

  
76 Broadway  
Sacramento, California 95818

RECEIVED

10:22 am, Jul 17, 2008

Alameda County  
Environmental Health

July 14, 2008

Ms. Barbara Jakub  
Alameda County Health Agency  
1131 Harbor Bay Parkway  
Alameda, California 94502

Re: Quarterly Status Report and Request for Closure Review Status – First Quarter 2008  
76 Station no. 5781  
3535 Pierson Street  
Oakland, CA

Dear Ms. Jakub,

I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct.

If you have any questions or need additional information, please contact me at (916) 558-7612.

Sincerely,



Bill Borgh  
Site Manager – Risk Management and Remediation

Attachment

July 14, 2008

Ms. Barbara Jakub  
Alameda County Health Care Services  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577

**Re: Annual Summary Report – First Quarter 2008**  
76 Service Station No. 5781  
3535 Pierson Street  
Oakland, California



Dear Ms. Jakub:

On behalf of ConocoPhillips Company (ConocoPhillips), Delta Consultants (Delta) is submitting the subject report and forwarding a copy of TRC's Annual Monitoring Report, *April 2007 through March 2008*, dated April 15, 2008 for the above site. TRC has uploaded a copy of their report to the GeoTracker database.

Please contact me at (916) 503-1260 if you have questions.

Sincerely,  
**DELTA CONSULTANTS**

Dennis S. Dettloff, P.G.  
Senior Project Manager  
California Registered Professional Geologist No. 7480



Enclosure

cc: Mr. Bill Borgh, ConocoPhillips (electronic copy only)

## QUARTERLY SUMMARY REPORT First Quarter 2008

76 Service Station No. 5781  
3535 Pierson Street  
Oakland, California

County: Alameda

### PREVIOUS SITE ACTIVITY

The subject site is an active service station located on the northwest corner of San Leandro Street and 66<sup>th</sup> Avenue in Oakland, California. Station facilities currently include two gasoline underground storage tanks (USTs), a 550-gallon waste oil UST, three dispenser islands under canopies, and a service station building. The product dispensers utilize a balanced vapor recovery system.

Historical data indicate that the site has been a service station since 1947. Renovation of the site first occurred in 1967, when the size of the site expanded to its current configuration.

1989 Two 10,000-gallon gasoline USTs, one 280-gallon waste oil UST and product piping were removed from the site. Confirmation soil samples collected from the UST pit indicated low residual maximum concentrations of Total Petroleum Hydrocarbons as gasoline (TPH-g), benzene, and Total Oil and Grease (TOG). After confirmation soil sampling, approximately 5,000 gallons of groundwater were removed from the UST pit and disposed offsite. A groundwater sample was collected and analyzed after recharge of the UST pit and contained TPH-g at 7,900 parts per billion (ppb) and benzene at 850 ppb. Confirmation soil samples collected from the product piping trench indicated low maximum residual concentrations of TPH-g and benzene.

April 1990 Two shallow soil borings were advanced and three groundwater monitoring wells were installed to depths of approximately 22 feet below ground surface (bgs).

August 1990 Three groundwater-monitoring wells (MW-4 through MW-6) were installed.

January 1991 A hydropunch survey was performed at the site.

March 1991 The pre-1967 UST pit was over-excavated, and two concrete slabs were removed from depths of approximately 8.5 and 10 feet bgs. Approximately 2,000 cubic yards of impacted soil was removed from the site and properly disposed. Over-excavation was limited by existing product piping. Confirmation soil samples from the former UST pit indicated low to moderate residual concentrations

of TPH-g. Approximately 20,000 gallons of groundwater were pumped from the former UST pit prior to backfilling and properly disposed.

September 1992 Three offsite groundwater monitoring wells were installed in the streets.

April 1993 One groundwater monitoring well was installed at the site.

August 1998 Oxygen Releasing Compound (ORC) was installed in monitoring well MW-6 to assist with biological attenuation of hydrocarbon compounds. Starting in 1999, the following bioattenuation parameters have been measured at the site: nitrate, sulfate, ferrous iron, dissolved oxygen, and, oxidation-reduction potential. According to Gettler-Ryan, Inc.'s (GR) Annual Monitoring and Sampling Report dated April 19, 2001, review of these parameters indicates that bioattenuation is occurring at the site.

July 2001 One offsite well boring was installed to a depth of 20 feet bgs.

October 2003 Site environmental consulting responsibilities were transferred to TRC.

## **SENSITIVE RECEPTORS**

February 27, 2006 TRC completed a sensitive receptor survey for the site. According to the California Department of Water Resources (DWR) records, no water supply wells were located within a one-half mile distance of the Site. Surface water bodies within a one-half mile of the Site include Damon Slough and Lion Creek, located approximately 775 feet south and 525 feet southeast of the site, respectively.

## **FIRST QUARTER 2008 GROUNDWATER MONITORING AND SAMPLING**

Currently, one onsite well is monitored annually during the first quarter.

During the most recent groundwater monitoring and sampling event conducted on March 22, 2008, depth to groundwater was 12.68 feet below top of casing (TOC) in (MW-A). The groundwater flow direction was not reported for the current sampling event; nor for the previous sampling event conducted on March 28, 2007.

Analytical results from the First Quarter 2008 event are discussed below. Groundwater samples were analyzed for TPH-G by EPA Method 8015M, benzene, toluene, ethylbenzene and total xylenes (BTEX) by EPA Method 8021B, and volatile organic compounds by EPA Method 8260. Analysis for MTBE was by EPA Method 8021B and 8260B.

**Liquid Phase Hydrocarbon (LPH)** LPH was not observed in monitoring well MW-A this quarter. This is consistent with the previous sampling event.

**Total Petroleum Hydrocarbons as Gasoline (TPH-G)** TPH-G was not present in the sample from well MW-A this quarter. This is consistent with the previous sampling event.

**Benzene** Benzene was not present in the sample from monitoring well MW-A this quarter. This is consistent with the previous sampling event.

**Methyl tertiary Butyl Ether (MTBE)** MTBE was not present in the sample from well MW-A this quarter. This is consistent with the previous sampling event.

### **REMEDIATION STATUS**

Remediation is not currently being conducted at the site.

### **CHARACTERIZATION STATUS**

One monitoring well (MW-A) is present at the site. Groundwater samples from this well have shown non-detectable concentrations of petroleum hydrocarbons during the last seven sampling events with the exception of MTBE at 0.54 ug/L in March 2006. Thus, closure of the site should be considered.

### **RECENT CORRESPONDENCE**

Remediation is not currently being conducted at the site.

### **THIS QUARTER ACTIVITIES (First Quarter 2008)**

- TRC monitored and sampled the groundwater monitoring well network on March 22, 2008.
- TRC prepared an *Annual Monitoring Report*, dated April 15, 2008.

### **NEXT ACTIVITIES**

- Discussions with the regulator regarding closure will be initiated.
- TRC will conduct the annual groundwater monitoring and sampling event in 2009.

**CONSULTANT: Delta Consultants**



21 Technology Drive  
Irvine, CA 92618

949.727.9336 PHONE  
949.727.7399 FAX

[www.TRCSolutions.com](http://www.TRCSolutions.com)

DATE: April 15, 2008

TO: ConocoPhillips Company  
76 Broadway  
Sacramento, CA 95818

ATTN: MR. BILL BORGH

SITE: 76 STATION 5781  
3535 PIERSON STREET  
OAKLAND, CALIFORNIA

RE: ANNUAL MONITORING REPORT  
APRIL 2007 THROUGH MARCH 2008

Dear Mr. Borgh:

Please find enclosed our Annual Monitoring Report for 76 Station 5781, located at 3535 Pierson Street, Oakland, California. If you have any questions regarding this report, please call us at (949) 727-9336.

Sincerely,

TRC

A handwritten signature in black ink, appearing to read "Anju Farfar".

Anju Farfar  
Groundwater Program Operations Manager

CC: Mr. Daniel Davis, Delta Consultants (2 copies)

Enclosures  
20-0400/5781R06.QMS

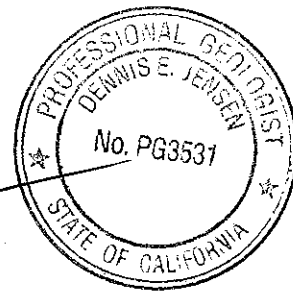
**ANNUAL MONITORING REPORT  
APRIL 2007 THROUGH MARCH 2008**

76 STATION 5781  
3535 Pierson Street  
Oakland, California

Prepared For:

Mr. Bill Borgh  
CONOCOPHILLIPS COMPANY  
76 Broadway  
Sacramento, California 95818

By:



Senior Project Geologist, Irvine Operations

Date: 4/15/08



## LIST OF ATTACHMENTS

Summary Sheet	Summary of Gauging and Sampling Activities
Tables	<p>Table Key</p> <p>Contents of Tables</p> <p>Table 1: Current Fluid Levels and Selected Analytical Results</p> <p>Table 1a: Additional Current Analytical Results</p> <p>Table 1b: Additional Current Analytical Results</p> <p>Table 1c: Additional Current Analytical Results</p> <p>Table 2: Historic Fluid Levels and Selected Analytical Results</p> <p>Table 2a: Additional Historic Analytical Results</p> <p>Table 2b: Additional Historic Analytical Results</p> <p>Table 2c: Additional Historic Analytical Results</p>
Figures	<p>Figure 1: Vicinity Map</p> <p>Figure 2: Groundwater Elevation Contour Map</p> <p>Figure 3: Dissolved-Phase TPH-G Concentration Map</p> <p>Figure 4: Dissolved-Phase Benzene Concentration Map</p> <p>Figure 5: Dissolved-Phase MTBE Concentration Map</p>
Graphs	<p>Groundwater Elevation vs. Time</p> <p>Benzene Concentrations vs. Time</p>
Field Activities	<p>General Field Procedures</p> <p>Field Monitoring Data Sheet – 03/22/08</p> <p>Groundwater Sampling Field Notes – 03/22/08</p>
Laboratory Reports	<p>Official Laboratory Reports</p> <p>Quality Control Reports</p> <p>Chain of Custody Records</p>
Statements	<p>Purge Water Disposal</p> <p>Limitations</p>



