Timothy L. Bishop
Project Manager
Marketing Business Unit

Chevron Environmental Management Company
6101 Bollinger Canyon Road
San Ramon, CA 94583
Tel 925.790.6463
TimBishop@chevron.com

December 27, 2013

RECEIVED
By Alameda County Environmental Health at 2:31 pm, Dec 27, 2013

Mr. Keith Nowell
Alameda County Health Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

RE: Second Semi-Annual 2013 Groundwater Monitoring Report
10151 International Blvd, Oakland, California
Fuel Leak Case No.: RO0002444

Dear Mr. Nowell,

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

If you have any questions or need additional information, please contact me at (925) 790-6463.

Sincerely,

Timothy L. Bishop
Union Oil of California – Project Manager

Attachment:
Second Semi-Annual 2013 Groundwater Monitoring Report

ARCADIS U.S., Inc.
2000 Powell Street
7th Floor
Emeryville
California 94608
Tel 510.652.4500
Fax 510.652.4906
www.arcadis-us.com

Mr. Keith Nowell
Alameda County Health Agency
1131 Harbor Bay Parkway
Alameda, California 94502

Subject:
Second Half 2013 Semi-Annually Groundwater Monitoring Report Submittal

ENVIRONMENT

Date:
December 27, 2013

Contact:
Katherine Brandt

Phone:
510.596.9675

Email:
Katherine.brandt@arcadis-us.com

Our ref:
B0047297.2013

Dear Mr. Nowell:

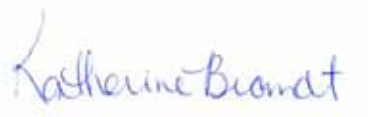
On behalf of Chevron Environmental Management Company, for itself and as Attorney-in-Fact for Union Oil Company of California (hereinafter "EMC"), ARCADIS U.S., Inc (ARCADIS) is pleased to submit the enclosed Semi-Annual Groundwater Monitoring Report for the following facility:

Facility No.	**Case No.**	**Location**
7124	RO0002444	10151 International Boulevard Oakland, California

If you have any questions, please contact Katherine Brandt at 510.596.9675.

Sincerely,

ARCADIS



Katherine Brandt
Certified Project Manager

Jacob Henry, P.G.
Professional Geologist

Copies:
Mr. Timothy Bishop, Chevron EMC (electronic copy only)
Ms. Cherie McCaulou, CRWQCB – San Francisco Bay Region, 1515 Clay Street, Suite1400, Oakland, California 94612 (geotracker)
Brahim and Nawa Abbushi, property owner, 10125 International Blvd, Oakland, CA 94603 (CD)

UNION OIL OF CALIFORNIA
SEMI-ANNUALLY MONITORING REPORT
SECOND HALF 2013
December 27, 2013

Facility No.: 7124 Address: 10151 International Boulevard, Oakland, California

Consulting Company/Contact Person/Phone No.: ARCADIS / Katherine Brandt / 510.596.9675

Primary Agency/Contact Person/Regulatory ID No.: Alameda County Health Agency / Mr. Keith Nowell / Case No. RO0002444

WORK PERFORMED DURING THIS REPORTING PERIOD (Second Half – 2013) :

1. Gettler-Ryan Inc. (G-R) conducted groundwater monitoring and sampling on October 7, 2013. Field data sheets and general procedures are included as **Attachment A**. Four (4) groundwater monitoring wells (MW-1 through MW-4) were gauged and sampled during this monitoring event.

   Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-g; C6-C12) by Environmental Protection Agency (EPA) Method 8015B; benzene, toluene, ethylbenzene, and total xylenes (BTEX, collectively), oxygenates (methyl tertiary butyl ether [MTBE], tertiary butyl alcohol [TBA], ethyl tertiary butyl ether [ETBE], di-isopropyl ether [DIPE], and tertiary amyl methyl ether [TAME]), ethanol, 1,2-dibromoethane (EDB), and 1,2-dichloroethane (EDC) by EPA Method 8260B. Groundwater samples were additional analyzed for methane by method RSK-175M, EPA Method 310.1 for total alkalinity as calcium carbonate ($CaCO_{3)}$, EPA Method 300.0 for nitrate (NO_3) and sulfate, EPA Method 353.2 for nitrite (NO_2), EPA Method 415.1 for non-volatile organic carbon (NVOC), Method SM-3500-FeD for ferrous iron, and EPA Method 6010B for dissolved iron and total manganese.

   The site location map, the site plan, and the groundwater contour map are presented on **Figures 1** through **3**. Concentration maps for TPH-g, benzene, and MTBE are on **Figures 4** through **6**. Current Groundwater Gauging and Analytical Results are summarized in **Table 1**, Current Additional Groundwater Analytical Results are summarized in **Table 1a**, Historic Groundwater Gauging and Analytical Results are summarized in **Table 2**, Historic Additional Groundwater Analytical Results are summarized in **Table 2a**, and Historical Groundwater Results from TRC Solutions (TRC) are included as **Attachment B**. A copy of the laboratory analytical report and chain-of-custody documentation is included as **Attachment C.**

2. ARCADIS completed proposed field activities that included the advancement of five cone penetrometer locations on and off-site, the advancement of associated Hydropunch® borings to collect depth discrete grab groundwater samples, and the advancement of one soil boring for soil identification and analytical data. The results of this investigation will be presented under separate cover.

WORK PROPOSED FOR THE NEXT REPORTING PERIOD (First Half – 2014):

1. Perform groundwater monitoring and related reporting during first half 2014.

2. Prepare a Site Assessment Activities report and Conceptual Site Model.

Current Phase of Project:	Groundwater Monitoring/Investigation
Site Use:	Retail service station
Frequency of Sampling:	Groundwater – Semi-Annually
Frequency of Monitoring:	Groundwater – Semi-Annually
Separate-Phase Hydrocarbons (SPH) Present:	No
Cumulative SPH Recovered to Date:	None
SPH Recovered This Quarter:	None
Bulk Soil Removed to Date:	60 cubic yards
Bulk Soil Removed this Quarter:	None
Water Wells or Surface Waters within a 2000’	None

UNION OIL OF CALIFORNIA
SEMI-ANNUALLY MONITORING REPORT
SECOND HALF 2013
December 27, 2013

Facility No.: 7124 Address: 10151 International Boulevard, Oakland, California

Radius and Their Respective Directions:

Groundwater Use Designation: Municipal and Domestic Water Supply

Current Remediation Techniques: None

Permits for Discharge (No.): None

Approximate Depth to Groundwater : 17.62 (MW-1) – 19.33 (MW-4) feet below top of casing

Measured X Estimated

Approximate Groundwater Elevation : 19.03 (MW-4) – 19.75 (MW-1) feet relative to mean sea level

Measured X Estimated

Groundwater Gradient: 0.007 ft/ft (Magnitude) Southwest (Direction)

DISCUSSION:

Groundwater concentrations during the second half 2013 have decreased since previous monitoring events (2012 and 2013). The maximum dissolved concentrations of TPHg 880 micrograms per liter [µg/L] and MTBE (12 µg/L) were detected in well MW-3. Other constituents were not detected above the laboratory reporting limits for wells sampled.

The maximum concentrations of monitored natural attenuation analytes are listed as follows: The maximum dissolved concentrations of methane (0.071 milligrams per liter [mg/L]), total alkalinity as $CaCO_3$ (260 mg/L), and dissolved iron (710 µg/L) were detected in well MW-3. The maximum dissolved concentrations of NO_3 (26 mg/L), sulfate (22 mg/L), and total manganese (13,000 µg/L) were detected in well MW-1. The maximum dissolved concentrations of NVOC (8.2 mg/L) and ferrous iron (13,000 µg/L) were detected in well MW-4.

Groundwater elevations at the service station vary by less than a foot, creating a gentle hydraulic gradient of 0.007 foot per foot in the southwest direction.

CONCLUSIONS AND RECOMMENDATIONS:

Dissolved hydrocarbon constituent concentrations have decreased since the previous monitoring event. ARCADIS recommends continued groundwater monitoring.

ATTACHMENTS:

Figure 1: Site Location Map
Figure 2: Site Plan
Figure 3: Groundwater Contour Map
Figure 4: TPH-g Concentration Map
Figure 5: Benzene Concentration Map
Figure 6: MTBE Concentration Map

Table 1: Current Groundwater Gauging and Analytical Results
Table 1a: Current Groundwater Additional Analytical Results
Table 2: Historic Groundwater Gauging and Analytical Results
Table 2a: Historic Groundwater Additional Analytical Results

Attachment A: Field Data Sheets and General Procedures
Attachment B: Historical Groundwater Results from TRC
Attachment C: Laboratory Report and Chain-of-Custody Documentation

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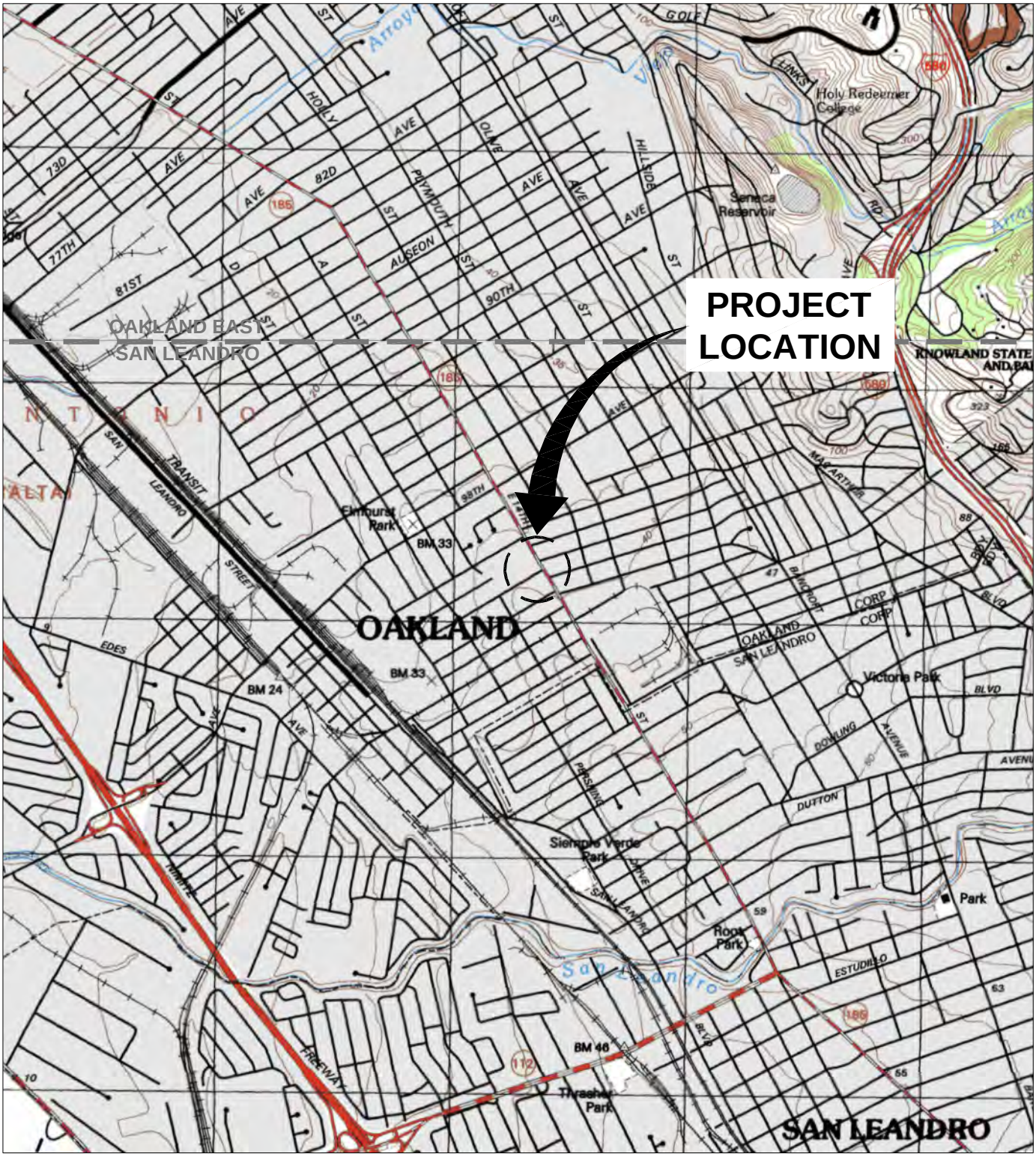
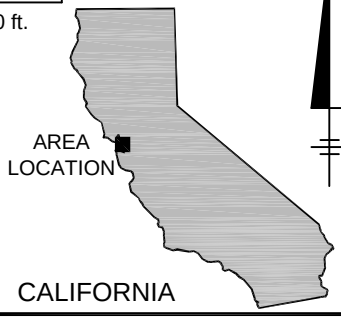
Figures



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., SAN LEANDRO, CALIFORNIA, 1993, AND OAKLAND EAST, CALIFORNIA, 1997.

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.



