U	NA	5 U	NA	5 U	1.2 J	1.1 J	1.6 J	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Toluene	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
trans-1,2-Dichloroethene	µg/L	5 U	5 U	NA	5 U	NA	5 U	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
trans-1,3-Dichloropropene	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Trichloroethene	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	0.8 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Trichlorofluoromethane	µg/L	5 UJ	5 UJ	NA	5 UJ	NA	5 U	5 U	5 U	5 UJ	5 U	5 U	5 UJ	5 UJ	5 U	5 UJ	NA	NA	NA	NA
Vinyl acetate	µg/L	10 U	10 U	NA	10 U	NA	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U	10 U	10 UJ	NA	NA	NA	NA
Vinyl Chloride	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Xylenes (total)	µg/L	5 U	5 U	NA	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Metals (EPA 6010A)																				
Aluminum	µg/L	NA	NA	495	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	µg/L	NA	NA	60 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	µg/L	NA	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	µg/L	NA	NA	200 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	µg/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	µg/L	NA	NA	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	µg/L	114000	NA	114000	126000	NA	NA	NA	NA	75700	NA	NA	64200	NA	NA	74100	NA	NA	NA	NA
Chromium	µg/L	NA	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	µg/L	NA	NA	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	µg/L	NA	NA	25 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	20 U	NA	599	20 U	NA	NA	NA	NA	29.8	NA	NA	20 U	NA	NA	20 U	20 U	20 U	20 U	20 U
Lead	µg/L	NA	NA	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	µg/L	65700	NA	47600	47100	NA	NA	NA	NA	33700	NA	NA	22000	NA	NA	21000	NA	NA	NA	NA
Manganese	µg/L	16.7	NA	53	43.2	NA	NA	NA	NA	14.6	NA	NA	10 U	NA	NA	15.2	NA	NA	NA	NA
Molybdenum	µg/L	NA	NA	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	µg/L	NA	NA	63.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	µg/L	6510	NA	4010	2700	NA	NA	NA	NA	2380	NA	NA	3950	NA	NA	2040	1000 U	1000 U	1000 U	1000 U
Selenium	µg/L	NA	NA	22 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	µg/L	NA	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	µg/L	131000	NA	99000	88100	NA	NA	NA	NA	126000	NA	NA	127000	NA	NA	44500	NA	NA	NA	NA
Thallium	µg/L	NA	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	µg/L	NA	NA	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	µg/L	NA	NA	20 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L	NA	NA	.2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry																				
Specific Conductance (EPA 120.1)	umhos/cm	NA	NA	1310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.1)	mg/L	NA	NA	480	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH (EPA 150.1 / EPA 9045)	pH units	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.3	5.5	5.7	6.8
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	1200	NA	NA	1390	NA	NA	NA	NA	860	NA	NA	500	NA	NA	75	70	15	15	10
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U	8
Fluoride (EPA 300.0)	mg/L	.5 U	NA	0.7	.5 U	NA	NA	NA	NA	.5 U	NA	NA	.5 U	NA	NA	.5 U	NA	NA	NA	NA
Nitrate (EPA 300.0)	mg/L	3.0	NA	3.78	3.55	NA	NA	NA	NA	19.4	NA	NA	2.31	NA	NA	5.73	.5 U	.5 U	.5 U	.5 U
Chloride (EPA 300.0 / EPA 325.2 / EPA 9250)	mg/L	326	NA	204	231	NA	NA	NA	NA	133	NA	NA	113	NA	NA	106	NA	NA	NA	NA
Sulfate (EPA 375.2 / EPA 375.3)	mg/L	80	NA	84.2	82	NA	NA	NA	NA	91	NA	NA	134	NA	NA	24	1.18	1 U	1 U	1 U
Alkalinity (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U	10 U
Alkalinity, Bicarbonate (EPA 310.1)	mg/L	286	NA	NA	352	NA	NA	NA	NA	296	NA	NA	244	NA	NA	197	NA	NA	NA	NA
Alkalinity, Carbonate (EPA 310.1)	mg/L	10 U	NA	NA	10 U	NA	NA	NA	NA	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	NA	NA	NA	.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	.05 U	.05 U	.05 U	.05 U
Total Kjeldahl Nitrogen (TKN) (EPA 351.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	.1 U	NA
Phosphorus, Total (EPA 365.2)	mg/L	NA	NA	0.4 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	.05 U	.05 U	.05 U	.05 U
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	NA	25 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 UJ	5 UJ	5 UJ	5 UJ
Total Organic Halides (TOX) (EPA 450.1)	mg/L	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Microbiology																				
Heterotrophic plate count (SM 9215-B/C)	cfu/mL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7	1 U	320	320

Table C-5
Summary of Analytical Results for Tank Farm 555
MCAS El Toro, Santa Ana, California

OHM Sample Number		96-TF555-W-260	96-TF555-W-287	97-TF555-W-391	97-TF555-W-393	97-TF555-W-395	97-TF555-W-397	97-TF555-W-402	97-TF555-W-408	97-TF555-W-411	97-TF555-W-416	18292-443	18292-444	18292-454	18292-457	18292-459	18292-460	18292-451	18292-452	96-TF555-W-233
Sample Location		Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	DI Unit	DI Unit	Trip Blank
Date Collected		9/26/96	10/24/96	1/22/97	1/22/97	1/22/97	1/22/97	1/29/97	2/4/97	2/4/97	2/7/97	5/7/97	5/7/97	5/9/97	5/9/97	5/12/97	5/12/97	5/8/97	5/8/97	9/20/96
	Unit																			
Total Petroleum Hydrocarbons (CA LUFT-8015M)																				
TPH as Diesel	µg/L	100 U	100 U	100 U	100 U	100 U	100 U	160	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	NA	NA	NA
TPH as Gasoline	µg/L	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	NA	NA	100 U
Volatile Aromatic Compounds (EPA 8020)																				
Benzene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	NA	NA	.3 U	.3 U	.3 U	.3 U	NA	NA	.3 U
Ethylbenzene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	NA	NA	.3 U	.3 U	.3 U	.3 U	NA	NA	.3 U
Methyl tert-butyl ether (MTBE)	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	NA	NA	1 U	1 U	1 U	1 U	NA	NA	1 U
Toluene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	NA	NA	.3 U	.3 U	.60	.50	NA	NA	.3 U
Xylenes (total)	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U	NA	NA	1 U
Volatile Organic Compounds (EPA 8260A)																				
1,1,1-Trichloroethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene (total)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
2-Butanone (MEK)	µg/L	NA	10 U	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U	71	NA	34	34	10 U	10 U	10 U
2-Chloroethyl vinyl ether	µg/L	NA	10 UJ	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U	10 R	NA	10 R	10 R	10 UJ	10 UJ	10 U
2-Hexanone	µg/L	NA	10 U	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U	19	NA	7.9 J	7.3 J	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	µg/L	NA	10 U	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	NA	14 J	NA	NA	NA	NA	NA	NA	NA	10 J	34	51	310 J	NA	160 J	220 J	11 J	16 J	10 U
Benzene	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
Bromoform	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
Bromomethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
Carbon disulfide	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
Carbon tetrachloride	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
Chloroethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 UJ	NA	5 UJ	5 UJ	5 UJ	5 UJ	5 U
Chloroform	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	2.1 J	2.8 J	5 U
Chloromethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
Methylene chloride	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	2.7 J	NA	5 U	5 U	2.2 J	2.3 J	2.2 J
Styrene	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
Toluene	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
Trichloroethene	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	µg/L	NA	.5 UJ	NA	NA	NA	NA	NA	NA	NA	5 U	5 UJ	5 UJ	5 UJ	NA	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Vinyl acetate	µg/L	NA	10 U	NA	NA	NA	NA	NA	NA	NA	10 UJ	10 UJ	10 UJ	10 U	NA	10 U	10 U	10 U	10 U	10 U
Vinyl Chloride	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 UJ	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
Xylenes (total)	µg/L	NA	5 U	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
Metals (EPA 6010A)																				
Aluminum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	20 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	µg/L	1000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry																				
Specific Conductance (EPA 120.1)	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH (EPA 150.1 / EPA 9045)	pH units	5.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride (EPA 300.0)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (EPA 300.0)	mg/L	.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride (EPA 300.0 / EPA 325.2 / EPA 9250)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (EPA 375.2 / EPA 375.3)	mg/L	1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity (EPA 310.1)	mg/L	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, Carbonate (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	.05	.05 U	NA	NA	NA	.05 U	NA	NA	.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Kjeldahl Nitrogen (TKN) (EPA 351.4)	mg/L	NA	.1 U	NA	NA	NA	0.24	NA	NA	.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus, Total (EPA 365.2)	mg/L	.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.2)	mg/L	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Halides (TOX) (EPA 450.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Microbiology																				
Heterotrophic plate count (SM 9215-B/C)	cfu/mL	3700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table C-5
Summary of Analytical Results for Tank Farm 555
MCAS El Toro, Santa Ana, California

OHM Sample Number		96-TF555-W-237	96-TF555-W-247	96-TF555-W-250	96-TF555-W-253	96-TF555-W-256	96-TF555-W-265	96-TF555-W-285	97-TF555-W-390	97-TF555-W-401	97-TF555-W-404	97-TF555-W-407	97-TF555-W-415	18292-442	18292-447	18292-453	18292-458
Sample Location		Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
Date Collected		9/23/96	9/24/96	9/24/96	9/25/96	9/25/96	9/27/96	10/24/96	1/22/97	1/29/97	1/31/97	2/4/97	2/7/97	5/7/97	5/8/97	5/9/97	5/12/97
	Unit																
Total Petroleum Hydrocarbons (CA LUFT-8015M)																	
TPH as Diesel	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH as Gasoline	µg/L	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	NA	100 U	100 U	100 U	100 U
Volatile Aromatic Compounds (EPA 8020)																	
Benzene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	NA	.3 U	.3 U	.3 U
Ethylbenzene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	NA	.3 U	.3 U	.3 U
Methyl tert-butyl ether (MTBE)	µg/L	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U
Toluene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	NA	.3 U	.3 U	.3 U
Xylenes (total)	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U	1 U
Volatile Organic Compounds (EPA 8260A)																	
1,1,1-Trichloroethane	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
1,1,2,2-Tetrachloroethane	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
1,1,2-Trichloroethane	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
1,1-Dichloroethane	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
1,1-Dichloroethene	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
1,2-Dichloroethane	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
1,2-Dichloroethene (total)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
2-Butanone (MEK)	µg/L	10 U	NA	NA	NA	NA	NA	10 U	NA	NA	10 U	NA	10 U	10 U	NA	10 U	10 U
2-Chloroethyl vinyl ether	µg/L	10 UJ	NA	NA	NA	NA	NA	10 UJ	NA	NA	10 U	NA	10 U	10 U	NA	10 R	10 R
2-Hexanone	µg/L	10 U	NA	NA	NA	NA	NA	10 U	NA	NA	10 U	NA	10 U	10 U	NA	10 U	10 U
4-Methyl-2-pentanone (MIBK)	µg/L	10 U	NA	NA	NA	NA	NA	10 U	NA	NA	10 U	NA	10 U	10 U	NA	10 U	10 U
Acetone	µg/L	10 U	NA	NA	NA	NA	NA	10 UJ	NA	NA	10 UJ	NA	10 UJ	10 U	NA	10 UJ	10 UJ
Benzene	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
Bromodichloromethane	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
Bromoform	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
Bromomethane	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
Carbon disulfide	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
Carbon tetrachloride	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
Chlorobenzene	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
Chloroethane	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 UJ	5 UJ
Chloroform	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
Chloromethane	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
cis-1,2-Dichloroethene	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
cis-1,3-Dichloropropene	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
Dibromochloromethane	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
Ethylbenzene	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
Methylene chloride	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	1.9 J	5 U	NA	3.5 J	5 U
Styrene	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
Tetrachloroethene	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
Toluene	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
trans-1,2-Dichloroethene	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U
trans-1,3-Dichloropropene	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
Trichloroethene	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
Trichlorofluoromethane	µg/L	5 U	NA	NA	NA	NA	NA	5 UJ	NA	NA	5 U	NA	5 U	5 UJ	NA	5 UJ	5 UJ
Vinyl acetate	µg/L	10 UJ	NA	NA	NA	NA	NA	10 U	NA	NA	10 U	NA	10 UJ	10 UJ	NA	10 U	10 U
Vinyl Chloride	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 UJ	5 U	NA	5 U	5 U
Xylenes (total)	µg/L	5 U	NA	NA	NA	NA	NA	5 U	NA	NA	5 U	NA	5 U	5 U	NA	5 U	5 U
Metals (EPA 6010A)																	
Aluminum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry																	
Specific Conductance (EPA 120.1)	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH (EPA 150.1 / EPA 9045)	pH units	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride (EPA 300.0)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (EPA 300.0)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride (EPA 300.0 / EPA 325.2 / EPA 9250)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (EPA 375.2 / EPA 375.3)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, Carbonate (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Kjeldahl Nitrogen (TKN) (EPA 351.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus, Total (EPA 365.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Halides (TOX) (EPA 450.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Microbiology																	
Heterotrophic plate count (SM 9215-B/C)	cfu/mL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table C-6
Summary of Analytical Results for
Tank Farms 5 and 6
MCAS El Toro, Santa Ana, California