**Summary of Gauging and Sampling Activities**  
**April 2007 through March 2008**  
**76 Station 5781**  
**3535 Pierson Street**  
**Oakland, CA**

Project Coordinator: **Bill Borgh**  
Telephone: **916-558-7612**

Water Sampling Contractor: **TRC**  
Compiled by: **Christina Carrillo**

Date(s) of Gauging/Sampling Event: **03/22/08**

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**Sample Points**

Groundwater wells: **1** onsite, **0** offsite      Points gauged: **1**      Points sampled: **1**  
Purging method: **Submersible pump**  
Purge water disposal: **Onyx/Rodeo Unit 100**  
Other Sample Points: **0**      Type: **n/a**

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**Liquid Phase Hydrocarbons (LPH)**

Sample Points with LPH: **0**      Maximum thickness (feet): **n/a**  
LPH removal frequency: **n/a**      Method: **n/a**  
Treatment or disposal of water/LPH: **n/a**

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**Hydrogeologic Parameters**

Depth to groundwater (below TOC):      Minimum: **12.68 feet**      Maximum: **12.68 feet**  
Average groundwater elevation (relative to available local datum): **139.12 feet**  
Average change in groundwater elevation since previous event: **1.30 feet**  
Interpreted groundwater gradient and flow direction:  
    Current event: **n/a**  
    Previous event: **n/a (03/28/07)**

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**Selected Laboratory Results**

Sample Points with detected **Benzene**: **0**      Sample Points above MCL (1.0 µg/l): **n/a**  
    Maximum reported benzene concentration: **n/a**  
  
Sample Points with **TPH-G**      **0**  
Sample Points with **MTBE 8260B**      **0**

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**Notes:**

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This report presents the results of groundwater monitoring and sampling activities performed by TRC. Please contact the primary consultant for other specific information on this site.

# TABLES

## TABLE KEY

### STANDARD ABBREVIATIONS

--	=	not analyzed, measured, or collected
LPH	=	liquid-phase hydrocarbons
Trace	=	less than 0.01 foot of LPH in well
µg/l	=	micrograms per liter (approx. equivalent to parts per billion, ppb)
mg/l	=	milligrams per liter (approx. equivalent to parts per million, ppm)
ND<	=	not detected at or above laboratory detection limit
TOC	=	top of casing (surveyed reference elevation)

### ANALYTES

BTEX	=	benzene, toluene, ethylbenzene, and (total) xylenes
DIPE	=	di-isopropyl ether
ETBE	=	ethyl tertiary butyl ether
MTBE	=	methyl tertiary butyl ether
PCB	=	polychlorinated biphenyls
PCE	=	tetrachloroethene
TBA	=	tertiary butyl alcohol
TCA	=	trichloroethane
TCE	=	trichloroethene
TPH-G	=	total petroleum hydrocarbons with gasoline distinction
TPH-D	=	total petroleum hydrocarbons with diesel distinction
TPPH	=	total purgeable petroleum hydrocarbons
TRPH	=	total recoverable petroleum hydrocarbons
TAME	=	tertiary amyl methyl ether
1,1-DCA	=	1,1-dichloroethane
1,2-DCA	=	1,2-dichloroethane (same as EDC, ethylene dichloride)
1,1-DCE	=	1,1-dichloroethene
1,2-DCE	=	1,2-dichloroethene (cis- and trans-)

### NOTES

1. Elevations are in feet above mean sea level. Depths are in feet below surveyed top-of-casing.
2. Groundwater elevations for wells with LPH are calculated as: Surface Elevation - Measured Depth to Water + (Dp x LPH Thickness), where Dp is the density of the LPH, if known. A value of 0.75 is used for gasoline and when the density is not known. A value of 0.83 is used for diesel.
3. Wells with LPH are generally not sampled for laboratory analysis (see General Field Procedures).
4. Comments shown on tables are general. Additional explanations may be included in field notes and laboratory reports, both of which are included as part of this report.
5. A "J" flag indicates that a reported analytical result is an estimated concentration value between the method detection limit (MDL) and the practical quantification limit (PQL) specified by the laboratory.
6. Other laboratory flags (qualifiers) may have been reported. See the official laboratory report (attached) for a complete list of laboratory flags.
7. Concentration graphs based on tables (presented following Figures) show non-detect results prior to the Second Quarter 2000 plotted at fixed values for graphical display. Non-detect results reported since that time are plotted at reporting limits stated in the official laboratory report.
8. Groundwater vs. Time graphs may be corrected for apparent level changes due to resurvey.

### REFERENCE

TRC began groundwater monitoring and sampling for 76 Station 5781 in October 2003. Historical data compiled prior to that time were provided by Gettler-Ryan Inc.

# Contents of Tables 1 and 2

## Site: 76 Station 5781

### Current Event

Table 1	Well/ Date	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G (8015M)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments			
Table 1a	Well/ Date	TPH-D	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME	Total Oil and Grease	Bromo- dichloro- methane	Bromo- form	Bromo- methane	Carbon Tetra- chloride	Chloro- benzene	Chloro- ethane
Table 1b	Well/ Date	Chloroform	Chloro- methane	Dibromo- chloro- methane	1,2- Dichloro- benzene	1,3- Dichloro- benzene	1,4- Dichloro- benzene	Dichloro- difluoro- methane	1,1-DCA	1,1-DCE	cis- 1,2- DCE	trans- 1,2- DCE	1,2- Dichloro- propane	cis-1,3- Dichloro- propene	trans-1,3- Dichloro- propene	Methylene chloride
Table 1c	Well/ Date	1,1,2,2- Tetrachloro- -ethane	Tetrachloro- -ethene (PCE)	Trichloro- trifluoro- ethane	1,1,1- Trichloro- ethane	1,1,2- Trichloro- ethane	Trichloro- ethene (TCE)	Trichloro- fluoro- methane	Vinyl chloride							

### Historic Data

Table 2	Well/ Date	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G (8015M)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments			
Table 2a	Well/ Date	TPH-D	TPH-G (GC/MS)	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME	Total Oil and Grease	TRPH	Bromo- dichloro- methane	Bromo- form	Bromo- methane	Carbon Tetra- chloride
Table 2b	Well/ Date	Chloro- benzene	Chloro- ethane	2- Chloroethyl vinyl ether	Chloroform	Chloro- methane	Dibromo- chloro- methane	1,2- Dichloro- benzene	1,3- Dichloro- benzene	1,4- Dichloro- benzene	Dichloro- difluoro- methane	1,1-DCA	1,1-DCE	cis- 1,2- DCE	trans- 1,2- DCE	1,2- Dichloro- propane
Table 2c	Well/ Date	cis-1,3- Dichloro- propene	trans-1,3- Dichloro- propene	Methylene chloride	1,1,2,2- Tetrachloro- -ethane	Tetrachloro- -ethene (PCE)	Trichloro- trifluoro- ethane	1,1,1- Trichloro- ethane	1,1,2- Trichloro- ethane	Trichloro- ethene (TCE)	Trichloro- fluoro- methane	Vinyl chloride				

**Table 1**  
**CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 22, 2008**  
**76 Station 5781**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>MW-A</b>													
03/22/08	151.80	12.68	0.00	139.12	1.30	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	

**Table 1 a**  
**ADDITIONAL CURRENT ANALYTICAL RESULTS**  
**76 Station 5781**

Date Sampled	TPH-D	TBA	Ethanol (8260B)	Ethylene-dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME	Total Oil and Grease	Bromo-dichloro-methane	Bromo-form	Bromo-methane	Carbon Tetra-chloride	Chloro-benzene	Chloro-ethane
	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(mg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
MW-A															
03/22/08	ND<50	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50

**Table 1-b**  
**ADDITIONAL CURRENT ANALYTICAL RESULTS**  
**76 Station 5781**

Date Sampled	Chloroform (µg/l)	Chloro- methane (µg/l)	Dibromo- chloro- methane (µg/l)	1,2- Dichloro- benzene (µg/l)	1,3- Dichloro- benzene (µg/l)	1,4- Dichloro- benzene (µg/l)	Dichloro- difluoro- methane (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)	cis- 1,2- DCE (µg/l)	trans- 1,2- DCE (µg/l)	1,2- Dichloro- propane (µg/l)	cis-1,3- Dichloro- propene (µg/l)	trans-1,3- Dichloro- propene (µg/l)	Methylene chloride (µg/l)
<b>MW-A</b> 03/22/08	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0

**Table 1 c**  
**ADDITIONAL CURRENT ANALYTICAL RESULTS**  
**76 Station 5781**

Date Sampled	1,1,2,2-Tetrachloroethane (µg/l)	Tetrachloroethene (PCE) (µg/l)	Trichlorotrifluoroethane (µg/l)	1,1,1-Trichloroethane (µg/l)	1,1,2-Trichloroethane (µg/l)	Trichloroethene (TCE) (µg/l)	Trichlorofluoromethane (µg/l)	Vinyl chloride (µg/l)
MW-A 03/22/08	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50



**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**December 1990 Through March 2008**  
**76 Station 5781**

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground-water Elevation	Change in Elevation	TPH-G (8015M)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
<b>MW-A</b>													
12/18/90	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
05/03/91	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
08/07/91	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
11/08/91	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
02/06/92	151.80	19.88	0.00	131.92	--	ND	ND	ND	ND	ND	--	--	
08/04/92	151.80	18.95	0.00	132.85	0.93	ND	ND	ND	ND	0.51	--	--	
02/10/93	151.80	17.71	0.00	134.09	1.24	ND	ND	ND	ND	ND	--	--	
02/10/94	151.80	15.25	0.00	136.55	2.46	ND	ND	0.52	ND	0.92	--	--	
02/09/95	151.80	15.68	0.00	136.12	-0.43	ND	ND	ND	ND	ND	--	--	
02/06/96	151.80	12.52	0.00	139.28	3.16	ND	ND	ND	ND	2.1	--	--	
02/05/97	151.80	13.01	0.00	138.79	-0.49	ND	ND	ND	ND	ND	--	ND	
02/02/98	151.80	11.91	0.00	139.89	1.10	ND	ND	ND	ND	ND	--	ND	
02/22/99	151.80	11.24	0.00	140.56	0.67	ND	ND	ND	ND	ND	--	ND	
02/26/00	151.80	12.16	0.00	139.64	-0.92	ND	ND	1.01	ND	ND	--	ND	
03/07/01	151.80	11.91	0.00	139.89	0.25	ND	ND	ND	ND	ND	ND	ND	
02/22/02	151.80	14.08	0.00	137.72	-2.17	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<5.0	
02/22/03	151.80	14.41	0.00	137.39	-0.33	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	ND<2.0	
02/03/04	151.80	14.32	0.00	137.48	0.09	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<2.0	
02/18/05	151.80	14.21	0.00	137.59	0.11	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<0.50	
03/29/06	151.80	12.72	0.00	139.08	1.49	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	0.54	
03/28/07	151.80	13.98	0.00	137.82	-1.26	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
03/22/08	151.80	12.68	0.00	139.12	1.30	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 5781**

