



Roya C. Kambin
Project Manager
Marketing Business Unit

**Chevron Environmental
Management Company**
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Alameda County Health Care Services Agency
Environmental Health Department
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Unocal #5781
Union Oil Site 351640
3535 Pierson Street
Oakland, CA

RECEIVED

8:27 am, Oct 11, 2011

Alameda County
Environmental Health

I have reviewed the attached report dated October 10, 2011.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Conestoga-Rovers & Associates, upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,

A handwritten signature in black ink, appearing to read "Roya Kambin", written over a light blue circular stamp.

Roya Kambin
Project Manager

Attachment: Report



**CONESTOGA-ROVERS
& ASSOCIATES**

5900 Hollis Street, Suite A
Emeryville, California 94608
Telephone: (510) 420-0700 Fax: (510) 420-9170
<http://www.craworld.com>

October 10, 2011

Reference No. 060723

Ms. Barbara Jakub
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Third Quarter 2011
Groundwater Monitoring and Sampling Report
UNOCAL #5781
Union Oil Company of California Site 351640
3535 Pierson Street
Oakland, California
Fuel Leak Case No. RO0000253

Dear Ms. Barbara Jakub:

Conestoga-Rovers & Associates (CRA), on behalf of Union Oil Company of California, is submitting this *Third Quarter 2011 Groundwater Monitoring and Sampling Report* for the site referenced above (Figures 1 and 2). Groundwater monitoring and sampling was performed by TRC Solutions (TRC) of Irvine, California. TRC's August 29, 2011 *Groundwater Monitoring Data* is presented as Attachment A. Current groundwater monitoring and sampling data are presented in Table 1. Laboratory analyses were performed by BC Laboratories of Bakersfield, California. BC Laboratories' September 6, 2011 *Analytical Results* are included as Attachment B. Historical groundwater monitoring and sampling data is included as Attachment C.

RESULTS OF THIRD QUARTER 2011 EVENT

On August 18, 2011, TRC monitored and sampled the site wells per the established schedule.

Results of the current monitoring event indicate the following:

- Groundwater Flow Direction Southeast
- Hydraulic Gradient 0.01
- Approximate Depth to Groundwater 12 to 19 feet below grade

Equal
Employment Opportunity
Employer



October 10, 2011

Reference No. 060723

- 2 -

Groundwater elevation data from monitoring well MW-A was not used in contouring due to different screen interval.

A partial summary of results of the current sampling event is presented below in Table A:

TABLE A: GROUNDWATER ANALYTICAL DATA							
Well ID	TPHd (µg/L)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
ESLs	100	100	1	40	30	20	5
MW-A	<40	<50	<0.50	<0.50	<0.50	<1.0	0.61
MW-4	<40	<50	<0.50	<0.50	<0.50	<1.0	4.0
MW-5	5,400	30,000	29	1,000	980	7,200	56
MW-6	<40	<50	<0.50	<0.50	<0.50	<1.0	2.4
MW-7	<40	<50	<0.50	<0.50	<0.50	<1.0	<0.50
MW-8	<40	<50	<0.50	<0.50	<0.50	<1.0	2.1
MW-9	<40	<50	<0.50	<0.50	<0.50	<1.0	2.1
TPHd	Total petroleum hydrocarbons as diesel						
TPHg	Total petroleum hydrocarbons as gasoline						
MTBE	Methyl tertiary butyl ether						
µg/L	Micrograms per Liter						
< x.x	Not detected above laboratory reported practical quantitation limit						
ESLs	Environmental Screening Levels (Table F-1a) for groundwater that is a current or potential drinking water resource; <i>Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater</i> ; California Regional Water Quality Control Board - San Francisco Bay Region; Interim Final November, 2007; revised May, 2008.						
BOLD	Concentration exceeds applicable ESL						

CONCLUSIONS AND RECOMMENDATIONS

The results of ongoing groundwater monitoring and sampling at the site indicate the following:

- Dissolved-phase hydrocarbon and oxygenate concentrations are below ESLs in all wells except MW-5
- Dissolved hydrocarbons appear centered in the area around MW-5

CRA recommends continuing quarterly groundwater monitoring and sampling to establish concentration trends over time. After the fourth quarter 2011 groundwater monitoring and



**CONESTOGA-ROVERS
& ASSOCIATES**

October 10, 2011

Reference No. 060723

- 3 -

sampling event (one complete hydrogeologic cycle for the newly installed wells), CRA will assess site conditions again.

ANTICIPATED FUTURE ACTIVITIES

Groundwater Monitoring

TRC will monitor and sample site wells per the established schedule. CRA will submit a groundwater monitoring and sampling report.



**CONESTOGA-ROVERS
& ASSOCIATES**

October 10, 2011

Reference No. 060723

- 4 -

Please contact Ian Hull at (510) 420-3344 if you have any questions or require additional information.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Ian Hull

Jim Schneider, PG 7914



IH/aa/3
Encl.

Figure 1	Vicinity Map
Figure 2	Groundwater Elevation and Hydrocarbon Concentration Map
Table 1	Groundwater Monitoring and Sampling Data
Attachment A	Monitoring Data Package
Attachment B	Laboratory Analytical Report
Attachment C	Historical Groundwater Monitoring and Sampling Data

cc: Ms. Roya Kambin, Union Oil Company of California (*electronic copy*)
United Brothers Enterprise, Inc., Property Owner

FIGURES

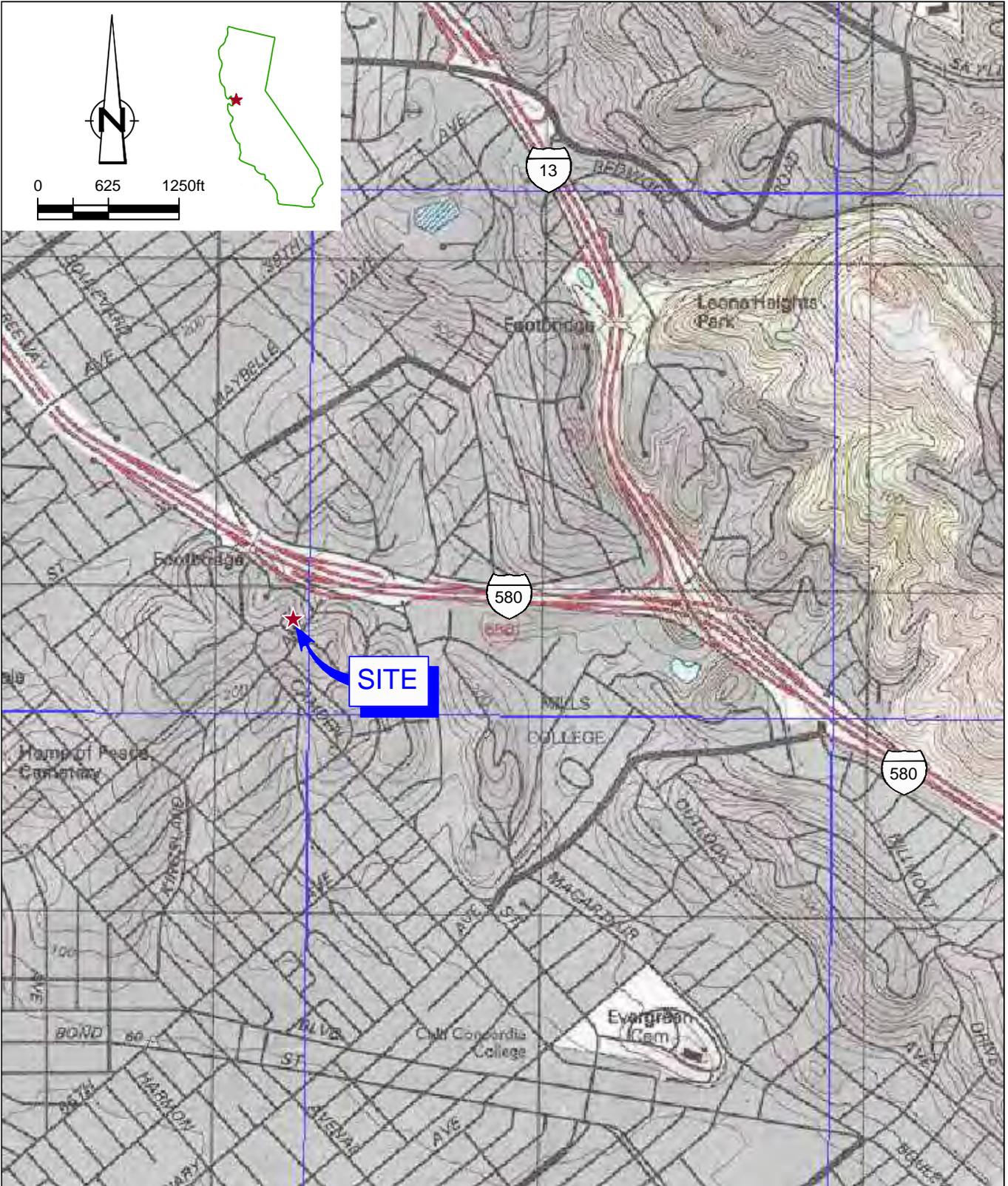
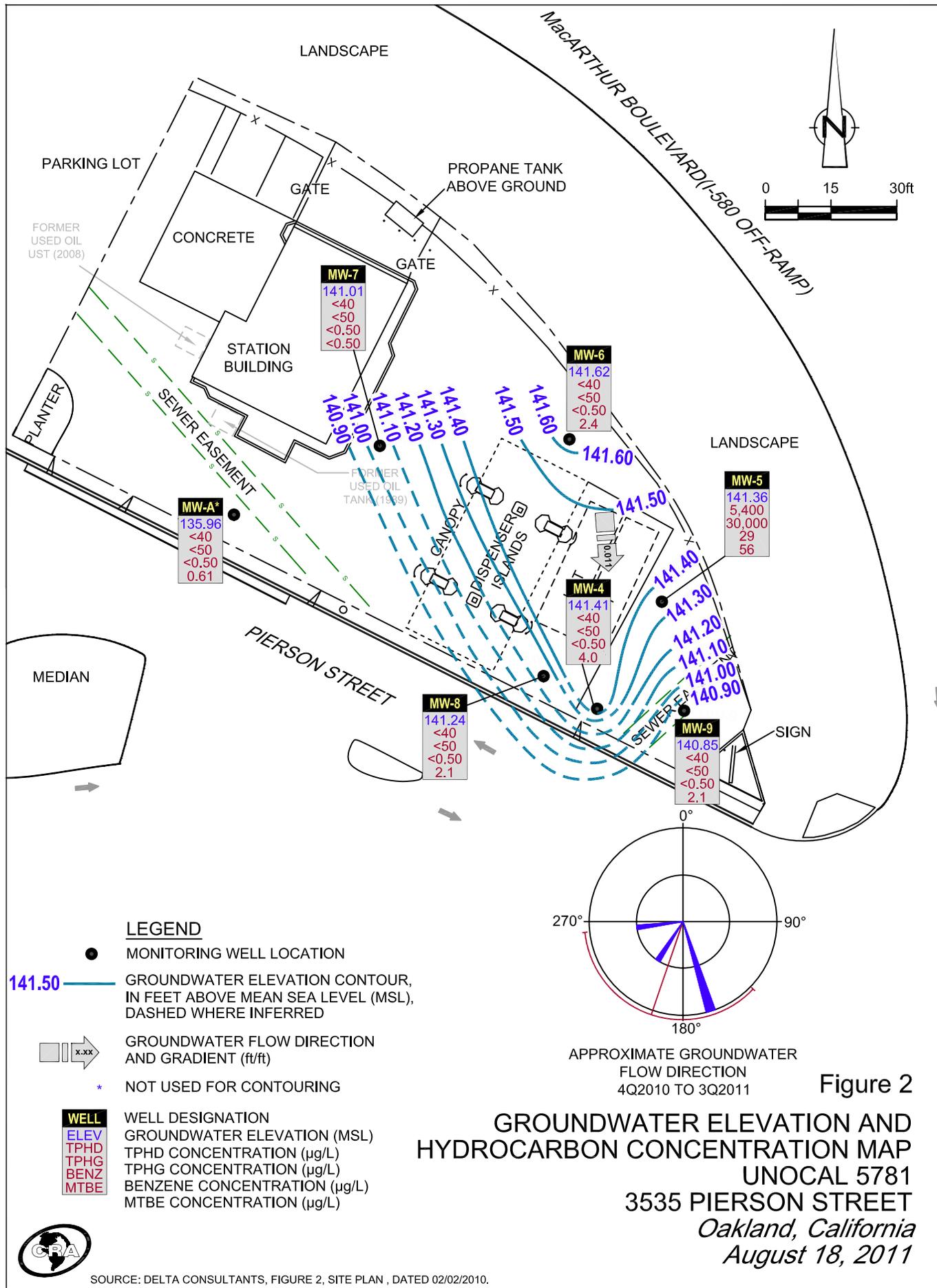