OHM Sample Number		96-TF6-W-934	97-TF6-W-1528	17486-280	96-TF6-W-938	96-TF6-W-939	97-TF6-W-1544	17486-277	17486-278	96-TF6-W-921	97-TF6-W-1532	17486-307	96-TF6-W-931	97-TF6-W-1536	17486-296	96-TF6-W-922	97-TF6-W-1537	17486-272	96-TF6-W-923	97-TF6-W-1540
Sample Location		TF6-MW-01	TF6MW-01	TF6MW-01	TF6MW-02	TF6MW-02 (Dup)	TF6MW-02	TF6MW-02	TF6MW-02 (Dup)	04_DBMW40	04_DBMW40	04_DBMW40	04_DGMW66	04_DGMW66	04_DGMW66	04_UGMW63	04_UGMW63	04_UGMW63	18_BGMW01E	18_BGMW01E
Date Collected		9/17/96	1/16/97	4/30/97	9/18/96	9/18/96	1/20/97	4/30/97	4/30/97	09/13/96	1/16/97	5/2/97	9/16/96	1/17/97	5/1/97	9/13/96	1/17/97	4/29/97	9/13/96	1/20/97
	Unit																			
Total Petroleum Hydrocarbons (CA LUFT-8015M)																				
TPH as Diesel	µg/L	570 U	480 U	500 U	520 U	520 U	500 U	500 U	500 U	530 U	490 U	500 U	500 U	500 U	500 U	540 U	500 U	500 U	560 U	500 U
TPH as Gasoline	µg/L	1300 P	1400 P	1710	65 P	58 P	57 P	1060	1050	800 PJ	220 P	1800	50 U	50 U	50 U	87 P	50 U	69	1200 P	2100 P
TPH as JP-5	µg/L	570 U	480 U	NA	520 U	520 U	500 U	NA	NA	530 U	490 U	NA	500 U	500 U	NA	540 U	500 U	NA	560 U	500 U
TPH-Extractable	µg/L	350 J	480 U	NA	500 U	360 J	500 U	NA	NA	250 J	490 U	NA	500 U	500 U	NA	140 J	500 U	NA	220 J	440 J
Volatile Aromatic Compounds (EPA 8020)																				
Benzene	µg/L	310	270	190	1.0 U	0.8 J	1.0 U	1 U	1 U	140 J	40	NA	1.0 U	1.0 U	NA	12	7.0	NA	110	150
Ethylbenzene	µg/L	5.0 U	0.7 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U
Methyl tert-butyl ether (MTBE)	µg/L	1.0 U	1.0 U	1 U	1.0 U	1.0 U	5.0 U	1 U	1 U	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	5.0 U
Toluene	µg/L	1.0 U	1.0 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U
Xylenes (total)	µg/L	63.2	26	31	1.0 U	1.0 U	1.0 U	1 U	1 U	10	1.0 U	NA	1.0 U	1.0 U	NA	1.0 U	1.0 U	NA	15	22
Volatile Organic Compounds (EPA 8260A)																				
1,1,1-Trichloroethane	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
1,1-Dichloroethane	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
1,1-Dichloroethene	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
1,2-Dichloroethane	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	2.8 J
1,2-Dichloropropane	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
2-Butanone (MEK)	µg/L	NA	NA	NA	NA	NA	10 U	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ
2-Chloroethyl vinyl ether	µg/L	NA	NA	NA	NA	NA	10 U	NA	NA	10 UJ	10 U	10 U	10 UJ	10 U	10 UJ	10 UJ	10 U	10 R	10 UJ	10 U
2-Hexanone	µg/L	NA	NA	NA	NA	NA	10 U	NA	NA	13	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ
4-Methyl-2-pentanone (MIBK)	µg/L	NA	NA	NA	NA	NA	10 U	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ
Acetone	µg/L	NA	NA	NA	NA	NA	10 U	NA	NA	1.7 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1.7 J	10 UJ
Benzene	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	90	22	140	5.0 U	5.0 U	5 U	12	3.4 J	4.3 J	88	110
Bromodichloromethane	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
Bromoform	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 UJ	5.0 U	5 U	5.0 UJ	5.0 U	5 U	5.0 UJ	5.0 U	5 U	5.0 UJ	5.0 U
Bromomethane	µg/L	NA	NA	NA	NA	NA	10 U	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
Chlorobenzene	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
Chloroethane	µg/L	NA	NA	NA	NA	NA	10 U	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
Chloromethane	µg/L	NA	NA	NA	NA	NA	10 U	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
Dibromochloromethane	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
Ethylbenzene	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
Methyl tert-butyl ether (MTBE)	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	NA	5 U	5.0 U	NA	5 U	5.0 U	5.0 U
Methylene chloride	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 UJ	5.0 U	3.2 J	5 UJ	5.0 U	5.0 U	5 U	5.0 U	5.0 U
Styrene	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
Tetrachloroethene	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
Toluene	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 J	5 U	5.0 U	5.0 U	5 U	5.0 U	0.5 J
trans-1,2-Dichloroethene	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
Trichloroethene	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U
Trichlorofluoromethane	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.0 U	5.0 U	5 UJ	5.0 U	5.0 U	5 UJ	5.0 U	5.0 U	5 UJ	5.0 U	5.0 U
Vinyl acetate	µg/L	NA	NA	NA	NA	NA	10 U	NA	NA	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 UJ	10 U	10 U
Vinyl Chloride	µg/L	NA	NA	NA	NA	NA	10 U	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Xylenes (total)	µg/L	NA	NA	NA	NA	NA	5.0 U	NA	NA	5.3	5.0 U	5 U	5.0 U	5.0 U	5 U	5.0 U	5.0 U	5 U	11.5	16
Metals (EPA 6010A)																				
Antimony	µg/L	NA	60 U	NA	NA	NA	60 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	µg/L	NA	5.0 U	NA	NA	NA	9.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	µg/L	NA	63	NA	NA	NA	36	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	µg/L	NA	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	µg/L	NA	5.0 U	NA	NA	NA	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	µg/L	NA	110000	98600	NA	NA	64000	55100	55300	NA	NA	86900	NA	NA	86100	NA	NA	128000	NA	NA
Chromium	µg/L	NA	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	µg/L	NA	20 U	NA	NA	NA	20 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	µg/L	NA	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	3400	410	50 U	12000	22000	350	123	127	NA	NA	50 U	NA	NA	54.8	NA	NA	50 U	NA	NA
Lead	µg/L	NA	3.0 U	NA	NA	NA	3.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	µg/L	NA	59000	61400	NA	NA	44000	38100	39800	NA	NA	55800	NA	NA	31000	NA	NA	60400	NA	NA
Manganese	µg/L	NA	64	82.2	NA	NA	190	205	210	NA	NA	41.1	NA	NA	10.8	NA	NA	489	NA	NA
Molybdenum	µg/L	NA	20 U	NA	NA	NA	20 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	µg/L	NA	20 U	NA	NA	NA	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	µg/L	5800	2800	3460	8600	9300	4100	4040	4410	NA	NA	3780	NA	NA	3120	NA	NA	2350	NA	NA
Selenium	µg/L	NA	5.0 U	NA	NA	NA	5.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	µg/L	NA	5.0 U	NA	NA	NA	5.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	µg/L	NA	74000	81100	NA	NA	110000	100000 J	104000	NA	NA	156000	NA	NA	108000	NA	NA	76400	NA	NA
Thallium	µg/L	NA	5.0 U	NA	NA	NA	5.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	µg/L	NA	28	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	µg/L	NA	20 U	NA	NA	NA	22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L	NA	0.39	NA	NA	NA	0.20 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry																				
Specific Conductance (EPA 120.1)	umhos/cm	NA	1300	NA	NA	NA	1300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.2)	mg/L	NA	1400	NA	NA	NA	360	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH (EPA 150.1)	pH units	7.1	NA	NA	7.7	7.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	780	NA	695	620	630	NA	585	560	NA	NA	745	NA	NA	715	NA	NA	905	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	87	NA	NA	38	39	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (EPA 300.0)	mg/L	NA	NA	4.21 J	NA	NA	NA	.89	.85	NA	NA	16	NA	NA	12	NA	NA	7.93	NA	NA
Alkalinity (EPA 310.1)	mg/L	370	NA	NA	280	280	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (EPA 310.1)	mg/L	NA	NA	335	NA	NA	NA	250	285	NA	NA	432	NA	NA	248	NA	NA	340	NA	NA
Alkalinity, Carbonate (EPA 310.1)	mg/L	NA	NA	10 U	NA	NA	NA	10 U	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA
Chloride (EPA 300.0 / EPA 325.2 / EPA 9250)	mg/L	NA	120	228	NA	NA	98	157	147	NA	NA	185	NA	NA	214	NA	NA	157	NA	NA
Fluoride (EPA 340.2)	mg/L	NA	0.43	1 U	NA	NA	0.53	1 U	1 U	NA	NA	.5 U	NA	NA	.5 U	NA	NA	.5 U	NA	NA
Ammonia (EPA 350.1 / EPA 350.3)	mg/L	0.1 U	NA	NA	0.1	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Kjeldahl Nitrogen (TKN) (EPA 351.4)	mg/L	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	5.4	6.3	NA	3.5	3.6	1.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus, Total (EPA 365.2)	mg/L	0.060	NA	NA	0.14	0.16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (EPA 375.2 / EPA 375.3 / EPA 375.4)	mg/L	100	54	132	91	120	39 J	169	160	NA	NA	227	NA	NA	200	NA	NA	90	NA	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	15	NA	NA	NA	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.2)	mg/L	4.3	NA	NA	2.5	2.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Halides (TOX) (EPA 450.1)	mg/L	NA	0.05	NA	NA	NA	0.02 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Microbiology																				
Heterotrophic plate count (SM 9215-B/C)	cfu/mL	14000	NA	NA	184000	325000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table C-6
Summary of Analytical Results for
Tank Farms 5 and 6
MCAS El Toro, Santa Ana, California