Date Sampled	TPH-D (µg/l)	TPH-G (GC/MS) (µg/l)	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Total Oil and Grease (mg/l)	TRPH (mg/l)	Bromo- dichloro- methane (µg/l)	Bromo- form (µg/l)	Bromo- methane (µg/l)	Carbon Tetra- chloride (µg/l)
<b>MW-A</b>															
12/18/90	73	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/03/91	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
08/07/91	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11/08/91	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/06/92	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
08/04/92	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/10/93	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/10/94	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/09/95	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/06/96	120	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/05/97	61	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/02/98	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/22/99	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/26/00	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/07/01	131	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--
02/22/02	ND<50	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/22/03	93	--	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	--	--
02/03/04	60	--	ND<100	ND<500	ND<2.0	ND<0.50	ND<2.0	ND<2.0	ND<2.0	--	ND<1.0	ND<0.50	ND<2.0	ND<1.0	ND<0.50
02/18/05	ND<50	--	ND<5.0	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	ND<0.50	ND<2.0	ND<1.0	ND<0.50
03/29/06	ND<200	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	ND<0.50	ND<0.50	ND<1.0	ND<0.50
03/28/07	92	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	ND<0.50	ND<0.50	ND<1.0	ND<0.50
03/22/08	ND<50	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	ND<0.50	ND<0.50	ND<1.0	ND<0.50

**Table 2 b**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 5781**

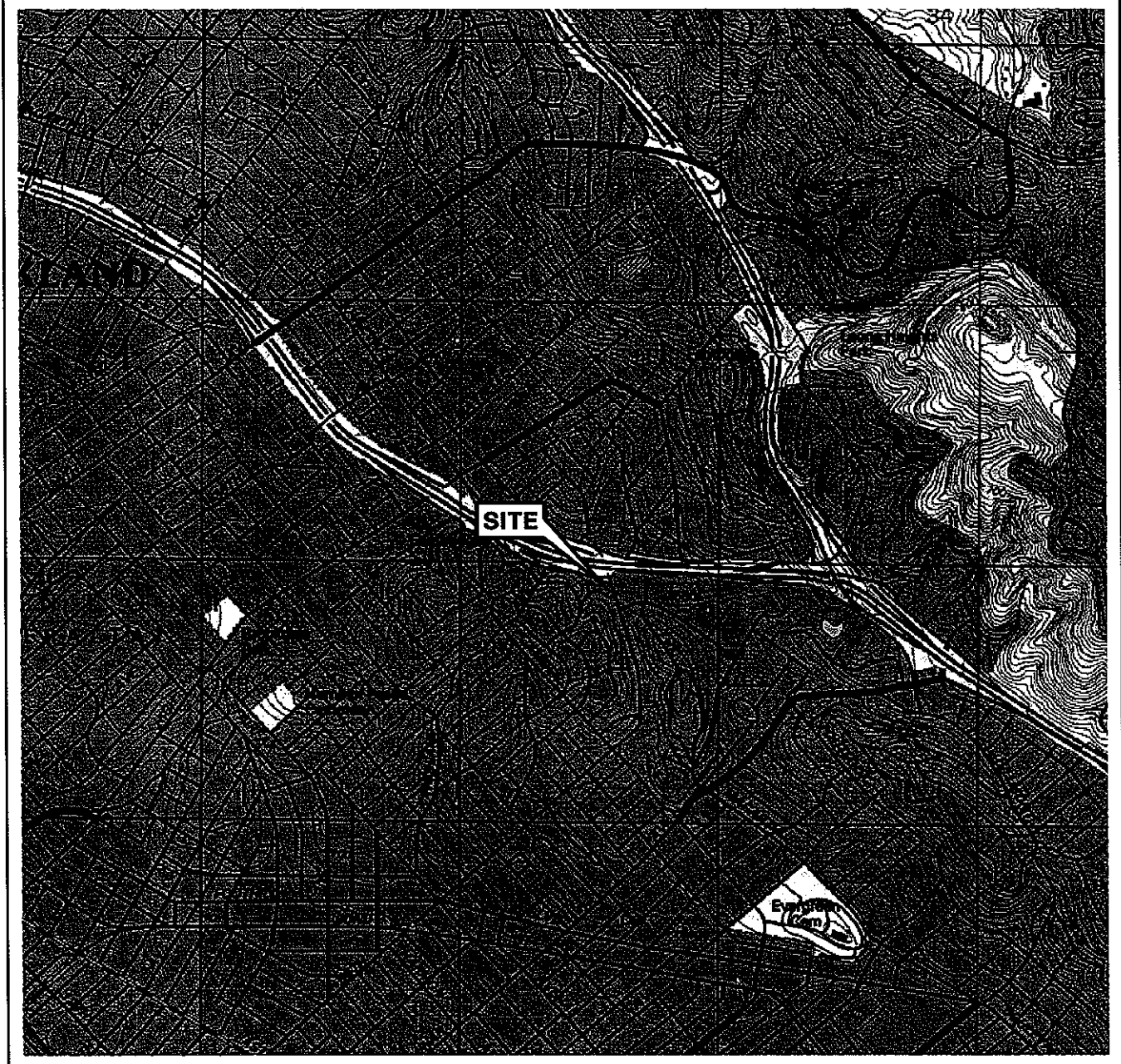
Date Sampled	Chloro-benzene	Chloro-ethane	2-Chloroethyl vinyl ether	Chloroform	Chloro-methane	Dibromo-chloro-methane	1,2-Dichloro-benzene	1,3-Dichloro-benzene	1,4-Dichloro-benzene	Dichloro-difluoro-methane	1,1-DCA	1,1-DCE	cis- 1,2-DCE	trans- 1,2-DCE	1,2-Dichloro-propane
	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
<b>MW-A</b>															
02/03/04	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<2.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
02/18/05	ND<0.50	ND<1.0	--	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
03/29/06	ND<0.50	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
03/28/07	ND<0.50	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
03/22/08	ND<0.50	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50

**Table 2 c**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 5781**

Date Sampled	cis-1,3-Dichloropropene (µg/l)	trans-1,3-Dichloropropene (µg/l)	Methylene chloride (µg/l)	1,1,2,2-Tetrachloroethane (µg/l)	Tetrachloroethene (PCE) (µg/l)	Trichlorotrifluoroethane (µg/l)	1,1,1-Trichloroethane (µg/l)	1,1,2-Trichloroethane (µg/l)	Trichloroethene (TCE) (µg/l)	Trichlorofluoromethane (µg/l)	Vinyl chloride (µg/l)
<b>MW-A</b>											
02/03/04	ND<0.50	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50
02/18/05	ND<0.50	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50
03/29/06	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
03/28/07	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
03/22/08	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50

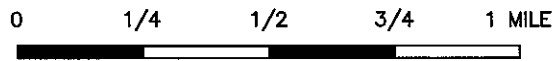
# FIGURES

PS-1: L:\DQMS VICINITY M A P S\5781\vm.dwg Nov 16, 2007 - 7:33am cwang



SOURCE:

United States Geological Survey  
7.5 Minute Topographic Map:  
Oakland East Quadrangle



SCALE 1:24,000



PROJECT: 154771


FACILITY:

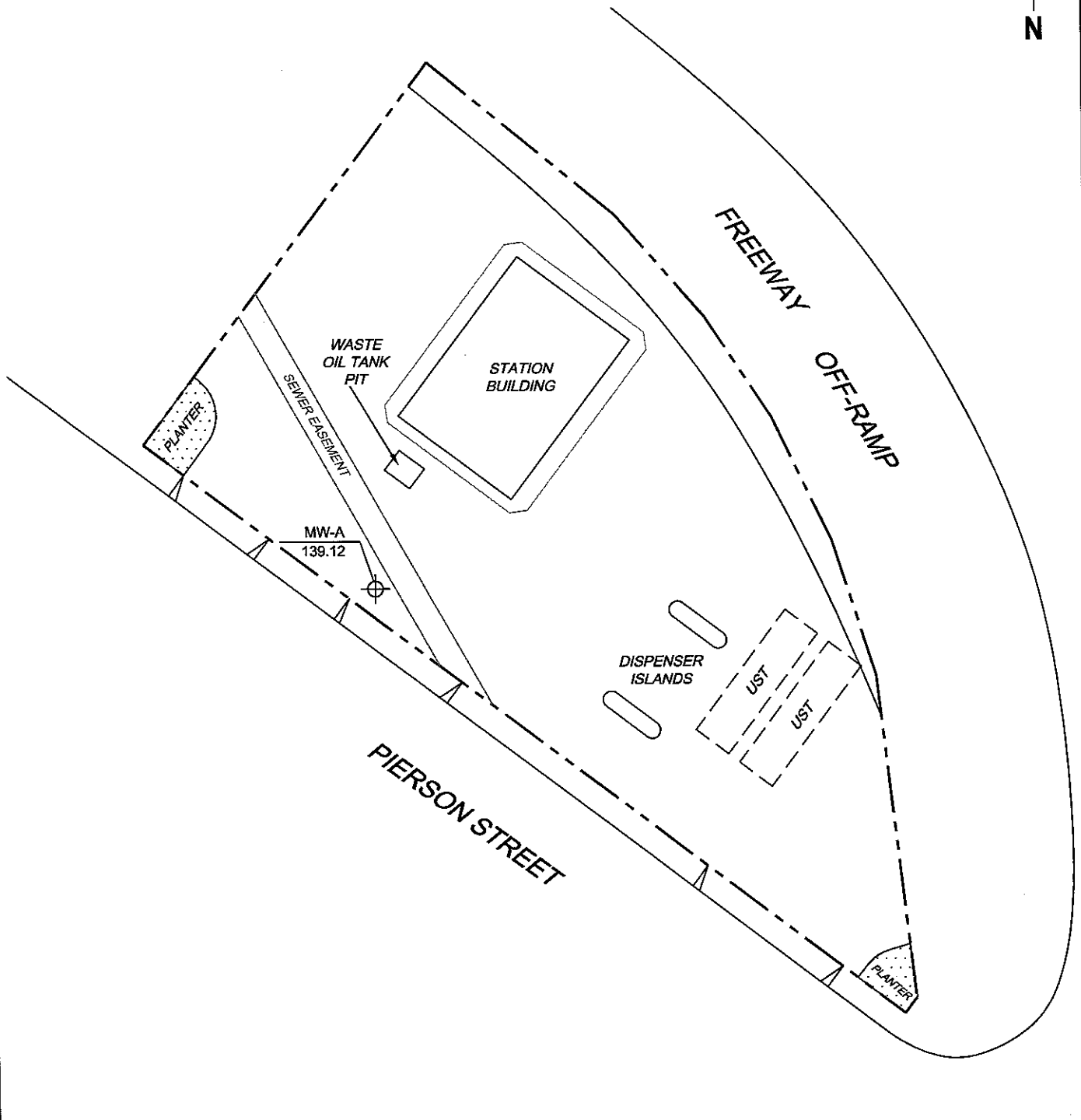
76 STATION 5781  
3535 PIERSON STREET  
OAKLAND, CALIFORNIA

VICINITY MAP

FIGURE 1

**LEGEND**

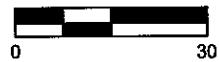
MW-A  Monitoring Well with Groundwater Elevation (feet)



**NOTES:**

Elevations are in feet above mean sea level. UST = underground storage tank.

SCALE (FEET)



L:\Graphics\QMS NORTH-SOUTH\5781\5781QMS(NEW).dwg Apr 14, 2008 - 1:28pm bschmidt

MS=1:1 5781-003




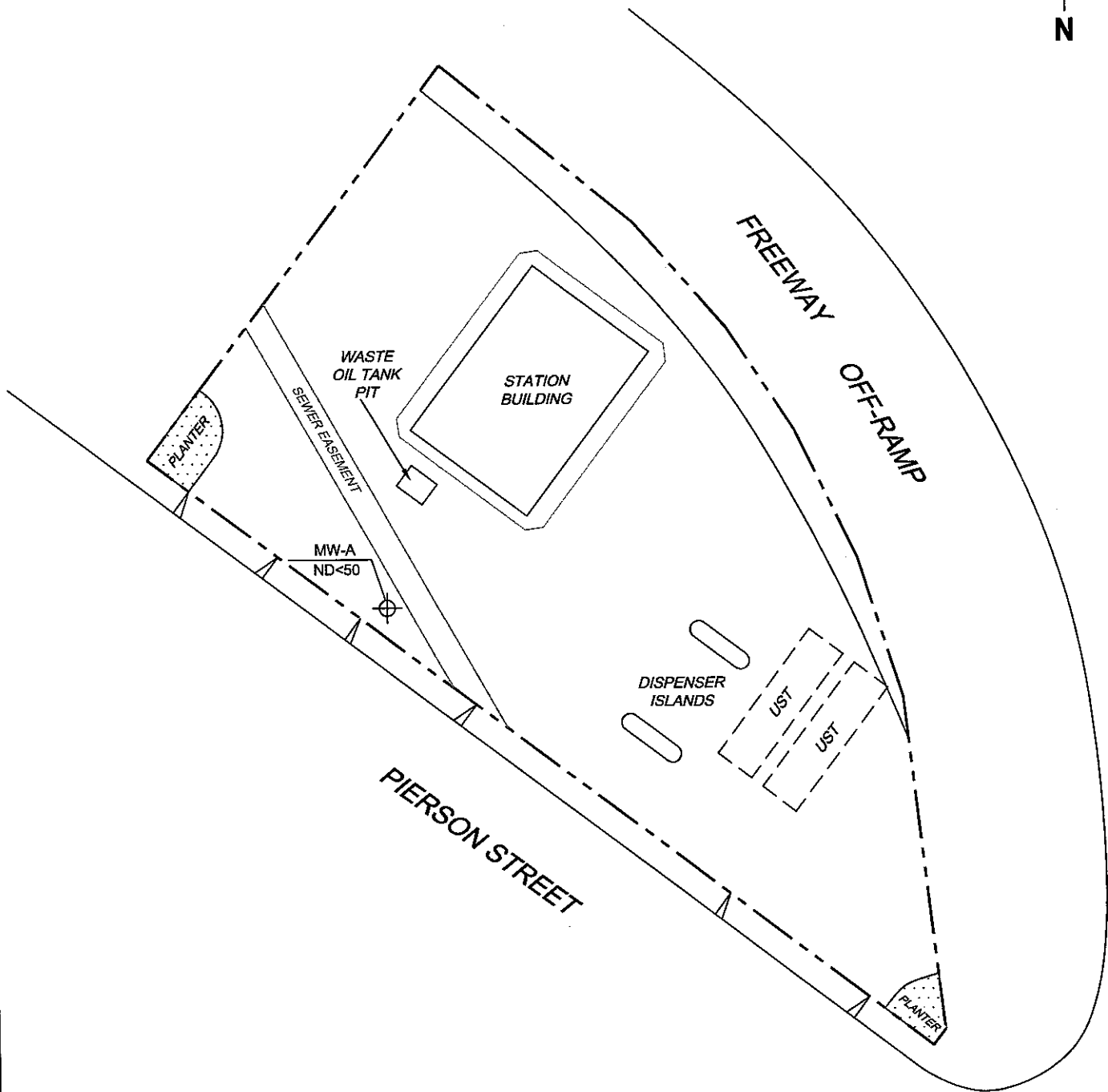
PROJECT: 154771  
 FACILITY:  
 76 STATION 5781  
 3535 PIERSON STREET  
 OAKLAND, CALIFORNIA

**GROUNDWATER ELEVATION  
 MAP**  
 March 22, 2008

**FIGURE 2**

**LEGEND**

MW-A  Monitoring Well with Dissolved-Phase TPH-G (GC/MS) Concentration (µg/l)



**NOTES:**

TPH-G = total petroleum hydrocarbons with gasoline. µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report. UST = underground storage tank. Results obtained using EPA Method 8015.

SCALE (FEET)



L:\Graphics\ICMS NORTH-SOUTH\lk-500015781+15781QMS(NEW).dwg Apr 14, 2008 - 1:28pm bschmidt

MS=1:1 5781-003




PROJECT: 154771  
 FACILITY:  
 76 STATION 5781  
 3535 PIERSON STREET  
 OAKLAND, CALIFORNIA

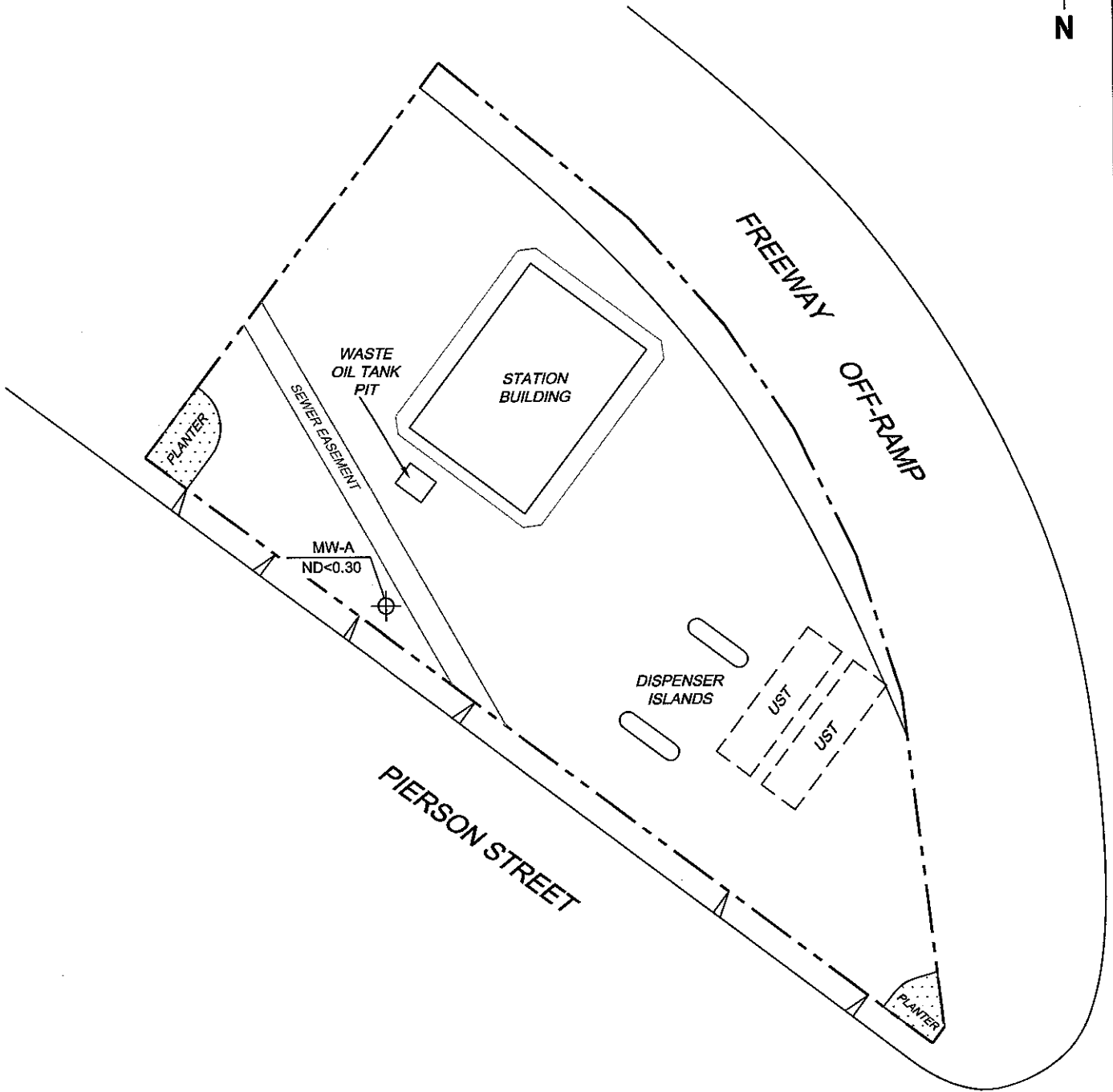
**DISSOLVED-PHASE TPH-G  
 CONCENTRATION MAP  
 March 22, 2008**

**FIGURE 3**



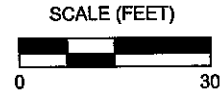
**LEGEND**

MW-A  Monitoring Well with Dissolved-Phase Benzene Concentration ( $\mu\text{g/l}$ )



**NOTES:**

$\mu\text{g/l}$  = micrograms per liter. ND = not detected at limit indicated on official laboratory report.  
 UST = underground storage tank.



L:\Graphics\ICMS NORTH-SOUTH\14-5781\ICMS(NEW).dwg Apr 14, 2008 - 1:28pm bschmidt

MS=1:1 5781-003



PROJECT: 154771

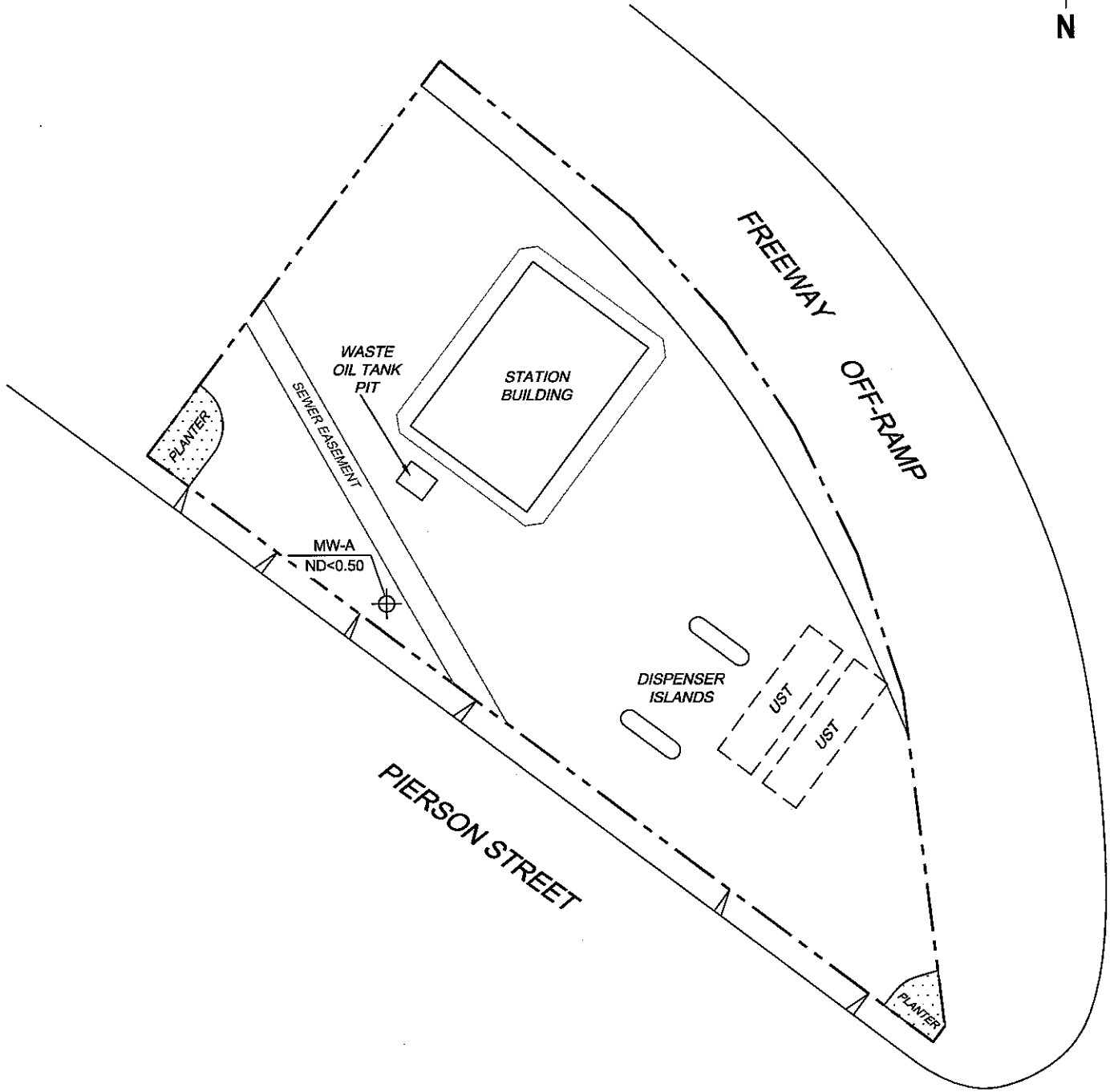
FACILITY:  
 76 STATION 5781  
 3535 PIERSON STREET  
 OAKLAND, CALIFORNIA

**DISSOLVED-PHASE BENZENE  
 CONCENTRATION MAP**  
 March 22, 2008

**FIGURE 4**

**LEGEND**

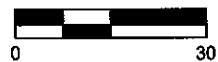
MW-A  Monitoring Well with Dissolved-Phase MTBE Concentration ( $\mu\text{g/l}$ )



**NOTES:**

MTBE = methyl tertiary butyl ether.  $\mu\text{g/l}$  = micrograms per liter. ND = not detected at limit indicated on official laboratory report. UST = underground storage tank. Results obtained using EPA Method 8260B.

SCALE (FEET)



L:\graphics\GISMS NORTH-SOUTH\5781-5781\GISMS(NEW).dwg Apr 14, 2008 - 1:28pm bschmidt

MS=1:1 5781-003



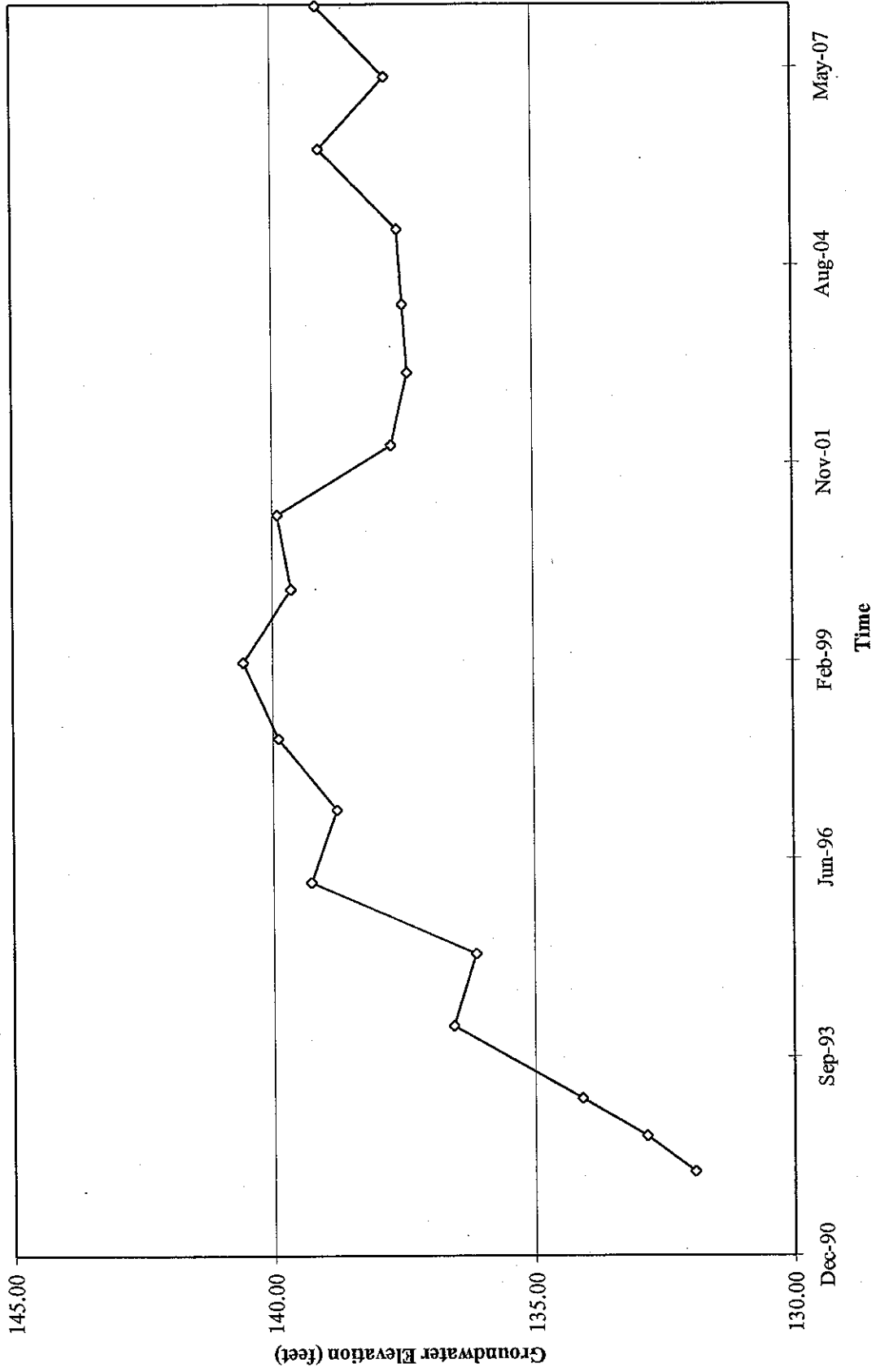
PROJECT: 154771  
 FACILITY:  
 76 STATION 5781  
 3535 PIERSON STREET  
 OAKLAND, CALIFORNIA

**DISSOLVED-PHASE MTBE  
 CONCENTRATION MAP  
 March 22, 2008**

**FIGURE 5**

# GRAPHS

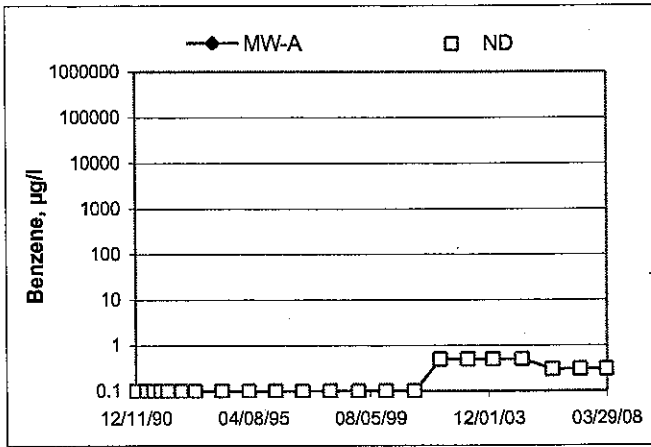
Groundwater Elevations vs. Time  
76 Station 5781



MW-A

Elevations may have been corrected for apparent changes due to resurvey

Benzene Concentrations vs Time  
76 Station 5781



# GENERAL FIELD PROCEDURES

## Groundwater Monitoring and Sampling Assignments

For each site, TRC technicians are provided with a Technical Service Request (TSR) that specifies activities required to complete the groundwater monitoring and sampling assignment for the site. TSRs are based on client directives, instructions from the primary environmental consultant for the site, regulatory requirements, and TRC's previous experience with the site.

## Fluid Level Measurements

Initial site activities include determination of well locations based on a site map provided with the TSR. Well boxes are opened and caps are removed. Indications of well or well box damage or of pressure buildup in the well are noted.

Fluid levels in each well are measured using a coated cloth tape equipped with an electronic interface probe, which distinguishes between liquid phase hydrocarbon (LPH) and water. The depth to LPH (if it is present), to water, and to the bottom of the well are measured from the top of the well casing (surveyors mark or notch if present) to the nearest 0.01 foot. Unless otherwise instructed, a well with less than 0.67 foot between the measured top of water and the measured bottom of the well casing is considered dry, and is not sampled. If the well contains 0.67 foot or more of water, an attempt is made to bail and/or sample as specified on the TSR.

Wells that are found to contain LPH are not purged or sampled. Instead, one casing volume of fluid is bailed from the well and the well is re-sealed. Bailed fluids are placed in a container separate from normal purge water, and properly disposed.

## Purging and Groundwater Parameter Measurement

TSR instructions may specify that a well not be purged (no-purge sampling), be purged using low-flow methods, or be purged using conventional pump and/or bail methods. Conventional purging generally consists of pumping or bailing until a minimum of three casing volumes of water have been removed or until the well has been pumped dry. Pumping is generally accomplished using submersible electric or pneumatic diaphragm pumps.

During conventional purging, three groundwater parameters (temperature, pH, and conductivity) are measured after removal of each casing volume. Stabilization of these parameters, to within 10 percent, confirm that sufficient purging has been completed. In some cases, the TSR indicates that other parameters are also to be measured during purging. TRC commonly measures dissolved oxygen (DO), oxidation-reduction potential (ORP), and/or turbidity. Instruments used for groundwater parameter measurements are calibrated daily according to manufacturer's instructions.

Low-flow purging utilizes a bladder or peristaltic pump to remove water from the well at a low rate. Groundwater parameters specified by the TSR are measured continuously until they become stable in general accordance with EPA guidelines.

Purge water is generally collected in labeled drums for disposal. Drums may be left on site for disposal by others, or transported to a collection location for eventual transfer to a licensed treatment or recycling facility. In some cases, purge water may be collected directly from the site by a licensed vacuum truck company, or may be treated on site by an active remediation system, if so directed.

## **Groundwater Sample Collection**

After wells are purged, or not purged, according to TSR instructions, samples are collected for laboratory analysis. For wells that have been purged using conventional pump or bail methods, sampling is conducted after the well has recovered to 80 percent of its original volume or after two hours if the well does not recover to at least 80 percent. If there is insufficient recharge of water in the well after two hours, the well is not sampled.

Samples are collected by lowering a new, disposable, ½-inch to 4-inch polyethylene bottom-fill bailer to just below the water level in the well. The bailer is retrieved and the water sample is carefully transferred to containers specified for the laboratory analytical methods indicated by the TSR. Particular care is given to containers for volatile organic analysis (VOAs) which require filling to zero headspace and fitting with Teflon-sealed caps.

After filling, all containers are labeled with project number (or site number), well designation, sample date, sample time, and the sampler's initials, and placed in an insulated chest with ice. Samples remain chilled prior to and during transport to a state-certified laboratory for analysis. Sample container descriptions and requested analyses are entered onto a chain-of-custody form in order to provide instructions to the laboratory. The chain-of-custody form accompanies the samples during transportation to provide a continuous record of possession from the field to the laboratory. If a freight or overnight carrier transports the samples, the carrier is noted on the form.

For wells that have been purged using low-flow methods, sample containers are filled from the effluent stream of the bladder or peristaltic pump. In some cases, if so specified by the TSR, samples are taken from the sample ports of actively pumping remediation wells.

### **Sequence of Gauging, Purging and Sampling**

The sequence in which monitoring activities are conducted is specified on the TSR. In general, wells are gauged beginning with the least affected well and ending with the well that has the highest concentration based on previous analytic results. After all gauging for the site is completed, wells are purged and/or sampled from the least-affected to the most-affected well.

### **Decontamination**

In order to reduce the possibility of cross contamination between wells, strict isolation and decontamination procedures are observed. Portable pumps are not used in wells with LPH. Technicians wear nitrile gloves during all gauging, purging, and sampling activities. Gloves are changed between wells and more often if warranted. Any equipment that could come in contact with fluids are either dedicated a particular well, decontaminated prior to each use, or discarded after a single use. Decontamination consists of washing in a solution of Liqui-nox and water and rinsing twice. The final rinse is in deionized water.

### **Exceptions**

Additional tasks or non-standard procedures, if any, that may be requested or required for a particular site, and noted on the site TSR, are documented in field notes on the following pages.

## FIELD MONITORING DATA SHEET

Technician: ALEX

Job #/Task #: 154771/PA20

Date: 3/22/08

Site # 5781

Project Manager A. COLLINS

Page 1 of 1

Well #	Time Gauged	TOC	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
MN-A	0555	✓	44.88	12.68	-	-	0615	2"

FIELD DATA COMPLETE      QA/QC      COC      WELL BOX CONDITION SHEETS

WTT CERTIFICATE      MANIFEST      DRUM INVENTORY      TRAFFIC CONTROL



## GROUNDWATER SAMPLING FIELD NOTES

Technician: Alex

Site: 5781

Project No.: 54771

Date: 3/22/08

Well No. MWA

Purge Method: SUB

Depth to Water (feet): 12.68

Depth to Product (feet):     

Total Depth (feet): 44.88

LPH & Water Recovered (gallons):     

Water Column (feet): 32.20

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 19.12

1 Well Volume (gallons): 5

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, °C)	pH	D.O.	ORP	Turbidity
<u>0559</u>			<u>5</u>	<u>1424</u>	<u>15.3</u>	<u>8.14</u>			
			<u>10</u>	<u>1554</u>	<u>17.2</u>	<u>7.92</u>			
	<u>0605</u>		<u>15</u>	<u>1553</u>	<u>18.0</u>	<u>7.77</u>			
Static at Time Sampled			Total Gallons Purged			Sample Time			
<u>19.04</u>			<u>15</u>			<u>0615</u>			
<b>Comments:</b>									

Well No. \_\_\_\_\_

Purge Method: \_\_\_\_\_

Depth to Water (feet): \_\_\_\_\_

Depth to Product (feet): \_\_\_\_\_

Total Depth (feet): \_\_\_\_\_

LPH & Water Recovered (gallons): \_\_\_\_\_

Water Column (feet): \_\_\_\_\_

Casing Diameter (Inches): \_\_\_\_\_

80% Recharge Depth(feet): \_\_\_\_\_

1 Well Volume (gallons): \_\_\_\_\_

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH	D.O.	ORP	Turbidity
Static at Time Sampled			Total Gallons Purged			Sample Time			
<b>Comments:</b>									



LABORATORIES, INC.

Date of Report: 04/07/2008

Anju Farfan

TRC

21 Technology Drive  
Irvine, CA 92618

RE: 5781

BC Work Order: 0803866

Enclosed are the results of analyses for samples received by the laboratory on 03/24/2008 20:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Molly Meyers".

Contact Person: Molly Meyers  
Client Service Rep

A handwritten signature in cursive script, which is mostly illegible but appears to be a name.

Authorized Signature

TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 5781  
Project Number: [none]  
Project Manager: Anju Farfan

Reported: 04/07/2008 7:57

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

0803866-01	COC Number:	---	Receive Date:	03/24/2008 20:50	Delivery Work Order:
	Project Number:	5781	Sampling Date:	03/22/2008 06:15	Global ID: T0600101467
	Sampling Location:	MW-A	Sample Depth:	---	Matrix: W
	Sampling Point:	MW-A	Sample Matrix:	Water	Sample QC Type (SACode): CS
	Sampled By:	TRCI			Cooler ID:

TRC  
 21 Technology Drive  
 Irvine, CA 92618

 Project: 5781  
 Project Number: [none]  
 Project Manager: Anju Farfan

Reported: 04/07/2008 7:57

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	0803866-01												
Client Sample Name:	5781, MW-A, MW-A, 3/22/2008 6:15:00AM												
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Bromodichloromethane	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
Bromoform	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
Bromomethane	ND	ug/L	1.0		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
Carbon tetrachloride	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
Chlorobenzene	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
Chloroethane	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
Chloroform	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
Chloromethane	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
Dibromochloromethane	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
1,2-Dichlorobenzene	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
1,3-Dichlorobenzene	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
1,4-Dichlorobenzene	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
Dichlorodifluoromethane	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
1,1-Dichloroethane	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
1,1-Dichloroethene	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
cis-1,2-Dichloroethene	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
trans-1,2-Dichloroethene	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
1,2-Dichloropropane	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
cis-1,3-Dichloropropene	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
trans-1,3-Dichloropropene	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
Methylene chloride	ND	ug/L	1.0		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	

TRC  
 21 Technology Drive  
 Irvine, CA 92618

 Project: 5781  
 Project Number: [none]  
 Project Manager: Anju Farfan

Reported: 04/07/2008 7:57

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0803866-01		Client Sample Name: 5781, MW-A, MW-A, 3/22/2008 6:15:00AM											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
Tetrachloroethene	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
1,1,1-Trichloroethane	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
1,1,2-Trichloroethane	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
Trichloroethene	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
Trichlorofluoromethane	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
Vinyl chloride	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
t-Butyl alcohol	ND	ug/L	10		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
Ethanol	ND	ug/L	250		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563	ND	
1,2-Dichloroethane-d4 (Surrogate)	97.5	%	76 - 114 (LCL - UCL)		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563		
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563		
4-Bromofluorobenzene (Surrogate)	96.1	%	86 - 115 (LCL - UCL)		EPA-8260	03/26/08	03/26/08 13:23	ANO	MS-V4	1	BRC1563		

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## Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 0803866-01		Client Sample Name: 5781, MW-A, MW-A, 3/22/2008 6:15:00AM											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.30		EPA-8021	03/28/08	03/28/08 22:28	JCC	GC-V4	1	BRC1672	ND	
Toluene	ND	ug/L	0.30		EPA-8021	03/28/08	03/28/08 22:28	JCC	GC-V4	1	BRC1672	ND	
Ethylbenzene	ND	ug/L	0.30		EPA-8021	03/28/08	03/28/08 22:28	JCC	GC-V4	1	BRC1672	ND	
Methyl t-butyl ether	ND	ug/L	1.0		EPA-8021	03/28/08	03/28/08 22:28	JCC	GC-V4	1	BRC1672	ND	
Total Xylenes	ND	ug/L	0.60		EPA-8021	03/28/08	03/28/08 22:28	JCC	GC-V4	1	BRC1672	ND	
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		Luft	03/28/08	03/28/08 22:28	JCC	GC-V4	1	BRC1672	ND	
a,a,a-Trifluorotoluene (PID Surrogate)	87.4	%	70 - 130 (LCL - UCL)		EPA-8021	03/28/08	03/28/08 22:28	JCC	GC-V4	1	BRC1672		
a,a,a-Trifluorotoluene (FID Surrogate)	91.6	%	70 - 130 (LCL - UCL)		Luft	03/28/08	03/28/08 22:28	JCC	GC-V4	1	BRC1672		

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## Total Petroleum Hydrocarbons

<b>BCL Sample ID:</b> 0803866-01		<b>Client Sample Name:</b> 5781, MW-A, MW-A, 3/22/2008 6:15:00AM											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru- ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	03/26/08	03/26/08 22:14	PTL	GC-5	1	BRC1620	ND	
Tetracosane (Surrogate)	68.0	%	28 - 139 (LCL - UCL)		Luft/TPHd	03/26/08	03/26/08 22:14	PTL	GC-5	1	BRC1620		

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## EPA Method 1664

BCL Sample ID: 0803866-01	Client Sample Name: 5781, MW-A, MW-A, 3/22/2008 6:15:00AM												
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Oil and Grease	ND	mg/L	5.0		EPA-1664H	04/02/08	04/02/08 08:40	JAK	MAN-SV	1	BRD0304	ND	



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## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits	
										RPD	Percent Recovery Lab Quals
Bromodichloromethane	BRC1563	Matrix Spike	0803851-03	0	23.780	25.000	ug/L		95.1		70 - 130
		Matrix Spike Duplicate	0803851-03	0	26.190	25.000	ug/L	9.9	105	20	70 - 130
Chlorobenzene	BRC1563	Matrix Spike	0803851-03	0	24.650	25.000	ug/L		98.6		70 - 130
		Matrix Spike Duplicate	0803851-03	0	27.460	25.000	ug/L	10.9	110	20	70 - 130
Chloroethane	BRC1563	Matrix Spike	0803851-03	0	22.250	25.000	ug/L		89.0		70 - 130
		Matrix Spike Duplicate	0803851-03	0	26.180	25.000	ug/L	16.5	105	20	70 - 130
1,4-Dichlorobenzene	BRC1563	Matrix Spike	0803851-03	0	24.100	25.000	ug/L		96.4		70 - 130
		Matrix Spike Duplicate	0803851-03	0	25.450	25.000	ug/L	5.6	102	20	70 - 130
1,1-Dichloroethane	BRC1563	Matrix Spike	0803851-03	0	24.610	25.000	ug/L		98.4		70 - 130
		Matrix Spike Duplicate	0803851-03	0	28.210	25.000	ug/L	13.8	113	20	70 - 130
1,1-Dichloroethene	BRC1563	Matrix Spike	0803851-03	0	23.520	25.000	ug/L		94.1		70 - 130
		Matrix Spike Duplicate	0803851-03	0	27.490	25.000	ug/L	15.6	110	20	70 - 130
Trichloroethene	BRC1563	Matrix Spike	0803851-03	0	22.770	25.000	ug/L		91.1		70 - 130
		Matrix Spike Duplicate	0803851-03	0	25.370	25.000	ug/L	10.3	101	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BRC1563	Matrix Spike	0803851-03	ND	9.6300	10.000	ug/L		96.3		76 - 114
		Matrix Spike Duplicate	0803851-03	ND	9.7800	10.000	ug/L		97.8		76 - 114
Toluene-d8 (Surrogate)	BRC1563	Matrix Spike	0803851-03	ND	10.120	10.000	ug/L		101		88 - 110
		Matrix Spike Duplicate	0803851-03	ND	10.190	10.000	ug/L		102		88 - 110
4-Bromofluorobenzene (Surrogate)	BRC1563	Matrix Spike	0803851-03	ND	10.170	10.000	ug/L		102		86 - 115
		Matrix Spike Duplicate	0803851-03	ND	9.7300	10.000	ug/L		97.3		86 - 115

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## Purgeable Aromatics and Total Petroleum Hydrocarbons

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		
									Percent Recovery	RPD	Percent Recovery Lab Quals
Benzene	BRC1672	Matrix Spike	0802904-38	0	41.262	40.000	ug/L		103		70 - 130
		Matrix Spike Duplicate	0802904-38	0	39.180	40.000	ug/L	5.0	98.0	20	70 - 130
Toluene	BRC1672	Matrix Spike	0802904-38	0	41.332	40.000	ug/L		103		70 - 130
		Matrix Spike Duplicate	0802904-38	0	39.303	40.000	ug/L	4.7	98.3	20	70 - 130
Ethylbenzene	BRC1672	Matrix Spike	0802904-38	0	41.241	40.000	ug/L		103		70 - 130
		Matrix Spike Duplicate	0802904-38	0	39.268	40.000	ug/L	4.8	98.2	20	70 - 130
Methyl t-butyl ether	BRC1672	Matrix Spike	0802904-38	0	42.022	40.000	ug/L		105		70 - 130
		Matrix Spike Duplicate	0802904-38	0	41.065	40.000	ug/L	1.9	103	20	70 - 130
Total Xylenes	BRC1672	Matrix Spike	0802904-38	0	124.68	120.00	ug/L		104		70 - 130
		Matrix Spike Duplicate	0802904-38	0	119.21	120.00	ug/L	4.6	99.3	20	70 - 130
Gasoline Range Organics (C4 - C12)	BRC1672	Matrix Spike	0802904-38	0	975.36	1000.0	ug/L		97.5		70 - 130
		Matrix Spike Duplicate	0802904-38	0	1005.0	1000.0	ug/L	2.5	100	20	70 - 130
a,a,a-Trifluorotoluene (PID Surrogate)	BRC1672	Matrix Spike	0802904-38	ND	38.481	40.000	ug/L		96.2		70 - 130
		Matrix Spike Duplicate	0802904-38	ND	39.473	40.000	ug/L		98.7		70 - 130
a,a,a-Trifluorotoluene (FID Surrogate)	BRC1672	Matrix Spike	0802904-38	ND	38.488	40.000	ug/L		96.2		70 - 130
		Matrix Spike Duplicate	0802904-38	ND	39.572	40.000	ug/L		98.9		70 - 130

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## Total Petroleum Hydrocarbons Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits	
										RPD	Percent Recovery Lab Quals
Diesel Range Organics (C12 - C24)	BRC1620	Matrix Spike	0802904-46	0	250.15	500.00	ug/L		50.0		36 - 130
		Matrix Spike Duplicate	0802904-46	0	238.22	500.00	ug/L	4.9	47.6	30	36 - 130
Tetracosane (Surrogate)	BRC1620	Matrix Spike	0802904-46	ND	14.609	20.000	ug/L		73.0		28 - 139
		Matrix Spike Duplicate	0802904-46	ND	9.5590	20.000	ug/L		47.8		28 - 139

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## EPA Method 1664

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		
									Percent Recovery	RPD	Percent Recovery Lab Quals
Oil and Grease	BRD0304	Matrix Spike	0802904-85	-0.70000	35.600	39.450	mg/L		90.2		78 - 114
		Matrix Spike Duplicate	0802904-85	-0.70000	25.950	39.450	mg/L	31.3	65.8	18	78 - 114 Q02,Q03

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## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Bromodichloromethane	BRC1563	BRC1563-BS1	LCS	26.020	25.000	0.50	ug/L	104		70 - 130		
Chlorobenzene	BRC1563	BRC1563-BS1	LCS	27.600	25.000	0.50	ug/L	110		70 - 130		
Chloroethane	BRC1563	BRC1563-BS1	LCS	25.130	25.000	0.50	ug/L	101		70 - 130		
1,4-Dichlorobenzene	BRC1563	BRC1563-BS1	LCS	25.940	25.000	0.50	ug/L	104		70 - 130		
1,1-Dichloroethane	BRC1563	BRC1563-BS1	LCS	27.240	25.000	0.50	ug/L	109		70 - 130		
1,1-Dichloroethene	BRC1563	BRC1563-BS1	LCS	26.440	25.000	0.50	ug/L	106		70 - 130		
Trichloroethene	BRC1563	BRC1563-BS1	LCS	25.980	25.000	0.50	ug/L	104		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BRC1563	BRC1563-BS1	LCS	9.4300	10.000		ug/L	94.3		76 - 114		
Toluene-d8 (Surrogate)	BRC1563	BRC1563-BS1	LCS	10.210	10.000		ug/L	102		88 - 110		
4-Bromofluorobenzene (Surrogate)	BRC1563	BRC1563-BS1	LCS	9.8900	10.000		ug/L	98.9		86 - 115		

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## Purgeable Aromatics and Total Petroleum Hydrocarbons

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Benzene	BRC1672	BRC1672-BS1	LCS	39.193	40.000	0.30	ug/L	98.0		85 - 115		
Toluene	BRC1672	BRC1672-BS1	LCS	39.259	40.000	0.30	ug/L	98.1		85 - 115		
Ethylbenzene	BRC1672	BRC1672-BS1	LCS	39.271	40.000	0.30	ug/L	98.2		85 - 115		
Methyl t-butyl ether	BRC1672	BRC1672-BS1	LCS	40.359	40.000	1.0	ug/L	101		85 - 115		
Total Xylenes	BRC1672	BRC1672-BS1	LCS	118.66	120.00	0.60	ug/L	98.9		85 - 115		
Gasoline Range Organics (C4 - C12)	BRC1672	BRC1672-BS1	LCS	979.82	1000.0	50	ug/L	98.0		85 - 115		
a,a,a-Trifluorotoluene (PID Surrogate)	BRC1672	BRC1672-BS1	LCS	39.124	40.000		ug/L	97.8		70 - 130		
a,a,a-Trifluorotoluene (FID Surrogate)	BRC1672	BRC1672-BS1	LCS	39.397	40.000		ug/L	98.5		70 - 130		

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## Total Petroleum Hydrocarbons

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Diesel Range Organics (C12 - C24)	BRC1620	BRC1620-BS1	LCS	268.89	500.00	50	ug/L	53.8		48 - 125		
Tetracosane (Surrogate)	BRC1620	BRC1620-BS1	LCS	10.057	20.000		ug/L	50.3		28 - 139		

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## EPA Method 1664

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	Control Limits		Lab Quals
									RPD	Percent Recovery	
Oil and Grease	BRD0304	BRD0304-BS1	LCS	35.900	39.450	5.0	mg/L	91.0		78 - 114	



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## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Bromodichloromethane	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
Bromoform	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
Bromomethane	BRC1563	BRC1563-BLK1	ND	ug/L	1.0		
Carbon tetrachloride	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
Chlorobenzene	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
Chloroethane	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
Chloroform	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
Chloromethane	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
Dibromochloromethane	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
1,2-Dichlorobenzene	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
1,3-Dichlorobenzene	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
1,4-Dichlorobenzene	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
Dichlorodifluoromethane	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
1,1-Dichloroethane	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
1,1-Dichloroethene	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
cis-1,2-Dichloroethene	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
trans-1,2-Dichloroethene	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
1,2-Dichloropropane	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
cis-1,3-Dichloropropene	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
trans-1,3-Dichloropropene	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
Methylene chloride	BRC1563	BRC1563-BLK1	ND	ug/L	1.0		
Methyl t-butyl ether	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		

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## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
1,1,2,2-Tetrachloroethane	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
Tetrachloroethene	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
1,1,1-Trichloroethane	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
1,1,2-Trichloroethane	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
Trichloroethene	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
Trichlorofluoromethane	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
1,1,2-Trichloro-1,2,2-trifluoroethane	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
Vinyl chloride	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
t-Amyl Methyl ether	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BRC1563	BRC1563-BLK1	ND	ug/L	10		
Diisopropyl ether	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
Ethanol	BRC1563	BRC1563-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BRC1563	BRC1563-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	BRC1563	BRC1563-BLK1	108	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BRC1563	BRC1563-BLK1	103	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BRC1563	BRC1563-BLK1	96.9	%	86 - 115 (LCL - UCL)		

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## Purgeable Aromatics and Total Petroleum Hydrocarbons

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BRC1672	BRC1672-BLK1	ND	ug/L	0.30		
Toluene	BRC1672	BRC1672-BLK1	ND	ug/L	0.30		
Ethylbenzene	BRC1672	BRC1672-BLK1	ND	ug/L	0.30		
Methyl t-butyl ether	BRC1672	BRC1672-BLK1	ND	ug/L	1.0		
Total Xylenes	BRC1672	BRC1672-BLK1	ND	ug/L	0.60		
Gasoline Range Organics (C4 - C12)	BRC1672	BRC1672-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (PID Surrogate)	BRC1672	BRC1672-BLK1	90.3	%	70 - 130 (LCL - UCL)		
a,a,a-Trifluorotoluene (FID Surrogate)	BRC1672	BRC1672-BLK1	95.7	%	70 - 130 (LCL - UCL)		

TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 5781  
Project Number: [none]  
Project Manager: Anju Farfan

Reported: 04/07/2008 7:57

## Total Petroleum Hydrocarbons Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Diesel Range Organics (C12 - C24)	BRC1620	BRC1620-BLK1	ND	ug/L	50		
Tetracosane (Surrogate)	BRC1620	BRC1620-BLK1	59.6	%	28 - 139 (LCL - UCL)		

TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 5781  
Project Number: [none]  
Project Manager: Anju Farfan

Reported: 04/07/2008 7:57

## EPA Method 1664

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Oil and Grease	BRD0304	BRD0304-BLK1	ND	mg/L	5.0		

TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 5781  
Project Number: [none]  
Project Manager: Anju Farfan

Reported: 04/07/2008 7:57

### Notes And Definitions

MDL Method Detection Limit  
ND Analyte Not Detected at or above the reporting limit  
PQL Practical Quantitation Limit  
RPD Relative Percent Difference  
Q02 Matrix spike precision is not within the control limits.  
Q03 Matrix spike recovery(s) is(are) not within the control limits.

Submission #: 0803868 Project Code: \_\_\_\_\_ TB Batch # \_\_\_\_\_

**SHIPPING INFORMATION**  
 Federal Express  UPS  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

**SHIPPING CONTAINER**  
 Ice Chest  None   
 Box  Other  (Specify) \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received YES  NO  
 Ice Chest ID: Blue Emissivity: 95 Date/Time: 3/24 2110  
 Temperature: 1.4 °C Container: PS Analyst Init: JNW  
 Thermometer ID: 48

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
100ml TOTAL ORGANIC CARBON										
QT TOX										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A, B									
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT QAOQ										
QT AMBER	B, C									
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments: \_\_\_\_\_ Date/Time: 3-25-8  
 Sample Numbering Completed By: Ann 1942

Submission #:

Project Code:

TB Batch #

SHIPPING INFORMATION

Federal Express  UPS  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER

Ice Chest  None   
 Box  Other  (Specify) \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments:

Custody Seals: Ice Chest  Containers  None  Comments:

Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  
 YES  NO

Ice Chest ID \_\_\_\_\_  
 Temperature: 1.9 °C  
 Thermometer ID: 48

Emissivity 0.97  
 Container QJA

Date/Time 3-25-08

Analyst Init AMZ/AS

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
100ml TOTAL ORGANIC CARBON										
QT TOX										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA-525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT QA/QC										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:

Sample Numbering Completed By: RML Date/Time: 3/26/08



**BC LABORATORIES, INC.**

4100 Atlas Court □ Bakersfield, CA 93308  
(661) 327-4911 □ FAX (661) 327-1918

**CHAIN OF CUSTODY**

Analysis Requested

0803855

Circle one: Phillips 66 / Unocal		Consultant Firm: TRC		MATRIX (GW) Ground-water (S) Soil (WW) Waste-water (SL) Sludge	BTEX/MTBE by 8021B, TPH-g by 8015 TPH -g by 8015M TPH -D by 8015M TPH-g by GC/MS <del>BTEX/MTBE/OXYs</del> BY 8260B EDB/EDC by 8260B ETHANOL by 8260B BTEX/MTBE by 8021 HUOCs (8010 list) by 8260B TOG	Turnaround Time Requested STD
Address: 3535 PERSON RD		21 Technology Drive Irvine, CA 92618-2302 Attn: Anju Farfan				
City: OAKLAND		4-digit site#: 5781				
State: CA Zip:		Work Order# 01470-450911 8528				
COP Manager:		Project #: 154771				
		Sampler Name: ALEX				

Lab#	Sample Description	Field Point Name	Date & Time Sampled	MATRIX	BTEX/MTBE by 8021B, TPH-g by 8015	TPH -g by 8015M	TPH -D by 8015M	TPH-g by GC/MS	<del>BTEX/MTBE/OXYs</del> BY 8260B	EDB/EDC by 8260B	ETHANOL by 8260B	BTEX/MTBE by 8021	HUOCs (8010 list) by 8260B	TOG	Turnaround Time Requested
	1	MW-A	3/22/08 0615	GW		X	X		X	X	X	X	X	X	STD

CHK BY DISTRIBUTION  
 J. J. [Signature]  
 SUB. OUT [Signature]

Comments:  Global ID: 10600101467	Relinquished by: [Signature]	Received by: FRIDGE	Date & Time: 3/22/08 1130
	Relinquished by (Signature): [Signature]	Received by: [Signature]	Date & Time: 3/24/08 2545
	Relinquished by (Signature): [Signature]	Received by: [Signature]	Date & Time: 3/24/08 1815

(A) = ANALYSIS      (C) = CONTAINER  
 (H) = PRESERVATIVE  
 R. L. [Signature] 3-24-08 2050      [Signature] 3/24/08 2050

## **STATEMENTS**

### **Purge Water Disposal**

Non-hazardous groundwater produced during purging and sampling of monitoring was accumulated at TRC's groundwater monitoring facility at Concord, California, for transportation by a licensed carrier, to the ConocoPhillips Refinery at Rodeo, California. Disposal at the Rodeo facility was authorized by ConocoPhillips in accordance with "ESD Standard Operating Procedures – Water Quality and Compliance", as revised on February 7, 2003. Documentation of compliance with ConocoPhillips requirements is provided by an ESD Form R-149, which is on file at TRC's Concord Office. Purge water suspected of containing potentially hazardous material, such as liquid-phase hydrocarbons, was accumulated separately in a drum for transportation and disposal by others.

### **Limitations**

The fluid level monitoring and groundwater sampling activities summarized in this report have been performed under the responsible charge of a California Registered Geologist or Registered Civil Engineer and have been conducted in accordance with current practice and the standard of care exercised by geologists and engineers performing similar tasks in this area. No warranty, express or implied, is made regarding the conclusions and professional opinions presented in this report. The conclusions are based solely upon an analysis of the observed conditions. If actual conditions differ from those described in this report, our office should be notified.