Figure 1
 VICINITY MAP
 UNOCAL 5781
 3535 PIERSON STREET
 Oakland, California





TABLE

TABLE 1

GROUNDWATER MONITORING AND SAMPLING DATA
 UNOCAL #5781
 3535 PIERSON STREET
 OAKLAND, CALIFORNIA

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS													GAS	GENERAL CHEMISTRY		
					TPH - Diesel	TPH - Gasoline	B	T	E	X	MTBE by SW8260	TBA	ETBE	DIPE	TAME	EDB	1,2-DCA	Ethanol	Methanol		Methane	Ferrous iron	Nitrate (as N)
	Units	ft	ft	ft-amsl	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	mg/L	µg/L	mg/L	mg/L
MW-A	06/07/2011	154.79	13.92	140.87	<40	<50	<0.50	<0.50	<0.50	<1.0	0.57	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	<100	-	-	-	-
MW-A	08/18/2011	154.79	18.83	135.96	<40	<50	<0.50	<0.50	<0.50	<1.0	0.61	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	<100	<0.0010	140	11	69
MW-4	06/07/2011	153.48	10.94	142.54	<40	<50	<0.50	<0.50	<0.50	<1.0	1.6	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	<100	-	-	-	-
MW-4	08/18/2011	153.48	12.07	141.41	<40	<50	<0.50	<0.50	<0.50	<1.0	4.0	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	<100	0.040	<100	4.6	52
MW-5	06/07/2011	153.66	11.45	142.21	3,700	40,000	32	2,300	1,500	16,000	24	150	<0.50	<0.50	<0.50	<0.50	<0.50	330	<100	-	-	-	-
MW-5	08/18/2011	153.66	12.30	141.36	5,400	30,000	29	1,000	980	7,200	56	44	<0.50	<0.50	<0.50	<0.50	<0.50	<250	<100	9.7	15,000	<0.44	<1.0
MW-6	06/07/2011	154.62	11.33	143.29	<40	<50	<0.50	<0.50	<0.50	<1.0	4.3	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	<100	-	-	-	-
MW-6	08/18/2011	154.62	13.00	141.62	<40	<50	<0.50	<0.50	<0.50	<1.0	2.4	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	<100	0.0027	<200	18	66
MW-7	06/07/2011	155.38	12.59	142.79	<40	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	<100	-	-	-	-
MW-7	08/18/2011	155.38	14.37	141.01	<40	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	<100	0.0012	<500	3.8	100
MW-8	06/07/2011	153.71	11.54	142.17	71	<50	<0.50	<0.50	<0.50	<1.0	3.6	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	<100	-	-	-	-
MW-8	08/18/2011	153.71	12.47	141.24	<40	<50	<0.50	<0.50	<0.50	<1.0	2.1	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	<100	<0.0010	140	1.5	65
MW-9	06/07/2011	153.37	11.36	142.01	<40	<50	<0.50	<0.50	<0.50	<1.0	1.4	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	<100	-	-	-	-
MW-9	08/18/2011	153.37	12.52	140.85	<40	<50	<0.50	<0.50	<0.50	<1.0	2.1	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	<100	0.0010	<500	2.7	47

Abbreviations and Notes:

TOC = Top of Casing
 DTW = Depth to Water
 GWE = Groundwater elevation

GROUNDWATER MONITORING AND SAMPLING DATA
UNOCAL #5781
3535 PIERSON STREET
OAKLAND, CALIFORNIA

(ft-amsl) = Feet Above Mean sea level

ft = Feet

µg/L = Micrograms per Liter

TPH - Total Petroleum Hydrocarbons

VOCS = Volatile Organic Compounds

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylene

MTBE = Methyl tert butyl ether

TBA = Tert-Butyl alcohol

DIPE = Diisopropyl ether

ETBE = Tert-Butyl ethyl ether

TAME = Tert-Amyl methyl ether

EDB = 1,2-Dibromoethane (Ethylene dibromide)

1,2-DCA = 1,2-Dichloroethane

-- = Not available / not applicable

<x = Not detected above laboratory method detection limit

ATTACHMENT A

MONITORING DATA PACKAGE



123 Technology Drive West
Irvine, CA 92618

949.727.9336 PHONE
949.727.7399 FAX

www.TRCSolutions.com

DATE: August 29, 2011

TO: Kiersten Hoey
CRA
5900 Hollis Street, Suite A
Emeryville, California 94608

SITE: Unocal Site 5781
Facility 351640
3535 Pierson Street, Oakland, CA

RE: Transmittal of Groundwater Monitoring Data

Dear Ms. Hoey,

Please find attached the field data sheets, chain of custody (COC) forms, and technical services request (TSR) form for the monitoring event that was completed on August 18, 2011. Field measurements and collection of samples submitted to the laboratory were completed in general accordance with our usual groundwater monitoring protocol which is also attached for your reference.

Please call me at 949-341-7440 if you have questions.

Sincerely,

TRC

A handwritten signature in black ink, appearing to read "Anju Farfan", with a stylized flourish at the end.

Anju Farfan
Groundwater Program Operations Manager

GENERAL FIELD PROCEDURES

Groundwater Gauging and Sampling Assignments

For each site, TRC technicians are provided with a Technical Service Request (TSR) that specifies activities required to complete the groundwater gauging 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 (Gauging)

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.

Unless otherwise instructed, a well that is found to contain a measureable amount of LPH (0.01 foot) is not purged or sampled. Instead, one casing volume of fluid is bailed from the well and the well is re-sealed.

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, using a flow cell, until they become stable in general accordance with EPA guidelines.

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.

GENERAL FIELD PROCEDURES

Samples are collected by lowering a new, disposable 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.

Sample 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. If wells must be gauged or sampled out of order, alternate interface probes and/or pumps are utilized and are noted in field documentation.

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 Liquinox and water and rinsing twice. The final rinse is in deionized water.

Purge Water Disposal

Purge water is generally collected in labeled drums for disposal as non-hazardous waste. Drums may be left on site for disposal by others, or transported to a collection location at a TRC field office, in either Fullerton, California or Concord, California, for eventual transfer to a licensed treatment or recycling facility. Alternatively, 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.

Exceptions

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

GROUNDWATER SAMPLING FIELD NOTES

Technician: A. Vidner

Site: 5781

Project No.: 183487.0035.1640

Date: 8/18/11

Well No. MW-5

Purge Method: Sub

Depth to Water (feet): 12.30

Depth to Product (feet):

Total Depth (feet): 19.92

LPH & Water Recovered (gallons):

Water Column (feet): 7.62

Casing Diameter (Inches): 4

80% Recharge Depth(feet): 13.82

1 Well Volume (gallons): 6

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
Pre-Purge							0.87	193	
0924			6	722.5	20.4	6.42	0.84	149	
	0939		12	718.8	20.8	6.39	0.77	125	
			18	704.4	20.8	6.39	0.72	106	
Static at Time Sampled			Total Gallons Purged			Sample Time			
12.34			18			1212			
Comments: <u>Pre-purge sample collected at 0727. Pump Slow.</u>									

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 (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
Pre-Purge									
Static at Time Sampled			Total Gallons Purged			Sample Time			
Comments: _____									

GROUNDWATER SAMPLING FIELD NOTES

Technician: A. Vidners

Site: 5781

Project No.: 183487.0035.1640

Date: 8/18/11

Well No. MW-9

Purge Method: HB

Depth to Water (feet): 12.52

Depth to Product (feet):

Total Depth (feet): 19.67

LPH & Water Recovered (gallons):

Water Column (feet): 7.15

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 13.95

1 Well Volume (gallons): 2

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
Pre-Purge							1.64	181	
0844	0851		2	854.2	19.6	6.53	1.57	135	
			4						
			6						
		Static at Time Sampled		Total Gallons Purged		Sample Time			
		15.39		3		1058			
Comments: <u>Pre-purge sample collected at 0639, Dry at 3 gallons.</u> <u>Did not recover in 2 hours.</u>									

Well No. MW-4

Purge Method: Sub

Depth to Water (feet): 12.07

Depth to Product (feet):

Total Depth (feet): 24.74

LPH & Water Recovered (gallons):

Water Column (feet): 12.67

Casing Diameter (Inches): 4

80% Recharge Depth(feet): 14.60

1 Well Volume (gallons): 9

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
Pre-Purge							4.42	189	
0829	0835		9	747.6	19.8	6.82	1.81	119	
			18						
			27						
		Static at Time Sampled		Total Gallons Purged		Sample Time			
		18.26		12		1120			
Comments: <u>Pre-purge sample collected at 0651, Dry at 12 gallons.</u> <u>Did not recover in 2 hours.</u>									