OHM Sample Number		17486-274	96-TF6-W-920	96-TF6-W-933	96-TF6-W-937	97-TF6-W-1527	97-TF6-W-1531	97-TF6-W-1535	97-TF6-W-1539	97-TF6-W-1543	17486-271	17486-273	17486-276	17486-279	17486-281	17486-297	17486-298	17486-299	96-TF6-W-919	96-TF6-W-932	96-TF6
Sample Location		18_BGMW01E	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Trip Blank	Trip Blank	Trip
Date Collected		4/29/97	9/13/96	9/16/96	9/17/96	1/16/97	1/16/97	1/17/97	1/20/97	1/20/97	4/29/97	4/29/97	4/30/97	4/30/97	4/30/97	5/1/97	5/1/97	5/1/97	9/13/96	9/16/96	9/1
	Unit																				
Total Petroleum Hydrocarbons (CA LUFT-8015M)																					
TPH as Diesel	µg/L	500 U	540 U	540 U	580 U	480 U	500 U	500 U	510 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	NA	NA	NA
TPH as Gasoline	µg/L	1560	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50
TPH as JP-5	µg/L	NA	540 U	540 U	580 U	480 U	500 U	500 U	510 U	500 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH-Extractable	µg/L	NA	540 U	540 U	500 U	500	500 U	500 U	510 U	500 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Aromatic Compounds (EPA 8020)																					
Benzene	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	0.6 J	1.0 U	1.0 U	1.0 U	NA	NA	1 U	1 U	1 U	NA	NA	NA	1.0 U	1.0 U	1.0
Ethylbenzene	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	1 U	1 U	1 U	NA	NA	NA	1.0 U	1.0 U	1.0
Methyl tert-butyl ether (MTBE)	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	1 U	1 U	1 U	NA	NA	NA	1.0 U	1.0 U	NA
Toluene	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	1 U	1 U	1 U	NA	NA	NA	1.0 U	1.0 U	1.0
Xylenes (total)	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	1 U	1 U	1 U	NA	NA	NA	1.0 U	1.0 U	1.0
Volatile Organic Compounds (EPA 8260A)																					
1,1,1-Trichloroethane	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
1,1,2,2-Tetrachloroethane	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
1,1,2-Trichloroethane	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
1,1-Dichloroethane	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
1,1-Dichloroethene	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
1,2-Dichloroethane	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
1,2-Dichloropropane	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
2-Butanone (MEK)	µg/L	10 U	10 U	NA	NA	NA	NA	10 U	10 UJ	NA	96	170	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	NA
2-Chloroethyl vinyl ether	µg/L	10 R	10 UJ	NA	NA	NA	NA	10 U	10 U	NA	10 R	10 R	NA	NA	NA	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	NA
2-Hexanone	µg/L	10 U	10 U	NA	NA	NA	NA	10 U	10 UJ	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	NA
4-Methyl-2-pentanone (MIBK)	µg/L	10 U	10 U	NA	NA	NA	NA	10 U	10 UJ	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	NA
Acetone	µg/L	10 U	3.4 J	NA	NA	NA	NA	10 U	10 UJ	NA	10 U	13	NA	NA	NA	57	54	61	2.8 J	2.0 J	NA
Benzene	µg/L	32	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
Bromodichloromethane	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
Bromoform	µg/L	5 U	5.0 UJ	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 UJ	5.0 UJ	NA
Bromomethane	µg/L	10 U	10 U	NA	NA	NA	NA	10 U	10 U	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	NA
Carbon disulfide	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
Carbon tetrachloride	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
Chlorobenzene	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
Chloroethane	µg/L	10 U	10 U	NA	NA	NA	NA	10 U	10 U	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	NA
Chloroform	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5.4	3.7 J	NA	NA	NA	1.6 J	.95 J	5 U	5.0 U	5.0 U	NA
Chloromethane	µg/L	10 U	10 U	NA	NA	NA	NA	10 U	10 U	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	NA
cis-1,2-Dichloroethene	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
cis-1,3-Dichloropropene	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
Dibromochloromethane	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
Ethylbenzene	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
Methyl tert-butyl ether (MTBE)	µg/L	5 U	5.0 U	NA	NA	NA	NA	NA	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	NA	NA
Methylene chloride	µg/L	5 U	5.0 U	NA	NA	NA	NA	3.7 J	5.0 U	NA	5 U	5 U	NA	NA	NA	5 UJ	2.9 J	2.9 J	5.0 U	1.9 J	NA
Styrene	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
Tetrachloroethene	µg/L	5 U	5.0 UJ	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
Toluene	µg/L	5 U	5.0 U	NA	NA	NA	NA	0.5 J	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
trans-1,2-Dichloroethene	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
trans-1,3-Dichloropropene	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
Trichloroethene	µg/L	5 U	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
Trichlorofluoromethane	µg/L	5 UJ	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 UJ	5 UJ	NA	NA	NA	5 UJ	5 UJ	5 UJ	5.0 U	5.0 U	NA
Vinyl acetate	µg/L	10 UJ	10 U	NA	NA	NA	NA	10 U	10 U	NA	10 UJ	10 UJ	NA	NA	NA	10 UJ	10 UJ	10 UJ	10 U	10 U	NA
Vinyl Chloride	µg/L	10 U	10 U	NA	NA	NA	NA	10 U	10 U	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	NA
Xylenes (total)	µg/L	3.5 J	5.0 U	NA	NA	NA	NA	5.0 U	5.0 U	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5.0 U	5.0 U	NA
Metals (EPA 6010A)																					
Antimony	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	µg/L	88800 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	50 U	NA	64 U	61	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	µg/L	57200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	91.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	µg/L	3270	NA	1000 U	1000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	µg/L	116000 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry																					
Specific Conductance (EPA 120.1)	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.2)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH (EPA 150.1)	µH units	NA	NA	6.2	6.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	760	NA	4.0 U	4.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	NA	NA	1.0 U	1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (EPA 300.0)	mg/L	9.81	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity (EPA 310.1)	mg/L	NA	NA	3.5 J	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (EPA 310.1)	mg/L	460	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, Carbonate (EPA 310.1)	mg/L	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride (EPA 300.0 / EPA 325.2 / EPA 9250)	mg/L	228	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride (EPA 340.2)	mg/L	.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia (EPA 350.1 / EPA 350.3)	mg/L	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Kjeldahl Nitrogen (TKN) (EPA 351.4)	mg/L	NA	NA	1.0 U	1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	NA	NA	NA	0.0060 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus, Total (EPA 365.2)	mg/L	NA	NA	0.030 U	0.030 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (EPA 375.2 / EPA 375.3 / EPA 375.4)	mg/L	81	NA	0.53	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.2)	mg/L	NA	NA	1.0 U	1.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Halides (TOX) (EPA 450.1)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Microbiology																					
Heterotrophic plate count (SM 9215-B/C)	cfu/mL	NA	NA	NA	3000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table C-6
Summary of Analytical Results for
Tank Farms 5 and 6
MCAS El Toro, Santa Ana, California

OHM Sample Number		-W-936	96-TF6-W-943	97-TF6-W-1526	97-TF6-W-1533	97-TF6-W-1538	17486-270	17486-275	17486-294	17486-306
Sample Location		lank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
Date Collected		/96	9/18/96	1/16/97	1/17/97	1/20/97	4/29/97	4/30/97	5/1/97	5/2/97
	Unit									
Total Petroleum Hydrocarbons (CA LUFT-8015M)										
TPH as Diesel	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
TPH as Gasoline	µg/L	U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
TPH as JP-5	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
TPH-Extractable	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Volatile Aromatic Compounds (EPA 8020)										
Benzene	µg/L	U	1.0 U	1.0 U	1.0 U	1.0 U	NA	1 U	NA	NA
Ethylbenzene	µg/L	U	1.0 U	1.0 U	1.0 U	1.0 U	NA	1 U	NA	NA
Methyl tert-butyl ether (MTBE)	µg/L		1.0 U	1.0 U	1.0 U	1.0 U	NA	1 U	NA	NA
Toluene	µg/L	U	1.0 U	1.0 U	1.0 U	1.0 U	NA	1 U	NA	NA
Xylenes (total)	µg/L	U	1.0 U	1.0 U	1.0 U	1.0 U	NA	1 U	NA	NA
Volatile Organic Compounds (EPA 8260A)										
1,1,1-Trichloroethane	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
1,1,2,2-Tetrachloroethane	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
1,1,2-Trichloroethane	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
1,1-Dichloroethane	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
1,1-Dichloroethene	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
1,2-Dichloroethane	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
1,2-Dichloropropane	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
2-Butanone (MEK)	µg/L		NA	NA	NA	NA	10 U	NA	10 U	10 U
2-Chloroethyl vinyl ether	µg/L		NA	NA	NA	NA	10 R	NA	10 UJ	10 U
2-Hexanone	µg/L		NA	NA	NA	NA	10 U	NA	10 U	10 U
4-Methyl-2-pentanone (MIBK)	µg/L		NA	NA	NA	NA	10 U	NA	10 U	10 U
Acetone	µg/L		NA	NA	NA	NA	10 U	NA	10 U	10 U
Benzene	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
Bromodichloromethane	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
Bromoform	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
Bromomethane	µg/L		NA	NA	NA	NA	10 U	NA	10 U	10 U
Carbon disulfide	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
Carbon tetrachloride	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
Chlorobenzene	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
Chloroethane	µg/L		NA	NA	NA	NA	10 U	NA	10 U	10 U
Chloroform	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
Chloromethane	µg/L		NA	NA	NA	NA	10 U	NA	10 U	10 U
cis-1,2-Dichloroethene	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
cis-1,3-Dichloropropene	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
Dibromochloromethane	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
Ethylbenzene	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
Methyl tert-butyl ether (MTBE)	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
Methylene chloride	µg/L		NA	NA	NA	NA	5 U	NA	3.6 J	5 UJ
Styrene	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
Tetrachloroethene	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
Toluene	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
trans-1,2-Dichloroethene	µg/L		NA	NA	NA	NA	5 U	NA	5 U	NA
trans-1,3-Dichloropropene	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
Trichloroethene	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
Trichlorofluoromethane	µg/L		NA	NA	NA	NA	5 UJ	NA	5 UJ	5 UJ
Vinyl acetate	µg/L		NA	NA	NA	NA	10 UJ	NA	10 UJ	10 U
Vinyl Chloride	µg/L		NA	NA	NA	NA	10 U	NA	10 U	10 U
Xylenes (total)	µg/L		NA	NA	NA	NA	5 U	NA	5 U	5 U
Metals (EPA 6010A)										
Antimony	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Barium	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Calcium	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Chromium	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Copper	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Lead	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Nickel	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Potassium	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Selenium	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Silver	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Sodium	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Thallium	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Zinc	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L		NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry										
Specific Conductance (EPA 120.1)	umhos/cm		NA	NA	NA	NA	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.2)	mg/L		NA	NA	NA	NA	NA	NA	NA	NA
pH (EPA 150.1)	pH units		NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L		NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L		NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (EPA 300.0)	mg/L		NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity (EPA 310.1)	mg/L		NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, Bicarbonate (EPA 310.1)	mg/L		NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, Carbonate (EPA 310.1)	mg/L		NA	NA	NA	NA	NA	NA	NA	NA
Chloride (EPA 300.0 / EPA 325.2 / EPA 9250)	mg/L		NA	NA	NA	NA	NA	NA	NA	NA
Fluoride (EPA 340.2)	mg/L		NA	NA	NA	NA	NA	NA	NA	NA
Ammonia (EPA 350.1 / EPA 350.3)	mg/L		NA	NA	NA	NA	NA	NA	NA	NA
Total Kjeldahl Nitrogen (TKN) (EPA 351.4)	mg/L		NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L		NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus, Total (EPA 365.2)	mg/L		NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (EPA 375.2 / EPA 375.3 / EPA 375.4)	mg/L		NA	NA	NA	NA	NA	NA	NA	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L		NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L		NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.2)	mg/L		NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Halides (TOX) (EPA 450.1)	mg/L		NA	NA	NA	NA	NA	NA	NA	NA
Microbiology										
Heterotrophic plate count (SM 9215-B/C)	cfu/mL		NA	NA	NA	NA	NA	NA	NA	NA

Table C-7
Summary of Analytical Results for
USTs 390 A and B
MCAS El Toro, Santa Ana, California