UNION OIL
STATION NO. 7124
10151 INTERNATIONAL BOULEVARD
OAKLAND, CALIFORNIA

SITE LOCATION MAP

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FIGURE 1

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS LD: J. HARRIS PIC: J. VOGELEY PM: K. ABBOTT TM: K. ABBOTT LYR:(Opt)ON=*;OFF=*REF*
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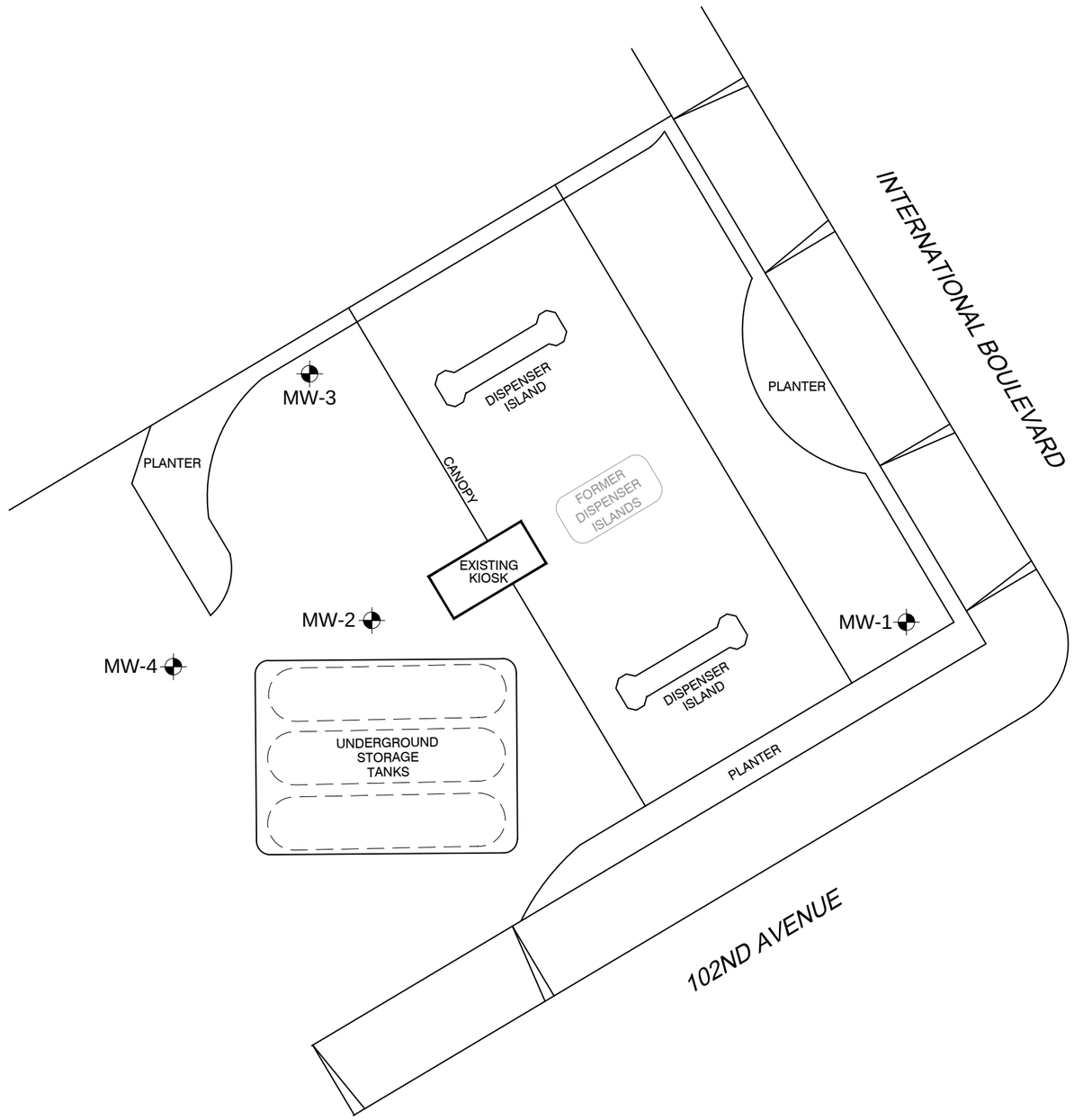
Oakland East.jpg
San Leandro.jpg



LEGEND

MW-1 GROUNDWATER MONITORING WELL

NOTES:

1. BASE MAP PROVIDED BY TRC, DATED JANUARY 2010, AT A SCALE OF 1"=20'.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 20' 40'

GRAPHIC SCALE

UNION OIL
STATION NO. 7124
10151 INTERNATIONAL BOULEVARD
OAKLAND, CALIFORNIA

SITE PLAN

ARCADIS

FIGURE
2

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS LD: J. HARRIS PIC: J. VOGELEY PM: K. ABBOTT TM: K. ABBOTT LYR:(Opt)ON=*;OFF=*REF*
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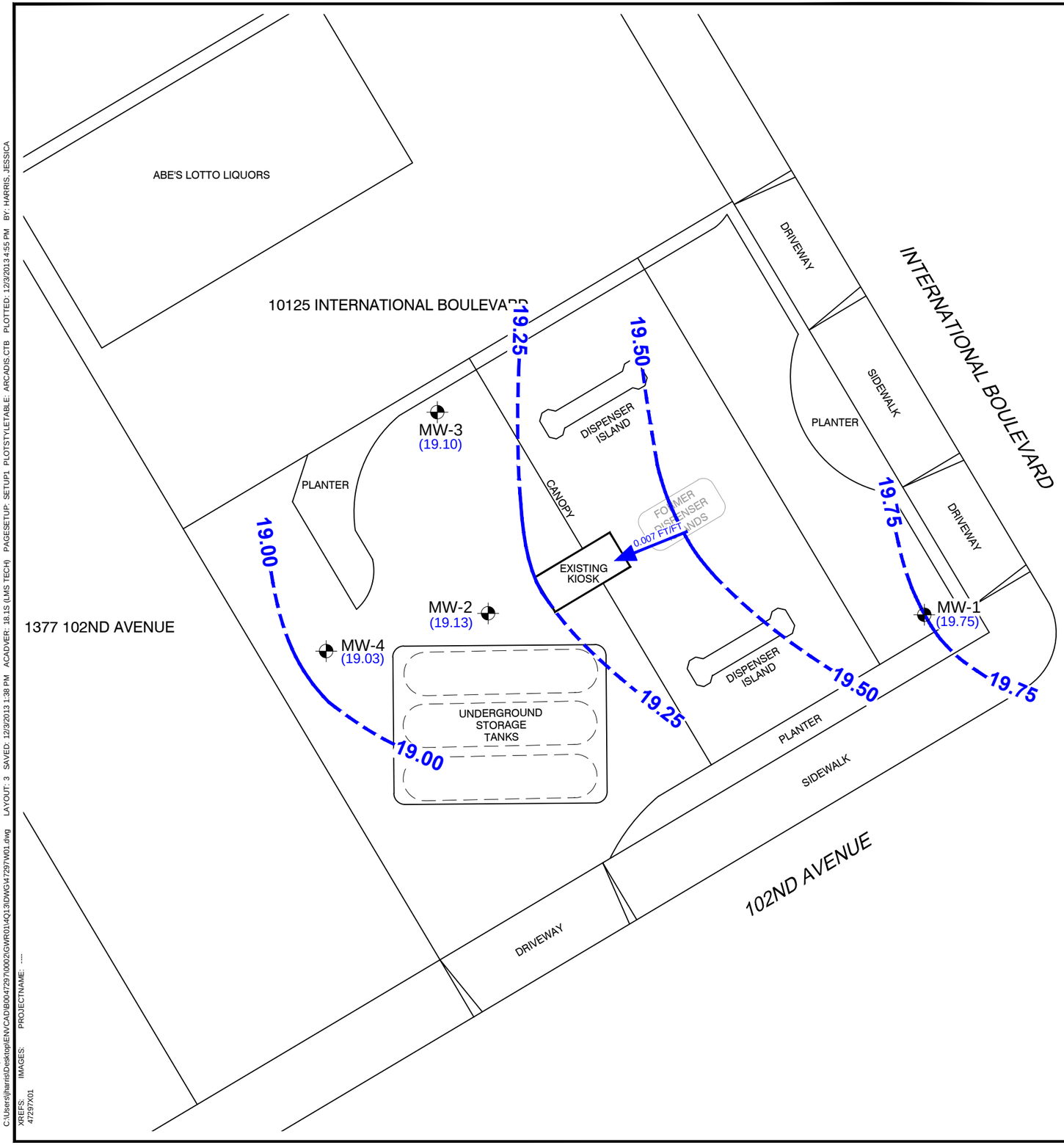

LEGEND

- MW-1 — GROUNDWATER MONITORING WELL
- (19.10) — GROUNDWATER ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL (FT MSL)
- 19.50 — GROUNDWATER ELEVATION CONTOUR (FT MSL; DASHED WHERE INFERRED)
- 0.007 FT/FT — APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT (FOOT PER FOOT)

NOTES:

1. BASE MAP PROVIDED BY TRC, DATED JANUARY 2010, AT A SCALE OF 1"=20'.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
3. ALL MONITORING WELLS WERE SAMPLED AND GAUGED ON OCTOBER 7, 2013.

0 20' 40'

GRAPHIC SCALE

UNION OIL
STATION NO. 7124
10151 INTERNATIONAL BOULEVARD
OAKLAND, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP

ARCADIS

FIGURE 3

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
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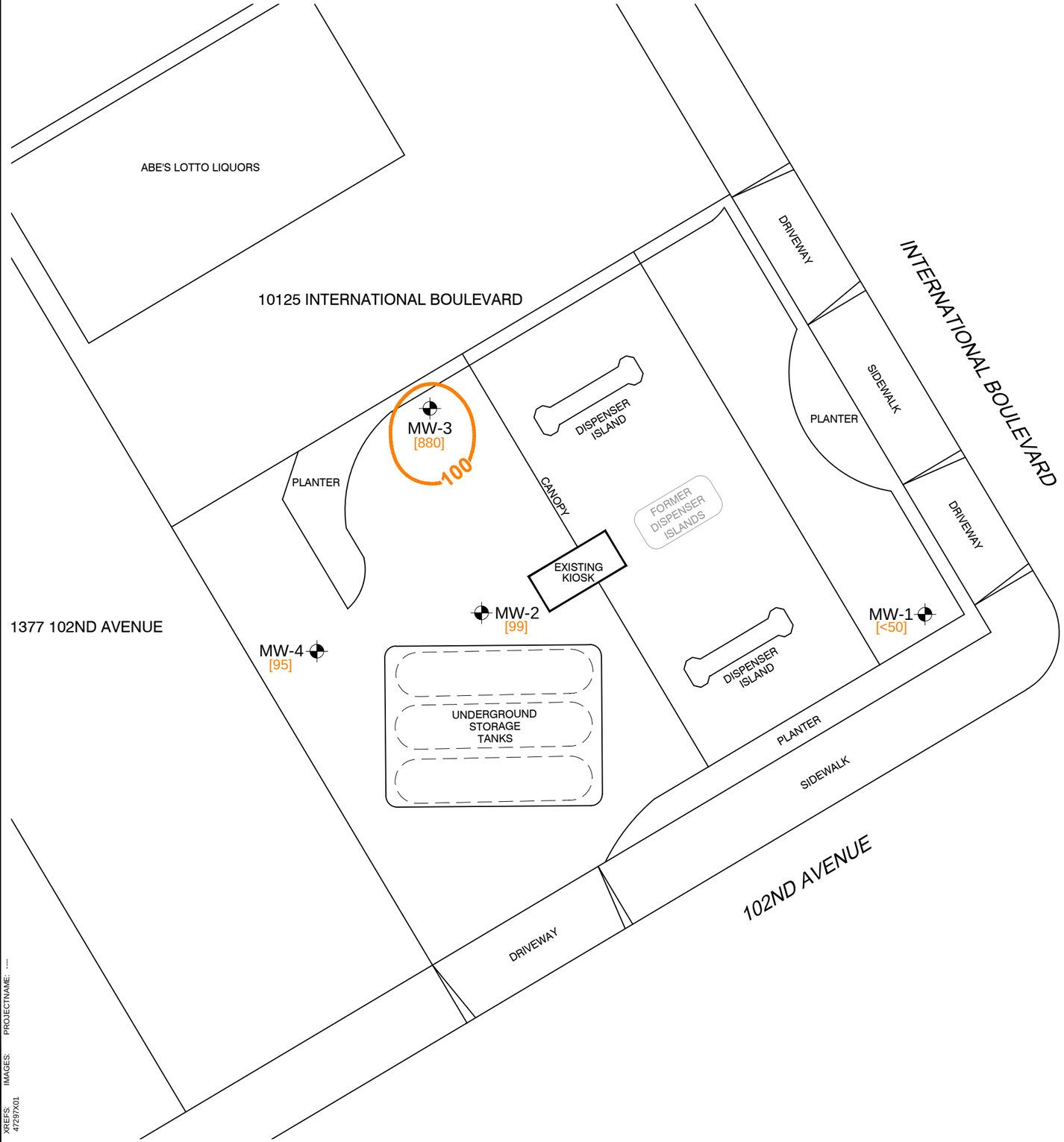

LEGEND

MW-1 GROUNDWATER MONITORING WELL

[TPH-g] TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (C6-C12) CONCENTRATION IN MICROGRAMS PER LITER (µg/L)

100 TPH-g ISOCONCENTRATION CONTOUR (µg/L; DASHED WHERE INFERRED)

< DENOTES LESS THAN LABORATORY REPORTING LIMIT

NOTES:

1. BASE MAP PROVIDED BY TRC, DATED JANUARY 2010, AT A SCALE OF 1"=20'.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
3. ALL MONITORING WELLS WERE GAUGED AND SAMPLED ON OCTOBER 7, 2013.

0 20' 40'

GRAPHIC SCALE

UNION OIL
STATION NO. 7124
10151 INTERNATIONAL BOULEVARD
OAKLAND, CALIFORNIA

TPH-g CONCENTRATION MAP

ARCADIS

FIGURE 4

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
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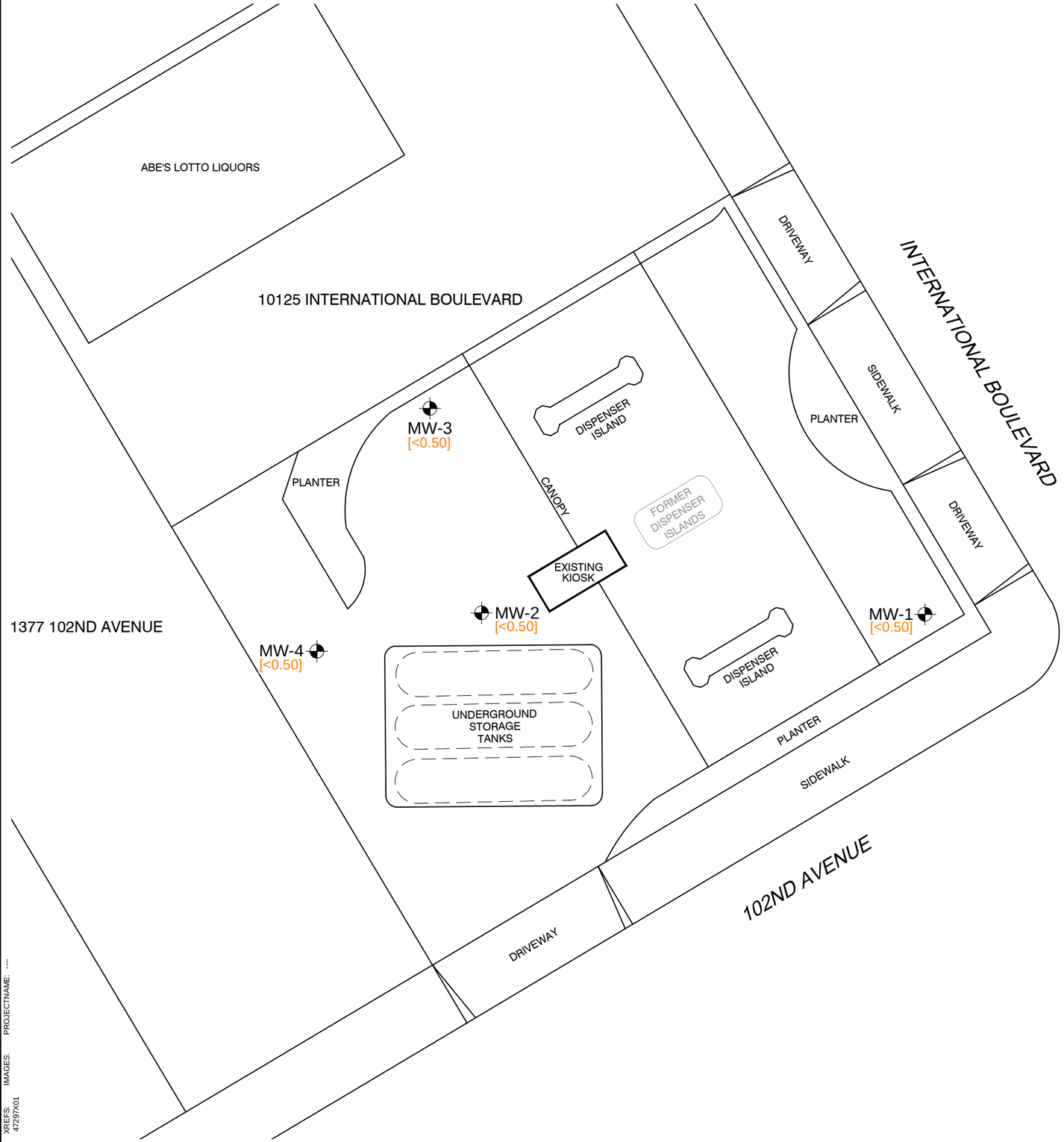

LEGEND

MW-1 ⊕	GROUNDWATER MONITORING WELL
[BENZ]	BENZENE CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
<	DENOTES LESS THAN LABORATORY REPORTING LIMIT

NOTES:

1. BASE MAP PROVIDED BY TRC, DATED JANUARY 2010, AT A SCALE OF 1"=20'.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
3. ALL MONITORING WELLS WERE GAUGED AND SAMPLED ON OCTOBER 7, 2013.

0 20' 40'

GRAPHIC SCALE

UNION OIL
STATION NO. 7124
10151 INTERNATIONAL BOULEVARD
OAKLAND, CALIFORNIA

BENZENE CONCENTRATION MAP

ARCADIS

FIGURE
5

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
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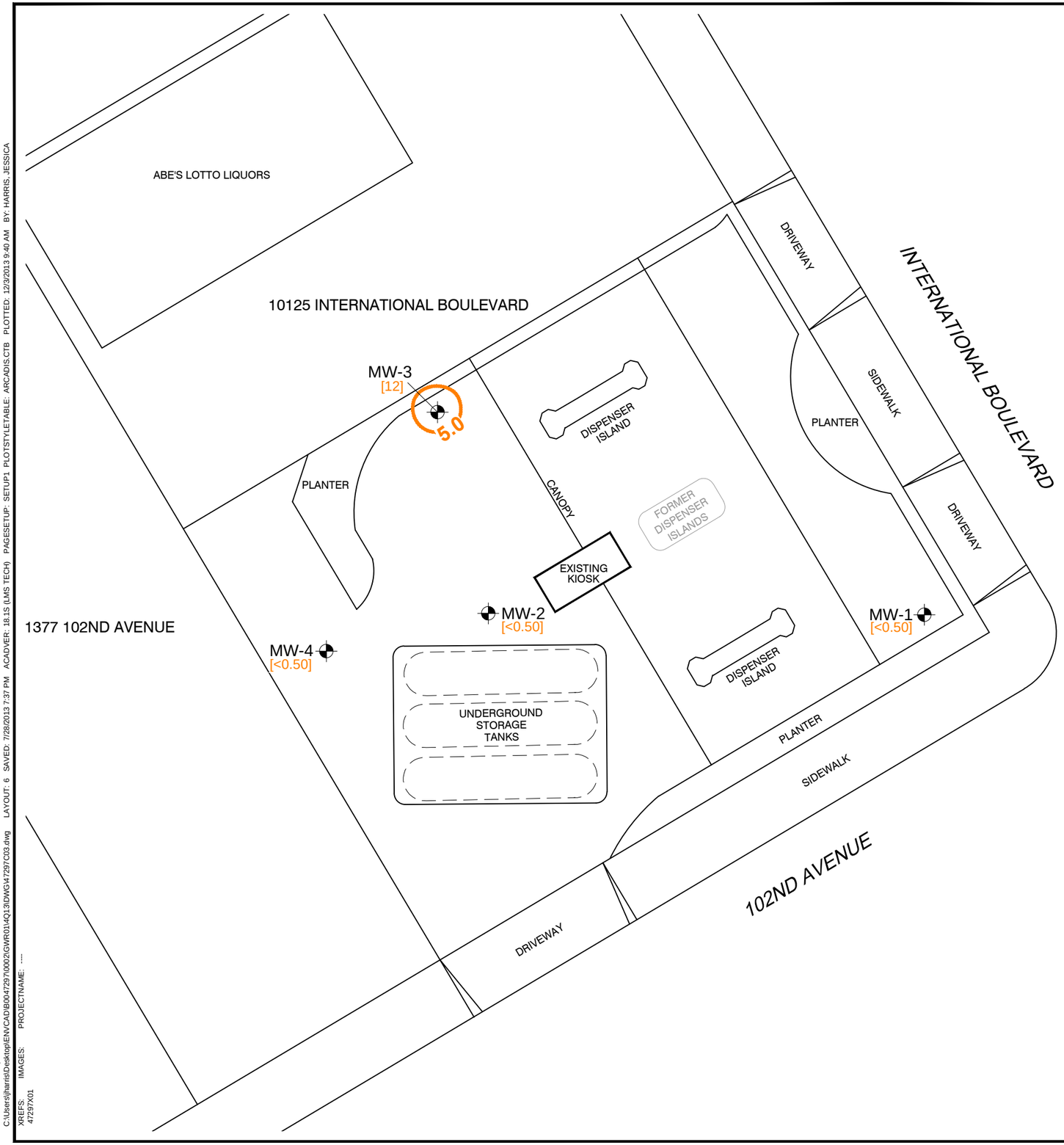

LEGEND

MW-1	GROUNDWATER MONITORING WELL
[MTBE]	METHYL TERTIARY BUTYL ETHER CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
5.0	MTBE ISOCONCENTRATION CONTOUR (µg/L; DASHED WHERE INFERRED)
<	DENOTES LESS THAN LABORATORY REPORTING LIMIT

NOTES:

1. BASE MAP PROVIDED BY TRC, DATED JANUARY 2010, AT A SCALE OF 1"=20'.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
3. ALL MONITORING WELLS WERE GAUGED AND SAMPLED ON OCTOBER 7, 2013.

0 20' 40'

GRAPHIC SCALE

UNION OIL
STATION NO. 7124
10151 INTERNATIONAL BOULEVARD
OAKLAND, CALIFORNIA

MTBE CONCENTRATION MAP

ARCADIS

FIGURE 6

CITY: PETALUMA, CA DIV/GROUP: ENV DB: J. HARRIS
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XREFS: IMAGES: PROJECTNAME: ---
47297X01

ARCADIS

Tables

Table 1
Current Groundwater Gauging and Analytical Results
76 Station 7124
10151 International Boulevard, Oakland, California

Well ID	Date Sampled	TOC Elevation (feet MSL)	DTW (feet bTOC)	LPH Thickness (feet)	GW Elevation (feet MSL)	Previous Quarter GWE (feet MSL)	Change in Elevation (feet)	TPH-g (8015B)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	DIPE	TAME	ETBE	Ethanol	EDB	EDC	Comments
MW-1	10/7/2013	37.37	17.62	0.00	19.75	23.17	-3.42	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	
MW-2	10/7/2013	37.87	18.74	0.00	19.13	22.24	-3.11	99	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	
MW-3	10/7/2013	37.72	18.62	0.00	19.10	21.32	-2.22	880	<0.50	<0.50	<0.50	<1.0	12	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	
MW-4	10/7/2013	38.36	19.33	0.00	19.03	22.68	-3.65	95	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	

Note

Analytical results given in micrograms per liter (µg/l), unless otherwise stated

Standard Abbreviations

--	not analyzed, measured, or collected
<	not detected at or above laboratory detection limit
TOC	top of casing (surveyed reference elevation)
feet MSL	feet relative to mean sea level
DTW	depth to water
bTOC	below top of casing
LPH	liquid-phase hydrocarbons
GW	groundwater
GWE	groundwater elevation
µg/l	micrograms per liter (approx. equivalent to parts per billion, ppb)

Analytes

TPH-g	total petroleum hydrocarbons with gasoline (C6-C12)
MTBE	methyl tertiary butyl ether
TBA	tertiary butyl alcohol
DIPE	di-isopropyl ether
TAME	tertiary amyl methyl ether
ETBE	ethyl tertiary butyl ether
EDB	1,2-dibromoethane (same as ethylene dibromide)
EDC	1,2-dichloroethane (same ethylene dichloride)
8015B	EPA Method 8015B for TPH-g (C6-C12)
EPA	Environmental Protection Agency
8260B	EPA Method 8260B for BTEX/MTBE, Oxygenates, EDB, EDC, and ethanol

Table 1a
Current Additional Groundwater Analytical Results
76 Station 7124
10151 International Boulevard, Oakland, California

Well ID	Date Sampled	Methane (mg/L)	Total Alkalinity as CaCO3 (mg/L)	NO3 (mg/L)	NO2 (mg/L)	Sulfate (mg/L)	Total Sulfide (mg/L)	NVOC (mg/L)	Iron (II) Species	Dissolved Iron	Total Manganese	Comments
MW-1	10/7/2013	0.015	150	26	<0.17	22	<0.10	3.4	<100	<50	13,000	
MW-2	10/7/2013	0.0049	200	<0.44	<0.17	9.6	<0.10	3.2	2700	260	5,600	
MW-3	10/7/2013	0.071	260	<0.44	<0.17	<1.0	<0.10	3.1	9,000	710	9,600	A01
MW-4	10/7/2013	<0.0010	190	<0.44	<0.17	18	<0.10	8.2	13,000	220	5,000	A01

Note

Analytical results given in micrograms per liter (µg/l), unless otherwise stated

Standard Abbreviations

--	not analyzed, measured, or collected
<	not detected at or above laboratory detection limit
mg/l	milligrams per liter (approx. equivalent to parts per million, ppm)
µg/l	micrograms per liter (approx. equivalent to parts per billion, ppb)

Analytes

CaCO3	calcium carbonate
NO3	nitrate
NO2	nitrite
NVOC	non-volatile organic carbon
RSK-175M	Method RSK-175M for Methane
310.1	EPA Method 310.1 for Total Alkalinity as CaCO3
EPA	Environmental Protection Agency
300.0	EPA Method 300.0 for NO3 and Sulfate
353.2	EPA Method 353.2 for NO2
SM-4500SD	Method SM-4500SD for Total Sulfide
415.1	EPA Method 415.1 for NVOC
SM-3500-FeD	Method SM-3500-FeD for Iron (II) Species
6010B	EPA Method 6010B for Dissolved Iron and Total Manganese

Notes

A01	PQL's and MDL's are raised due to sample dilution.
PQL	practical quantitation limit
MDL	method detection limit
A10	PQL's and MDL's were raised due to matrix interference.

Table 2
Historic Groundwater Gauging and Analytical Results
76 Station 7124
10151 International Boulevard, Oakland, California

Well ID	Date Sampled	TOC Elevation (feet MSL)	DTW (feet bTOC)	LPH Thickness (feet)	GW Elevation (feet MSL)	Previous Quarter GWE (feet MSL)	Change in Elevation (feet)	TPH-g (8015B)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	DIPE	TAME	ETBE	Ethanol	EDB	EDC	Comments
MW-1	11/2/2011	37.37	16.38	0.00	20.99	21.02	-0.03	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	
MW-1	4/6/2012	37.37	14.20	0.00	23.17	20.99	2.18	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	
MW-1	6/13/2013	37.37	16.81	0.00	20.56	23.17	-2.61	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	
MW-1	10/7/2013	37.37	17.62	0.00	19.75	23.17	-3.42	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	
MW-2	11/2/2011	37.87	17.15	0.00	20.72	20.19	0.53	96	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	
MW-2	4/6/2012	37.87	15.63	0.00	22.24	20.72	1.52	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	
MW-2	6/13/2013	37.87	18.03	0.00	19.84	22.24	-2.40	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	
MW-2	10/7/2013	37.87	18.74	0.00	19.13	22.24	-3.11	99	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	
MW-3	11/2/2011	37.72	17.55	0.00	20.17	20.07	0.10	880	<0.50	<0.50	<0.50	<1.0	35	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	
MW-3	4/6/2012	37.72	16.40	0.00	21.32	20.17	1.15	1,000	<0.50	<0.50	<0.50	<1.0	210	85	<0.50	<0.50	<0.50	<250	<0.50	<0.50	A01
MW-3	6/13/2013	37.72	17.45	0.00	20.27	21.32	-1.05	<50	<0.50	<0.50	<0.50	<1.0	6.5	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	
MW-3	10/7/2013	37.72	18.62	0.00	19.10	21.32	-2.22	880	<0.50	<0.50	<0.50	<1.0	12	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	
MW-4	11/2/2011	38.36	18.27	0.00	20.09	20.08	0.01	170	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	
MW-4	4/6/2012	38.36	15.68	0.00	22.68	20.09	2.59	200	<0.50	<0.50	<0.50	<1.0	1.7	58	<0.50	<0.50	<0.50	<250	<0.50	<0.50	
MW-4	6/13/2013	38.36	18.65	0.00	19.71	22.68	-2.97	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	
MW-4	10/7/2013	38.36	19.33	0.00	19.03	22.68	-3.65	95	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	

Note
Analytical results given in micrograms per liter (µg/l), unless otherwise stated

Standard Abbreviations

--	not analyzed, measured, or collected
<	not detected at or above laboratory detection limit
TOC	top of casing (surveyed reference elevation)
feet MSL	feet relative to mean sea level
DTW	depth to water
bTOC	below top of casing
LPH	liquid-phase hydrocarbons
GW	groundwater
GWE	groundwater elevation
µg/l	micrograms per liter (approx. equivalent to parts per billion, ppb)

Analytes

TPH-g	total petroleum hydrocarbons with gasoline (C6-C12)
MTBE	methyl tertiary butyl ether
TBA	tertiary butyl alcohol
DIPE	di-isopropyl ether
TAME	tertiary amyl methyl ether
ETBE	ethyl tertiary butyl ether
EDB	1,2-dibromoethane (same as ethylene dibromide)
EDC	1,2-dichloroethane (same ethylene dichloride)
8015B	EPA Method 8015B for TPH-g (C6-C12)
EPA	Environmental Protection Agency
8260B	EPA Method 8260B for BTEX/MTBE, Oxygenates, EDB, EDC, and ethanol

Notes

A01	PQL's and MDL's are raised due to sample dilution.
PQL	practical quantitation limit
MDL	method detection limit

Table 2a
Historic Additional Groundwater Analytical Results
76 Station 7124
10151 International Boulevard, Oakland, California

Well ID	Date Sampled	Methane (mg/L)	Total Alkalinity as CaCO3 (mg/L)	NO3 (mg/L)	NO2 (mg/L)	Sulfate (mg/L)	Total Sulfide (mg/L)	NVOC (mg/L)	Iron (II) Species	Dissolved Iron	Total Manganese	Comments
MW-1	6/13/2013	<0.0010	140	24	<0.17	23	<0.50	1.1	<100	<50	31,000	A10
MW-1	10/7/2013	0.015	150	26	<0.17	22	<0.10	3.4	<100	<50	13,000	
MW-2	6/13/2013	<0.0010	180	<0.44	<0.17	20	<0.10	1.0	250	120	9,700	
MW-2	10/7/2013	0.0049	200	<0.44	<0.17	9.6	<0.10	3.2	2700	260	5,600	
MW-3	6/13/2013	0.075	260	<0.44	<0.17	<1.0	<0.10	1.4	3,200	160	5,700	
MW-3	10/7/2013	0.071	260	<0.44	<0.17	<1.0	<0.10	3.1	9,000	710	9,600	A01
MW-4	6/13/2013	<0.0010	210	<0.44	<0.17	15	<0.50	4.7	5,200	<50	7,900	A01, A10
MW-4	10/7/2013	<0.0010	190	<0.44	<0.17	18	<0.10	8.2	13,000	220	5,000	A01

Note

Analytical results given in micrograms per liter (µg/l), unless otherwise stated

Standard Abbreviations

--	not analyzed, measured, or collected
<	not detected at or above laboratory detection limit
mg/l	milligrams per liter (approx. equivalent to parts per million, ppm)
µg/l	micrograms per liter (approx. equivalent to parts per billion, ppb)

Analytes

CaCO3	calcium carbonate
NO3	nitrate
NO2	nitrite
NVOC	non-volatile organic carbon
RSK-175M	Method RSK-175M for Methane
310.1	EPA Method 310.1 for Total Alkalinity as CaCO3
EPA	Environmental Protection Agency
300.0	EPA Method 300.0 for NO3 and Sulfate
353.2	EPA Method 353.2 for NO2
SM-4500SD	Method SM-4500SD for Total Sulfide
415.1	EPA Method 415.1 for NVOC
SM-3500-FeD	Method SM-3500-FeD for Iron (II) Species
6010B	EPA Method 6010B for Dissolved Iron and Total Manganese

Notes

A01	PQL's and MDL's are raised due to sample dilution.
PQL	practical quantitation limit
MDL	method detection limit
A10	PQL's and MDL's were raised due to matrix interference.

ARCADIS

Attachment A

Field Data Sheets and General Procedures

GETTLER-RYAN INC.

TRANSMITTAL

October 17, 2013
G-R #385639

TO: Ms. Katherine Brandt
Arcadis
2000 Powell Street, 7th Floor
Emeryville, CA 94608

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

RE: Chevron Facility
#351638/7124
10151 International Boulevard
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package **Second Semi-Annual Event of October 7, 2013**

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/351638 7124

WELL CONDITION STATUS SHEET

Client/
Facility #: **Chevron #351638 / 7124**

Site Address: **10151 International Blvd.**

City: **Oakland, CA**

Job #: **385639**

Event Date: 10-7-13

Sampler: ML

WELL ID	Vault Frame Condition	Gasket/ O-Ring (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Bolt Flanges B=Broken S=Stripped R=Retap	Apron Condition C=Cracked B=Broken G=Gone	Grout Seal (Deficient) Inches from TOC	Casing (Condition prevents tight cap seal)	REPLACE LOCK Y/N	REPLACE CAP Y/N	WELL VAULT Manufacture/Size/ # of Bolts	Pictures Taken Y/N
MW-1	OK	→					→	NO	NO	EMCO/12"/2	NO
MW-2	OK	→					→	↓	↓	↓	↓
MW-3	OK	→					→	↓	↓	↓	↓
MW-4	OK	→	L-M	1-B	OK	→	→	↓	↓	MORRISON/12"/2	↓

Comments

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. (GR) field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. All work is performed in accordance with the GR Health & Safety Plan and all client-specific programs. The scope of work and type of analysis to be performed is determined prior to commencing field work.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, peristaltic or Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging (additional parameters such as dissolved oxygen, oxidation reduction potential, turbidity may also be measured, depending on specific scope of work.). Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Environmental Management Company, the purge water and decontamination water generated during sampling activities is transported by Clean Harbors Environmental Services to Seaport Environmental located in Redwood City, California.

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351638 / 7124 Job Number: 385639
Site Address: 10151 International Blvd. Event Date: 10-7-13 (inclusive)
City: Oakland, CA Sampler: ML

Well ID MW-1 Date Monitored: 10-7-13
Well Diameter 4 in.
Total Depth 29.85 ft.
Depth to Water 17.62 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

12.23 xVF .66 = 8.0 x3 case volume = Estimated Purge Volume: 24 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 20.06

Purge Equipment:
Disposable Bailer
Stainless Steel Bailer
Stack Pump X
Suction Pump
Grundfos
Peristaltic Pump
QED Bladder Pump
Other:

Sampling Equipment:
Disposable Bailer X
Pressure Bailer
Metal Filters
Peristaltic Pump
QED Bladder Pump
Other:

Time Started: (2400 hrs)
Time Completed: (2400 hrs)
Depth to Product: ft
Depth to Water: ft
Hydrocarbon Thickness: ft
Visual Confirmation/Description:
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: gal
Amt Removed from Well: gal
Water Removed:

Start Time (purge): 0515 Weather Conditions: Sunny
Sample Time/Date: 0540 / 10-7-13 Water Color: Cloudy Odor: Y / (N)
Approx. Flow Rate: 2 gpm. Sediment Description: Light
Did well de-water? NO If yes, Time: Volume: gal. DTW @ Sampling: 18.49

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS) MS	Temperature (C) / F	D.O. (mg/L)	ORP (mV)
0519	8	7.13	0.36	17.1	PRE: 1.1	PRE: 36
0523	16	7.07	0.38	17.0		
0527	24	7.06	0.39	16.9		
					POST: 1.2	POST: 41

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	6 x voa vial	YES	HCL	BC LABS	TPH-GRO(C6-C12)(8015)/BTEX+MTBE(8260)/ 8 OXYS (8260)
	1 x 1 liter poly	YES	NP	BC LABS	NITRATE/NITRITE/SULFATE/ALKALINITY/DISSOLVED IRON
	1 x 500ml poly	YES	ZnAc	BC LABS	SULFIDE
	1 x 500ml amber	YES	H2SO4	BC LABS	TOC
	1 x 250ml poly	YES	HCL	BC LABS	FERROUS IRON
	1 x 500ml poly	YES	HNO3	BC LABS	TOTAL MANGANESE
	2 x voa vial	YES	NP	BC LABS	METHANE

COMMENTS:

Add/Replaced Gasket: Add/Replaced Bolt: Add/Replaced Lock: Add/Replaced Plug:

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351638 / 7124 Job Number: 385639
Site Address: 10151 International Blvd. Event Date: 10-7-13 (inclusive)
City: Oakland, CA Sampler: ML

Well ID MW- 2 Date Monitored: 10-7-13
Well Diameter 4 in.
Total Depth 25.26 ft.
Depth to Water 18.74 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

6.52 xVF .166 = 4.3 x3 case volume = Estimated Purge Volume: 12.9 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 20.09

Purge Equipment:
Disposable Bailer ____
Stainless Steel Bailer ____
Stack Pump X
Suction Pump ____
Grundfos ____
Peristaltic Pump ____
QED Bladder Pump ____
Other: ____

Sampling Equipment:
Disposable Bailer X
Pressure Bailer ____
Metal Filters ____
Peristaltic Pump ____
QED Bladder Pump ____
Other: ____

Time Started: ____ (2400 hrs)
Time Completed: ____ (2400 hrs)
Depth to Product: ____ ft
Depth to Water: ____ ft
Hydrocarbon Thickness: ____ ft
Visual Confirmation/Description: ____
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: ____ gal
Amt Removed from Well: ____ gal
Water Removed: ____

Start Time (purge): 0600 Weather Conditions: Clear
Sample Time/Date: 0630 / 10-7-13 Water Color: Brown Odor: Y / (N)
Approx. Flow Rate: 1 gpm. Sediment Description: Light
Did well de-water? No If yes, Time: ____ Volume: ____ gal. DTW @ Sampling: 19.01

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (~~umhos/cm~~ mS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0604	4	7.36	0.30	18.1	PRE: 1.3	PRE: 67
0608	8	7.40	0.32	17.9		
0613	13	7.39	0.33	17.8		
					POST: 1.3	POST: 72

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- 2	6 x voa vial	YES	HCL	BC LABS	TPH-GRO(C6-C12)(8015)/BTEX+MTBE(8260)/ 8 OXYS (8260)
	1 x 1 liter poly	YES	NP	BC LABS	NITRATE/NITRITE/SULFATE/ALKALINITY/DISSOLVED IRON
	1 x 500ml poly	YES	ZnAc	BC LABS	SULFIDE
	1 x 500ml amber	YES	H2SO4	BC LABS	TOC
	1 x 250ml poly	YES	HCL	BC LABS	FERROUS IRON
	1 x 500ml poly	YES	HNO3	BC LABS	TOTAL MANGANESE
	2 x voa vial	YES	NP	BC LABS	METHANE

COMMENTS: ____

Add/Replaced Gasket: ____ Add/Replaced Bolt: ____ Add/Replaced Lock: ____ Add/Replaced Plug: ____

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351638 / 7124 Job Number: 385639
Site Address: 10151 International Blvd. Event Date: 10-7-13 (inclusive)
City: Oakland, CA Sampler: ML

Well ID MW-3 Date Monitored: 10-7-13
Well Diameter 4 in.
Total Depth 25.21 ft.
Depth to Water 18.62 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

6.59 xVF .66 = 4.3 x3 case volume = Estimated Purge Volume: 12.9 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 19.93

Purge Equipment:
Disposable Bailer ____
Stainless Steel Bailer ____
Stack Pump X
Suction Pump ____
Grundfos ____
Peristaltic Pump ____
QED Bladder Pump ____
Other: ____

Sampling Equipment:
Disposable Bailer X
Pressure Bailer ____
Metal Filters ____
Peristaltic Pump ____
QED Bladder Pump ____
Other: ____

Time Started: ____ (2400 hrs)
Time Completed: ____ (2400 hrs)
Depth to Product: ____ ft
Depth to Water: ____ ft
Hydrocarbon Thickness: ____ ft
Visual Confirmation/Description: ____
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: ____ gal
Amt Removed from Well: ____ gal
Water Removed: ____

Start Time (purge): 0650 Weather Conditions: Sunny
Sample Time/Date: 0720 / 10-7-13 Water Color: Brown Odor: Y / N
Approx. Flow Rate: 1 gpm. Sediment Description: Light
Did well de-water? No If yes, Time: ____ Volume: ____ gal. DTW @ Sampling: 18.92

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0654	4	7.21	0.31	17.6	PRE: 1.4	PRE: -12
0658	8	7.18	0.34	17.4		
0703	13	7.17	0.33	17.4		
					POST: 1.7	POST: -10

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-3	6 x voa vial	YES	HCL	BC LABS	TPH-GRO(C6-C12)(8015)/BTEX+MTBE(8260)/ 8 OXYS (8260)
	1 x 1 liter poly	YES	NP	BC LABS	NITRATE/NITRITE/SULFATE/ALKALINITY/DISSOLVED IRON
	1 x 500ml poly	YES	ZnAc	BC LABS	SULFIDE
	1 x 500ml amber	YES	H2SO4	BC LABS	TOC
	1 x 250ml poly	YES	HCL	BC LABS	FERROUS IRON
	1 x 500ml poly	YES	HNO3	BC LABS	TOTAL MANGANESE
	2 x voa vial	YES	NP	BC LABS	METHANE

COMMENTS: ____

Add/Replaced Gasket: ____ Add/Replaced Bolt: ____ Add/Replaced Lock: ____ Add/Replaced Plug: ____

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351638 / 7124 Job Number: 385639
Site Address: 10151 International Blvd. Event Date: 10-7-13 (inclusive)
City: Oakland, CA Sampler: MC

Well ID MW-4 Date Monitored: 10-7-13
Well Diameter 4 in.
Total Depth 24.98 ft.
Depth to Water 19.33 ft. ☐ Check if water column is less then 0.50 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

5.65 xVF .66 = 3.7 x3 case volume = Estimated Purge Volume: 11.1 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 20.46

Purge Equipment:
Disposable Bailer
Stainless Steel Bailer
Stack Pump X
Suction Pump
Grundfos
Peristaltic Pump
QED Bladder Pump
Other:

Sampling Equipment:
Disposable Bailer X
Pressure Bailer
Metal Filters
Peristaltic Pump
QED Bladder Pump
Other:

Time Started: (2400 hrs)
Time Completed: (2400 hrs)
Depth to Product: ft
Depth to Water: ft
Hydrocarbon Thickness: ft
Visual Confirmation/Description:
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: gal
Amt Removed from Well: gal
Water Removed:

Start Time (purge): 0745 Weather Conditions: Sunny
Sample Time/Date: 0815 / 10-7-13 Water Color: Brown Odor: (Y) / N Light
Approx. Flow Rate: 1 gpm. Sediment Description: Light
Did well de-water? NO If yes, Time: Volume: gal. DTW @ Sampling: 19.40

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm ~~µS~~ mS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0749	4	7.11	0.29	17.6	PRE: 1.0	PRE: -43
0753	8	7.14	0.30	17.5		
0757	12	7.14	0.30	17.5		
					POST: 1.1	POST: -44

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	6 x voa vial	YES	HCL	BC LABS	TPH-GRO(C6-C12)(8015)/BTEX+MTBE(8260)/ 8 OXYS (8260)
	1 x 1 liter poly	YES	NP	BC LABS	NITRATE/NITRITE/SULFATE/ALKALINITY/DISSOLVED IRON
	1 x 500ml poly	YES	ZnAc	BC LABS	SULFIDE
	1 x 500ml amber	YES	H2SO4	BC LABS	TOC
	1 x 250ml poly	YES	HCL	BC LABS	FERROUS IRON
	1 x 500ml poly	YES	HNO3	BC LABS	TOTAL MANGANESE
	2 x voa vial	YES	NP	BC LABS	METHANE

COMMENTS:

Add/Replaced Gasket: Add/Replaced Bolt: Add/Replaced Lock: Add/Replaced Plug:

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: 7124	Union Oil Consultant: ARCADIS
Site Global ID: T0600173591	Consultant Contact: KATHERINE BRANDT
Site Address: 1015 International Blvd. OAKLAND, CA	Consultant Phone No.: (510) 596-9675
Union Oil PM: TOM BISHOP	Sampling Company: G-12
Union Oil PM Phone No.: (925) 790-6463	Sampled By (PRINT): MIKE LUMBARD
Charge Code: NWRTB- 0 351638 -0- LAB	Sampler Signature:
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.	BC Laboratories, Inc. Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911

Turnaround Time (TAT): Standard ☑ 24 Hours ☐ 48 Hours ☐ 72 Hours ☐

Special Instructions

SAMPLE ID						ANALYSES REQUIRED												
Field Point Name	Matrix	Depth	Date (yymmdd)	Sample Time	# of Containers	TPH - Diesel by EPA 8015	TPH - G by GC/MS (8260B) (8015)	BTEX/MTBE/OXYS by EPA 8260B (8 OXYS)	Ethanol by EPA 8260B TOC	EPA 8260B Full List with OXYS	Nitrate/Nitrite/Sulfate	Alkalinity/Dissolved Iron	Sulfide	Ferrous Iron	Total Manganese	Methane	Notes / Comments
QA	W-S-A		131007		2		X	X									
MW-1	W-S-A		↓	0540	13		X	X	X		X	X	X	X	X	X	
MW-2	W-S-A			0630	↓		X	X	X		X	X	X	X	X	X	
MW-3	W-S-A			0720			X	X	X		X	X	X	X	X	X	
MW-4	W-S-A		↓	0815			X	X	X		X	X	X	X	X	X	
	W-S-A																
	W-S-A																
	W-S-A																
	W-S-A																
	W-S-A																
	W-S-A																
	W-S-A																

Relinquished By	Company	Date / Time:	Relinquished By	Company	Date / Time:	Relinquished By	Company	Date / Time:
	GR	10-7-13 1100		GR	10/7/13 1556			
Received By	**Company**	**Date / Time:**	**Received By**	**Company**	**Date / Time:**	**Received By**	**Company**	**Date / Time:**
GETTLER-RYAN/FEDEX		10-07-13 1006	Amy Bogan		10-7-13 1555			

ARCADIS

Attachment B

Historical Groundwater Results from TRC

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

76 Station 7124

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (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-1														
4/8/2002	37.37	14.27	0.00	23.10	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	ND<2.0	
7/28/2002	37.37	15.88	0.00	21.49	-1.61	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
11/3/2002	37.37	16.75	0.00	20.62	-0.87	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
1/24/2003	37.37	13.94	0.00	23.43	2.81	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
4/2/2003	37.37	14.99	0.00	22.38	-1.05	--	460	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
7/1/2003	37.37	15.48	0.00	21.89	-0.49	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
10/2/2003	37.37	16.68	0.00	20.69	-1.20	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
1/9/2004	37.37	13.79	0.00	23.58	2.89	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1	--	ND<2	
4/26/2004	37.37	15.21	0.00	22.16	-1.42	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
7/22/2004	37.37	16.43	0.00	20.94	-1.22	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
10/29/2004	37.37	16.14	0.00	21.23	0.29	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.51	
1/12/2005	37.37	12.83	0.00	24.54	3.31	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.52	
6/20/2005	37.37	14.38	0.00	22.99	-1.55	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.53	
9/23/2005	37.37	15.92	0.00	21.45	-1.54	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.54	
12/13/2005	37.37	16.09	0.00	21.28	-0.17	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.55	
3/24/2006	37.37	11.85	0.00	25.52	4.24	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.56	
5/30/2006	37.37	13.30	0.00	24.07	-1.45	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.57	
8/22/2006	37.37	15.11	0.00	22.26	-1.81	--	ND<50	ND<0.50		ND<0.50	ND<0.50	--	ND<0.58	
10/31/2006	37.37	16.11	0.00	21.26	-1.00	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.59	
1/12/2007	37.37	15.55	0.00	21.82	0.56	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.60	
4/4/2007	37.37	15.31	0.00	22.06	0.24	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.61	
7/5/2007	37.37	16.21	0.00	21.16	-0.90	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.62	
10/1/2007	37.37	17.13	0.00	20.24	-0.92	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.63	
1/11/2008	37.37	14.48	0.00	22.89	2.65	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.64	
4/4/2008	37.37	16.17	0.00	21.20	-1.69	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.65	Gauged on 5-22-08
7/2/2008	37.37	16.70	0.00	20.67	-0.53	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.66	
10/2/2008	37.37	17.50	0.00	19.87	-0.80	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.67	
1/14/2009	37.37	17.30	0.00	20.07	0.20	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.68	
4/16/2009	37.37	15.60	0.00	21.77	1.70	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.69	
7/16/2009	37.37	16.90	0.00	20.47	-1.30	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.70	
1/6/2010	37.37	16.35	0.00	21.02	0.55	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.71	
MW-2														
4/8/2002	37.87	15.86	0.00	22.01	--	4400	--	ND<2.5	ND<2.5	6.4	ND<2.5	380	490	
7/28/2002	37.87	17.28	0.00	20.59	-1.42	--	3200	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	170	
11/3/2002	37.87	18.03	0.00	19.84	-0.75	--	3800	ND<5.0	ND<5.0	ND<5.0	ND<10	--	72	
1/24/2003	37.87	15.59	0.00	22.28	2.44	--	410	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	490	
4/2/2003	37.87	16.50	0.00	21.37	-0.91	--	1000	ND<5.0	ND<5.0	ND<5.0	ND<10	--	180	
7/1/2003	37.87	16.94	0.00	20.93	-0.44	--	1900	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	120	
10/2/2003	37.87	17.93	0.00	19.94	-0.99	--	6900	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	32	
1/9/2004	37.87	15.42	0.00	22.45	2.51	--	1000	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	300	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

76 Station 7124

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (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
4/26/2004	37.87	--	--	--	--	--	--	--	--	--	--	--	--	Covered with asphalt
7/22/2004	37.87	--	--	--	--	--	--	--	--	--	--	--	--	Covered with asphalt
10/29/2004	37.87	--	0.00	--	--	--	--	--	--	--	--	--	--	Well is paved over.
1/12/2005	37.87	--	--	--	--	--	--	--	--	--	--	--	--	Well was paved over.
6/20/2005	37.87	15.94	0.00	21.93	--	--	120	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	46	
9/23/2005	37.87	17.29	0.00	20.58	-1.35	--	120	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	10	
12/13/2005	37.87	17.41	0.00	20.46	-0.12	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	11	
3/24/2006	37.87	13.77	0.00	24.10	3.64	--	190	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	15	
5/30/2006	37.87	15.16	0.00	22.71	-1.39	--	120	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	6.6	
8/22/2006	37.87	16.49	0.00	21.38	-1.33	--	81	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	3.0	
10/31/2006	37.87	17.15	0.00	20.72	-0.66	--	93	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	2.0	
1/12/2007	37.87	17.07	0.00	20.80	0.08	--	230	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	4.3	
4/4/2007	37.87	17.84	0.00	20.03	-0.77	--	110	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	2.5	
7/5/2007	37.87	17.51	0.00	20.36	0.33	--	150	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	2.6	
10/1/2007	37.87	18.25	0.00	19.62	-0.74	--	160	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	2.0	
1/11/2008	37.87	16.80	0.00	21.07	1.45	--	130	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	7.7	
5/22/2008	37.87	17.46	0.00	20.41	-0.66	--	140	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	4.2	Gauged and sampled on 5-22-08
7/2/2008	37.87	17.94	0.00	19.93	-0.48	--	75	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.4	
10/2/2008	37.87	18.65	0.00	19.22	-0.71	--	130	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.1	
1/14/2009	37.87	18.40	0.00	19.47	0.25	--	66	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.5	
4/16/2009	37.87	16.94	0.00	20.93	1.46	--	93	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	3.2	
7/16/2009	37.87	18.15	0.00	19.72	-1.21	--	92	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.6	
1/6/2010	37.87	17.68	0.00	20.19	0.47	--	150	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.0	
MW-3														
4/8/2002	37.72	15.86	0.00	21.86	--	8700	--	65	ND<25	400	ND<25	6500	8300	
7/28/2002	37.72	17.22	0.00	20.50	-1.36	--	4500	ND<25	ND<25	ND<25	ND<50	--	1100	
11/3/2002	37.72	17.90	0.00	19.82	-0.68	--	25000	ND<5.0	ND<5.0	25	ND<10	--	470	
1/24/2003	37.72	15.57	0.00	22.15	2.33	--	6000	ND<25	ND<25	94	ND<50	--	10000	
4/2/2003	37.72	16.45	0.00	21.27	-0.88	--	130000	ND<100	ND<100	ND<100	ND<200	--	4400	
7/1/2003	37.72	16.88	0.00	20.84	-0.43	--	9400	ND<10	ND<10	ND<10	ND<20	--	2200	
10/2/2003	37.72	17.85	0.00	19.87	-0.97	--	73000	ND<50	ND<50	ND<50	ND<100	--	460	
1/9/2004	37.72	15.31	0.00	22.41	2.54	--	8700	ND<25	ND<25	98	ND<50	--	3800	
4/26/2004	37.72	16.62	0.00	21.10	-1.31	--	6700	ND<25	ND<25	ND<25	ND<50	--	3900	
7/22/2004	37.72	17.62	0.00	20.10	-1.00	--	13000	ND<25	ND<25	ND<25	ND<50	--	980	
10/29/2004	37.72	17.29	0.00	20.43	0.33	--	4600	ND<5.0	ND<5.0	13	ND<10	--	640	
1/12/2005	37.72	14.64	0.00	23.08	2.65	--	6100	0.88	0.99	30	2.2	--	6900	
6/20/2005	37.72	15.91	0.00	21.81	-1.27	--	1900	ND<0.50	0.21J	0.52	0.46J	--	960	
9/23/2005	37.72	17.20	0.00	20.52	-1.29	--	2400	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	160	
12/13/2005	37.72	17.32	0.00	20.40	-0.12	--	2100	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	340	
3/24/2006	37.72	13.86	0.00	23.86	3.46	--	2200	ND<5.0	ND<5.0	ND<5.0	ND<10	--	970	
5/30/2006	37.72	15.69	0.00	22.03	-1.83	--	1500	ND<12	ND<12	ND<12	ND<25	--	760	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

76 Station 7124

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (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
8/22/2006	37.72	16.51	0.00	21.21	-0.82	--	1900	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	160	
10/31/2006	37.72	17.36	0.00	20.36	-0.85	--	2200	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	58	
1/12/2007	37.72	16.85	0.00	20.87	0.51	--	2600	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	680	
4/4/2007	37.72	16.62	0.00	21.10	0.23	--	1700	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	650	
7/5/2007	37.72	17.42	0.00	20.30	-0.80	--	2400	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	160	
10/1/2007	37.72	18.16	0.00	19.56	-0.74	--	1700	ND<1.0	ND<1.0	ND<1.0	ND<1.0	--	87	
1/11/2008	37.72	15.84	0.00	21.88	2.32	--	2200	ND<0.50	ND<0.50	1.6	ND<1.0	--	1300	
4/4/2008	37.72	17.30	0.00	20.42	-1.46	--	1600	ND<1.0	ND<1.0	ND<1.0	ND<2.0	--	470	Gauged on 5-22-08
7/2/2008	37.72	17.84	0.00	19.88	-0.54	--	1200	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	91	
10/2/2008	37.72	18.50	0.00	19.22	-0.66	--	2100	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	84	
1/14/2009	37.72	18.33	0.00	19.39	0.17	--	2000	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	320	
4/16/2009	37.72	16.92	0.00	20.80	1.41	--	1800	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	560	
7/16/2009	37.72	18.05	0.00	19.67	-1.13	--	1900	ND<5.0	ND<5.0	ND<5.0	ND<10	--	100	
1/6/2010	37.72	17.65	0.00	20.07	0.40	--	2200	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1300	
MW-4														
4/8/2002	38.36	16.59	0.00	21.77	--	13000	--	ND<5.0	ND<5.0	28	ND<5.0	790	980	
7/28/2002	38.36	17.93	0.00	20.43	-1.34	--	18000	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	170	
11/3/2002	38.36	18.66	0.00	19.70	-0.73	--	220	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	5.7	
1/24/2003	38.36	16.27	0.00	22.09	2.39	--	ND<1000	ND<10	ND<10	ND<10	ND<20	--	1000	
4/2/2003	38.36	17.19	0.00	21.17	-0.92	--	130000	ND<100	ND<100	ND<100	ND<200	--	ND<400	
7/1/2003	38.36	17.61	0.00	20.75	-0.42	--	15000	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	170	
10/2/2003	38.36	18.58	0.00	19.78	-0.97	--	7100	ND<10	ND<10	ND<10	ND<20	--	70	
1/9/2004	38.36	16.15	0.00	22.21	2.43	--	18000	ND<10	ND<10	ND<10	ND<20	--	530	
4/26/2004	38.36	17.20	0.00	21.16	-1.05	--	6500	ND<10	ND<10	ND<10	ND<20	--	240	
7/22/2004	38.36	18.34	0.00	20.02	-1.14	--	18000	ND<10	ND<10	ND<10	ND<20	--	48	
10/29/2004	38.36	18.13	0.00	20.23	0.21	--	2700	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	76	
1/12/2005	38.36	15.22	0.00	23.14	2.91	--	1300	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	620	
6/20/2005	38.36	16.63	0.00	21.73	-1.41	--	980	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	110	
9/23/2005	38.36	17.93	0.00	20.43	-1.30	--	1500	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	34	
12/13/2005	38.36	18.04	0.00	20.32	-0.11	--	3900	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	36	
3/24/2006	38.36	14.48	0.00	23.88	3.56	--	1500	ND<12	ND<12	ND<12	ND<25	--	200	
5/30/2006	38.36	15.79	0.00	22.57	-1.31	--	1200	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	130	
8/22/2006	38.36	17.26	0.00	21.10	-1.47	--	980	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	33	
10/31/2006	38.36	18.08	0.00	20.28	-0.82	--	1300	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	10	
1/12/2007	38.36	17.57	0.00	20.79	0.51	--	820	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	28	
4/4/2007	38.36	17.40	0.00	20.96	0.17	--	460	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	41	
7/5/2007	38.36	18.02	0.00	20.34	-0.62	--	920	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	7.0	
10/1/2007	38.36	18.89	0.00	19.47	-0.87	--	560	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	3.0	
1/11/2008	38.36	16.56	0.00	21.80	2.33	--	340	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	21	
5/22/2008	38.36	18.10	0.00	20.26	-1.54	--	520	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	5.6	Gauged and sampled on 5-22-08
7/2/2008	38.36	18.55	0.00	19.81	-0.45	--	340	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	3.3	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

76 Station 7124

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (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
10/2/2008	38.36	19.25	0.00	19.11	-0.70	--	790	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.4	
1/14/2009	38.36	19.10	0.00	19.26	0.15	--	430	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.4	
4/16/2009	38.36	17.61	0.00	20.75	1.49	--	390	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	16	
7/16/2009	38.36	18.70	0.00	19.66	-1.09	--	310	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	3.2	
1/6/2010	38.36	18.28	0.00	20.08	0.42	--	380	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.4	

Table 2a
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 7124

Date Sampled	TBA (µg/l)	Ethanol (8015B) (mg/l)	Ethanol (8260B) (µg/l)	Ethylene-dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Comments
MW-1									
7/28/2002	ND<100	ND<500	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	
11/3/2002	ND<100	ND<500	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	
1/24/2003	ND<100	ND<500	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	
4/2/2003	ND<100	ND<500	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	
7/1/2003	ND<100	ND<500	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	
10/2/2003	ND<100	--	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	
1/9/2004	ND<100	--	ND<500	ND<2	ND<2.0	ND<2	ND<2	ND<2	
4/26/2004	ND<5.0	--	ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	
7/22/2004	ND<5.0	--	ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	
10/29/2004	ND<5.0	--	ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	
1/12/2005	ND<5.0	--	ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	
6/20/2005	ND<10	--	ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
9/23/2005	ND<10	--	ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
12/13/2005	ND<10	--	ND<250	21.449999	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
3/24/2006	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
5/30/2006	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
8/22/2006	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
10/31/2006	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
1/12/2007	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
4/4/2007	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
7/5/2007	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
10/1/2007	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
1/11/2008	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
4/4/2008	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
7/2/2008	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
10/2/2008	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
1/14/2009	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
4/16/2009	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
7/16/2009	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
1/6/2010	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
MW-2									
4/8/2002	ND<2000	ND<10000	--	ND<40	ND<40	ND<40	ND<40	ND<40	
7/28/2002	ND<500	ND<2500	--	ND<10	ND<10	ND<10	ND<10	ND<10	
11/3/2002	ND<1000	ND<5000	--	ND<20	ND<20	ND<20	ND<20	ND<20	

Table 2a
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 7124

Date Sampled	TBA (µg/l)	Ethanol (8015B) (mg/l)	Ethanol (8260B) (µg/l)	Ethylene-dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Comments
1/24/2003	ND<500	ND<2500	--	ND<10	ND<10	ND<10	ND<10	ND<10	
4/2/2003	ND<1000	ND<5000	--	ND<20	ND<20	ND<20	ND<20	ND<20	
7/1/2003	ND<500	ND<2500	--	ND<10	ND<10	ND<10	ND<10	ND<10	
10/2/2003	ND<100	--	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	
1/9/2004	ND<500	--	ND<2500	ND<10	ND<10	ND<10	ND<10	ND<10	
6/20/2005	25	--	ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
9/23/2005	ND<10	--	ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
12/13/2005	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
3/24/2006	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
5/30/2006	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
8/22/2006	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
10/31/2006	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
1/12/2007	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
4/4/2007	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
7/5/2007	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
10/1/2007	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
1/11/2008	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
5/22/2008	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
7/2/2008	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
10/2/2008	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
1/14/2009	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
4/16/2009	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
7/16/2009	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
1/6/2010	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
MW-3									
10/2/2003	ND<10000	--	ND<50000	ND<200	ND<200	ND<200	ND<200	ND<200	
1/9/2004	ND<5000	--	ND<25000	ND<100	ND<100	ND<100	ND<100	ND<100	
4/26/2004	ND<250	--	ND<2500	ND<25	ND<25	ND<50	ND<25	ND<25	
7/22/2004	ND<250	--	ND<2500	ND<25	ND<25	ND<50	ND<25	ND<25	
10/29/2004	ND<50	--	ND<500	ND<5.0	ND<5.0	ND<10	ND<5.0	ND<5.0	
1/12/2005	1300	--	ND<2500	ND<25	ND<25	ND<50	ND<25	ND<25	
6/20/2005	39	--	ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.31J	
9/23/2005	ND<10	--	ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
12/13/2005	ND<50	--	ND<1200	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	
3/24/2006	ND<100	--	ND<2500	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	

Table 2a
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 7124

Date Sampled	TBA (µg/l)	Ethanol (8015B) (mg/l)	Ethanol (8260B) (µg/l)	Ethylene-dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Comments
5/30/2006	ND<250	--	ND<6200	ND<12	ND<12	ND<12	ND<12	ND<12	
8/22/2006	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
10/31/2006	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
1/12/2007	43	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
4/4/2007	130	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
7/5/2007	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
10/1/2007	ND<20	--	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	
1/11/2008	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
4/4/2008	ND<20	--	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	
7/2/2008	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
10/2/2008	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
1/14/2009	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
4/16/2009	ND<50	--	ND<1200	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	
7/16/2009	ND<100	--	ND<2500	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	
1/6/2010	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
MW-4									
4/8/2002	ND<5000	ND<25000	--	ND<100	ND<100	ND<100	ND<100	ND<100	
7/28/2002	ND<500	ND<2500	--	ND<10	ND<10	ND<10	ND<10	ND<10	
11/3/2002	ND<100	ND<500	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	
1/24/2003	ND<2000	ND<10000	--	ND<40	ND<40	ND<40	ND<40	ND<40	
4/2/2003	ND<20000	ND<100000	--	ND<400	ND<400	ND<400	ND<400	ND<400	
7/1/2003	ND<500	ND<2500	--	ND<10	ND<10	ND<10	ND<10	ND<10	
10/2/2003	ND<2000	--	ND<10000	ND<40	ND<40	ND<40	ND<40	ND<40	
1/9/2004	ND<2000	--	ND<10000	ND<40	ND<40	ND<40	ND<40	ND<40	
4/26/2004	430	--	ND<1000	ND<10	ND<10	ND<20	ND<10	ND<10	
7/22/2004	ND<100	--	ND<1000	ND<10	ND<10	ND<20	ND<10	ND<10	
10/29/2004	63	--	ND<250	ND<2.5	ND<2.5	ND<5.0	ND<2.5	ND<2.5	
1/12/2005	1300	--	ND<250	ND<10	ND<2.5	ND<5.0	ND<2.5	ND<2.5	
6/20/2005	580	--	ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
9/23/2005	92	--	ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
12/13/2005	50	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
3/24/2006	1900	--	ND<6200	ND<12	ND<12	ND<12	ND<12	ND<12	
5/30/2006	ND<50	--	ND<1200	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	
8/22/2006	150	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
10/31/2006	43	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	

Table 2a
ADDITIONAL HISTORIC ANALYTICAL RESULTS

76 Station 7124

Date Sampled	TBA (µg/l)	Ethanol (8015B) (mg/l)	Ethanol (8260B) (µg/l)	Ethylene-dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Comments
1/12/2007	72	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
4/4/2007	260	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
7/5/2007	18	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
10/1/2007	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
1/11/2008	140	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
5/22/2008	52	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
7/2/2008	15	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
10/2/2008	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
1/14/2009	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
4/16/2009	170	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
7/16/2009	20	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
1/6/2010	ND<10	--	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	

ARCADIS

Attachment C

Laboratory Report and Chain-of-Custody Documentation

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 10/23/2013

Kathy Brandt

Arcadis
2000 Powell Street 7th Floor
Emeryville, CA 94608

Project:	7124
BC Work Order:	1321772
Invoice ID:	B158213

Enclosed are the results of analyses for samples received by the laboratory on 10/7/2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Molly Meyers

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

Table of Contents

13-21772

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: 7124	Union Oil Consultant: ARCADIS
Site Global ID: T0600173591	Consultant Contact: KATHERINE BRANDT
Site Address: 10151 International Blvd. OAKLAND, CA	Consultant Phone No.: (510) 596-9675
Union Oil PM: TIM BISHOP	Sampling Company: G-12
Union Oil PM Phone No.: (925) 790-6463	Sampled By (PRINT): MIKE LOMBARD
Charge Code: NWRTB-0 35438 -0- LAB	Sampler Signature:

This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.

BC Laboratories, Inc.
Project Manager: Molly Meyers
4100 Atlas Court, Bakersfield, CA 93308
Phone No. 661-327-4911

Turnaround Time (TAT): Standard ☒ 24 Hours ☐ 48 Hours ☐ 72 Hours ☐

Special Instructions

SAMPLE ID						ANALYSES REQUIRED											
Field Point Name	Matrix	Depth	Date (yymmdd)	Sample Time	# of Containers	TPH - Diesel by EPA 8015	TPH - G by GC/MS (8015)	BTEX/MTBE/OXYS by EPA 8260B (8260)	TOC	EPA 8260B Full List with OXYS	Nitrate/Nitrite/Sulfate	Alkalinity/Dissolved Iron	Sulfide	Ferrous Iron	Total Manganese	Methane	Notes / Comments
-1 QA	W-S-A		131007		2		X	X									
-2 MW-1	W-S-A		↓	0540	13		X	X	X		X	X	X	X	X	X	
-3 MW-2	W-S-A			0630	↓		X	X	X		X	X	X	X	X	X	
-4 MW-3	W-S-A			0720			X	X	X		X	X	X	X	X	X	
-5 MW-4	W-S-A			0615			X	X	X		X	X	X	X	X	X	
	W-S-A																
	W-S-A																
	W-S-A																
	W-S-A																
	W-S-A																
	W-S-A																
	W-S-A																

SHORT HOLDING TIME
C NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS OCT
CHK BY: K IQ
DISTRIBUTION
SUB-OUT ☐

Relinquished By	Company	Date / Time:
[signature]	GR	10-7-13 / 1000

Received By	Company	Date / Time:
GETTLER-RYAN FRIDGE		10-7-13 1000

Relinquished By	Company	Date / Time:
[signature]	GR	10/7/13 1556

Received By	Company	Date / Time:
Mary Bogan	BCLab	10-7-13 1555

REL [signature] 10-7-13 21:30

Relinquished By	Company	Date / Time:
Mary Bogan	BCLab	10-7-13 1850

Received By	Company	Date / Time:
[signature]	BCLAB	10-7-13 18:30

Rec: SAS 2130 10.7.13

Chain of Custody and Cooler Receipt Form for 1321772 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 15 07/01/13 Page 1 Of 1

Submission #: 13-21772

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Federal Express ☐ UPS ☐ Hand Delivery BC Lab Field Service ☑ Other ☐ (Specify)_____	Ice Chest ☑ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☑ Comments:

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

COC Received ☑ YES ☐ NO

Emissivity: 0.95 Container: PTPE Thermometer ID: 207 Date/Time 10-7-13 2130

Temperature: (A) 2.6 °C / (C) 2.7 °C Analyst Init SAS

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
)T GENERAL MINERAL/ GENERAL		C	C	C	C					
'T PE UNPRESERVED										
)T INORGANIC CHEMICAL METALS										
'T INORGANIC CHEMICAL METALS		D	D	D	D					
'T CYANIDE										
'T NITROGEN FORMS										
'T TOTAL SULFIDE		E	E	E	E					
oz. NITRATE / NITRITE										
'T TOTAL ORGANIC CARBON		F	F	F	F					
'T TOX										
'T CHEMICAL OXYGEN DEMAND										
'LA PHENOLICS										
0ml VOA VIAL TRAVEL BLANK	A 2									
0ml VOA VIAL	( )	A (6)	A (6)	A (6)	A (6)	( )	( )	( )	( )	( )
)T EPA 413.1, 413.2, 418.1										
'T ODOR										
ADIOLOGICAL										
ACTERIOLOGICAL										
0 ml VOA VIAL ~~504~~ Unpreserved		B 2	B 2	B 2	B 2					
)T EPA 508/608/8080										
)T EPA 515.1/8150										
)T EPA 525										
)T EPA 525 TRAVEL BLANK										
00ml EPA 547										
00ml EPA 531.1										
)T EPA 548										
)T EPA 549										
)T EPA 632										
)T EPA 8015M										
)T AMBER										
OZ. JAR										
2 OZ. JAR										
OIL SLEEVE										
'CB VIAL										
'LASTIC BAG										
'ERROUS IRON		G	G	G	G					
:NCORE										
MART KIT										
Summa Canister										

Comments:

Sample Numbering Completed By: M Date/Time: 10/7/13 2240

Arcadis
2000 Powell Street 7th Floor
Emeryville, CA 94608

Reported: 10/23/2013 10:57
Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1321772-01	**COC Number:**	---	**Receive Date:** 10/07/2013 21:30
	Project Number:	7124	**Sampling Date:** 10/07/2013 00:00
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	QA-W-131007	**Lab Matrix:** Water
	Sampled By:	GRD	**Sample Type:**
			Delivery Work Order:
			Global ID: T0600173591
			Location ID (FieldPoint): QA
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1321772-02	**COC Number:**	---	**Receive Date:** 10/07/2013 21:30
	Project Number:	7124	**Sampling Date:** 10/07/2013 05:40
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-1-W-131007	**Lab Matrix:** Water
	Sampled By:	GRD	**Sample Type:** Water
			Metal Analysis: 2-Lab Filtered and Acidified
			Delivery Work Order:
			Global ID: T0600173591
			Location ID (FieldPoint): MW-1
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1321772-03	**COC Number:**	---	**Receive Date:** 10/07/2013 21:30
	Project Number:	7124	**Sampling Date:** 10/07/2013 06:30
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-2-W-131007	**Lab Matrix:** Water
	Sampled By:	GRD	**Sample Type:** Water
			Metal Analysis: 2-Lab Filtered and Acidified
			Delivery Work Order:
			Global ID: T0600173591
			Location ID (FieldPoint): MW-2
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

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Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1321772-04	**COC Number:**	---	**Receive Date:**	10/07/2013 21:30
	Project Number:	7124	**Sampling Date:**	10/07/2013 07:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-3-W-131007	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
	Metal Analysis: 2-Lab Filtered and Acidified			
	Delivery Work Order:			
	Global ID: T0600173591			
	Location ID (FieldPoint): MW-3			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
1321772-05	**COC Number:**	---	**Receive Date:**	10/07/2013 21:30
	Project Number:	7124	**Sampling Date:**	10/07/2013 08:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-4-W-131007	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
	Metal Analysis: 2-Lab Filtered and Acidified			
	Delivery Work Order:			
	Global ID: T0600173591			
	Location ID (FieldPoint): MW-4			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			

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Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1321772-01 | **Client Sample Name:** 7124, QA-W-131007, 10/7/2013 12:00:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.1	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	95.7	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.8	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/11/13	10/11/13 18:07	EAR	MS-V10	1	BWJ1005

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Reported: 10/23/2013 10:57
Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1321772-01 | **Client Sample Name:** 7124, QA-W-131007, 10/7/2013 12:00:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C6 - C12)	ND	ug/L	50	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	77.7	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	10/09/13	10/10/13 13:20	jjh	GC-V9	1	BWJ0708

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Reported: 10/23/2013 10:57
Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1321772-02 | **Client Sample Name:** 7124, MW-1-W-131007, 10/7/2013 5:40:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	90.3	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	106	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/11/13	10/12/13 00:29	EAR	MS-V10	1	BWJ1005

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Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1321772-02 | **Client Sample Name:** 7124, MW-1-W-131007, 10/7/2013 5:40:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C6 - C12)	ND	ug/L	50	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	76.6	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	10/09/13	10/10/13 13:40	jjh	GC-V9	1	BWJ0708

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Reported: 10/23/2013 10:57
Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Gas Testing in Water

BCL Sample ID: 1321772-02 | **Client Sample Name:** 7124, MW-1-W-131007, 10/7/2013 5:40:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methane	**0.015**	**mg/L**	**0.0010**	**RSK-175M**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	RSK-175M	10/18/13	10/18/13 10:29	EAR	GC-V1	1	BWJ1123

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Reported: 10/23/2013 10:57
Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Water Analysis (General Chemistry)

BCL Sample ID: 1321772-02 | **Client Sample Name:** 7124, MW-1-W-131007, 10/7/2013 5:40:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Total Alkalinity as CaCO3	**150**	**mg/L**	**4.1**	**EPA-310.1**	ND		1
Nitrate as NO3	**26**	**mg/L**	**0.44**	**EPA-300.0**	ND		2
Sulfate	**22**	**mg/L**	**1.0**	**EPA-300.0**	ND		2
Iron (II) Species	ND	ug/L	100	SM-3500-FeD	ND		3
Nitrite as NO2	ND	mg/L	0.17	EPA-353.2	ND		4
Total Sulfide	ND	mg/L	0.10	SM-4500SD	ND		5
Non-Volatile Organic Carbon	**3.4**	**mg/L**	**0.30**	**EPA-415.1**	ND		6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-310.1	10/11/13	10/11/13 17:52	RML	MET-1	1	BWJ1033
2	EPA-300.0	10/08/13	10/08/13 22:27	LS1	IC1	1	BWJ0661
3	SM-3500-FeD	10/08/13	10/08/13 08:50	TDC	KONE-1	1	BWJ0628
4	EPA-353.2	10/08/13	10/08/13 08:10	TDC	KONE-1	1	BWJ0627
5	SM-4500SD	10/10/13	10/10/13 14:15	DIW	SPEC05	1	BWJ0916
6	EPA-415.1	10/22/13	10/22/13 17:03	CDR	TOC2	1	BWJ1643

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Reported: 10/23/2013 10:57
Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Metals Analysis

BCL Sample ID: 1321772-02 | **Client Sample Name:** 7124, MW-1-W-131007, 10/7/2013 5:40:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Dissolved Iron	ND	ug/L	50	EPA-6010B	ND		1
Total Manganese	**13000**	**ug/L**	**10**	**EPA-6010B**	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	10/08/13	10/09/13 09:19	ARD	PE-OP1	1	BWJ0698
2	EPA-6010B	10/10/13	10/11/13 09:04	ARD	PE-OP1	1	BWJ0853

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Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1321772-03 | **Client Sample Name:** 7124, MW-2-W-131007, 10/7/2013 6:30:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.4	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	88.7	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	108	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/11/13	10/12/13 00:47	EAR	MS-V10	1	BWJ1005

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Reported: 10/23/2013 10:57
Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1321772-03 | **Client Sample Name:** 7124, MW-2-W-131007, 10/7/2013 6:30:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C6 - C12)	**99**	**ug/L**	**50**	**EPA-8015B**	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	90.5	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	10/09/13	10/10/13 14:00	jjh	GC-V9	1	BWJ0708

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Reported: 10/23/2013 10:57
Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Gas Testing in Water

BCL Sample ID: 1321772-03 | **Client Sample Name:** 7124, MW-2-W-131007, 10/7/2013 6:30:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methane	**0.0049**	**mg/L**	**0.0010**	**RSK-175M**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	RSK-175M	10/18/13	10/18/13 10:36	EAR	GC-V1	1	BWJ1123

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Reported: 10/23/2013 10:57
Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Water Analysis (General Chemistry)

BCL Sample ID: 1321772-03 | **Client Sample Name:** 7124, MW-2-W-131007, 10/7/2013 6:30:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Total Alkalinity as CaCO3	**200**	**mg/L**	**4.1**	**EPA-310.1**	ND		1
Nitrate as NO3	ND	mg/L	0.44	EPA-300.0	ND		2
Sulfate	**9.6**	**mg/L**	**1.0**	**EPA-300.0**	ND		2
Iron (II) Species	**2700**	**ug/L**	**100**	**SM-3500-FeD**	ND		3
Nitrite as NO2	ND	mg/L	0.17	EPA-353.2	ND		4
Total Sulfide	ND	mg/L	0.10	SM-4500SD	ND		5
Non-Volatile Organic Carbon	**3.2**	**mg/L**	**0.30**	**EPA-415.1**	ND		6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-310.1	10/11/13	10/11/13 17:59	RML	MET-1	1	BWJ1033
2	EPA-300.0	10/08/13	10/08/13 22:44	LS1	IC1	1	BWJ0661
3	SM-3500-FeD	10/08/13	10/08/13 08:50	TDC	KONE-1	1	BWJ0628
4	EPA-353.2	10/08/13	10/08/13 08:10	TDC	KONE-1	1	BWJ0627
5	SM-4500SD	10/10/13	10/10/13 14:15	DIW	SPEC05	1	BWJ0916
6	EPA-415.1	10/22/13	10/22/13 18:27	CDR	TOC2	1	BWJ1643

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Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Metals Analysis

BCL Sample ID: 1321772-03 | **Client Sample Name:** 7124, MW-2-W-131007, 10/7/2013 6:30:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Dissolved Iron	**260**	**ug/L**	**50**	**EPA-6010B**	ND		1
Total Manganese	**5600**	**ug/L**	**10**	**EPA-6010B**	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	10/08/13	10/09/13 09:21	ARD	PE-OP1	1	BWJ0698
2	EPA-6010B	10/10/13	10/11/13 09:06	ARD	PE-OP1	1	BWJ0853

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Reported: 10/23/2013 10:57
Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1321772-04 | **Client Sample Name:** 7124, MW-3-W-131007, 10/7/2013 7:30:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Methyl t-butyl ether	**12**	**ug/L**	**0.50**	**EPA-8260B**	ND		1
Toluene	ND	ug/L	0.50	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	89.5	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	114	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/11/13	10/12/13 01:06	EAR	MS-V10	1	BWJ1005

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Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1321772-04 | **Client Sample Name:** 7124, MW-3-W-131007, 10/7/2013 7:30:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C6 - C12)	**880**	**ug/L**	**50**	**EPA-8015B**	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	176	%	70 - 130 (LCL - UCL)	EPA-8015B		A19,S09	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	10/09/13	10/10/13 14:20	jjh	GC-V9	1	BWJ0708

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Reported: 10/23/2013 10:57
Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Gas Testing in Water

BCL Sample ID: 1321772-04 | **Client Sample Name:** 7124, MW-3-W-131007, 10/7/2013 7:30:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methane	**0.071**	**mg/L**	**0.0010**	**RSK-175M**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	RSK-175M	10/18/13	10/18/13 10:40	EAR	GC-V1	1	BWJ1144

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Reported: 10/23/2013 10:57
Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Water Analysis (General Chemistry)

BCL Sample ID: 1321772-04 | **Client Sample Name:** 7124, MW-3-W-131007, 10/7/2013 7:30:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Total Alkalinity as CaCO3	**260**	**mg/L**	**4.1**	**EPA-310.1**	ND		1
Nitrate as NO3	ND	mg/L	0.44	EPA-300.0	ND		2
Sulfate	ND	mg/L	1.0	EPA-300.0	ND		2
Iron (II) Species	**9000**	**ug/L**	**1000**	**SM-3500-FeD**	ND	**A01**	3
Nitrite as NO2	ND	mg/L	0.17	EPA-353.2	ND		4
Total Sulfide	ND	mg/L	0.10	SM-4500SD	ND		5
Non-Volatile Organic Carbon	**3.1**	**mg/L**	**0.30**	**EPA-415.1**	ND		6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-310.1	10/11/13	10/11/13 18:05	RML	MET-1	1	BWJ1033
2	EPA-300.0	10/08/13	10/08/13 23:01	LD1	IC1	1	BWJ0661
3	SM-3500-FeD	10/08/13	10/08/13 09:01	TDC	KONE-1	10	BWJ0628
4	EPA-353.2	10/08/13	10/08/13 08:10	TDC	KONE-1	1	BWJ0627
5	SM-4500SD	10/10/13	10/10/13 14:15	DIW	SPEC05	1	BWJ0916
6	EPA-415.1	10/22/13	10/22/13 18:42	CDR	TOC2	1	BWJ1643

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Reported: 10/23/2013 10:57
Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Metals Analysis

BCL Sample ID: 1321772-04 | **Client Sample Name:** 7124, MW-3-W-131007, 10/7/2013 7:30:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Dissolved Iron	**710**	**ug/L**	**50**	**EPA-6010B**	ND		1
Total Manganese	**9600**	**ug/L**	**10**	**EPA-6010B**	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	10/08/13	10/09/13 09:23	ARD	PE-OP1	1	BWJ0698
2	EPA-6010B	10/10/13	10/11/13 09:08	ARD	PE-OP1	1	BWJ0853

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2000 Powell Street 7th Floor
Emeryville, CA 94608

Reported: 10/23/2013 10:57
Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1321772-05 | **Client Sample Name:** 7124, MW-4-W-131007, 10/7/2013 8:15:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	89.6	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	111	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	10/11/13	10/12/13 01:24	EAR	MS-V10	1	BWJ1005

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Project: 7124
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Project Manager: Kathy Brandt

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1321772-05 | **Client Sample Name:** 7124, MW-4-W-131007, 10/7/2013 8:15:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C6 - C12)	**95**	**ug/L**	**50**	**EPA-8015B**	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	80.8	%	70 - 130 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	10/09/13	10/10/13 14:40	jjh	GC-V9	1	BWJ0708

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Project Number: 351638
Project Manager: Kathy Brandt

Gas Testing in Water

BCL Sample ID: 1321772-05 | **Client Sample Name:** 7124, MW-4-W-131007, 10/7/2013 8:15:00AM

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	10/18/13	10/18/13 10:45	EAR	GC-V1	1	BWJ1144

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Project: 7124
Project Number: 351638
Project Manager: Kathy Brandt

Water Analysis (General Chemistry)

BCL Sample ID: 1321772-05 | **Client Sample Name:** 7124, MW-4-W-131007, 10/7/2013 8:15:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Total Alkalinity as CaCO3	**190**	**mg/L**	**4.1**	**EPA-310.1**	ND		1
Nitrate as NO3	ND	mg/L	0.44	EPA-300.0	ND		2
Sulfate	**18**	**mg/L**	**1.0**	**EPA-300.0**	ND		2
Iron (II) Species	**13000**	**ug/L**	**1000**	**SM-3500-FeD**	ND	**A01**	3
Nitrite as NO2	ND	mg/L	0.17	EPA-353.2	ND		4
Total Sulfide	ND	mg/L	0.10	SM-4500SD	ND		5
Non-Volatile Organic Carbon	**8.2**	**mg/L**	**0.30**	**EPA-415.1**	ND		6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-310.1	10/11/13	10/11/13 18:12	RML	MET-1	1	BWJ1033
2	EPA-300.0	10/08/13	10/08/13 23:18	LD1	IC1	1	BWJ0661
3	SM-3500-FeD	10/08/13	10/08/13 09:01	TDC	KONE-1	10	BWJ0628
4	EPA-353.2	10/08/13	10/08/13 08:10	TDC	KONE-1	1	BWJ0627
5	SM-4500SD	10/10/13	10/10/13 14:15	DIW	SPEC05	1	BWJ0916
6	EPA-415.1	10/22/13	10/22/13 18:56	CDR	TOC2	1	BWJ1643

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Project Number: 351638
Project Manager: Kathy Brandt

Metals Analysis

BCL Sample ID: 1321772-05 | **Client Sample Name:** 7124, MW-4-W-131007, 10/7/2013 8:15:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Dissolved Iron	**220**	**ug/L**	**50**	**EPA-6010B**	ND		1
Total Manganese	**5000**	**ug/L**	**10**	**EPA-6010B**	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	10/08/13	10/09/13 09:24	ARD	PE-OP1	1	BWJ0698
2	EPA-6010B	10/10/13	10/11/13 09:09	ARD	PE-OP1	1	BWJ0853

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Project Manager: Kathy Brandt

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWJ1005						
Benzene	BWJ1005-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BWJ1005-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BWJ1005-BLK1	ND	ug/L	0.50		
Ethylbenzene	BWJ1005-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BWJ1005-BLK1	ND	ug/L	0.50		
Toluene	BWJ1005-BLK1	ND	ug/L	0.50		
Total Xylenes	BWJ1005-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BWJ1005-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BWJ1005-BLK1	ND	ug/L	10		
Diisopropyl ether	BWJ1005-BLK1	ND	ug/L	0.50		
Ethanol	BWJ1005-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BWJ1005-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	BWJ1005-BLK1	98.8	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BWJ1005-BLK1	93.5	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BWJ1005-BLK1	103	%	80 - 120 (LCL - UCL)		

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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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BWJ1005										
Benzene	BWJ1005-BS1	LCS	23.660	25.000	ug/L	94.6		70 - 130		
Toluene	BWJ1005-BS1	LCS	26.400	25.000	ug/L	106		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BWJ1005-BS1	LCS	9.4500	10.000	ug/L	94.5		75 - 125		
Toluene-d8 (Surrogate)	BWJ1005-BS1	LCS	9.5100	10.000	ug/L	95.1		80 - 120		
4-Bromofluorobenzene (Surrogate)	BWJ1005-BS1	LCS	10.940	10.000	ug/L	109		80 - 120		

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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	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BWJ1005	Used client sample: N										
Benzene	MS	1320257-69	ND	21.950	25.000	ug/L		87.8		70 - 130	
	MSD	1320257-69	ND	22.140	25.000	ug/L	0.9	88.6	20	70 - 130	
Toluene	MS	1320257-69	ND	25.370	25.000	ug/L		101		70 - 130	
	MSD	1320257-69	ND	25.700	25.000	ug/L	1.3	103	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1320257-69	ND	9.9200	10.000	ug/L		99.2		75 - 125	
	MSD	1320257-69	ND	9.9500	10.000	ug/L	0.3	99.5		75 - 125	
Toluene-d8 (Surrogate)	MS	1320257-69	ND	9.6600	10.000	ug/L		96.6		80 - 120	
	MSD	1320257-69	ND	9.7300	10.000	ug/L	0.7	97.3		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1320257-69	ND	10.700	10.000	ug/L		107		80 - 120	
	MSD	1320257-69	ND	11.040	10.000	ug/L	3.1	110		80 - 120	

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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: BWJ0708						
Gasoline Range Organics (C6 - C12)	BWJ0708-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (FID Surrogate)	BWJ0708-BLK1	84.8	%	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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BWJ0708										
Gasoline Range Organics (C6 - C12)	BWJ0708-BS1	LCS	1006.6	1000.0	ug/L	101		85 - 115		
a,a,a-Trifluorotoluene (FID Surrogate)	BWJ0708-BS1	LCS	34.151	40.000	ug/L	85.4		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	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BWJ0708	Used client sample: N										
Gasoline Range Organics (C6 - C12)	MS	1321575-03	ND	938.68	1000.0	ug/L		93.9		70 - 130	
	MSD	1321575-03	ND	938.00	1000.0	ug/L	0.1	93.8	20	70 - 130	
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1321575-03	ND	35.108	40.000	ug/L		87.8		70 - 130	
	MSD	1321575-03	ND	35.387	40.000	ug/L	0.8	88.5		70 - 130	

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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: BWJ1123						
Methane	BWJ1123-BLK1	ND	mg/L	0.0010		
QC Batch ID: BWJ1144						
Methane	BWJ1144-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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BWJ1123										
Methane	BWJ1123-BS1	LCS	0.011237	0.010843	mg/L	104		80 - 120		
	BWJ1123-BSD1	LCSD	0.0099557	0.010843	mg/L	91.8	12.1	80 - 120	20	
QC Batch ID: BWJ1144										
Methane	BWJ1144-BS1	LCS	0.010424	0.010843	mg/L	96.1		80 - 120		
	BWJ1144-BSD1	LCSD	0.010264	0.010843	mg/L	94.7	1.5	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: BWJ0627						
Nitrite as NO2	BWJ0627-BLK1	ND	mg/L	0.17		
QC Batch ID: BWJ0628						
Iron (II) Species	BWJ0628-BLK1	ND	ug/L	100		
QC Batch ID: BWJ0661						
Nitrate as NO3	BWJ0661-BLK1	ND	mg/L	0.44		
Sulfate	BWJ0661-BLK1	ND	mg/L	1.0		
QC Batch ID: BWJ0916						
Total Sulfide	BWJ0916-BLK1	ND	mg/L	0.10		
QC Batch ID: BWJ1033						
Total Alkalinity as CaCO3	BWJ1033-BLK1	ND	mg/L	4.1		
QC Batch ID: BWJ1643						
Non-Volatile Organic Carbon	BWJ1643-BLK1	ND	mg/L	0.30		

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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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BWJ0627										
Nitrite as NO2	BWJ0627-BS1	LCS	1.5623	1.6425	mg/L	95.1		90 - 110		
QC Batch ID: BWJ0628										
Iron (II) Species	BWJ0628-BS1	LCS	2502.4	2500.0	ug/L	100		90 - 110		
QC Batch ID: BWJ0661										
Nitrate as NO3	BWJ0661-BS1	LCS	22.116	22.134	mg/L	99.9		90 - 110		
Sulfate	BWJ0661-BS1	LCS	100.35	100.00	mg/L	100		90 - 110		
QC Batch ID: BWJ0916										
Total Sulfide	BWJ0916-BS1	LCS	0.49755	0.50000	mg/L	99.5		90 - 110		
QC Batch ID: BWJ1033										
Total Alkalinity as CaCO3	BWJ1033-BS3	LCS	96.000	100.00	mg/L	96.0		90 - 110		
QC Batch ID: BWJ1643										
Non-Volatile Organic Carbon	BWJ1643-BS1	LCS	5.2120	5.0000	mg/L	104		85 - 115		

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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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BWJ0627	Used client sample: N										
Nitrite as NO2	DUP	1321743-01	0.092088	ND		mg/L			10		
	MS	1321743-01	0.092088	1.7257	1.7289	mg/L		94.5		90 - 110	
	MSD	1321743-01	0.092088	1.7330	1.7289	mg/L	0.4	94.9	10	90 - 110	
QC Batch ID: BWJ0628	Used client sample: Y - Description: MW-1-W-131007, 10/07/2013 05:40										
Iron (II) Species	DUP	1321772-02	67.314	ND		ug/L			10		
QC Batch ID: BWJ0661	Used client sample: N										
Nitrate as NO3	DUP	1321771-01	80.612	80.785		mg/L	0.2		10		
	MS	1321771-01	80.612	102.59	22.358	mg/L		98.3		80 - 120	
	MSD	1321771-01	80.612	102.52	22.358	mg/L	0.1	98.0	10	80 - 120	
Sulfate	DUP	1321771-01	42.641	42.841		mg/L	0.5		10		
	MS	1321771-01	42.641	154.49	101.01	mg/L		111		80 - 120	
	MSD	1321771-01	42.641	154.36	101.01	mg/L	0.1	111	10	80 - 120	
QC Batch ID: BWJ0916	Used client sample: N										
Total Sulfide	DUP	1321768-01	ND	ND		mg/L			10		
	MS	1321768-01	ND	0.48153	0.50000	mg/L		96.3		80 - 120	
	MSD	1321768-01	ND	0.47619	0.50000	mg/L	1.1	95.2	10	80 - 120	
QC Batch ID: BWJ1033	Used client sample: N										
Total Alkalinity as CaCO3	DUP	1322256-02	173.74	173.28		mg/L	0.3		10		
QC Batch ID: BWJ1643	Used client sample: Y - Description: MW-1-W-131007, 10/07/2013 05:40										
Non-Volatile Organic Carbon	DUP	1321772-02	3.3640	3.0710		mg/L	9.1		10		
	MS	1321772-02	3.3640	8.6302	5.0251	mg/L		105		80 - 120	
	MSD	1321772-02	3.3640	8.6563	5.0251	mg/L	0.3	105	10	80 - 120	

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Metals Analysis

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWJ0698						
Dissolved Iron	BWJ0698-BLK1	ND	ug/L	50		
QC Batch ID: BWJ0853						
Total Manganese	BWJ0853-BLK1	ND	ug/L	10		

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Metals Analysis

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BWJ0698										
Dissolved Iron	BWJ0698-BS1	LCS	1062.2	1000.0	ug/L	106		85 - 115		
QC Batch ID: BWJ0853										
Total Manganese	BWJ0853-BS1	LCS	467.20	500.00	ug/L	93.4		85 - 115		

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Metals Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BWJ0698	Used client sample: N										
Dissolved Iron	DUP	1321769-01	7010.2	7165.9		ug/L	2.2		20		
	MS	1321769-01	7010.2	12449	5102.0	ug/L		107		75 - 125	
	MSD	1321769-01	7010.2	12655	5102.0	ug/L	1.6	111	20	75 - 125	
QC Batch ID: BWJ0853	Used client sample: N										
Total Manganese	DUP	1321935-02	300.22	292.80		ug/L	2.5		20		
	MS	1321935-02	300.22	786.41	500.00	ug/L		97.2		75 - 125	
	MSD	1321935-02	300.22	804.66	500.00	ug/L	2.3	101	20	75 - 125	

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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.
A19	Surrogate is high due to matrix interference. Interferences verified through second extraction/analysis.
S09	The surrogate recovery on the sample for this compound was not within the control limits.