GROUNDWATER SAMPLING FIELD NOTES

Technician: A. Vidners

Site: 5781

Project No.: 183487.0035.1640

Date: 8/18/11

Well No. MW-8

Purge Method: HB

Depth to Water (feet): 12.47

Depth to Product (feet):

Total Depth (feet): 19.89

LPH & Water Recovered (gallons):

Water Column (feet): 7.42

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 13.95

1 Well Volume (gallons): 2

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
Pre-Purge							1.28	196	
0855			2	782.2	19.6	6.45	1.69	143	
			4	791.2	19.4	6.38	1.81	147	
	0909		6	788.9	19.5	6.34	1.41	147	
Static at Time Sampled			Total Gallons Purged			Sample Time			
13.19			6			1136			
Comments:									

Well No. MW-6

Purge Method: HB

Depth to Water (feet): 13.00

Depth to Product (feet):

Total Depth (feet): 19.87

LPH & Water Recovered (gallons):

Water Column (feet): 6.87

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 14.37

1 Well Volume (gallons): 2

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
Pre-Purge							3.09	198	
0914	0920		2	639.6	19.2	6.51	2.91	147	
			4						
	0920		6						
Static at Time Sampled			Total Gallons Purged			Sample Time			
17.71			3			1150			
Comments: Pre-purge sample collected at 0914. Dry at 3 gallons. Did not recover in 2 hours. Well went dry while sampling. See non completion.									

STATEMENT OF NON-COMPLETION OF JOB

DATE OF EVENT: 8/18/11 SITE ID: 5781
TECH: A. Vidners CALLED SUPERVISOR: (YES) / NO
CALLED PM: YES / NO NAME OF PM: _____

WELL ID: MW-6

Well went dry while sampling. Unable to collect
sample for ferrous iron. Used pre-purge sample.

WELL ID: _____

WELL ID: _____

WELL BOX CONDITION REPORT

SITE NO. 5781
 ADDRESS 3535 Pierson St. Oakland, CA
 DATE 8/18/11

PERFORMED BY: A. Vidners
 PAGE 1 OF 1

Well Name	Current Well Box Size	# of Ears	# of Stipped Ears	# of Broken Ears	# of Broken Bolts	# of Missing Bolts	Seal Damaged	Missing Lid	Broken Lid	Well Box is Exposed	Well Box is Below Grade	Unable to Access	Unable to Locate	Foundation Damaged	Paved Over	Street Well	Saw Cut Needed	System Well	USA Marked Well	Comments
MW-7	12"	2	0	0	0	0	N	N	N	N	N	N	N	N	N	N	N	N	N	
MW-A	8"	2	0	0	0	0	Y	N	N	N	N	N	N	N	N	N	N	N	N	
MW-9	12"	2	0	0	0	0	Y	N	N	N	N	N	N	N	N	N	N	N	N	
MW-4	12"	2	0	0	0	0	Y	N	N	N	N	N	N	N	N	N	N	N	N	
MW-8	12"	2	0	0	0	0	N	N	N	N	N	N	N	N	N	N	N	N	N	
MW-6	12"	2	0	0	0	0	N	N	N	N	N	N	N	Y	N	N	N	N	N	
MW-5	12"	2	0	0	0	0	N	N	N	N	N	N	N	N	N	N	N	N	N	



CHAIN OF CUSTODY FORM

Union Oil Company of California ■ 6101 Bollinger Canyon Road ■ San Ramon, CA 94583

COC 1 of 1

Union Oil Site ID: <u>5781</u>				Union Oil Consultant: <u>CRA</u>				ANALYSES REQUIRED												
Site Global ID: <u>T0600101467</u>				Consultant Contact: <u>Kiersten Troy</u>				TPH - Diesel by EPA 8015 w/ sulfur cleanup	TPH - G by GC/MS	BTEX/MTBE/OXYS by EPA 8260B	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS	TPH-G by 8015	EDB/EDC by 8260B	Methanol by 8015	Nitrate, Sulfate	Ferrous Iron	Methane	Turnaround Time (TAT):	
Site Address: <u>3535 Pierson St. Oakland, CA</u>				Consultant Phone No.: <u>510 420 3347</u>															Standard <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/>	
Union Oil PM: <u>Roya Kambin</u>				Sampling Company: <u>TRC</u>															48 Hours <input type="checkbox"/> 72 Hours <input type="checkbox"/>	
Union Oil PM Phone No.: <u>925 740 2270</u>				Sampled By (PRINT): <u>Andrew Videncs</u>															Special Instructions	
Charge Code: <u>NWRTB-0 351 240 -0- LAB</u>				Sampler Signature: 																
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.				BC Laboratories, Inc. Project Manager: <u>Molly Meyers</u> 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911																
				SAMPLE ID																
Field Point Name	Matrix	DTW	Date (yymmdd)	Sample Time	# of Containers	TPH - Diesel by EPA 8015 w/ sulfur cleanup	TPH - G by GC/MS	BTEX/MTBE/OXYS by EPA 8260B	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS	TPH-G by 8015	EDB/EDC by 8260B	Methanol by 8015	Nitrate, Sulfate	Ferrous Iron	Methane	Notes / Comments			
MW-7	W-S-A		110818	1007	15	X		X	X		X	X	X	X	X	X				
MW-A	W-S-A			1027											X					
MW-9	W-S-A			1058											X					
MW-4	W-S-A			1120											X					
MW-8	W-S-A			1130											X					
MW-6	W-S-A			1150	14										X					
MW-5	W-S-A			1212	15										X					
MW-6	W-S-A			0714	1										X					
	W-S-A																			
	W-S-A																			
	W-S-A																			
	W-S-A																			
Relinquished By: <u>[Signature]</u> Company: <u>TRC</u> Date / Time: <u>8/18/11</u>				Relinquished By: _____ Company: _____ Date / Time: _____				Relinquished By: _____ Company: _____ Date / Time: _____												
Received By: <u>RL Ruy</u> Company: <u>JRCC</u> Date / Time: <u>8-18-11 1510</u>				Received By: _____ Company: _____ Date / Time: _____				Received By: _____ Company: _____ Date / Time: _____												

TRC SOLUTIONS
TECHNICAL SERVICES REQUEST FORM

20-Jul-11

Site ID: 5781
Address: 3535 Pierson Street
City: Oakland
Cross Street: Redding St.

Project No.: 183487.0035.1640 / 00TA01
Client: Roya Kambin
Contact #: 925-790-6270
PM: Kiersten Hoey CRA
PM Contact #: 510-420-3347

Total number of wells: 7 **Min. Well Diameter (in.):** 2 **# of Techs, # of Hrs:** 1, 5
Depth to Water (ft.): 14 **Max. Well Diameter (in.):** 2 **Travel Time (hrs):**
Max. Well Depth (ft): 45

ACTIVITIES:	Frequency	Notes
Gauging: <input checked="" type="checkbox"/>	Quarterly	
Purge/Sampling: <input checked="" type="checkbox"/>	Quarterly	
No Purge/Sample <input type="checkbox"/>		

RELATED ACTIVITIES	Note
Drums: <input checked="" type="checkbox"/>	
Other Activities: <input type="checkbox"/>	
Traffic Control: <input type="checkbox"/>	

PERMIT INFORMATION:

NOTIFICATIONS:

76 Station: 510-437-9837

SITE INFORMATION:

MW-4, MW-5, MW-6, MW-7 & MW-9 recover slow. Take pre-purge samples and then follow standard TRC purge and sample procedures. Submit pre-purge samples if monitoring doesn't recover with enough water to collect the required bottles after two hours.

Collect DO and ORP measurements pre-purge and after each purge volume.

TRC SOLUTIONS
TECHNICAL SERVICES REQUEST FORM

20-Jul-11

Site ID: 5781
Address: 3535 Pierson Street
City: Oakland
Cross Street: Redding St.

Project No.: 183487.0035.1640 / 00TA01
Client: Roya Kambin
Contact #: 925-790-6270
PM: Kiersten Hoey CRA
PM Contact #: 510-420-3347

LAB INFORMATION:

Global ID: T0600101467

Lab WO: 351640

Lab Used: BC Labs

Lab Notes: Lab Analyses:
TPH-D by 8015M w/silica gel clean-up [Containers: two 1L ambers unpreserved]
TPH-G by 8015 [Containers: 3 voas w/HCl]
BTEX/MTBE/OXYS by 8260B, EDB/EDC by 8260B, Ethanol by 8260B [Containers: 3 voas w/HCl]
Methanol by 8015 [Containers: 3 voas unpreserved]
Nitrate, Sulfate [Container: one 500 mL poly unpreserved]
Ferrous Iron [Container: one 500 mL poly w/ HCl]
Methane [Containers: 2 voas unpreserved]

TRC SOLUTIONS
TECHNICAL SERVICES REQUEST FORM

20-Jul-11

Site ID.: 5781
Address 3535 Pierson Street
City: Oakland
Cross Street Redding St.