OHM Sample Number		96-T390-W-200	97-T390-W-384	18292-435	96-T390-W-224	97-T390-W-389	18292-437	96-T390-W-203	97-T390-W-390	18292-438	96-T390-W-222	97-T390-W-386	18292-439
Sample Location		T390MW-01	T390MW-01	T390MW-01	T390MW-02	T390MW-02	T390MW-02	T390MW-03	T390MW-03	T390MW-03	18_BGMW02E	18_BGMW02E	18_BGMW02E
Date Collected	Unit	09/19/96	01/21/97	05/06/97	09/19/96	01/21/97	05/06/97	09/19/96	01/21/97	05/06/97	09/19/96	01/21/97	05/06/97
Total Petroleum Hydrocarbons (CA LUFT-8015M)													
TPH as Diesel	µg/L	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
TPH as Gasoline	µg/L	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Volatile Aromatic Compounds (EPA 8020)													
Benzene	µg/L	4.0	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	NA
Ethylbenzene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	NA
Methyl tert-butyl ether (MTBE)	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
Toluene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	NA
Xylenes (total)	µg/L	1.9	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
Volatile Organic Compounds (EPA 8260A)													
1,1,1-Trichloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
1,1,2-Trichloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
1,1-Dichloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
1,1-Dichloroethene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
1,2-Dichloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
1,2-Dichloropropane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
2-Butanone (MEK)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
2-Chloroethyl vinyl ether	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 UJ
2-Hexanone	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	16 J
4-Methyl-2-pentanone (MIBK)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Acetone	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 UJ
Benzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
Bromodichloromethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
Bromoform	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
Bromomethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
Carbon disulfide	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
Carbon tetrachloride	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
Chlorobenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
Chloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
Chloroform	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
Chloromethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 UJ
cis-1,2-Dichloroethene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
cis-1,3-Dichloropropene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
Dibromochloromethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
Ethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
Methylene chloride	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	2.6 J	2.4 J
Styrene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
Tetrachloroethene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.3 J	0.9 J	5 U
Toluene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
trans-1,2-Dichloroethene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
trans-1,3-Dichloropropene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
Trichloroethene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
Trichlorofluoromethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 UJ	5 U	5 UJ
Vinyl acetate	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Vinyl Chloride	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
Xylenes (total)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U
Metals (EPA 6010A)													
Aluminum	µg/L	NA	50 U	NA	NA	50 U	NA	NA	420	NA	NA	NA	NA
Antimony	µg/L	NA	60 U	NA	NA	60 U	NA	NA	60 U	NA	NA	NA	NA
Arsenic	µg/L	NA	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA	NA	NA
Barium	µg/L	NA	200 U	NA	NA	200 U	NA	NA	200 U	NA	NA	NA	NA
Beryllium	µg/L	NA	5 U	NA	NA	5 U	NA	NA	5 U	NA	NA	NA	NA
Cadmium	µg/L	NA	5 U	NA	NA	5 U	NA	NA	5 U	NA	NA	NA	NA
Calcium	µg/L	NA	103000	NA	NA	107000	NA	NA	109000	NA	NA	NA	NA
Chromium	µg/L	NA	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA	NA	NA
Cobalt	µg/L	NA	50 U	NA	NA	50 U	NA	NA	50 U	NA	NA	NA	NA
Copper	µg/L	NA	25 U	NA	NA	25 U	NA	NA	25 U	NA	NA	NA	NA
Iron	µg/L	1230	57.8	NA	455	119	NA	224	602	NA	NA	NA	NA
Lead	µg/L	NA	3 U	NA	NA	3 U	NA	NA	3 U	NA	NA	NA	NA
Magnesium	µg/L	NA	29400	NA	NA	31500	NA	NA	31900	NA	NA	NA	NA
Manganese	µg/L	NA	10 U	NA	NA	11	NA	NA	14.3	NA	NA	NA	NA
Molybdenum	µg/L	NA	69.8	NA	NA	54.4	NA	NA	68.1	NA	NA	NA	NA
Nickel	µg/L	NA	40 U	NA	NA	40 U	NA	NA	40 U	NA	NA	NA	NA
Potassium	µg/L	4090	2940	NA	3510	3020	NA	4320	3480	NA	NA	NA	NA
Selenium	µg/L	NA	37	NA	NA	5 U	NA	NA	14.7	NA	NA	NA	NA
Silver	µg/L	NA	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA	NA	NA
Sodium	µg/L	NA	128000	NA	NA	126000	NA	NA	141000	NA	NA	NA	NA
Thallium	µg/L	NA	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA	NA	NA
Vanadium	µg/L	NA	50 U	NA	NA	50 U	NA	NA	50 U	NA	NA	NA	NA
Zinc	µg/L	NA	20 U	NA	NA	20 U	NA	NA	20 U	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L	NA	.2 U	NA	NA	.2 U	NA	NA	.2 U	NA	NA	NA	NA
General Chemistry													
Specific Conductance (EPA 120.1)	umhos/cm	NA	1270	NA	NA	1230	NA	NA	1280	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.2)	mg/L	NA	378	NA	NA	396	NA	NA	403	NA	NA	NA	NA
pH (EPA 150.1)	pH units	7.4	NA	NA	7.2	NA	NA	7.8	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	905	NA	NA	925	NA	NA	1050	NA	NA	NA	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	14	NA	NA	13	NA	NA	16	NA	NA	NA	NA	NA
Chloride (EPA 300.0)	mg/L	NA	103	NA	NA	100	NA	NA	106	NA	NA	NA	NA
Fluoride (EPA 340.2)	mg/L	NA	.4 U	NA	NA	.4 U	NA	NA	.4 U	NA	NA	NA	NA
Nitrate (EPA 300.0)	mg/L	11.8	10.8	NA	11.9	10.7	NA	12.4 R	11.1	NA	NA	NA	NA
Sulfate (EPA 300.0)	mg/L	285	260	NA	277	236	NA	1 R	253	NA	NA	NA	NA
Alkalinity (EPA 310.1)	mg/L	183	NA	NA	238	NA	NA	170	NA	NA	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	.05 U	NA	NA	.05 U	NA	NA	.05 U	NA	NA	NA	NA	NA
Total Kjeldahl Nitrogen (TKN) (EPA 351.4)	mg/L	0.5 U	NA	NA	0.5 U	NA	NA	0.5 U	NA	NA	NA	NA	NA
Phosphorus, Total (EPA 365.2)	mg/L	0.05 U	.4 U	NA	0.5	.4 U	NA	0.5 U	.4 U	NA	NA	NA	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	NA	NA	NA	4	NA	NA	1 U	NA	NA	NA	6
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	NA	NA	NA	10	NA	NA	10 U	NA	NA	NA	14
Total Organic Carbon (TOC) (EPA 415.1)	mg/L	NA	NA	NA	1	NA	NA	1	NA	NA	NA	1.0	NA
Total Organic Halides (TOX) (EPA 450.1)	mg/L	NA	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	NA	NA	0.07
Microbiology													
Heterotrophic plate count (SM 9215-B/C)	cfu/mL	830	NA	NA	3800	NA	NA	12000	NA	NA	NA	NA	NA

OHM Sample Number	96-T390-W-199	96-T390-W-202	96-T390-W-223	97-T390-W-383	97-T390-W-385	97-T390-W-387	97-T390-W-388
Sample Location	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate	Equipment Rinsate
Date Collected	09/19/96	09/19/96	09/19/96	01/21/97	01/21/97	01/21/97	01/21/97
Total Petroleum Hydrocarbons (CA LUFT-8015M)							
TPH as Diesel	100 U	100 U	100 U	100 U	100 U	100 U	100 U
TPH as Gasoline	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Volatile Aromatic Compounds (EPA 8020)							
Benzene	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U
Ethylbenzene	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U
Methyl tert-butyl ether (MTBE)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U	.3 U
Xylenes (total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Volatile Organic Compounds (EPA 8260A)							
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	5 U	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	5 U	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	5 U	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	5 U	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	5 U	NA
1,2-Dichloroethane	NA	NA	NA	NA	NA	5 U	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	5 U	NA
2-Butanone (MEK)	NA	NA	NA	NA	NA	10 U	NA
2-Chloroethyl vinyl ether	NA	NA	NA	NA	NA	10 U	NA
2-Hexanone	NA	NA	NA	NA	NA	10 U	NA
4-Methyl-2-pentanone (MIBK)	NA	NA	NA	NA	NA	10 U	NA
Acetone	NA	NA	NA	NA	NA	10 U	NA
Benzene	NA	NA	NA	NA	NA	5 U	NA
Bromodichloromethane	NA	NA	NA	NA	NA	5 U	NA
Bromoform	NA	NA	NA	NA	NA	5 U	NA
Bromomethane	NA	NA	NA	NA	NA	5 U	NA
Carbon disulfide	NA	NA	NA	NA	NA	5 U	NA
Carbon tetrachloride	NA	NA	NA	NA	NA	5 U	NA
Chlorobenzene	NA	NA	NA	NA	NA	5 U	NA
Chloroethane	NA	NA	NA	NA	NA	5 U	NA
Chloroform	NA	NA	NA	NA	NA	5 U	NA
Chloromethane	NA	NA	NA	NA	NA	5 U	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	5 U	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	5 U	NA
Dibromochloromethane	NA	NA	NA	NA	NA	5 U	NA
Ethylbenzene	NA	NA	NA	NA	NA	5 U	NA
Methylene chloride	NA	NA	NA	NA	NA	5.1 B	NA
Styrene	NA	NA	NA	NA	NA	5 U	NA
Tetrachloroethene	NA	NA	NA	NA	NA	5 U	NA
Toluene	NA	NA	NA	NA	NA	5 U	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	5 U	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	5 U	NA
Trichloroethene	NA	NA	NA	NA	NA	5 U	NA
Trichlorofluoromethane	NA	NA	NA	NA	NA	5 U	NA
Vinyl acetate	NA	NA	NA	NA	NA	10 U	NA
Vinyl Chloride	NA	NA	NA	NA	NA	5 U	NA
Xylenes (total)	NA	NA	NA	NA	NA	5 U	NA
Metals (EPA 6010A)							
Aluminum	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA
Iron	20 U	20 U	20 U	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA
Molybdenum	NA	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA	NA
Potassium	1000 U	1000 U	1000 U	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA
Mercury (EPA 7470A)	NA	NA	NA	NA	NA	NA	NA
General Chemistry							
Specific Conductance (EPA 120.1)	NA	NA	NA	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.2)	NA	NA	NA	NA	NA	NA	NA
pH (EPA 150.1)	5.6	5.8	6.4	NA	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	10 U	10 U	10 U	NA	NA	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	10 U	10 U	10 U	NA	NA	NA	NA
Chloride (EPA 300.0)	NA	NA	NA	NA	NA	NA	NA
Fluoride (EPA 340.2)	NA	NA	NA	NA	NA	NA	NA
Nitrate (EPA 300.0)	12.3 R	.1 U	.1 U	NA	NA	NA	NA
Sulfate (EPA 300.0)	1 UR	1 U	1 U	NA	NA	NA	NA
Alkalinity (EPA 310.1)	10 U	10 U	10 U	NA	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	.05 U	.05 U	.05 U	NA	NA	NA	NA
Total Kjeldahl Nitrogen (TKN) (EPA 351.4)	0.5 U	0.5 U	0.5 U	NA	NA	NA	NA
Phosphorus, Total (EPA 365.2)	0.5 U	0.5 U	0.5 U	NA	NA	NA	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.1)	0.5 U	0.5 U	0.5 U	NA	NA	NA	NA
Total Organic Halides (TOX) (EPA 450.1)	NA	NA	NA	NA	NA	NA	NA
Microbiology							
Heterotrophic plate count (SM 9215-B/C)	1 U	660	1 U	NA	NA	NA	NA

Table C-7
Summary of Analytical Results for
USTs 390 A and B
MCAS El Toro, Santa Ana, California

OHM Sample Number		18292-436	96-T390-W-198	96-T390-W-201	96-T390-W-221	97-T390-W-582	18292-433
Sample Location		Equipment Rinsate	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
Date Collected		05/06/97	09/19/96	09/19/96	09/19/96	01/21/97	05/06/97
	Unit						
Total Petroleum Hydrocarbons (CA LUFT-8015M)							
TPH as Diesel	µg/L	100 U	NA	NA	NA	NA	100 U
TPH as Gasoline	µg/L	102	100 U	100 U	100 U	100 U	100 U
Volatile Aromatic Compounds (EPA 8020)							
Benzene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	NA
Ethylbenzene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	NA
Methyl tert-butyl ether (MTBE)	µg/L	1 U	1 U	1 U	1 U	1 U	NA
Toluene	µg/L	.3 U	.3 U	.3 U	.3 U	.3 U	NA
Xylenes (total)	µg/L	1 U	1 U	1 U	1 U	1 U	NA
Volatile Organic Compounds (EPA 8260A)							
1,1,1-Trichloroethane	µg/L	NA	NA	NA	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	µg/L	NA	NA	NA	5 U	5 U	5 U
1,1,2-Trichloroethane	µg/L	NA	NA	NA	5 U	5 U	5 U
1,1-Dichloroethane	µg/L	NA	NA	NA	5 U	5 U	5 U
1,1-Dichloroethene	µg/L	NA	NA	NA	5 U	5 U	5 U
1,2-Dichloroethane	µg/L	NA	NA	NA	5 U	5 U	5 U
1,2-Dichloropropane	µg/L	NA	NA	NA	5 U	5 U	5 U
2-Butanone (MEK)	µg/L	NA	NA	NA	10 U	10 U	10 U
2-Chloroethyl vinyl ether	µg/L	NA	NA	NA	10 U	10 U	10 UJ
2-Hexanone	µg/L	NA	NA	NA	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	µg/L	NA	NA	NA	10 U	10 U	10 U
Acetone	µg/L	NA	NA	NA	10 U	10 U	10 UJ
Benzene	µg/L	NA	NA	NA	5 U	5 U	5 U
Bromodichloromethane	µg/L	NA	NA	NA	5 U	5 U	5 U
Bromoform	µg/L	NA	NA	NA	5 U	5 U	5 U
Bromomethane	µg/L	NA	NA	NA	5 U	5 U	5 U
Carbon disulfide	µg/L	NA	NA	NA	5 U	5 U	5 U
Carbon tetrachloride	µg/L	NA	NA	NA	5 U	5 U	5 U
Chlorobenzene	µg/L	NA	NA	NA	5 U	5 U	5 U
Chloroethane	µg/L	NA	NA	NA	5 U	5 U	5 U
Chloroform	µg/L	NA	NA	NA	5 U	5 U	5 U
Chloromethane	µg/L	NA	NA	NA	5 U	5 U	5 UJ
cis-1,2-Dichloroethene	µg/L	NA	NA	NA	5 U	5 U	5 U
cis-1,3-Dichloropropene	µg/L	NA	NA	NA	5 U	5 U	5 U
Dibromochloromethane	µg/L	NA	NA	NA	5 U	5 U	5 U
Ethylbenzene	µg/L	NA	NA	NA	5 U	5 U	5 U
Methylene chloride	µg/L	NA	NA	NA	3.5 J	1.7 J	2.4 J
Styrene	µg/L	NA	NA	NA	5 U	5 U	5 U
Tetrachloroethene	µg/L	NA	NA	NA	5 U	5 U	5 U
Toluene	µg/L	NA	NA	NA	5 U	5 U	5 U
trans-1,2-Dichloroethene	µg/L	NA	NA	NA	5 U	5 U	5 U
trans-1,3-Dichloropropene	µg/L	NA	NA	NA	5 U	5 U	5 U
Trichloroethene	µg/L	NA	NA	NA	5 U	5 U	5 U
Trichlorofluoromethane	µg/L	NA	NA	NA	5 UJ	5 U	5 UJ
Vinyl acetate	µg/L	NA	NA	NA	10 U	10 U	10 U
Vinyl Chloride	µg/L	NA	NA	NA	5 U	5 U	5 U
Xylenes (total)	µg/L	NA	NA	NA	5 U	5 U	5 U
Metals (EPA 6010A)							
Aluminum	µg/L	NA	NA	NA	NA	NA	NA
Antimony	µg/L	NA	NA	NA	NA	NA	NA
Arsenic	µg/L	NA	NA	NA	NA	NA	NA
Barium	µg/L	NA	NA	NA	NA	NA	NA
Beryllium	µg/L	NA	NA	NA	NA	NA	NA
Cadmium	µg/L	NA	NA	NA	NA	NA	NA
Calcium	µg/L	NA	NA	NA	NA	NA	NA
Chromium	µg/L	NA	NA	NA	NA	NA	NA
Cobalt	µg/L	NA	NA	NA	NA	NA	NA
Copper	µg/L	NA	NA	NA	NA	NA	NA
Iron	µg/L	NA	NA	NA	NA	NA	NA
Lead	µg/L	NA	NA	NA	NA	NA	NA
Magnesium	µg/L	NA	NA	NA	NA	NA	NA
Manganese	µg/L	NA	NA	NA	NA	NA	NA
Molybdenum	µg/L	NA	NA	NA	NA	NA	NA
Nickel	µg/L	NA	NA	NA	NA	NA	NA
Potassium	µg/L	NA	NA	NA	NA	NA	NA
Selenium	µg/L	NA	NA	NA	NA	NA	NA
Silver	µg/L	NA	NA	NA	NA	NA	NA
Sodium	µg/L	NA	NA	NA	NA	NA	NA
Thallium	µg/L	NA	NA	NA	NA	NA	NA
Vanadium	µg/L	NA	NA	NA	NA	NA	NA
Zinc	µg/L	NA	NA	NA	NA	NA	NA
Mercury (EPA 7470A)	µg/L	NA	NA	NA	NA	NA	NA
General Chemistry							
Specific Conductance (EPA 120.1)	umhos/cm	NA	NA	NA	NA	NA	NA
Hardness as CaCO3 (EPA 130.2)	mg/L	NA	NA	NA	NA	NA	NA
pH (EPA 150.1)	pH units	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS) (EPA 160.1)	mg/L	NA	NA	NA	NA	NA	NA
Total Suspended Solids (TSS) (EPA 160.2)	mg/L	NA	NA	NA	NA	NA	NA
Chloride (EPA 300.0)	mg/L	NA	NA	NA	NA	NA	NA
Fluoride (EPA 340.2)	mg/L	NA	NA	NA	NA	NA	NA
Nitrate (EPA 300.0)	mg/L	NA	NA	NA	NA	NA	NA
Sulfate (EPA 300.0)	mg/L	NA	NA	NA	NA	NA	NA
Alkalinity (EPA 310.1)	mg/L	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate/Nitrite (EPA 353.2 / EPA 353.3)	mg/L	NA	NA	NA	NA	NA	NA
Total Kjeldahl Nitrogen (TKN) (EPA 351.4)	mg/L	NA	NA	NA	NA	NA	NA
Phosphorus, Total (EPA 365.2)	mg/L	NA	NA	NA	NA	NA	NA
Biochemical Oxygen Demand (BOD) (EPA 405.1)	mg/L	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD) (EPA 410.4)	mg/L	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC) (EPA 415.1)	mg/L	NA	NA	NA	NA	NA	NA
Total Organic Halides (TOX) (EPA 450.1)	mg/L	NA	NA	NA	NA	NA	NA
Microbiology							
Heterotrophic plate count (SM 9215-B/C)	cfu/mL	NA	NA	NA	NA	NA	NA

Appendix D
Analytical Laboratory Reports, Chain-of-Custody Forms, and Laboratory Validation Reports

O[illegible] Remediation Se[illegible]s Corp.

TRANSFER 3
Form 0019
Field Technical Services
Rev. 08/89

CHAIN-OF-CUSTODY RECORD

970083 H1/WA4

201876

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

PROJECT NAME: Tank Farm 2 - GroundWater
PROJECT LOCATION: M.C.A.S. EL TORO
PROJ. NO.: 17486
PROJECT CONTACT: Thizar Tintut-Williams
PROJECT TELEPHONE NO.: (714) 263-1146 x 620
CLIENT'S REPRESENTATIVE: Lynn Hornecker-SWDIV
PROJECT MANAGER/SUPERVISOR: Bill Sedlak - OHM

ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS): TPH - Purgable; TPH - Extractable; 8260

T=2°C
EMAX
TORRANCE, CA.

ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	TPH - Purgable	TPH - Extractable	8260					REMARKS
1	17486-225	4/17/97	0730		X	Trip Blank for 4/17/97	2	X		X					
2	17486-226	4/17/97	0800		X	Equipment Rinsate from After 13UGMW-32 Pump "A"	3	X	X						24 hr T.A.T.
3	17486-227	4/17/97	0820		X	Equipment Rinsate from After 15BDMW-51 Pump "B"	3	X	X						24 hr. T.A.T.
4	17486-228	4/17/97	1035		X	GroundWater Sample from TF2-MW-02 Pump "A"	5	X	X	X					
5	17486-229	4/17/97	1410		X	GroundWater Sample from TF2-MW-04 Pump "B"	5	X	X	X					
6	17486-230	4/17/97	1412		X	GroundWater Sample from TF2-MW-04 Pump "B"	5	X	X	X					
7															
8															
9															
10															

Mark L. Bemmel 4/17/97

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1	1 to 6	Mark L. Bemmel	Don Knowles	4/17/97	1450
2	1 to 6	Don Knowles	J. Slater	4/17/97	1620
3					
4					

REMARKS
1) 14 DAY T.A.T.

SAMPLER'S SIGNATURE: Mark L. Bemmel

1001

EPA METHOD M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

ENT:	OHM Remediation Services	DATE COLLECTED:	04/17/97
JECT:	MCAS El Toro/17486/D.O. 24	DATE RECEIVED:	04/17/97
CH NO.:	97D083	DATE EXTRACTED:	04/18/97
RIX:	WATER	DATE ANALYZED:	04/18/97

PLE ID	CONTROL NO	RESULT (mg/L)	H-C RANGE	% RECOVERY SURR1	% RECOVERY SURR2	DL FACTOR	PRL (mg/L)
86-226	D083-02	ND	N.A.	76	85	1	.5
86-227	D083-03	ND	N.A.	81	90	1	.5
86-228	D083-04	ND	N.A.	78	87	1	.5
86-229	D083-05	ND	N.A.	86	84	1	.5
86-230	D083-06	ND	N.A.	85	87	1	.5
K1W	DSD029WB	ND	N.A.	90	93	1	.5
LIMIT:				65-135	60-140		

RR1 : Bromobenzene
RR2 : Hexacosane
L : Project Reporting Limit
RANGE: C10-C15 = JP5
C6-C12 = Gas
C10-C24 = Diesel
C18-C34 = Motor Oil

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

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

ENT: OHM Remediation Services
JECT: MCAS El Toro/17486/D.O. 24
P EPA M8015
K WATER
OISTURE: NA

TCH NO.: 97D083
PLE ID: 17486-235
TROL NO.: D100-05

DATE RECEIVED: NA
DATE EXTRACTED: 04/18/97
DATE ANALYZED: 04/18/97

CESSION: 97D083 D100

RAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD %	QC LIMIT %	RPD LIMIT %
esel	.39	1.00	1.34	95	1.00	1.31	92	3	65-135	30

RROGATE PARAMETER	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	QC LIMIT %
omobenzene	1.00	1.16	116	1.00	1.08	108	65-135
xacosane	1.00	1.02	102	1.00	.97	97	60-140

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

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

IENT: OHM Remediation Services
OJECT: MCAS El Toro/17486/D.O. 24
THOD: EPA M8015
.TRIX: WATER
MOISTURE: NA

.TCH NO.: 97D083
.MPLE ID: LCS1W/LCD1W
)NTROL NO.: DSD029WL/C

DATE RECEIVED: NA
DATE EXTRACTED: 04/18/97
DATE ANALYZED: 04/18/97

:CESSION: 97D083 D095 D100

.RAMETER	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 %	RPD LIMIT %
iesel	ND	1.00	.80	80	1.00	.89	89	11	65-135	30

JRROGATE PARAMETER	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	QC LIMIT %
romobenzene	1.00	.90	90	1.00	.92	92	65-135
exacosane	1.00	.95	95	1.00	.97	97	60-140

EPA 5030/M8015
TOTAL PETROLEUM HYDROCARBONS BY PURGE & TRAP

T:	OHM Remediation Services	DATE COLLECTED:	04/17/97
T:	MCAS El Toro/17486/D.O. 24	DATE RECEIVED:	04/17/97
CH NO.:	97D083	DATE EXTRACTED:	NA
RIX:	WATER	DATE ANALYZED:	04/17/97

MPLE ID	CONTROL NO	RESULT (mg/L)	% RECOVERY SURR	DILUTION FACTOR	PRL (mg/L)
486-225	D083-01	ND	86	1	.05
486-226	D083-02	ND	86	1	.05
486-227	D083-03	ND	85	1	.05
486-228	D083-04	.57	92	1	.05
486-229	D083-05	1.6	101	1	.05
486-230	D083-06	1.3	103	1	.05
LK1W	VAD1314B	ND	90	1	.05

LIMIT: 65-135
RR : Bromofluorobenzene
L : Project Reporting Limit

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

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

NT: OHM Remediation Services
ECT: MCAS El Toro/17486/D.O. 24
OD: EPA M8015G
IX: WATER
DISTURE: NA