Well IDs	Benz.	MTBE	Gauging				Sampling				Field Measurements			Comments
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Pre-Purge	Post-Purge	Type	
MW-7	0	0	<input checked="" type="checkbox"/>	D.O., ORP	2" casing									
MW-A	0	0.57	<input checked="" type="checkbox"/>	D.O., ORP	2" casing									
MW-9	0	1.4	<input checked="" type="checkbox"/>	D.O., ORP	2" casing									
MW-4	0	1.6	<input checked="" type="checkbox"/>	D.O., ORP	4" casing									
MW-8	0	3.6	<input checked="" type="checkbox"/>	D.O., ORP	2" casing									
MW-6	0	4.3	<input checked="" type="checkbox"/>	D.O., ORP	2" casing									
MW-5	32	24	<input checked="" type="checkbox"/>	D.O., ORP	4" casing									

ATTACHMENT B

LABORATORY ANALYTICAL REPORT



Date of Report: 09/06/2011

Ian Hull

Conestoga-Rovers & Associates

5900 Hollis St. Suite A

Emeryville, CA 94608

Project: 5781

BC Work Order: 1113390

Invoice ID: B106852

Enclosed are the results of analyses for samples received by the laboratory on 8/18/2011. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014



Table of Contents

Sample Information

Chain of Custody and Cooler Receipt form.....	4
Laboratory / Client Sample Cross Reference.....	7

Sample Results

1113390-01 - MW-7-W-110818	
Solvent Scan (EPA Method 8015).....	10
Volatile Organic Analysis (EPA Method 8260).....	11
Purgeable Aromatics and Total Petroleum Hydrocarbons.....	12
Total Petroleum Hydrocarbons (Silica Gel Treated).....	13
Gas Testing in Water.....	14
Water Analysis (General Chemistry).....	15
1113390-02 - MW-A-W-110818	
Solvent Scan (EPA Method 8015).....	16
Volatile Organic Analysis (EPA Method 8260).....	17
Purgeable Aromatics and Total Petroleum Hydrocarbons.....	18
Total Petroleum Hydrocarbons (Silica Gel Treated).....	19
Gas Testing in Water.....	20
Water Analysis (General Chemistry).....	21
1113390-03 - MW-9-W-110818	
Solvent Scan (EPA Method 8015).....	22
Volatile Organic Analysis (EPA Method 8260).....	23
Purgeable Aromatics and Total Petroleum Hydrocarbons.....	24
Total Petroleum Hydrocarbons (Silica Gel Treated).....	25
Gas Testing in Water.....	26
Water Analysis (General Chemistry).....	27
1113390-04 - MW-4-W-110818	
Solvent Scan (EPA Method 8015).....	28
Volatile Organic Analysis (EPA Method 8260).....	29
Purgeable Aromatics and Total Petroleum Hydrocarbons.....	30
Total Petroleum Hydrocarbons (Silica Gel Treated).....	31
Gas Testing in Water.....	32
Water Analysis (General Chemistry).....	33
1113390-05 - MW-8-W-110818	
Solvent Scan (EPA Method 8015).....	34
Volatile Organic Analysis (EPA Method 8260).....	35
Purgeable Aromatics and Total Petroleum Hydrocarbons.....	36
Total Petroleum Hydrocarbons (Silica Gel Treated).....	37
Gas Testing in Water.....	38
Water Analysis (General Chemistry).....	39
1113390-06 - MW-6-W-110818	
Solvent Scan (EPA Method 8015).....	40
Volatile Organic Analysis (EPA Method 8260).....	41
Purgeable Aromatics and Total Petroleum Hydrocarbons.....	42
Total Petroleum Hydrocarbons (Silica Gel Treated).....	43
Gas Testing in Water.....	44
Water Analysis (General Chemistry).....	45
1113390-07 - MW-5-W-110818	
Solvent Scan (EPA Method 8015).....	46
Volatile Organic Analysis (EPA Method 8260).....	47
Purgeable Aromatics and Total Petroleum Hydrocarbons.....	48
Total Petroleum Hydrocarbons (Silica Gel Treated).....	49
Gas Testing in Water.....	50
Water Analysis (General Chemistry).....	51
1113390-08 - MW-6-WN-110818	



Table of Contents

Water Analysis (General Chemistry).....	52
Quality Control Reports	
Solvent Scan (EPA Method 8015)	
Method Blank Analysis.....	53
Laboratory Control Sample.....	54
Precision and Accuracy.....	55
Volatile Organic Analysis (EPA Method 8260)	
Method Blank Analysis.....	56
Laboratory Control Sample.....	57
Precision and Accuracy.....	58
Purgeable Aromatics and Total Petroleum Hydrocarbons	
Method Blank Analysis.....	59
Laboratory Control Sample.....	60
Precision and Accuracy.....	61
Total Petroleum Hydrocarbons (Silica Gel Treated)	
Method Blank Analysis.....	62
Laboratory Control Sample.....	63
Precision and Accuracy.....	64
Gas Testing in Water	
Method Blank Analysis.....	65
Laboratory Control Sample.....	66
Water Analysis (General Chemistry)	
Method Blank Analysis.....	67
Laboratory Control Sample.....	68
Precision and Accuracy.....	69
Notes	
Notes and Definitions.....	70



11-13390

CHAIN OF CUSTODY FORM
Union Oil Company of California ■ 6101 Bollinger Canyon Road ■ San Ramon, CA 94583

COC 1 of 1

Union Oil Site ID: <u>5781</u>				Union Oil Consultant: <u>CRA</u>				ANALYSES REQUIRED														
Site Global ID: <u>T0600101467</u>				Consultant Contact: <u>Kiersten Hoey</u>				TPH - Dissal by EPA 8015 w/ silica gel cleanup	TPH - G by GCIMS	BTEX/MTBE/OXYS by EPA 8260B	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS	TPH-G by 8015	EDB/EDC by 8260B	Methanol by 8015	Nitrate, Sulfate	Ferrous Iron	Methane	Turnaround Time (TAT): Standard <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 72 Hours <input type="checkbox"/>		Special Instructions	
Site Address: <u>3535 Pierson St. Oakland, CA</u>				Consultant Phone No.: <u>510 420 3347</u>															Notes / Comments			
Site Address: <u>3535 Pierson St. Oakland, CA</u>				Sampling Company: <u>TRC</u>																		
Union Oil PM: <u>Roya Kambin</u>				Sampled By (PRINT): <u>Andrew Wilkins</u>																		
Union Oil PM Phone No.: <u>925 790 6270</u>				Sampler Signature:																		
Charge Code: <u>NWRTB-0351640-0-LAB</u>				BC Laboratories, Inc. Project Manager: <u>Molly Meyers</u> 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911																		
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.																						
SAMPLE ID				Sample Time	# of Containers	TPH - Dissal by EPA 8015 w/ silica gel cleanup	TPH - G by GCIMS	BTEX/MTBE/OXYS by EPA 8260B	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS	TPH-G by 8015	EDB/EDC by 8260B	Methanol by 8015	Nitrate, Sulfate	Ferrous Iron	Methane						
Field Point Name	Matrix	DTW	Date (yymmdd)																			
MW-7	W-S-A	-1	110818	1007	15	X	X				X	X	X	X	X	X						
MW-A	W-S-A	-2		1027											X							
MW-9	W-S-A	-3		1058											X							
MW-4	W-S-A	-4		1120											X							
MW-8	W-S-A	-5		1136											X							
MW-6	W-S-A	-10		1150	14										X							
MW-5	W-S-A	-7		1212	15										X							
MW-6	W-S-A	-8		0714	1										X							
	W-S-A																					
	W-S-A																					
	W-S-A																					
	W-S-A																					
Relinquished By: <u>TRC</u> Company Date / Time: <u>8/18/11</u>				Relinquished By: <u>R. Ruy</u> Company Date / Time: <u>BCC 8-18-11 2:20</u>				Relinquished By: _____ Company Date / Time: _____														
Received By: <u>R. Ruy</u> Company Date / Time: <u>BCC 8-18-11 1:510</u>				Received By: <u>[Signature]</u> Company Date / Time: <u>BCC 8/18/11 2:20</u>				Received By: _____ Company Date / Time: _____														

CHK BY: [Signature] DISTRIBUTION: [Signature] SUB-OUT:

SHORT HOLDING TIME: [Signature]
Cr⁶⁺ NO₂ NO₃ OP SS
DO C₆ BOD MBAS CO

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BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 1 of 2

Submission #: 11-13390

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
 Emissivity: 0.97 Container: VO9 Thermometer ID: 103 Date/Time: 8/18/11 2:35
 Temperature: A 3.2 °C / C 3.2 °C Analyst Init: JNW

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED	D	D	D	D						
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
20L NITRATE /NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A10	A10	A10	A10						
QT EPA 413.1, 413.2, 413.1										
PT ODOB 10 ml VOA	B3	B3	B3	B3						
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL 500	C2	C2	C2	C2						
QT EPA 505/605/8050										
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 AMBER	EF	EF	EF	EF						
8 OZ JAR										
32 OZ JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG	G	G	G	G						
FERROUS IRON										
ENCORE										

Comments: _____
 Sample Numbering Completed By: JNW Date/Time: 8/18/11 2:20Z
 A = Actual / C = Corrected [H:\DOCS\INP\LAB_DOC\FORMS\5AMREC2.VPD]



BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 2 Of 2

Submission #: 11-13390

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

Emissivity: n.58 Container: pipe Thermometer ID: 1103 Date/Time 8/18/11 2135
 Temperature: A 1.2 °C / C 1.0 °C Analyst Init JNW

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED					D	D	D			
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2ea. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK					A	A	A			
40ml VOA VIAL										
QT EPA 413.1, 413.1, 413.1					B3	B3	B3			
PT-ODOR 40 ml VOA										
RADIOLOGICAL										
BACTERIOLOGICAL					C2	C2	C2			
40 ml VOA VIAL 404										
QT EPA 508/608/808D										
QT EPA 515.1/815D										
QT EPA 515										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 801SM					EF	EF	EF			
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG					G	G	G	A		
FERROUS IRON										
ENCORE										

Comments: _____
 Sample Numbering Completed By: JNW Date/Time: 8/18/11 2202
 A = Actual / C = Corrected



Conestoga-Rovers & Associates
5900 Hollis St. Suite A
Emeryville, CA 94608

Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Laboratory / Client Sample Cross Reference

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

1113390-01	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-7-W-110818 Sampled By: TRCI	Receive Date: 08/18/2011 21:20 Sampling Date: 08/18/2011 10:07 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-7 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1113390-02	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-A-W-110818 Sampled By: TRCI	Receive Date: 08/18/2011 21:20 Sampling Date: 08/18/2011 10:27 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-A Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1113390-03	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-9-W-110818 Sampled By: TRCI	Receive Date: 08/18/2011 21:20 Sampling Date: 08/18/2011 10:58 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-9 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--



Conestoga-Rovers & Associates
5900 Hollis St. Suite A
Emeryville, CA 94608

Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Laboratory / Client Sample Cross Reference

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

1113390-04	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-4-W-110818 Sampled By: TRCI	Receive Date: 08/18/2011 21:20 Sampling Date: 08/18/2011 11:20 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-4 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1113390-05	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-8-W-110818 Sampled By: TRCI	Receive Date: 08/18/2011 21:20 Sampling Date: 08/18/2011 11:36 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-8 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1113390-06	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-6-W-110818 Sampled By: TRCI	Receive Date: 08/18/2011 21:20 Sampling Date: 08/18/2011 11:50 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-6 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--



Conestoga-Rovers & Associates
5900 Hollis St. Suite A
Emeryville, CA 94608

Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Laboratory / Client Sample Cross Reference

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

1113390-07	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-5-W-110818 Sampled By: TRCI	Receive Date: 08/18/2011 21:20 Sampling Date: 08/18/2011 12:12 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-5 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1113390-08	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-6-WN-110818 Sampled By: TRCI	Receive Date: 08/18/2011 21:20 Sampling Date: 08/18/2011 07:14 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-6 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--



Conestoga-Rovers & Associates
5900 Hollis St. Suite A
Emeryville, CA 94608

Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1113390-01	Client Sample Name: 5781, MW-7-W-110818, 8/18/2011 10:07:00AM						
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	ug/L	100	EPA-8015B	ND		1
2-Chloroacrylonitrile (Surrogate)	142	%	60 - 140 (LCL - UCL)	EPA-8015B		S09	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/31/11	08/31/11 21:12	ZZZ	GC-12	1	BUH2468



Conestoga-Rovers & Associates
5900 Hollis St. Suite A
Emeryville, CA 94608

Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1113390-01	Client Sample Name: 5781, MW-7-W-110818, 8/18/2011 10:07:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	101	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	97.2	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	96.2	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	08/23/11	08/23/11 13:27	JMC	MS-V10	1	BUH1874

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.