CH NO.: 97D083
LE ID: 17486-226
ROL NO.: D083-02

DATE RECEIVED: 04/17/97
DATE EXTRACTED: NA
DATE ANALYZED: 04/17/97

ESSION:

AMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD %	QC LIMIT %	RPD LIMIT %
oline	ND	.50	.522	104	.50	.492	98	6	65-135	30

ROGATE PARAMETER	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	QC LIMIT %
mofluorobenzene	.05	.0461	92	.05	.0449	90	65-135

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

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

IENT: OHM Remediation Services
DJ... MCAS El Toro/17486/D.O. 24
T EPA M8015G
TRIX. WATER
MOISTURE: NA

TCH NO.: 97D083
MPLE ID: LCS1W/LCD1W
NTROL NO.: VAD1314L/C

DATE RECEIVED: NA
DATE EXTRACTED: NA
DATE ANALYZED: 04/17/97

CESSION:

RAMETER	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 %	RPD LIMIT %
soline	ND	.50	.524	105	.50	.539	108	3	70-125	30

RROGATE PARAMETER	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	QC LIMIT %
omofluorobenzene	.05	.0483	97	.05	.0484	97	65-135

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

EPA 8260
VOLATILE ORGANICS BY GC/MS

:ENT:	OHM Remediation Services	DATE COLLECTED:	04/17/97
)JECT:	MCAS El Toro/17486/D.O. 24	DATE RECEIVED:	04/17/97
:CH NO.:	97D083	DATE EXTRACTED:	NA
IPLE ID:	17486-225	DATE ANALYZED:	04/21/97
ITROL NO.:	D083-01	MATRIX:	WATER
MOISTURE:	NA	DILUTION FACTOR:	1

RAMETERS	RESULT (ug/L)	PRL	PARAMETERS	RESULT (ug/L)	PRL
etone	ND	10	cis-1,3-Dichloropropene	ND	5
nzene	ND	5	trans-1,3-Dichloropropene	ND	5
omodichloromethane	ND	5	Ethylbenzene	ND	5
omoform	ND	5	Freon 113	ND	5
omomethane	ND	10	2-Hexanone (MBK)	ND	10
Butanone (MEK)	ND	10	Methylene chloride	8.1*	5
rbon Disulfide	ND	5	4-Metyl-2-Pentanone (MIBK)	ND	10
rbon Tetrachloride	ND	5	Metyl-t-butyl-ether (MTBE)	ND	5
lorobenzene	ND	5	Styrene	ND	5
loroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Chloroethylvinylether	ND	10	Tetrachloroethene	ND	5
loroform	ND	5	Toluene	ND	5
loromethane	ND	10	1,1,1-Trichloroethane	ND	5
bromochloromethane	ND	5	1,1,2-Thrichloroethane	ND	5
1-Dichloroethane	ND	5	Trichloroethene	ND	5
2-Dichloroethane	ND	5	Trichlorofluoromethane	ND	5
1-Dichloroethene	ND	5	Vinyl Acetate	ND	10
s-1,2-Dichloroethene	ND	5	Vinyl Chloride	ND	10
ans-1,2-Dichloroethene	ND	5	Xylenes (Total)	ND	5
2-Dichloropropane	ND	5			

RROGATE PARAMETER	% RECOVERY	QC LIMIT
2 Dichloroethane-d4	101	76-114
luene -d8	100	88-110
omofluorobenzene	100	86-115

RL : Project Reporting Limit

: Suspected lab contamination

2002

EPA 8260
VOLATILE ORGANICS BY GC/MS

IENT:	OHM Remediation Services	DATE COLLECTED:	04/17/97
C T:	MCAS El Toro/17486/D.O. 24	DATE RECEIVED:	04/17/97
I NO.:	97D083	DATE EXTRACTED:	NA
MPLE ID:	17486-228	DATE ANALYZED:	04/21/97
NTROL NO.:	D083-04	MATRIX:	WATER
MOISTURE:	NA	DILUTION FACTOR:	1

RAMETERS	RESULT (ug/L)	PRL (ug/L)	PARAMETERS	RESULT (ug/L)	PRL (ug/L)
etone	ND	10	cis-1,3-Dichloropropene	ND	5
nzene	ND	5	trans-1,3-Dichloropropene	ND	5
omodichloromethane	ND	5	Ethylbenzene	ND	5
omoform	ND	5	Freon 113	ND	5
omomethane	ND	10	2-Hexanone (MBK)	ND	10
Butanone (MEK)	ND	10	Methylene chloride	ND	5
rbon Disulfide	ND	5	4-Metyl-2-Pentanone (MIBK)	ND	10
rbon Tetrachloride	ND	5	Metyl-t-butyl-ether (MTBE)	ND	5
lorobenzene	ND	5	Styrene	ND	5
loroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Chloroethylvinylether	ND	10	Tetrachloroethene	ND	5
loroform	ND	5	Toluene	ND	5
loromethane	ND	10	1,1,1-Trichloroethane	ND	5
bromochloromethane	ND	5	1,1,2-Thrichloroethane	ND	5
1-Dichloroethane	ND	5	Trichloroethene	ND	5
2-Dichloroethane	ND	5	Trichlorofluoromethane	ND	5
1-Dichloroethene	ND	5	Vinyl Acetate	ND	10
s-1,2-Dichloroethene	ND	5	Vinyl Chloride	ND	10
ans-1,2-Dichloroethene	ND	5	Xylenes (Total)	6.7	5
2-Dichloropropane	ND	5			

RR GATE PARAMETER	% RECOVERY	QC LIMIT
2 ichloroethane-d4	96	76-114
luene -d8	94	88-110
omofluorobenzene	93	86-115

RL : Project Reporting Limit

2003

EPA 8260
VOLATILE ORGANICS BY GC/MS

IENT:	OHM Remediation Services	DATE COLLECTED:	04/17/97
OJECT:	MCAS El Toro/17486/D.O. 24	DATE RECEIVED:	04/17/97
TCH NO.:	97D083	DATE EXTRACTED:	NA
MPLE ID:	17486-229	DATE ANALYZED:	04/21/97
NTROL NO.:	D083-05	MATRIX:	WATER
MOISTURE:	NA	DILUTION FACTOR:	1

RAMETERS	(ug/L) RESULT	PRL	PARAMETERS	(ug/L) RESULT	PRL
etone	ND	10	cis-1,3-Dichloropropene	ND	5
nzene	370E	5	trans-1,3-Dichloropropene	ND	5
omodichloromethane	ND	5	Ethylbenzene	ND	5
omoform	ND	5	Freon 113	ND	5
omomethane	ND	10	2-Hexanone (MBK)	ND	10
-Butanone (MEK)	ND	10	Methylene chloride	ND	5
rbon Disulfide	ND	5	4-Metyl-2-Pentanone (MIBK)	ND	10
rbon Tetrachloride	ND	5	Metyl-t-butyl-ether (MTBE)	ND	5
lorobenzene	ND	5	Styrene	ND	5
loroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
-Chloroethylvinylether	ND	10	Tetrachloroethene	ND	5
loroform	ND	5	Toluene	ND	5
loromethane	ND	10	1,1,1-Trichloroethane	ND	5
bromochloromethane	ND	5	1,1,2-Thrichloroethane	ND	5
1-Dichloroethane	ND	5	Trichloroethene	ND	5
2-Dichloroethane	ND	5	Trichlorofluoromethane	ND	5
1-Dichloroethene	ND	5	Vinyl Acetate	ND	10
is-1,2-Dichloroethene	ND	5	Vinyl Chloride	ND	10
rans-1,2-Dichloroethene	ND	5	Xylenes (Total)	65	5
2-Dichloropropane	ND	5			

URROGATE PARAMETER	% RECOVERY	QC LIMIT
2 Dichloroethane-d4	89	76-114
oluene -d8	100	88-110
romofluorobenzene	99	86-115

RL : Project Reporting Limit
: Exceeded calibration range

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

EPA 8260
VOLATILE ORGANICS BY GC/MS

IENT:	OHM Remediation Services	DATE COLLECTED:	04/17/97
C CT:	MCAS El Toro/17486/D.O. 24	DATE RECEIVED:	04/17/97
T NO.:	97D083	DATE EXTRACTED:	NA
MPLE ID:	17486-229	DATE ANALYZED:	04/22/97
NTROL NO.:	D083-05T	MATRIX:	WATER
MOISTURE:	NA	DILUTION FACTOR:	5

RAMETERS	RESULT (ug/L)	PRL	PARAMETERS	RESULT (ug/L)	PRL
etone	ND	50	cis-1,3-Dichloropropene	ND	25
nzene	370	25	trans-1,3-Dichloropropene	ND	25
omodichloromethane	ND	25	Ethylbenzene	ND	25
omoform	ND	25	Freon 113	ND	25
omomethane	ND	50	2-Hexanone (MBK)	ND	50
Butanone (MEK)	ND	50	Methylene chloride	ND	25
rbon Disulfide	ND	25	4-Metyl-2-Pentanone (MIBK)	ND	50
rbon Tetrachloride	ND	25	Metyl-t-butyl-ether (MTBE)	ND	25
lorobenzene	ND	25	Styrene	ND	25
loroethane	ND	50	1,1,2,2-Tetrachloroethane	ND	25
Chloroethylvinylether	ND	50	Tetrachloroethene	ND	25
loroform	ND	25	Toluene	ND	25
loromethane	ND	50	1,1,1-Trichloroethane	ND	25
bromochloromethane	ND	25	1,1,2-Thrichloroethane	ND	25
1-Dichloroethane	ND	25	Trichloroethene	ND	25
2-Dichloroethane	ND	25	Trichlorofluoromethane	ND	25
1-Dichloroethene	ND	25	Vinyl Acetate	ND	50
s-1,2-Dichloroethene	ND	25	Vinyl Chloride	ND	50
ans-1,2-Dichloroethene	ND	25	Xylenes (Total)	58	25
2-Dichloropropane	ND	25			

RROGATE PARAMETER	% RECOVERY	QC LIMIT
2 ichloroethane-d4	97	76-114
luene -d8	101	88-110
omofluorobenzene	98	86-115

RL : Project Reporting Limit

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

EPA 8260
VOLATILE ORGANICS BY GC/MS

IENT:	OHM Remediation Services	DATE COLLECTED:	04/17/97
OJECT:	MCAS El Toro/17486/D.O. 24	DATE RECEIVED:	04/17/97
TCH NO.:	97D083	DATE EXTRACTED:	NA
MPLE ID:	17486-230	DATE ANALYZED:	04/21/97
NTROL NO.:	D083-06	MATRIX:	WATER
MOISTURE:	NA	DILUTION FACTOR:	1

RAMETERS	RESULT (ug/L)	PRL	PARAMETERS	RESULT (ug/L)	PRL
etone	ND	10	cis-1,3-Dichloropropene	ND	5
enzene	380E	5	trans-1,3-Dichloropropene	ND	5
romodichloromethane	ND	5	Ethylbenzene	ND	5
romoform	ND	5	Freon 113	ND	5
romomethane	ND	10	2-Hexanone (MBK)	ND	10
-Butanone (MEK)	ND	10	Methylene chloride	ND	5
arbon Disulfide	ND	5	4-Metyl-2-Pentanone (MIBK)	ND	10
arbon Tetrachloride	ND	5	Metyl-t-butyl-ether (MTBE)	ND	5
lorobenzene	ND	5	Styrene	ND	5
loroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
-Chloroethylvinylether	ND	10	Tetrachloroethene	ND	5
loroform	ND	5	Toluene	ND	5
loromethane	ND	10	1,1,1-Trichloroethane	ND	5
ibromochloromethane	ND	5	1,1,2-Thrichloroethane	ND	5
,1-Dichloroethane	ND	5	Trichloroethene	ND	5
,2-Dichloroethane	13	5	Trichlorofluoromethane	ND	5
,1-Dichloroethene	ND	5	Vinyl Acetate	ND	10
is-1,2-Dichloroethene	ND	5	Vinyl Chloride	ND	10
rans-1,2-Dichloroethene	ND	5	Xylenes (Total)	59	5
,2-Dichloropropane	ND	5			

JRROGATE PARAMETER	% RECOVERY	QC LIMIT
,2 Dichloroethane-d4	93	76-114
oluene -d8	96	88-110
romofluorobenzene	95	86-115