Conestoga-Rovers & Associates
5900 Hollis St. Suite A
Emeryville, CA 94608

Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1113390-01	Client Sample Name: 5781, MW-7-W-110818, 8/18/2011 10:07:00AM						
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	86.5	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/24/11	08/24/11 14:20	jjh	GC-V4	1	BUH1886



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1113390-01	Client Sample Name: 5781, MW-7-W-110818, 8/18/2011 10:07:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	40	EPA-8015B/TPH d	ND		1
Tetracosane (Surrogate)	89.1	%	28 - 139 (LCL - UCL)	EPA-8015B/TPH d			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B/TPHd	08/23/11	08/30/11 15:52	MWB	GC-5	1.020	BUH2412



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Emeryville, CA 94608

Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Gas Testing in Water

BCL Sample ID: 1113390-01	Client Sample Name: 5781, MW-7-W-110818, 8/18/2011 10:07:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methane	0.0012	mg/L	0.0010	RSK-175M	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	RSK-175M	08/25/11	08/25/11 10:21	JMC	GC-V1	1	BUH1529



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Water Analysis (General Chemistry)

BCL Sample ID: 1113390-01	Client Sample Name: 5781, MW-7-W-110818, 8/18/2011 10:07:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Nitrate as NO3	3.8	mg/L	0.44	EPA-300.0	ND		1
Sulfate	100	mg/L	1.0	EPA-300.0	ND		1
Iron (II) Species	ND	ug/L	500	SM-3500-FeD	ND	A10	2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-300.0	08/19/11	08/19/11 16:34	TMS	IC1	1	BUH1611
2	SM-3500-FeD	08/18/11	08/18/11 22:15	MRM2	SPEC05	5	BUH1766

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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1113390-02	Client Sample Name: 5781, MW-A-W-110818, 8/18/2011 10:27:00AM						
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	ug/L	100	EPA-8015B	ND		1
2-Chloroacrylonitrile (Surrogate)	141	%	60 - 140 (LCL - UCL)	EPA-8015B		S09	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/31/11	08/31/11 21:35	ZZZ	GC-12	1	BUH2468



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1113390-02	Client Sample Name: 5781, MW-A-W-110818, 8/18/2011 10:27:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	0.61	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.4	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	96.6	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	99.6	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	08/23/11	08/23/11 13:09	JMC	MS-V10	1	BUH1874

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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1113390-02	Client Sample Name: 5781, MW-A-W-110818, 8/18/2011 10:27:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	87.7	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/24/11	08/24/11 14:43	jjh	GC-V4	1	BUH1886



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Emeryville, CA 94608

Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1113390-02	Client Sample Name: 5781, MW-A-W-110818, 8/18/2011 10:27:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	40	EPA-8015B/TPH d	ND		1
Tetracosane (Surrogate)	94.9	%	28 - 139 (LCL - UCL)	EPA-8015B/TPH d			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B/TPHd	08/23/11	08/30/11 16:06	MWB	GC-5	1.010	BUH2412



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Emeryville, CA 94608

Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Gas Testing in Water

BCL Sample ID: 1113390-02	Client Sample Name: 5781, MW-A-W-110818, 8/18/2011 10:27:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methane	ND	mg/L	0.0010	RSK-175M	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	RSK-175M	08/25/11	08/25/11 10:17	JMC	GC-V1	1	BUH1529

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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Water Analysis (General Chemistry)

BCL Sample ID: 1113390-02	Client Sample Name: 5781, MW-A-W-110818, 8/18/2011 10:27:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Nitrate as NO3	11	mg/L	0.44	EPA-300.0	ND		1
Sulfate	69	mg/L	1.0	EPA-300.0	ND		1
Iron (II) Species	140	ug/L	100	SM-3500-FeD	ND		2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-300.0	08/19/11	08/19/11 17:55	TMS	IC1	1	BUH1611
2	SM-3500-FeD	08/18/11	08/18/11 22:15	MRM2	SPEC05	1	BUH1766

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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1113390-03	Client Sample Name: 5781, MW-9-W-110818, 8/18/2011 10:58:00AM						
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	ug/L	100	EPA-8015B	ND		1
2-Chloroacrylonitrile (Surrogate)	142	%	60 - 140 (LCL - UCL)	EPA-8015B		S09	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/31/11	08/31/11 21:56	ZZZ	GC-12	1	BUH2468

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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1113390-03	Client Sample Name: 5781, MW-9-W-110818, 8/18/2011 10:58:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	2.1	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	95.9	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	97.8	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	08/23/11	08/23/11 12:51	JMC	MS-V10	1	BUH1874



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1113390-03	Client Sample Name: 5781, MW-9-W-110818, 8/18/2011 10:58:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	87.6	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/24/11	08/24/11 15:06	jjh	GC-V4	1	BUH1886



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1113390-03	Client Sample Name: 5781, MW-9-W-110818, 8/18/2011 10:58:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	40	EPA-8015B/TPH d	ND		1
Tetracosane (Surrogate)	89.3	%	28 - 139 (LCL - UCL)	EPA-8015B/TPH d			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B/TPHd	08/23/11	08/30/11 16:20	MWB	GC-5	1	BUH2412



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Gas Testing in Water

BCL Sample ID: 1113390-03	Client Sample Name: 5781, MW-9-W-110818, 8/18/2011 10:58:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methane	0.0010	mg/L	0.0010	RSK-175M	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	RSK-175M	08/25/11	08/25/11 10:13	JMC	GC-V1	1	BUH1529

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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Water Analysis (General Chemistry)

BCL Sample ID: 1113390-03	Client Sample Name: 5781, MW-9-W-110818, 8/18/2011 10:58:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Nitrate as NO3	2.7	mg/L	0.44	EPA-300.0	ND		1
Sulfate	47	mg/L	1.0	EPA-300.0	ND		1
Iron (II) Species	ND	ug/L	500	SM-3500-FeD	ND	A10	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	08/19/11	08/19/11	18:09	TMS	IC1	1	BUH1611
2	SM-3500-FeD	08/18/11	08/18/11	22:15	MRM2	SPEC05	5	BUH1766



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1113390-04	Client Sample Name: 5781, MW-4-W-110818, 8/18/2011 11:20:00AM						
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	ug/L	100	EPA-8015B	ND		1
2-Chloroacrylonitrile (Surrogate)	144	%	60 - 140 (LCL - UCL)	EPA-8015B		S09	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/31/11	08/31/11 22:18	ZZZ	GC-12	1	BUH2468



Conestoga-Rovers & Associates
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Emeryville, CA 94608

Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1113390-04	Client Sample Name: 5781, MW-4-W-110818, 8/18/2011 11:20:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	4.0	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	94.5	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	94.8	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	08/23/11	08/23/11 12:34	JMC	MS-V10	1	BUH1874



Conestoga-Rovers & Associates
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Emeryville, CA 94608

Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1113390-04	Client Sample Name: 5781, MW-4-W-110818, 8/18/2011 11:20:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	87.7	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/24/11	08/24/11 15:30	jjh	GC-V4	1	BUH1886

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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1113390-04	Client Sample Name: 5781, MW-4-W-110818, 8/18/2011 11:20:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	40	EPA-8015B/TPH d	ND		1
Tetracosane (Surrogate)	94.4	%	28 - 139 (LCL - UCL)	EPA-8015B/TPH d			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B/TPHd	08/23/11	08/30/11 16:34	MWB	GC-5	1.010	BUH2412



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Gas Testing in Water

BCL Sample ID: 1113390-04	Client Sample Name: 5781, MW-4-W-110818, 8/18/2011 11:20:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methane	0.040	mg/L	0.0010	RSK-175M	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	RSK-175M	08/25/11	08/25/11 10:00	JMC	GC-V1	1	BUH1529



Conestoga-Rovers & Associates
5900 Hollis St. Suite A
Emeryville, CA 94608

Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Water Analysis (General Chemistry)

BCL Sample ID: 1113390-04	Client Sample Name: 5781, MW-4-W-110818, 8/18/2011 11:20:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Nitrate as NO3	4.6	mg/L	0.44	EPA-300.0	ND		1
Sulfate	52	mg/L	1.0	EPA-300.0	ND		1
Iron (II) Species	ND	ug/L	100	SM-3500-FeD	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	08/19/11	08/19/11	18:22	TMS	IC1	1	BUH1611
2	SM-3500-FeD	08/18/11	08/18/11	22:15	MRM2	SPEC05	1	BUH1766



Conestoga-Rovers & Associates
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Emeryville, CA 94608

Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1113390-05	Client Sample Name: 5781, MW-8-W-110818, 8/18/2011 11:36:00AM						
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	ug/L	100	EPA-8015B	ND		1
2-Chloroacrylonitrile (Surrogate)	137	%	60 - 140 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/31/11	08/31/11 22:39	ZZZ	GC-12	1	BUH2468

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Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1113390-05	Client Sample Name: 5781, MW-8-W-110818, 8/18/2011 11:36:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	2.1	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	96.3	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	96.4	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	08/23/11	08/23/11 12:16	JMC	MS-V10	1	BUH1874



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1113390-05	Client Sample Name: 5781, MW-8-W-110818, 8/18/2011 11:36:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	87.4	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/24/11	08/24/11 15:53	jjh	GC-V4	1	BUH1886

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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1113390-05	Client Sample Name: 5781, MW-8-W-110818, 8/18/2011 11:36:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	40	EPA-8015B/TPH d	ND		1
Tetracosane (Surrogate)	91.8	%	28 - 139 (LCL - UCL)	EPA-8015B/TPH d			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B/TPHd	08/23/11	08/30/11 16:48	MWB	GC-5	1.010	BUH2412



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Gas Testing in Water

BCL Sample ID: 1113390-05	Client Sample Name: 5781, MW-8-W-110818, 8/18/2011 11:36:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methane	ND	mg/L	0.0010	RSK-175M	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	RSK-175M	08/25/11	08/25/11 09:56	JMC	GC-V1	1	BUH1529



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Water Analysis (General Chemistry)

BCL Sample ID: 1113390-05	Client Sample Name: 5781, MW-8-W-110818, 8/18/2011 11:36:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Nitrate as NO3	1.5	mg/L	0.44	EPA-300.0	ND		1
Sulfate	65	mg/L	1.0	EPA-300.0	ND		1
Iron (II) Species	140	ug/L	100	SM-3500-FeD	ND		2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-300.0	08/19/11	08/19/11 18:36	TMS	IC1	1	BUH1611
2	SM-3500-FeD	08/18/11	08/18/11 22:15	MRM2	SPEC05	1	BUH1766

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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1113390-06	Client Sample Name: 5781, MW-6-W-110818, 8/18/2011 11:50:00AM						
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	ug/L	100	EPA-8015B	ND		1
2-Chloroacrylonitrile (Surrogate)	129	%	60 - 140 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/31/11	08/31/11 23:02	ZZZ	GC-12	1	BUH2468



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1113390-06	Client Sample Name: 5781, MW-6-W-110818, 8/18/2011 11:50:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	2.4	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	93.2	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	94.4	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	08/24/11	08/25/11 02:24	JMC	MS-V10	1	BUH2002

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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1113390-06	Client Sample Name: 5781, MW-6-W-110818, 8/18/2011 11:50:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	87.8	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/24/11	08/24/11 16:16	jjh	GC-V4	1	BUH1886

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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1113390-06	Client Sample Name: 5781, MW-6-W-110818, 8/18/2011 11:50:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	40	EPA-8015B/TPH d	ND		1
Tetracosane (Surrogate)	113	%	28 - 139 (LCL - UCL)	EPA-8015B/TPH d			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B/TPHd	08/23/11	08/30/11 17:03	MWB	GC-5	0.980	BUH2412



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Gas Testing in Water

BCL Sample ID: 1113390-06	Client Sample Name: 5781, MW-6-W-110818, 8/18/2011 11:50:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methane	0.0027	mg/L	0.0010	RSK-175M	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	RSK-175M	08/25/11	08/25/11 09:52	JMC	GC-V1	1	BUH1529



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Water Analysis (General Chemistry)

BCL Sample ID: 1113390-06	Client Sample Name: 5781, MW-6-W-110818, 8/18/2011 11:50:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Nitrate as NO3	18	mg/L	0.44	EPA-300.0	ND		1
Sulfate	66	mg/L	1.0	EPA-300.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	08/19/11	08/19/11 18:49	TMS	IC1	1	BUH1611

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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1113390-07	Client Sample Name: 5781, MW-5-W-110818, 8/18/2011 12:12:00PM						
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	ug/L	100	EPA-8015B	ND		1
2-Chloroacrylonitrile (Surrogate)	135	%	60 - 140 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/31/11	09/01/11 00:34	ZZZ	GC-12	1	BUH2468

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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1113390-07	Client Sample Name: 5781, MW-5-W-110818, 8/18/2011 12:12:00PM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	29	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	980	ug/L	10	EPA-8260	ND	A01	2
Methyl t-butyl ether	56	ug/L	0.50	EPA-8260	ND		1
Toluene	1000	ug/L	10	EPA-8260	ND	A01	2
Total Xylenes	7200	ug/L	25	EPA-8260	ND	A01	3
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	ND		1
t-Butyl alcohol	44	ug/L	10	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.5	%	76 - 114 (LCL - UCL)	EPA-8260			1
1,2-Dichloroethane-d4 (Surrogate)	99.3	%	76 - 114 (LCL - UCL)	EPA-8260			2
1,2-Dichloroethane-d4 (Surrogate)	108	%	76 - 114 (LCL - UCL)	EPA-8260			3
Toluene-d8 (Surrogate)	96.9	%	88 - 110 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	91.0	%	88 - 110 (LCL - UCL)	EPA-8260			2
Toluene-d8 (Surrogate)	96.5	%	88 - 110 (LCL - UCL)	EPA-8260			3
4-Bromofluorobenzene (Surrogate)	92.9	%	86 - 115 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	101	%	86 - 115 (LCL - UCL)	EPA-8260			2
4-Bromofluorobenzene (Surrogate)	100	%	86 - 115 (LCL - UCL)	EPA-8260			3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	08/23/11	08/23/11 11:40	JMC	MS-V10	1	BUH1874
2	EPA-8260	08/24/11	08/25/11 02:42	JMC	MS-V10	20	BUH2002
3	EPA-8260	08/25/11	08/25/11 14:28	JMC	MS-V10	25	BUH2002



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1113390-07	Client Sample Name: 5781, MW-5-W-110818, 8/18/2011 12:12:00PM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	30000	ug/L	1000	EPA-8015B	ND	A01	1
a,a,a-Trifluorotoluene (FID Surrogate)	84.3	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/24/11	08/29/11 15:51	jjh	GC-V4	20	BUH1886

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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1113390-07	Client Sample Name: 5781, MW-5-W-110818, 8/18/2011 12:12:00PM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	5400	ug/L	400	EPA-8015B/TPH d	ND	A01,A52	1
Tetracosane (Surrogate)	1.6	%	28 - 139 (LCL - UCL)	EPA-8015B/TPH d		A01,S09	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B/TPHd	08/23/11	09/01/11 11:00	MWB	GC-5	10	BUH2412



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Gas Testing in Water

BCL Sample ID: 1113390-07	Client Sample Name: 5781, MW-5-W-110818, 8/18/2011 12:12:00PM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methane	9.7	mg/L	0.050	RSK-175M	ND	A01,S01	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	RSK-175M	08/25/11	08/25/11 09:39	JMC	GC-V1	50	BUH1529

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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Water Analysis (General Chemistry)

BCL Sample ID: 1113390-07	Client Sample Name: 5781, MW-5-W-110818, 8/18/2011 12:12:00PM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Nitrate as NO3	ND	mg/L	0.44	EPA-300.0	ND		1
Sulfate	ND	mg/L	1.0	EPA-300.0	ND		1
Iron (II) Species	15000	ug/L	500	SM-3500-FeD	ND	A01	2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-300.0	08/19/11	08/19/11 19:03	TMS	IC1	1	BUH1611
2	SM-3500-FeD	08/18/11	08/18/11 22:15	MRM2	SPEC05	5	BUH1766



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Water Analysis (General Chemistry)

BCL Sample ID: 1113390-08	Client Sample Name: 5781, MW-6-WN-110818, 8/18/2011 7:14:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Iron (II) Species	ND	ug/L	200	SM-3500-FeD	ND	A10	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-3500-FeD	08/18/11	08/18/11 22:15	MRM2	SPEC05	2	BUH1766



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Solvent Scan (EPA Method 8015)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BUH2468						
Methanol	BUH2468-BLK1	ND	ug/L	100		
2-Chloroacrylonitrile (Surrogate)	BUH2468-BLK1	133	%	60 - 140 (LCL - UCL)		



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Solvent Scan (EPA Method 8015)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: BUH2468										
Methanol	BUH2468-BS1	LCS	2670.2	2000.0	ug/L	134		50 - 150		
2-Chloroacrylonitrile (Surrogate)	BUH2468-BS1	LCS	5273.8	4000.0	ug/L	132		60 - 140		



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Solvent Scan (EPA Method 8015)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
									RPD	Percent Recovery	
QC Batch ID: BUH2468		Used client sample: N									
Methanol	MS	1107512-56	ND	2309.9	2000.0	ug/L		115		50 - 150	
	MSD	1107512-56	ND	2171.9	2000.0	ug/L	6.2	109	30	50 - 150	
2-Chloroacrylonitrile (Surrogate)	MS	1107512-56	ND	5816.3	4000.0	ug/L		145		60 - 140	Q03
	MSD	1107512-56	ND	5933.7	4000.0	ug/L	2.0	148		60 - 140	Q03



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Reported: 09/06/2011 10:20
Project: 5781
Project Number: 351640
Project Manager: Ian Hull

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
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QC Batch ID: BUH1874

Benzene	BUH1874-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BUH1874-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BUH1874-BLK1	ND	ug/L	0.50		
Ethylbenzene	BUH1874-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BUH1874-BLK1	ND	ug/L	0.50		
Toluene	BUH1874-BLK1	ND	ug/L	0.50		
Total Xylenes	BUH1874-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BUH1874-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BUH1874-BLK1	ND	ug/L	10		
Diisopropyl ether	BUH1874-BLK1	ND	ug/L	0.50		
Ethanol	BUH1874-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BUH1874-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	BUH1874-BLK1	96.5	%		76 - 114 (LCL - UCL)	
Toluene-d8 (Surrogate)	BUH1874-BLK1	96.8	%		88 - 110 (LCL - UCL)	
4-Bromofluorobenzene (Surrogate)	BUH1874-BLK1	100	%		86 - 115 (LCL - UCL)	

QC Batch ID: BUH2002

Benzene	BUH2002-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BUH2002-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BUH2002-BLK1	ND	ug/L	0.50		
Ethylbenzene	BUH2002-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BUH2002-BLK1	ND	ug/L	0.50		
Toluene	BUH2002-BLK1	ND	ug/L	0.50		
Total Xylenes	BUH2002-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BUH2002-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BUH2002-BLK1	ND	ug/L	10		
Diisopropyl ether	BUH2002-BLK1	ND	ug/L	0.50		
Ethanol	BUH2002-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BUH2002-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	BUH2002-BLK1	108	%		76 - 114 (LCL - UCL)	
Toluene-d8 (Surrogate)	BUH2002-BLK1	98.6	%		88 - 110 (LCL - UCL)	
4-Bromofluorobenzene (Surrogate)	BUH2002-BLK1	96.0	%		86 - 115 (LCL - UCL)	



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Project: 5781
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Project Manager: Ian Hull

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: BUH1874										
Benzene	BUH1874-BS1	LCS	23.220	25.000	ug/L	92.9		70 - 130		
Toluene	BUH1874-BS1	LCS	25.960	25.000	ug/L	104		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BUH1874-BS1	LCS	9.5100	10.000	ug/L	95.1		76 - 114		
Toluene-d8 (Surrogate)	BUH1874-BS1	LCS	9.7500	10.000	ug/L	97.5		88 - 110		
4-Bromofluorobenzene (Surrogate)	BUH1874-BS1	LCS	9.9400	10.000	ug/L	99.4		86 - 115		
QC Batch ID: BUH2002										
Benzene	BUH2002-BS1	LCS	27.350		ug/L			70 - 130		
Toluene	BUH2002-BS1	LCS	29.740		ug/L			70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BUH2002-BS1	LCS	10.410	10.000	ug/L	104		76 - 114		
Toluene-d8 (Surrogate)	BUH2002-BS1	LCS	10.300	10.000	ug/L	103		88 - 110		
4-Bromofluorobenzene (Surrogate)	BUH2002-BS1	LCS	9.4400	10.000	ug/L	94.4		86 - 115		