RL : Project Reporting Limit
: Exceeded calibration range

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

EPA 8260
VOLATILE ORGANICS BY GC/MS

I[illegible]T:	OHM Remediation Services	DATE COLLECTED:	04/17/97
[illegible]T:	MCAS El Toro/17486/D.O. 24	DATE RECEIVED:	04/17/97
T[illegible] NO.:	97D083	DATE EXTRACTED:	NA
MPLE ID:	17486-230	DATE ANALYZED:	04/22/97
NTROL NO.:	D083-06T	MATRIX:	WATER
MOISTURE:	NA	DILUTION FACTOR:	5

RAMETERS	(ug/L) RESULT	PRL	PARAMETERS	(ug/L) RESULT	PRL
etone	ND	50	cis-1,3-Dichloropropene	ND	25
nzene	350	25	trans-1,3-Dichloropropene	ND	25
omodichloromethane	ND	25	Ethylbenzene	ND	25
omoform	ND	25	Freon 113	ND	25
omomethane	ND	50	2-Hexanone (MBK)	ND	50
Butanone (MEK)	ND	50	Methylene chloride	ND	25
rbon Disulfide	ND	25	4-Metyl-2-Pentanone (MIBK)	ND	50
rbon Tetrachloride	ND	25	Metyl-t-butyl-ether (MTBE)	ND	25
lorobenzene	ND	25	Styrene	ND	25
loroethane	ND	50	1,1,2,2-Tetrachloroethane	ND	25
Chloroethylvinylether	ND	50	Tetrachloroethene	ND	25
loroform	ND	25	Toluene	ND	25
loromethane	ND	50	1,1,1-Trichloroethane	ND	25
bromochloromethane	ND	25	1,1,2-Thrichloroethane	ND	25
1-Dichloroethane	ND	25	Trichloroethene	ND	25
2-Dichloroethane	ND	25	Trichlorofluoromethane	ND	25
1-Dichloroethene	ND	25	Vinyl Acetate	ND	50
s-1,2-Dichloroethene	ND	25	Vinyl Chloride	ND	50
ans-1,2-Dichloroethene	ND	25	Xylenes (Total)	53	25
2-Dichloropropane	ND	25			

R[illegible] [illegible]ATE PARAMETER	% RECOVERY	QC LIMIT
2 [illegible]ichloroethane-d4	95	76-114
luene -d8	99	88-110
omofluorobenzene	99	86-115

L : Project Reporting Limit

2007

EPA 8260
VOLATILE ORGANICS BY GC/MS

IENT:	OHM Remediation Services	DATE COLLECTED:	NA
OJECT:	MCAS El Toro/17486/D.O. 24	DATE RECEIVED:	NA
TCH NO.:	97D083	DATE EXTRACTED:	NA
MPLE ID:	MBLK1W	DATE ANALYZED:	04/21/97
NTROL NO.:	VOD1301B	MATRIX:	WATER
MOISTURE:	NA	DILUTION FACTOR:	1

RAMETERS	RESULT (ug/L)	PRL	PARAMETERS	RESULT (ug/L)	PRL
etone	ND	10	cis-1,3-Dichloropropene	ND	5
nzene	ND	5	trans-1,3-Dichloropropene	ND	5
omodichloromethane	ND	5	Ethylbenzene	ND	5
omoform	ND	5	Freon 113	ND	5
omomethane	ND	10	2-Hexanone (MBK)	ND	10
Butanone (MEK)	ND	10	Methylene chloride	ND	5
rbon Disulfide	ND	5	4-Metyl-2-Pentanone (MIBK)	ND	10
rbon Tetrachloride	ND	5	Metyl-t-butyl-ether (MTBE)	ND	5
lorobenzene	ND	5	Styrene	ND	5
loroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Chloroethylvinylether	ND	10	Tetrachloroethene	ND	5
loroform	ND	5	Toluene	ND	5
loromethane	ND	10	1,1,1-Trichloroethane	ND	5
bromochloromethane	ND	5	1,1,2-Thrichloroethane	ND	5
1-Dichloroethane	ND	5	Trichloroethene	ND	5
2-Dichloroethane	ND	5	Trichlorofluoromethane	ND	5
1-Dichloroethene	ND	5	Vinyl Acetate	ND	10
s-1,2-Dichloroethene	ND	5	Vinyl Chloride	ND	10
ans-1,2-Dichloroethene	ND	5	Xylenes (Total)	ND	5
2-Dichloropropane	ND	5			

RROGATE PARAMETER	% RECOVERY	QC LIMIT
2 Dichloroethane-d4	111	76-114
luene -d8	105	88-110
omofluorobenzene	98	86-115

L : Project Reporting Limit

2008

EPA 8260
VOLATILE ORGANICS BY GC/MS

T:	OHM Remediation Services	DATE COLLECTED:	NA
CT:	MCAS El Toro/17486/D.O. 24	DATE RECEIVED:	NA
TCH NO.:	97D083	DATE EXTRACTED:	NA
MPLE ID:	MBLK2W	DATE ANALYZED:	04/22/97
NTROL NO.:	VOD1401B	MATRIX:	WATER
MOISTURE:	NA	DILUTION FACTOR:	1

ARAMETERS	RESULT (ug/L)	PRL	PARAMETERS	RESULT (ug/L)	PRL
cetone	ND	10	cis-1,3-Dichloropropene	ND	5
enzene	ND	5	trans-1,3-Dichloropropene	ND	5
romodichloromethane	ND	5	Ethylbenzene	ND	5
romoform	ND	5	Freon 113	ND	5
romomethane	ND	10	2-Hexanone (MBK)	ND	10
-Butanone (MEK)	ND	10	Methylene chloride	ND	5
arbon Disulfide	ND	5	4-Metyl-2-Pentanone (MIBK)	ND	10
arbon Tetrachloride	ND	5	Metyl-t-butyl-ether (MTBE)	ND	5
hlorobenzene	ND	5	Styrene	ND	5
hloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
-Chloroethylvinylether	ND	10	Tetrachloroethene	ND	5
hloroform	ND	5	Toluene	ND	5
hloromethane	ND	10	1,1,1-Trichloroethane	ND	5
ibromochloromethane	ND	5	1,1,2-Thrichloroethane	ND	5
,1-Dichloroethane	ND	5	Trichloroethene	ND	5
,2-Dichloroethane	ND	5	Trichlorofluoromethane	ND	5
,1-Dichloroethene	ND	5	Vinyl Acetate	ND	10
is-1,2-Dichloroethene	ND	5	Vinyl Chloride	ND	10
rans-1,2-Dichloroethene	ND	5	Xylenes (Total)	ND	5
,2-Dichloropropane	ND	5			

UT GATE PARAMETER	% RECOVERY	QC LIMIT
,2 Dichloroethane-d4	102	76-114
oluene -d8	100	88-110
romofluorobenzene	93	86-115

RL : Project Reporting Limit

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

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

IENT: OHM Remediation Services
OJECT: MCAS El Toro/17486/D.O. 24
THOD: EPA 8260
TRIX: WATER
MOISTURE: NA

TCH NO.: 97D083
MPLE ID: 17486-235
NTROL NO.: D100-05

DATE RECEIVED: NA
DATE EXTRACTED: NA
DATE ANALYZED: 04/22/97

CESSION: 97D083 D100

RAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	RPD %	QC LIMIT %	RPD LIMIT %
1-Dichloroethene	ND	250.00	259.00	104	250.00	268.00	107	3	61-145	14
nzene	616.00	250.00	927.00	124	250.00	950.00	133+	7	76-127	11
ichloroethene	ND	250.00	261.00	104	250.00	264.00	106	1	71-120	14
luene	ND	250.00	261.00	104	250.00	269.00	108	3	76-125	13
lorobenzene	ND	250.00	268.00	107	250.00	279.00	112	4	75-130	13

RROGATE PARAMETER	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	QC LIMIT %
2-Dichlorethane-d4	250.00	256.00	102	250.00	260.00	104	76-114
luene-d8	250.00	246.00	98	250.00	244.00	98	88-110
Bromofluorobenzene	250.00	243.00	97	250.00	237.00	95	86-115

: Out of QC limits

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

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

.IENT: OHM Remediation Services
RC T: MCAS El Toro/17486/D.O. 24
E EPA 8260
ATRIX: WATER
MOISTURE: NA

ATCH NO.: 97D083
AMPLE ID: LCS1W/LCD1W
ONTROL NO.: VOD1301L/Y

DATE RECEIVED: NA
DATE EXTRACTED: NA
DATE ANALYZED: 04/21/97

CCESSION:

ARAMETER	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 %	RPD LIMIT %
,1-Dichloroethene	ND	20.00	18.90	95	20.00	19.80	99	5	10-234	14
enzene	ND	20.00	18.40	92	20.00	18.90	95	3	37-151	11
richloroethene	ND	20.00	18.50	92	20.00	18.90	95	2	71-157	14
oluene	ND	20.00	18.40	92	20.00	20.00	100	9	47-150	13
hlorobenzene	ND	20.00	19.60	98	20.00	20.30	102	4	37-160	13

URROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT %
,2-Dichlorethane-d4	50.00	52.70	105	50.00	49.60	99	76-114
oluene-d8	50.00	47.70	95	50.00	48.30	97	88-110
-Bromofluorobenzene	50.00	46.80	94	50.00	47.40	95	86-115

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

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

IENT: OHM Remediation Services
OJECT: MCAS El Toro/17486/D.O. 24
THOD: EPA 8260
TRIX: WATER
MOISTURE: NA

TCH NO.: 97D083
MPLE ID: LCS2W/LCD2W
NTROL NO.: VOD1401L/C

DATE RECEIVED: NA
DATE EXTRACTED: NA
DATE ANALYZED: 04/22/97

CESSION:

RAMETER	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 %	RPD LIMIT %
1-Dichloroethene	ND	20.00	17.90	89	20.00	17.30	87	3	10-234	14
nzene	ND	20.00	18.10	91	20.00	19.20	96	6	37-151	11
ichloroethene	ND	20.00	17.80	89	20.00	19.00	95	6	71-157	14
luene	ND	20.00	18.10	90	20.00	19.30	97	7	47-150	13
lorobenzene	ND	20.00	19.00	95	20.00	19.50	98	2	37-160	13

RROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT %
2-Dichlorethane-d4	50.00	50.00	100	50.00	47.60	95	76-114
luene-d8	50.00	50.20	100	50.00	48.00	96	88-110
Bromofluorobenzene	50.00	46.80	94	50.00	47.00	94	86-115

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

Ol[illegible]ediation Services Corp.

CHAIN-OF-CUSTODY RECORD

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

970083 H1/WA4

201876

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

PROJECT NAME: Tank Farm 2 - GroundWater
PROJECT LOCATION: M.C.A.S. EL TORO
PROJ. NO.: 17486
PROJECT CONTACT: Thizar Tintut-Williams
PROJECT TELEPHONE NO.: (714) 263-1146 x 620
CLIENT'S REPRESENTATIVE: Lynn Hornecker-SWDIV
PROJECT MANAGER/SUPERVISOR: Bill Sedlak-OHM

T=2°C
EMAX
TORRANCE, CA.

ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	TPH-Purgable	TPH-Extractable	8260					REMARKS
1	17486-225	4/17/97	0730		X	Trip Blank for 4/17/97	2	X		X					
2	17486-226	4/17/97	0800		X	Equipment Rinsate from After 13UGMW-32 Pump "A"	3	X	X						24 hr T.A.T.
3	17486-227	4/17/97	0820		X	Equipment Rinsate from After 15BDMW-51 Pump "B"	3	X	X						24 hr. T.A.T.
4	17486-228	4/17/97	1035		X	GroundWater Sample from TF2-MW-02 Pump "A"	5	X	X	X					
5	17486-229	4/17/97	1410		X	GroundWater Sample from TF2-MW-04 Pump "B"	5	X	X	X					
6	17486-230	4/17/97	1412		X	GroundWater Sample from TF2-MW-04 Pump "B"	5	X	X	X					
7															
8															
9															
10															

Marlin Bernard 4/17/97

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1	1 to 6	Marlin Bernard	Don Knowles	4/17/97	1450
2	1 to 6	Don Knowles	J S Patel	4/17/97	1620
3					
4					

REMARKS
1.) 14 DAY T.A.T.