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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery		Lab	
								RPD	Percent Recovery		
QC Batch ID: BUH1874		Used client sample: Y - Description: MW-7-W-110818, 08/18/2011 10:07									
Benzene	MS	1113390-01	ND	29.110	25.000	ug/L		116		70 - 130	
	MSD	1113390-01	ND	29.080	25.000	ug/L	0.1	116	20	70 - 130	
Toluene	MS	1113390-01	ND	30.420	25.000	ug/L		122		70 - 130	
	MSD	1113390-01	ND	31.300	25.000	ug/L	2.9	125	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1113390-01	ND	10.120	10.000	ug/L		101		76 - 114	
	MSD	1113390-01	ND	10.170	10.000	ug/L	0.5	102		76 - 114	
Toluene-d8 (Surrogate)	MS	1113390-01	ND	9.5900	10.000	ug/L		95.9		88 - 110	
	MSD	1113390-01	ND	9.7200	10.000	ug/L	1.3	97.2		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1113390-01	ND	9.2700	10.000	ug/L		92.7		86 - 115	
	MSD	1113390-01	ND	9.2700	10.000	ug/L	0	92.7		86 - 115	
QC Batch ID: BUH2002		Used client sample: N									
Benzene	MS	1113168-28	ND	24.670		ug/L				70 - 130	
	MSD	1113168-28	ND	25.370		ug/L	2.8		20	70 - 130	
Toluene	MS	1113168-28	ND	27.010		ug/L				70 - 130	
	MSD	1113168-28	ND	27.660		ug/L	2.4		20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1113168-28	ND	10.220	10.000	ug/L		102		76 - 114	
	MSD	1113168-28	ND	10.050	10.000	ug/L	1.7	100		76 - 114	
Toluene-d8 (Surrogate)	MS	1113168-28	ND	10.030	10.000	ug/L		100		88 - 110	
	MSD	1113168-28	ND	9.8000	10.000	ug/L	2.3	98.0		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1113168-28	ND	9.9700	10.000	ug/L		99.7		86 - 115	
	MSD	1113168-28	ND	10.250	10.000	ug/L	2.8	102		86 - 115	

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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BUH1886						
Gasoline Range Organics (C4 - C12)	BUH1886-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (FID Surrogate)	BUH1886-BLK1	89.6	%	70 - 130 (LCL - UCL)		



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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: BUH1886										
Gasoline Range Organics (C4 - C12)	BUH1886-BS1	LCS	1013.0	1000.0	ug/L	101		85 - 115		
a,a,a-Trifluorotoluene (FID Surrogate)	BUH1886-BS1	LCS	37.868	40.000	ug/L	94.7		70 - 130		



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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
QC Batch ID: BUH1886		Used client sample: N								
Gasoline Range Organics (C4 - C12)	MS	1113168-11	ND	1012.5	1000.0	ug/L		101		70 - 130
	MSD	1113168-11	ND	987.30	1000.0	ug/L	2.5	98.7	20	70 - 130
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1113168-11	ND	37.573	40.000	ug/L		93.9		70 - 130
	MSD	1113168-11	ND	38.068	40.000	ug/L	1.3	95.2		70 - 130



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Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BUH2412						
Diesel Range Organics (C12 - C24)	BUH2412-BLK1	ND	ug/L	40		
Tetracosane (Surrogate)	BUH2412-BLK1	103	%	28 - 139 (LCL - UCL)		



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Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: BUH2412										
Diesel Range Organics (C12 - C24)	BUH2412-BS1	LCS	446.26	500.00	ug/L	89.3		48 - 125		
Tetracosane (Surrogate)	BUH2412-BS1	LCS	18.366	20.000	ug/L	91.8		28 - 139		



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Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
									RPD	Percent Recovery	
QC Batch ID: BUH2412		Used client sample: N									
Diesel Range Organics (C12 - C24)	MS	1110024-48	ND	420.98	500.00	ug/L		84.2		36 - 130	
	MSD	1110024-48	ND	462.79	500.00	ug/L	9.5	92.6	30	36 - 130	
Tetracosane (Surrogate)	MS	1110024-48	ND	19.316	20.000	ug/L		96.6		28 - 139	
	MSD	1110024-48	ND	20.768	20.000	ug/L	7.2	104		28 - 139	



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Gas Testing in Water

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BUH1529						
Methane	BUH1529-BLK1	ND	mg/L	0.0010		



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Gas Testing in Water

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: BUH1529										
Methane	BUH1529-BS1	LCS	0.0093805	0.010843	mg/L	86.5		80 - 120		
	BUH1529-BSD1	LCSD	0.0093516	0.010843	mg/L	86.2	0.3	80 - 120	20	



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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BUH1611						
Nitrate as NO3	BUH1611-BLK1	ND	mg/L	0.44		
Sulfate	BUH1611-BLK1	ND	mg/L	1.0		
QC Batch ID: BUH1766						
Iron (II) Species	BUH1766-BLK1	ND	ug/L	100		



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Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab	Quals
								Percent Recovery	RPD		
QC Batch ID: BUH1611											
Nitrate as NO3	BUH1611-BS1	LCS	22.369	22.134	mg/L	101		90 - 110			
Sulfate	BUH1611-BS1	LCS	99.889	100.00	mg/L	99.9		90 - 110			
QC Batch ID: BUH1766											
Iron (II) Species	BUH1766-BS1	LCS	2063.6	2000.0	ug/L	103		90 - 110			



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Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
									RPD	Percent Recovery	
QC Batch ID: BUH1611		Used client sample: Y - Description: MW-7-W-110818, 08/18/2011 10:07									
Nitrate as NO3	DUP	1113390-01	3.8425	3.7406		mg/L	2.7		10		
	MS	1113390-01	3.8425	26.565	22.358	mg/L		102		80 - 120	
	MSD	1113390-01	3.8425	26.445	22.358	mg/L	0.5	101	10	80 - 120	
Sulfate	DUP	1113390-01	99.996	99.911		mg/L	0.1		10		
	MS	1113390-01	99.996	208.20	101.01	mg/L		107		80 - 120	
	MSD	1113390-01	99.996	207.76	101.01	mg/L	0.2	107	10	80 - 120	
QC Batch ID: BUH1766		Used client sample: Y - Description: MW-7-W-110818, 08/18/2011 10:07									
Iron (II) Species	DUP	1113390-01	ND	ND		ug/L			10		

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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

A01 PQL's and MDL's are raised due to sample dilution.

A10 PQL's and MDL's were raised due to matrix interference.

A52 Chromatogram not typical of diesel.

Q03 Matrix spike recovery(s) is(are) not within the control limits.

S01 Sample result is not within the quantitation range of the method.

S09 The surrogate recovery on the sample for this compound was not within the control limits.

ATTACHMENT C

HISTORICAL GROUNDWATER MONITORING AND SAMPLING DATA

**Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**

**March 10, 2011
76 Station 5781**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-D (µg/l)	TPH-G 8015 (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
MW-4														
6/16/2010	153.48	11.13	0	142.35	--	ND<50	58	ND<0.50	9.7	1.3	16	--	5.4	
9/29/2010	153.48	12.62	0	140.86	-1.49	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	7.3	
12/21/2010	153.48	11.17	0	142.31	1.45	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
3/10/2011	153.48	10.57	0	142.91	0.60	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.2	
MW-5														
6/16/2010	153.66	11.95	0	141.71	--	3000	29000	580	6800	850	7200	--	ND<50	
9/29/2010	153.66	13.67	0	139.99	-1.72	64000	29000	220	4100	2500	23000	--	52	
12/21/2010	153.66	11.17	0	142.49	2.50	11000	50000	81	4800	2200	22000	--	ND<50	
3/10/2011	153.66	11.35	0	142.31	-0.18	4900	48000	69	3600	1700	20000	--	ND<50	
MW-6														
12/21/2010	154.62	12.10	0	142.52	--	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	32	
3/10/2011	154.62	11.36	0	143.26	0.74	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	4.6	
MW-7														
12/21/2010	155.38	13.46	0	141.92	--	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
3/10/2011	155.38	12.07	0	143.31	1.39	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
MW-8														
12/21/2010	153.71	11.63	0	142.08	--	81	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	3.9	
3/10/2011	153.71	11.38	0	142.33	0.25	61	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.3	
MW-9														
12/21/2010	153.37	10.53	0	142.84	--	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.2	
3/10/2011	153.37	10.86	0	142.51	-0.33	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.90	
MW-A														
12/18/1990	--	--	--	--	--	73	ND	ND	ND	ND	ND	--		
5/3/1991	--	--	--	--	--	ND	ND	ND	ND	ND	ND	--		
8/7/1991	--	--	--	--	--	ND	ND	ND	ND	ND	ND	--		
11/8/1991	--	--	--	--	--	ND	ND	ND	ND	ND	ND	--		
2/6/1992	151.80	19.88	0	131.92	--	ND	ND	ND	ND	ND	ND	--		
8/4/1992	151.80	18.95	0	132.85	0.93	ND	ND	ND	ND	ND	0.51	--		
2/10/1993	151.80	17.71	0	134.09	1.24	ND	ND	ND	ND	ND	ND	--		
2/10/1994	151.80	15.25	0	136.55	2.46	ND	ND	ND	0.52	ND	0.92	--		
2/9/1995	151.80	15.68	0	136.12	-0.43	ND	ND	ND	ND	ND	ND	--		
2/6/1996	151.80	12.52	0	139.28	3.16	120	ND	ND	ND	ND	2.1	--		
2/5/1997	151.80	13.01	0	138.79	-0.49	61	ND	ND	ND	ND	ND	--	ND	
2/2/1998	151.80	11.91	0	139.89	1.10	ND	ND	ND	ND	ND	ND	--	ND	
2/22/1999	151.80	11.24	0	140.56	0.67	ND	ND	ND	ND	ND	ND	--	ND	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

March 10, 2011
76 Station 5781

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-D (µg/l)	TPH-G 8015 (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
2/26/2000	151.80	12.16	0	139.64	-0.92	ND	ND	ND	1.01	ND	ND	--	ND	
3/7/2001	151.80	11.91	0	139.89	0.25	131	ND	ND	ND	ND	ND	ND	ND	
2/22/2002	151.80	14.08	0	137.72	-2.17	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<5.0	
2/22/2003	151.80	14.41	0	137.39	-0.33	93	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	ND<2.0	
2/3/2004	151.80	14.32	0	137.48	0.09	60	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<2.0	
2/18/2005	151.80	14.21	0	137.59	0.11	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<0.50	
3/29/2006	151.80	12.72	0	139.08	1.49	ND<200	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	0.54	
3/28/2007	151.80	13.98	0	137.82	-1.26	92	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
3/22/2008	151.80	12.68	0	139.12	1.30	ND<50	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
3/27/2009	151.80	14.35	0	137.45	-1.67	53	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
3/23/2010	151.80	19.55	0	132.25	-5.20	ND<58	--	--	--	--	--	--	--	
6/16/2010	154.79	17.85	0	136.94	4.69	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
9/29/2010	154.79	15.50	0	139.29	2.35	ND<1200	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.63	
12/21/2010	154.79	14.43	0	140.36	1.07	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.65	
3/10/2011	154.79	17.70	0	137.09	-3.27	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.56	

Table 2a
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 5781

Date Sampled	TPH-G (GC/MS) ($\mu\text{g/l}$)	TBA ($\mu\text{g/l}$)	Ethanol (8260B) ($\mu\text{g/l}$)	Ethylene-dibromide (EDB) ($\mu\text{g/l}$)	1,2-DCA (EDC) ($\mu\text{g/l}$)	DIPE ($\mu\text{g/l}$)	ETBE ($\mu\text{g/l}$)	TAME ($\mu\text{g/l}$)	Methanol ($\mu\text{g/l}$)	Total Oil and Grease (mg/l)	TRPH (mg/l)	Bromo-dichloro-methane ($\mu\text{g/l}$)	Comments
MW-4													
6/16/2010	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	--	--	
9/29/2010	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	--	--	
12/21/2010	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	--	--	
3/10/2011	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	--	--	
MW-5													
6/16/2010	--	ND<1000	ND<25000	ND<50	ND<50	ND<50	ND<50	ND<50	ND<100	--	--	--	
9/29/2010	--	ND<1000	ND<25000	ND<50	ND<50	ND<50	ND<50	ND<50	ND<1000	--	--	--	
12/21/2010	--	ND<1000	ND<25000	ND<50	ND<50	ND<50	ND<50	ND<50	ND<100	--	--	--	
3/10/2011	--	ND<1000	ND<25000	ND<50	ND<50	ND<50	ND<50	ND<50	ND<100	--	--	--	
MW-6													
12/21/2010	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	--	--	
3/10/2011	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	--	--	
MW-7													
12/21/2010	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	--	--	
3/10/2011	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	--	--	
MW-8													
12/21/2010	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	--	--	
3/10/2011	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	--	--	
MW-9													
12/21/2010	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	--	--	
3/10/2011	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	--	--	
MW-A													
2/6/1996	--	--	--	--	--	--	--	--	--	--	--	--	
2/5/1997	--	--	--	--	--	--	--	--	--	--	--	--	
3/7/2001	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	
2/22/2003	--	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	
2/3/2004	--	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	
2/18/2005	--	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	
3/29/2006	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	ND<0.50	
3/28/2007	--	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	
3/22/2008	--	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	
3/27/2009	--	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	
6/16/2010	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	--	--	
9/29/2010	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	--	--	
12/21/2010	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	--	--	
3/10/2011	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	--	--	

**Table 2b
ADDITIONAL HISTORIC ANALYTICAL RESULTS**

76 Station 5781

Date Sampled	Bromoform (µg/l)	Bromomethane (µg/l)	Carbon Tetrachloride (µg/l)	Chlorobenzene (µg/l)	Chloroethane (µg/l)	2-Chloroethyl vinyl ether (µg/l)	Chloroform (µg/l)	Chloromethane (µg/l)	Dibromochloromethane (µg/l)	1,2-Dichlorobenzene (µg/l)	1,3-Dichlorobenzene (µg/l)	1,4-Dichlorobenzene (µg/l)	Comments
MW-4													
6/16/2010	--	--	--	--	--	--	--	--	--	--	--	--	
9/29/2010	--	--	--	--	--	--	--	--	--	--	--	--	
12/21/2010	--	--	--	--	--	--	--	--	--	--	--	--	
3/10/2011	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5													
6/16/2010	--	--	--	--	--	--	--	--	--	--	--	--	
9/29/2010	--	--	--	--	--	--	--	--	--	--	--	--	
12/21/2010	--	--	--	--	--	--	--	--	--	--	--	--	
3/10/2011	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6													
12/21/2010	--	--	--	--	--	--	--	--	--	--	--	--	
3/10/2011	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7													
12/21/2010	--	--	--	--	--	--	--	--	--	--	--	--	
3/10/2011	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8													
12/21/2010	--	--	--	--	--	--	--	--	--	--	--	--	
3/10/2011	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9													
12/21/2010	--	--	--	--	--	--	--	--	--	--	--	--	
3/10/2011	--	--	--	--	--	--	--	--	--	--	--	--	
MW-A													
2/6/1996	--	--	--	--	--	--	--	--	--	--	--	--	
2/5/1997	--	--	--	--	--	--	--	--	--	--	--	--	
3/7/2001	--	--	--	--	--	--	--	--	--	--	--	--	
2/22/2003	--	--	--	--	--	--	--	--	--	--	--	--	
2/3/2004	ND<2.0	ND<1.0	ND<0.50	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	
2/18/2005	ND<2.0	ND<1.0	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
3/29/2006	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	ND<0.50	
3/28/2007	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	ND<0.50	
3/22/2008	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	ND<0.50	
3/27/2009	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	ND<0.50	
6/16/2010	--	--	--	--	--	--	--	--	--	--	--	--	
9/29/2010	--	--	--	--	--	--	--	--	--	--	--	--	
12/21/2010	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2b
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 5781

Date Sampled	Bromo- form (µg/l)	Bromo- methane (µg/l)	Carbon Tetra- chloride (µg/l)	Chloro- benzene (µg/l)	Chloro- ethane (µg/l)	2- Chloroethyl vinyl ether (µg/l)	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)	Comments
3/10/2011	--	--	--	--	--	--	--	--	--	--	--	--	

**Table 2c
ADDITIONAL HISTORIC ANALYTICAL RESULTS**

76 Station 5781

Date Sampled	Dichloro-difluoromethane (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-Dichloropropane (µg/l)	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)	Comments
MW-4													
6/16/2010	--	--	--	--	--	--	--	--	--	--	--	--	
9/29/2010	--	--	--	--	--	--	--	--	--	--	--	--	
12/21/2010	--	--	--	--	--	--	--	--	--	--	--	--	
3/10/2011	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5													
6/16/2010	--	--	--	--	--	--	--	--	--	--	--	--	
9/29/2010	--	--	--	--	--	--	--	--	--	--	--	--	
12/21/2010	--	--	--	--	--	--	--	--	--	--	--	--	
3/10/2011	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6													
12/21/2010	--	--	--	--	--	--	--	--	--	--	--	--	
3/10/2011	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7													
12/21/2010	--	--	--	--	--	--	--	--	--	--	--	--	
3/10/2011	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8													
12/21/2010	--	--	--	--	--	--	--	--	--	--	--	--	
3/10/2011	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9													
12/21/2010	--	--	--	--	--	--	--	--	--	--	--	--	
3/10/2011	--	--	--	--	--	--	--	--	--	--	--	--	
MW-A													
2/6/1996	--	--	--	--	--	--	--	--	--	--	--	--	
2/5/1997	--	--	--	--	--	--	--	--	--	--	--	--	
3/7/2001	--	--	--	--	--	--	--	--	--	--	--	--	
2/22/2003	--	--	--	--	--	--	--	--	--	--	--	--	
2/3/2004	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<5.0	ND<0.50	ND<0.50	ND<0.50	
2/18/2005	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<5.0	ND<0.50	ND<0.50	ND<0.50	
3/29/2006	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	ND<0.50	ND<0.50	ND<0.50	
3/28/2007	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	ND<0.50	ND<0.50	ND<0.50	
3/22/2008	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	ND<0.50	ND<0.50	ND<0.50	
3/27/2009	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	ND<0.50	ND<0.50	ND<0.50	
6/16/2010	--	--	--	--	--	--	--	--	--	--	--	--	
9/29/2010	--	--	--	--	--	--	--	--	--	--	--	--	
12/21/2010	--	--	--	--	--	--	--	--	--	--	--	--	
3/10/2011	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2d
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 5781

Date Sampled	1,1,1-Trichloro-ethane (µg/l)	1,1,2-Trichloro-ethane (µg/l)	Trichloro-ethene (TCE) (µg/l)	Trichloro-fluoro-methane (µg/l)	Vinyl chloride (µg/l)	Comments
MW-4						
6/16/2010	--	--	--	--	--	
9/29/2010	--	--	--	--	--	
12/21/2010	--	--	--	--	--	
3/10/2011	--	--	--	--	--	
MW-5						
6/16/2010	--	--	--	--	--	
9/29/2010	--	--	--	--	--	
12/21/2010	--	--	--	--	--	
3/10/2011	--	--	--	--	--	
MW-6						
12/21/2010	--	--	--	--	--	
3/10/2011	--	--	--	--	--	
MW-7						
12/21/2010	--	--	--	--	--	
3/10/2011	--	--	--	--	--	
MW-8						
12/21/2010	--	--	--	--	--	
3/10/2011	--	--	--	--	--	
MW-9						
12/21/2010	--	--	--	--	--	
3/10/2011	--	--	--	--	--	
MW-A						
2/6/1996	--	--	--	--	--	
2/5/1997	--	--	--	--	--	
3/7/2001	--	--	--	--	--	
2/22/2003	--	--	--	--	--	
2/3/2004	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	
2/18/2005	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	
3/29/2006	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
3/28/2007	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
3/22/2008	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
3/27/2009	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
6/16/2010	--	--	--	--	--	
9/29/2010	--	--	--	--	--	
12/21/2010	--	--	--	--	--	
3/10/2011	--	--	--	--	--	

TABLE KEY

STANDARD ABBREVIATIONS

--	=	not analyzed, measured, or collected
LPH	=	liquid-phase hydrocarbons
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)
D	=	duplicate
P	=	no-purge sample

ANALYTES

DIPE	=	di-isopropyl ether
FTBE	=	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-G (GC/MS)	=	total petroleum hydrocarbons with gasoline distinction utilizing EPA Method 8260B
TPH-D	=	total petroleum hydrocarbons with diesel distinction
TRPH	=	total recoverable petroleum hydrocarbons
TAME	=	tertiary amyl methyl ether
1,2-DCA	=	1,2-dichloroethane (same as EDC, ethylene dichloride)

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 $\text{Surface Elevation} - \text{Measured Depth to Water} + (\text{Dp} \times \text{LPH Thickness})$, 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 Prior to the 1st quarter 2010, the word “monitor” was used in table comments interchangeably with the word “gauge” Starting in the 1st quarter 2010, the word “monitor” is used to include both “gauge” and “sample”

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