SAMPLER'S SIGNATURE: Marlin Bernard

1002

EPA 8260
VOLATILE ORGANICS BY GC/MS

:ENT:	OHM Remediation Services	DATE COLLECTED:	04/17/97
)JECT:	MCAS El Toro/17486/D.O. 24	DATE RECEIVED:	05/01/97
'CH NO.:	97D083A	DATE EXTRACTED:	NA
IPLE ID:	17486-226	DATE ANALYZED:	05/01/97
/TROL NO.:	D083-02	MATRIX:	WATER
MOISTURE:	NA	DILUTION FACTOR:	1

RAMETERS	(ug/L) RESULT	PRL	PARAMETERS	(ug/L) RESULT	PRL
etone	64	10	cis-1,3-Dichloropropene	ND	5
nzene	ND	5	trans-1,3-Dichloropropene	ND	5
omodichloromethane	ND	5	Ethylbenzene	ND	5
omoform	ND	5	Freon 113	ND	5
omomethane	ND	10	2-Hexanone (MBK)	ND	10
Butanone (MEK)	ND	10	Methylene chloride	ND	5
rbon Disulfide	ND	5	4-Metyl-2-Pentanone (MIBK)	ND	10
rbon Tetrachloride	ND	5	Metyl-t-butyl-ether (MTBE)	ND	5
lorobenzene	ND	5	Styrene	ND	5
loroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Chloroethylvinylether	ND	10	Tetrachloroethene	ND	5
loroform	ND	5	Toluene	ND	5
loromethane	ND	10	1,1,1-Trichloroethane	ND	5
oromochloromethane	ND	5	1,1,2-Thrichloroethane	ND	5
1-Dichloroethane	ND	5	Trichloroethene	ND	5
2-Dichloroethane	ND	5	Trichlorofluoromethane	ND	5
1-Dichloroethene	ND	5	Vinyl Acetate	ND	10
s-1,2-Dichloroethene	ND	5	Vinyl Chloride	ND	10
ans-1,2-Dichloroethene	ND	5	Xylenes (Total)	ND	5
2-Dichloropropane	ND	5			

RROGATE PARAMETER	% RECOVERY	QC LIMIT
2 Dichloroethane-d4	97	76-114
luene -d8	105	88-110
omofluorobenzene	99	86-115

L : Project Reporting Limit

2003

EPA 8260
VOLATILE ORGANICS BY GC/MS

CLIENT:	OHM Remediation Services	DATE COLLECTED:	04/17/97
PROJECT:	MCAS El Toro/17486/D.O. 24	DATE RECEIVED:	05/01/97
TCH NO.:	97D083A	DATE EXTRACTED:	NA
SAMPLE ID:	17486-227	DATE ANALYZED:	05/01/97
CONTROL NO.:	D083-03	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	RESULT (ug/L)	PRL	PARAMETERS	RESULT (ug/L)	PRL
Acetone	72	10	cis-1,3-Dichloropropene	ND	5
Benzene	ND	5	trans-1,3-Dichloropropene	ND	5
Bromodichloromethane	ND	5	Ethylbenzene	ND	5
Bromoform	ND	5	Freon 113	ND	5
Bromomethane	ND	10	2-Hexanone (MBK)	ND	10
2-Butanone (MEK)	ND	10	Methylene chloride	ND	5
Carbon Disulfide	ND	5	4-Metyl-2-Pentanone (MIBK)	ND	10
Carbon Tetrachloride	ND	5	Metyl-t-butyl-ether (MTBE)	ND	5
Chlorobenzene	ND	5	Styrene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
2-Chloroethylvinylether	ND	10	Tetrachloroethene	ND	5
Chloroform	ND	5	Toluene	ND	5
Chloromethane	ND	10	1,1,1-Trichloroethane	ND	5
Dibromochloromethane	ND	5	1,1,2-Thrichloroethane	ND	5
1,1-Dichloroethane	ND	5	Trichloroethene	ND	5
1,2-Dichloroethane	ND	5	Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5	Vinyl Acetate	ND	10
cis-1,2-Dichloroethene	ND	5	Vinyl Chloride	ND	10
trans-1,2-Dichloroethene	ND	5	Xylenes (Total)	ND	5
1,2-Dichloropropane	ND	5			

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
2 Dichloroethane-d4	103	76-114
Toluene -d8	107	88-110
Bromofluorobenzene	102	86-115

PRL : Project Reporting Limit

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

EPA 8260
VOLATILE ORGANICS BY GC/MS

CLIENT:	OHM Remediation Services	DATE COLLECTED:	04/17/97
PROJECT:	MCAS El Toro/17486/D.O. 24	DATE RECEIVED:	05/01/[illegible]
BATCH NO.:	97D083A	DATE EXTRACTED:	NA
SAMPLE ID:	MBLK1W	DATE ANALYZED:	05/01/9[illegible]
CONTROL NO.:	VOE0101B	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	RESULT (ug/L)	PRL	PARAMETERS	RESULT (ug/L)	PRL
Acetone	ND	10	cis-1,3-Dichloropropene	ND	5
Benzene	ND	5	trans-1,3-Dichloropropene	ND	5
Bromodichloromethane	ND	5	Ethylbenzene	ND	5
Bromoform	ND	5	Freon 113	ND	5
Bromomethane	ND	10	2-Hexanone (MBK)	ND	10
2-Butanone (MEK)	ND	10	Methylene chloride	ND	5
Carbon Disulfide	ND	5	4-Metyl-2-Pentanone (MIBK)	ND	10
Carbon Tetrachloride	ND	5	Metyl-t-butyl-ether (MTBE)	ND	5
Chlorobenzene	ND	5	Styrene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
2-Chloroethylvinylether	ND	10	Tetrachloroethene	ND	5
Chloroform	ND	5	Toluene	ND	5
Chloromethane	ND	10	1,1,1-Trichloroethane	ND	5
Dibromochloromethane	ND	5	1,1,2-Thrichloroethane	ND	5
1,1-Dichloroethane	ND	5	Trichloroethene	ND	5
1,2-Dichloroethane	ND	5	Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5	Vinyl Acetate	ND	10
cis-1,2-Dichloroethene	ND	5	Vinyl Chloride	ND	10
trans-1,2-Dichloroethene	ND	5	Xylenes (Total)	ND	5
1,2-Dichloropropane	ND	5			

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
1,2 Dichloroethane-d4	103	76-114
Toluene -d8	108	88-110
Bromofluorobenzene	101	86-115

PRL : Project Reporting Limit

2005

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: OHM Remediation Services
PROJECT: MCAS El Toro/17486/D.O. 24
METHOD: EPA 8260
MATRIX: WATER
% MOISTURE: NA

BATCH NO.: 97D083A
SAMPLE ID: 17486-272
CONTROL NO.: D149-08

DATE RECEIVED: NA
DATE EXTRACTED: NA
DATE ANALYZED: 05/01/97

ACCESSION: 97D083A D149

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	RPD %	QC LIMIT %	RPD LIMIT %
1,1-Dichloroethene	ND	50.00	58.40	117	50.00	56.30	112	4	61-145	14
Benzene	ND	50.00	61.60	123	50.00	61.30	123	0	76-127	11
Trichloroethene	ND	50.00	55.70	111	50.00	54.80	110	2	71-120	14
Toluene	ND	50.00	57.50	115	50.00	57.70	115	0	76-125	13
Chlorobenzene	ND	50.00	60.40	121	50.00	58.80	118	3	75-130	13

SURROGATE PARAMETER	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	QC LIMIT %
1,2-Dichlorethane-d4	50.00	54.60	109	50.00	51.50	103	76-114
Toluene-d8	50.00	53.50	107	50.00	53.20	106	88-110
4-Bromofluorobenzene	50.00	51.40	103	50.00	51.80	104	86-115

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

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: OHM Remediation Services
PROJECT: MCAS El Toro/17486/D.O. 24
METHOD: EPA 8260
MATRIX: WATER
% MOISTURE: NA

BATCH NO.: 97D083A
SAMPLE ID: LCS1W/LCD1W
CONTROL NO.: VOE0101L/C

DATE RECEIVED: NA
DATE EXTRACTED: NA
DATE ANALYZED: 05/01/97

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 %	RPD LIMIT %
1,1-Dichloroethene	ND	20.00	17.60	88	20.00	19.20	96	8	10-234	14
Benzene	ND	20.00	18.40	92	20.00	19.20	96	4	37-151	11
Trichloroethene	ND	20.00	17.80	89	20.00	18.50	92	4	71-157	14
Toluene	ND	20.00	18.50	92	20.00	19.60	98	6	47-150	13
Chlorobenzene	ND	20.00	19.40	97	20.00	20.00	100	3	37-160	13

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	50.00	47.10	94	50.00	50.00	100	76-114
Toluene-d8	50.00	48.80	98	50.00	51.00	102	88-110
4-Bromofluorobenzene	50.00	47.00	94	50.00	49.40	99	86-115

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

LDC Report# 2359A1

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro

Collection Date: April 17, 1997

LDC Report Date: August 27, 1997

Matrix: Water

Parameters: Volatiles

Validation Level: NFESC Level C

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 97D083

Sample Identification

17486-225
17486-228
17486-229
17486-229DL
17486-230
17486-230DL

Introduction

This data review covers 6 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260 for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) 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.

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 30.0% for all compounds with the following exceptions:

Date	Compound	%RSD	Associated Samples	Flag	A or P
4/21/97	Trichlorofluoromethane	35.233	All samples in SDG 97D083	J	A

Average relative response factors (RRF) for all volatile target compounds and system monitoring compounds were within 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% with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
4/22/97	2-Butanone Vinyl acetate 2-Chloroethylvinyl ether	27.05 58.85 44.35	17486-229DL 17486-230DL MBLK2W	J J J	A

All of the continuing calibration RRF values were within validation criteria with the following exceptions:

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
4/22/97	Vinyl acetate	0.02123 (≥0.05)	17486-229DL 17486-230DL MBLK2W	J (all detects) R (all non-detects)	A

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

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.

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.

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

All compound quantitation and CRQLs were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
17486-229 17486-230	Benzene	Sample result exceeded calibration range.	Reported result should be within calibration range.	J	A

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 17486-229 and 17486-230 and samples 17486-229DL and 17486-230DL were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD
	17486-229	17486-230	
Benzene	370	380	3
1,2-Dichloroethane	ND	13	Not calculable
Xylenes (total)	ND	59	Not calculable

Compound	Concentration (ug/L)		RPD
	17486-229DL	17486-230DL	
Benzene	370	350	6

XVII. Field Blanks

Sample 17486-225 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)
17486-225	Methylene chloride	8.1

MCAS El Toro
Volatiles - Data Qualification Summary - SDG 97D083

SDG	Sample	Compound	Flag	A or P	Reason
97D083	17486-225 17486-228 17486-229 17486-229DL 17486-230 17486-230DL	Trichlorofluoromethane	J	A	Initial calibration (%RSD)
97D083	17486-229DL 17486-230DL	2-Butanone Vinyl acetate 2-Chloroethylvinyl ether	J J J	A	Continuing calibration (%D)
97D083	17486-229DL 17486-230DL	Vinyl acetate	J (all detects) R (all non-detects)	A	Continuing calibration (RRF)
97D083	17486-229 17486-230	Benzene	J	A	Compound quantitation and CRQLs

MCAS El Toro
Volatiles - Laboratory Blank Data Qualification Summary - SDG 97D083

No Sample Data Qualified in this SDG

LDC Report# 2359B1

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	MCAS El Toro
Collection Date:	April 17, 1997
LDC Report Date:	August 27, 1997
Matrix:	Water
Parameters:	Volatiles
Validation Level:	NFESC Level C
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	97D083A

Sample Identification

17486-226
17486-227

Introduction

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

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) 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.

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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. 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 30.0% for all compounds with the following exceptions:

Date	Compound	%RSD	Associated Samples	Flag	A or P
4/21/97	Trichlorofluoromethane	35.233	All samples in SDG 97D083A	J	A

Average relative response factors (RRF) for all volatile target compounds and system monitoring compounds were within 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% with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
5/1/97	Trichlorofluoromethane Vinyl acetate	29.55 146.47	All samples in SDG 97D083A	J J	A

All of the continuing calibration RRF values were within validation criteria with the following exceptions: