James P. Kiernan, P.E.
Project Manager

Chevron Environmental Management Company
6001 Bollinger Canyon Road
Room C2102
San Ramon, CA 94583
Tel (925) 842-3220
jkiernan@chevron.com

July 14, 2016

RECEIVED
By Alameda County Environmental Health 9:24 am, Jul 14, 2016

Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: 76 Station No. 7124 (351638)
First Semi-Annual 2016 Groundwater Monitoring Report
10151 International Blvd, Oakland, California
Fuel Leak Case No.: RO0002444
GeoTracker Global ID #T0600173591

I have reviewed the attached report dated July 14, 2016.

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

This letter is submitted pursuant to the requirements of California Water Code Section 13257(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

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

Sincerely,

James P. Kiernan, P.E.
Project Manager

Attachment: First Semi-Annual 2016 Groundwater Monitoring Report by AECOM

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

(805) 388-3775 tel
(805) 388-3577 fax

July 14, 2016

Mr. Keith Nowell
Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577
(*via internet upload*)

Subject: **First Semi-Annual 2016 Groundwater Monitoring Report**
76 Station No. 7124 (351638)
10151 International Boulevard, Oakland, California
Fuel Leak Case #RO0002444
GeoTracker Global ID #T0600173591

Dear Mr. Nowell,

On behalf of Chevron Environmental Management Company's (EMC's) affiliate, Union Oil Company of California ("Union Oil"), AECOM has prepared this first semi-annual 2016 groundwater monitoring report for the above-referenced site.

Recommendations and Future Work

The site meets the criteria for low-threat closure. As such, no further monitoring is warranted and we recommend ACEH move forward with public notification per the January 16, 2015 letter .

If required, the next semi-annual groundwater monitoring event would be conducted during the fourth quarter of 2016.

Remarks/Signatures

The interpretations in this report represent AECOM's professional opinions and are based, in part, on the information supplied by the groundwater monitoring contractor and laboratory. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

If you have any questions regarding this project, please contact Chad Roper at (805) 764-4027.

Sincerely,

Chad Roper, PhD
Project Manager

Lorien Sanders, PG #8019
Project Geologist

7/13/16

cc: James Kiernan, EMC (via electronic copy)
Ed Ralston, P66 (via electronic copy)
Ibrahim and Nawal, Abbushi (via paper copy)

Enclosures:

Attachment A - Groundwater Summary
Attachment B - Figures
Attachment C - Tables
Attachment D - Hydrographs

Attachment E - Field Procedures and Field Logs
Attachment F - Laboratory Analytical Report and Chain-of-Custody Documentation

ATTACHMENT A

GROUNDWATER SUMMARY

GROUNDWATER MONITORING SUMMARY REPORT
76 Station No. 7124 (351638)
10151 International Boulevard, Oakland, California

CURRENT FIELD ACTIVITIES

Groundwater monitoring frequency:	Semi-annual
Activity date:	6/15/2016
Groundwater monitoring subcontractor:	Gettler-Ryan Inc. (G-R)
Number of groundwater wells total:	4
Number of groundwater wells off-site:	0
Number of wells sampled (this period):	4
Number of wells with LNAPL (this period):	0
Cumulative LNAPL recovered to date (gallons):	0
LNAPL recovered during this period (gallons):	0

SITE HYDROGEOLOGY

Depth to water range (feet below top of casing) (this period):	16.22 to 18.20
Approximate groundwater flow direction (this period):	West/northwest
Approximate hydraulic gradient (feet per foot) (this period):	0.01

GROUNDWATER CONDITIONS

Maximum detected TPHg (this period):	92 µg/L (MW-4 only)
Historical maximum detected TPHg concentration:	1,600 µg/L (MW-3) on 10/15/2014
Maximum detected benzene concentration (this period):	Non-detect
Historical maximum detected benzene concentration:	Non-detect
Maximum detected MTBE concentration (this period):	0.96 µg/L (MW-3 only)
Historical maximum detected MTBE concentration:	210 µg/L (MW-3) on 4/6/2012
Maximum detected TBA (this period):	Non-detect
Historical maximum detected TBA concentration:	85 µg/L(MW-3) on 4/6/2012

GROUNDWATER TRENDS AND OBSERVATIONS

- Groundwater flow direction changed from the west/southwest to the west/northwest.
- The groundwater analytical results were generally consistent with previous events. TPHg was only detected in MW-4, and only at a low concentration. Benzene was not detected in the groundwater samples collected from the four wells sampled during this period, and has not been detected in any of the wells. No TBA continues to be detected in the wells.
- MTBE was only detected in the groundwater sample collected from one of four wells sampled during this period, at 0.96 µg/L (well MW-3). The detected concentration was the lowest to date in this well.

RECOMMENDATIONS AND PROPOSED FUTURE WORK

GROUNDWATER MONITORING SUMMARY
Chevron Service Station No. 90786
700 East Imperial Highway, Brea, California

- The site meets the criteria for low-threat closure. As such, no further monitoring is warranted and we recommend ACEH move forward with public notification per the January 16, 2015 letter.

- If required, the next semi-annual monitoring and reporting event would be performed during fourth quarter 2016.

ATTACHMENT B

FIGURES

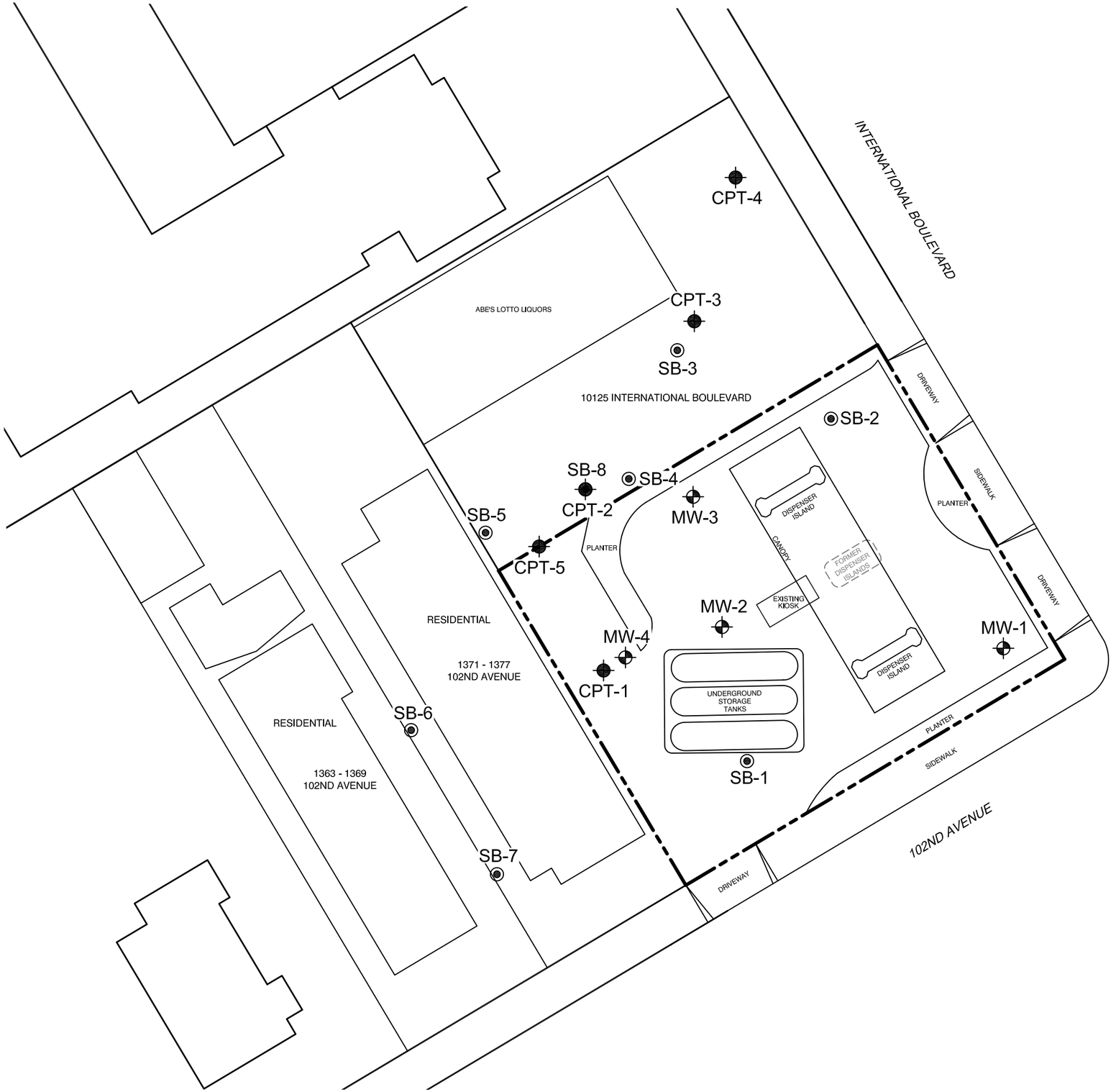
AECOM
1220 AVENIDA ACASO
CAMARILLO, CALIFORNIA 93012
PHONE: 805.388.3775
FAX: 805.388.3557
WEB: HTTP://WWW.AECOM.COM

SITE LOCATION MAP

76 Station No. 7124 (351638)
10151 International Boulevard
Oakland, California

FIGURE NUMBER:
1

DRAWN BY:	DATE:	PROJECT NUMBER:	SHEET NUMBER:
T. Quiroz	07/06/2016	60481177	1 of 1



LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- GROUNDWATER MONITORING WELL
- SOIL BORING
- CPT LOCATION

NOTES:

1. BASE MAP PROVIDED BY TRC, DATED JANUARY 2010, AT A SCALE OF 1"=20'. ADDITIONAL SITE INFORMATION PROVIDED BY STANTEC, DATED SEPTEMBER 23, 2008, AT A SCALE OF 1"=40'.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

NO.	DESCRIPTION	DATE	BY
	REVISION		

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
TQ	TQ	DF	CR

AECOM
1220 AVENIDA ACASO
CAMARILLO, CALIFORNIA 93012
PHONE: (805) 388-3775
FAX: (805) 388-3577

SITE PLAN

76 STATION NO. 7124 (351638)
10151 INTERNATIONAL BOULEVARD
OAKLAND, CALIFORNIA

SCALE:	DATE:	PROJECT NUMBER:
1" = 30'	07/06/2016	60481777

FIGURE NUMBER:

2

SHEET NUMBER:

1 of 1

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LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- GROUNDWATER MONITORING WELL
- (#) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 20.65 CONTOUR OF GROUNDWATER ELEVATIONS IN FEET ABOVE MEAN SEA LEVEL (DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION

HYDRAULIC GRADIENT = 0.01 FEET PER FOOT

NOTES:
1. BASE MAP PROVIDED BY TRC, DATED JANUARY 2010, AT A SCALE OF 1"=20'. ADDITIONAL SITE INFORMATION PROVIDED BY STANTEC, DATED SEPTEMBER 23, 2008, AT A SCALE OF 1"=40'.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

N

0 15' 30' 60'

SCALE IN FEET

REVISED BY	NO.	DESCRIPTION	DATE	BY
TQ				
DRAWN BY: TQ				
CHECKED BY: DF				
APPROVED BY: CR				

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CAMARILLO, CALIFORNIA 93012
PHONE: (805) 388-3775
FAX: (805) 388-3577

FIRST SEMI-ANNUAL 2016 GROUNDWATER ELEVATION MAP

76 STATION NO. 7124 (351638)
10151 INTERNATIONAL BOULEVARD
OAKLAND, CALIFORNIA

SCALE:	DATE:	PROJECT NUMBER:
1" = 30'	07/06/2016	60481777

FIGURE NUMBER:
3

SHEET NUMBER:
1 of 1

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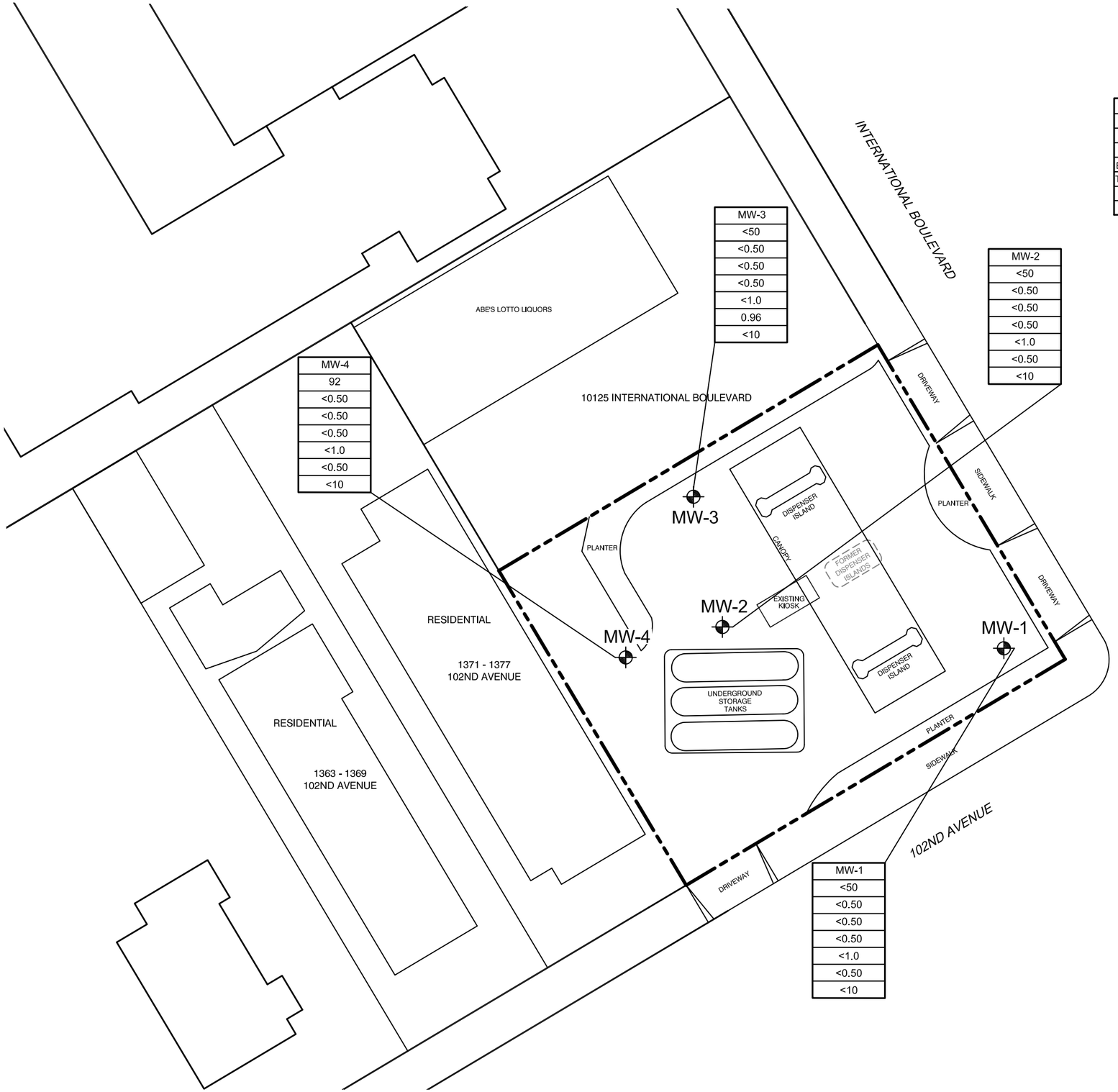

LEGEND

APPROXIMATE PROPERTY BOUNDARY

GROUNDWATER MONITORING WELL

WELL ID
TPH-GRO
BENZENE
TOLUENE
ETHYLBENZENE
TOTAL XYLENES
MTBE
TBA

ID = IDENTIFICATION

TPH-GRO = TOTAL PETROLEUM HYDROCARBONS-GASOLINE RANGE ORGANICS

MTBE = METHYL T-BUTYL ETHER

TBA = T-BUTYL ALCOHOL

<# = ANALYTE NOT DETECTED AT OR ABOVE INDICATED LABORATORY PRACTICAL QUANTITATION LIMIT

ANALYTE RESULTS EXPRESSED IN MICROGRAMS PER LITER

NOTES:
1. BASE MAP PROVIDED BY TRC, DATED JANUARY 2010, AT A SCALE OF 1"=20'. ADDITIONAL SITE INFORMATION PROVIDED BY STANTEC, DATED SEPTEMBER 23, 2008, AT A SCALE OF 1"=40'.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

N

0 15' 30' 60'

SCALE IN FEET

REVISED BY	NO.	DESCRIPTION	DATE	BY

DESIGNED BY: TQ
DRAWN BY: TQ
CHECKED BY: DF
APPROVED BY: CR

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1220 AVENIDA ACASO
CAMARILLO, CALIFORNIA 93012
PHONE: (805) 388-3775
FAX: (805) 388-3577

FIRST SEMI-ANNUAL 2016 GROUNDWATER ANALYTICAL DATA MAP

76 STATION NO. 7124 (351638)
10151 INTERNATIONAL BOULEVARD
OAKLAND, CALIFORNIA

SCALE: 1" = 30'
DATE: 07/06/2016
PROJECT NUMBER: 60481777

FIGURE NUMBER: **4**

SHEET NUMBER: 1 of 1

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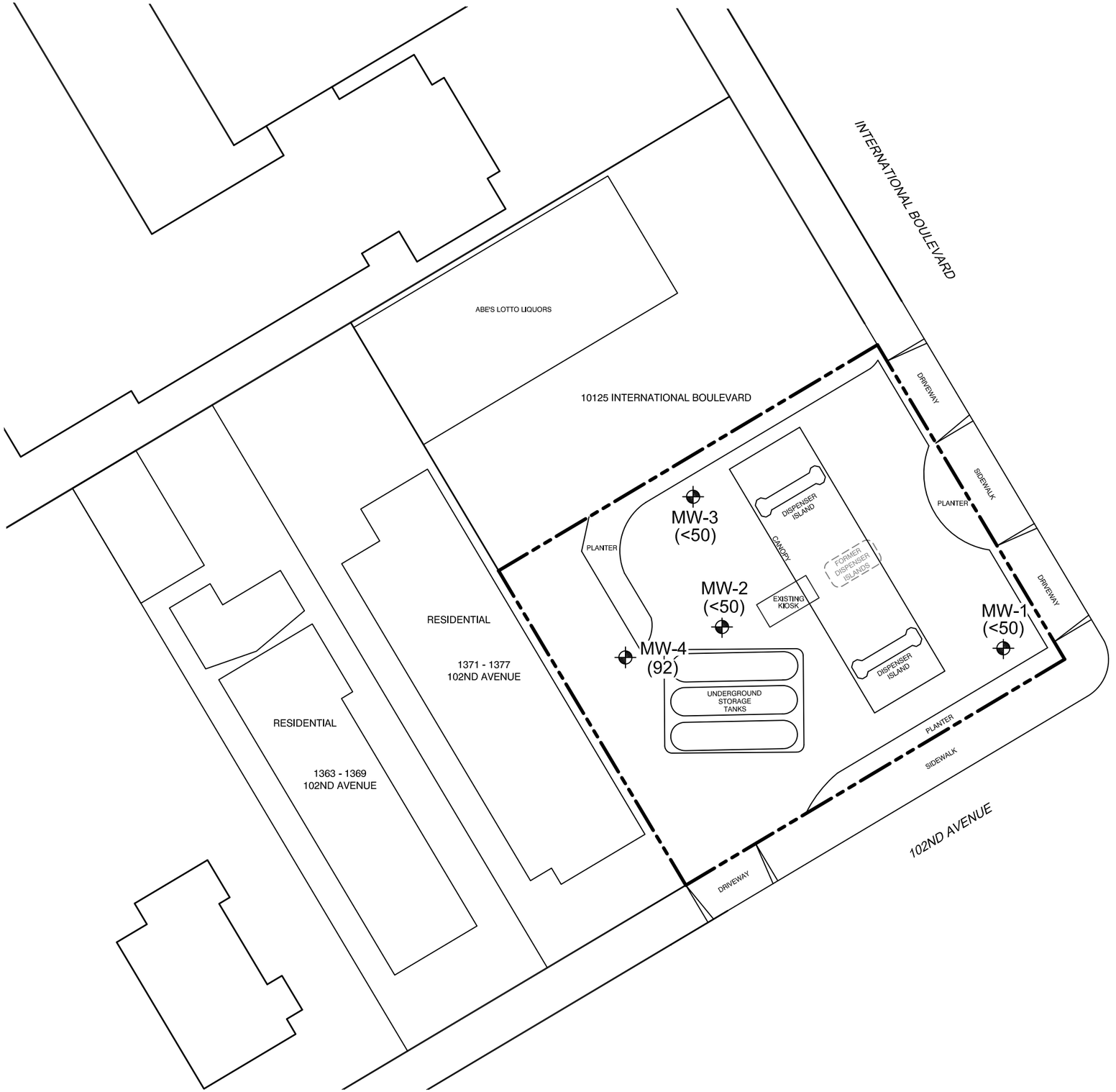

LEGEND

APPROXIMATE PROPERTY BOUNDARY

GROUNDWATER MONITORING WELL

TPH-GRO TOTAL PETROLEUM HYDROCARBONS-GASOLINE RANGE ORGANICS

(#) TPH-GRO CONCENTRATION IN MICROGRAMS PER LITER

(<#) ANALYTE NOT DETECTED AT OR ABOVE INDICATED LABORATORY PRACTICAL QUANTITATION LIMIT

NOTES:
1. BASE MAP PROVIDED BY TRC, DATED JANUARY 2010, AT A SCALE OF 1"=20'. ADDITIONAL SITE INFORMATION PROVIDED BY STANTEC, DATED SEPTEMBER 23, 2008, AT A SCALE OF 1"=40'.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

REVISED BY	NO.	DESCRIPTION	DATE	BY
DESIGNED BY: TQ				
DRAWN BY: TQ				
CHECKED BY: DF				
APPROVED BY: CR				

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CAMARILLO, CALIFORNIA 93012
PHONE: (805) 388-3775
FAX: (805) 388-3577

FIRST SEMI-ANNUAL 2016 TPH-GRO CONCENTRATION MAP

76 STATION NO. 7124 (351638)
10151 INTERNATIONAL BOULEVARD
OAKLAND, CALIFORNIA

SCALE:	DATE:	PROJECT NUMBER:
1" = 30'	07/06/2016	60481777

FIGURE NUMBER:

5

SHEET NUMBER:

1 of 1

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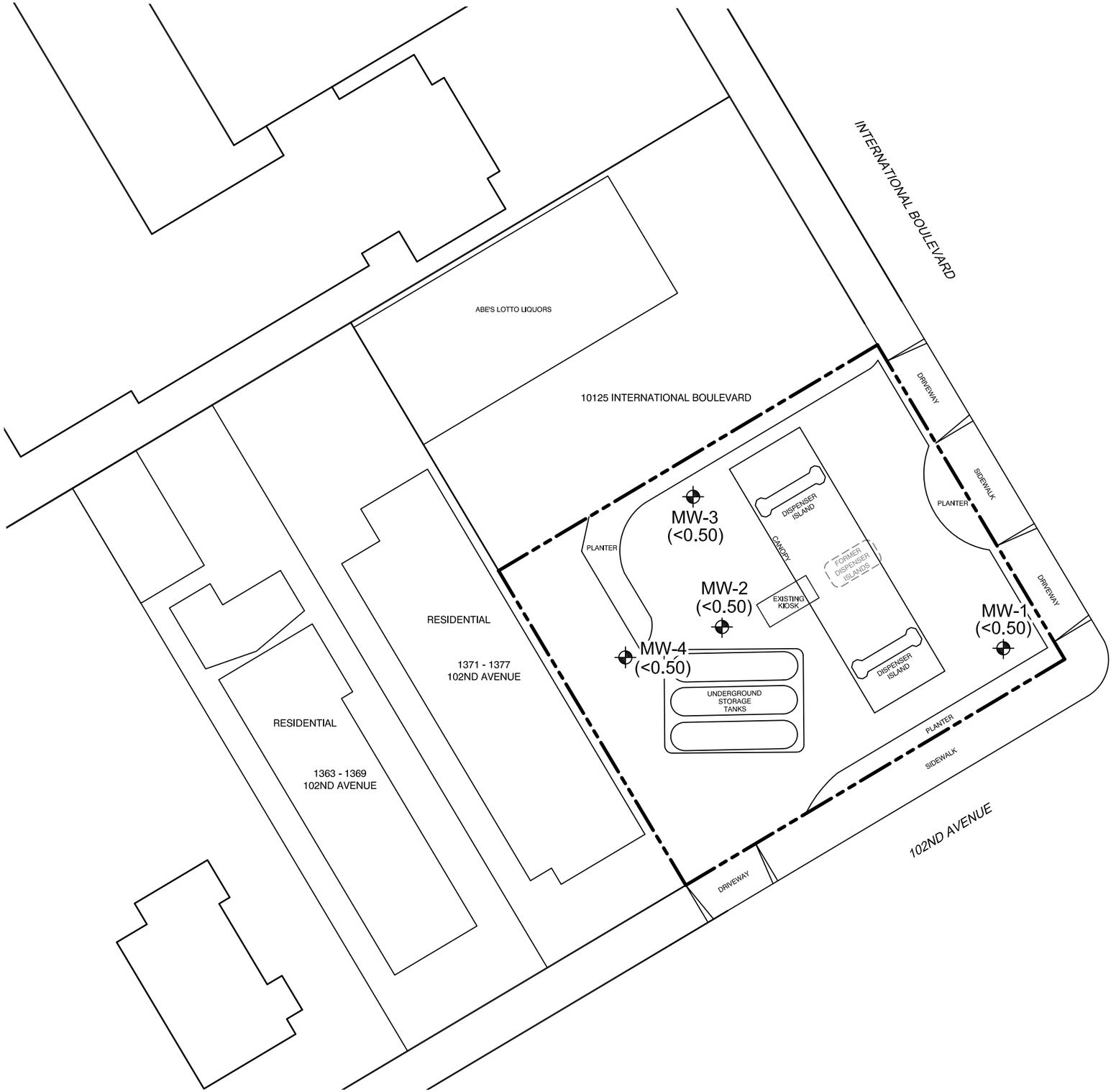

LEGEND

APPROXIMATE PROPERTY BOUNDARY

GROUNDWATER MONITORING WELL

(<#) ANALYTE NOT DETECTED AT OR ABOVE INDICATED LABORATORY PRACTICAL QUANTITATION LIMIT

NOTES:
1. BASE MAP PROVIDED BY TRC, DATED JANUARY 2010, AT A SCALE OF 1"=20'. ADDITIONAL SITE INFORMATION PROVIDED BY STANTEC, DATED SEPTEMBER 23, 2008, AT A SCALE OF 1"=40'.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 15' 30' 60'

SCALE IN FEET

REVISED			
NO.	DESCRIPTION	DATE	BY

DESIGNED BY: TQ
DRAWN BY: TQ
CHECKED BY: DF
APPROVED BY: CR

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CAMARILLO, CALIFORNIA 93012
PHONE: (805) 388-3775
FAX: (805) 388-3577

FIRST SEMI-ANNUAL 2016 BENZENE CONCENTRATION MAP

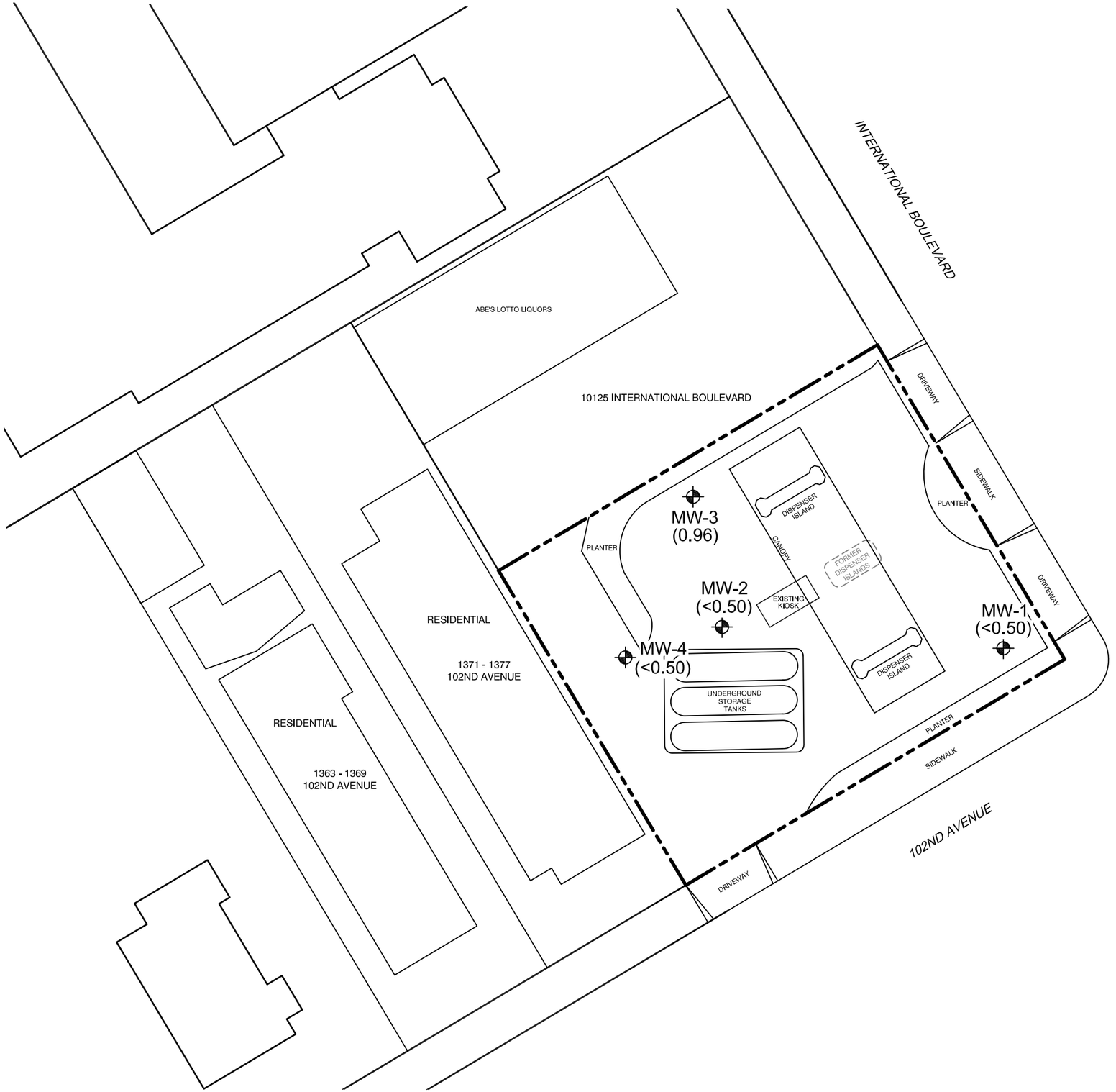
76 STATION NO. 7124 (351638)
10151 INTERNATIONAL BOULEVARD
OAKLAND, CALIFORNIA

SCALE: 1" = 30'
DATE: 07/06/2016
PROJECT NUMBER: 60481777

FIGURE NUMBER: 6

SHEET NUMBER: 1 of 1

FILENAME: J:\Client--Projects\76_Products\351638_7124_Oakland_10151_International_Blvd\500--Deliverables\502 2Q2016 GWMR\Figs\CADD\351638--1SA16.dwg



LEGEND

APPROXIMATE PROPERTY BOUNDARY

GROUNDWATER MONITORING WELL

MTBE METHYL T-BUTYL ETHER

(#) MTBE CONCENTRATION IN MICROGRAMS PER LITER

(<#) ANALYTE NOT DETECTED AT OR ABOVE INDICATED LABORATORY PRACTICAL QUANTITATION LIMIT

NOTES:
1. BASE MAP PROVIDED BY TRC, DATED JANUARY 2010, AT A SCALE OF 1"=20'. ADDITIONAL SITE INFORMATION PROVIDED BY STANTEC, DATED SEPTEMBER 23, 2008, AT A SCALE OF 1"=40'.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

N

0 15' 30' 60'

SCALE IN FEET

REVISED BY	NO.	DESCRIPTION	DATE	BY

DESIGNED BY: TQ
DRAWN BY: TQ
CHECKED BY: DF
APPROVED BY: CR

AECOM
1220 AVENIDA ACASO
CAMARILLO, CALIFORNIA 93012
PHONE: (805) 388-3775
FAX: (805) 388-3577

FIRST SEMI-ANNUAL 2016 MTBE CONCENTRATION MAP

76 STATION NO. 7124 (351638)
10151 INTERNATIONAL BOULEVARD
OAKLAND, CALIFORNIA

SCALE: 1" = 30'
DATE: 07/06/2016
PROJECT NUMBER: 60481777

FIGURE NUMBER: 7

SHEET NUMBER: 1 of 1

FILENAME: J:\Client--Projects\76_Products\351638_7124_Oakland_10151_International_Blvd\500--Deliverables\502 2Q2016 GWMR\Figs\CADD\351638--1SA16.dwg

ATTACHMENT C

TABLES

Table 1
Current Groundwater Monitoring Data and Analytical Results
76 Station No. 7124 (351638)
10151 International Boulevard
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
MW-1	37.37	6/15/2016	16.22	21.15	0	<50	<0.50	<0.50	<0.50	<1.0	
MW-2	37.87	6/15/2016	17.75	20.12	0	<50	<0.50	<0.50	<0.50	<1.0	
MW-3	37.72	6/15/2016	17.57	20.15	0	<50	<0.50	<0.50	<0.50	<1.0	
MW-4	38.36	6/15/2016	18.20	20.16	0	92	<0.50	<0.50	<0.50	<1.0	
QA	--	6/15/2016	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	

NOTES:

* TOC and GWE are in feet above mean sea level

BTEX analyzed by Environmental Protection Agency (EPA) Method 8260B

TPH-GRO analyzed by EPA Method 8015B

<# = Analyte not detected at or above indicated laboratory practical quantitation limit

µg/L = Micrograms per liter

-- = Not available/not sampled

B = Benzene

DTW = Depth to water

E = Ethylbenzene

ft = Feet

GWE = Groundwater elevation

ID = Identification

LNAPL = Light non-aqueous phase liquid

QA = Quality assurance/trip blank

T = Toluene

TOC = Top of casing

TPH-GRO = Total petroleum hydrocarbons-gasoline range organics

X = Total xylenes

Table 2
Current Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 7124 (351638)
10151 International Boulevard
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)
MW-1	6/15/2016	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-2	6/15/2016	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-3	6/15/2016	0.96	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-4	6/15/2016	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
QA	6/15/2016	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50

NOTES:

Oxygenate compounds analyzed by Environmental Protection Agency Method 8260B
<# = Analyte not detected at or above indicated laboratory practical quantitation limit
µg/L = Micrograms per liter
-- = Not available/not sampled
DIPE = Diisopropyl Ether
EDB = 1,2-Dibromoethane
EDC = 1,2-Dichloroethane
ETBE = Ethyl t-butyl ether
ID = Identification
MTBE = Methyl t-butyl ether
QA = Quality assurance/trip blank
TAME = t-Amyl Methyl ether
TBA = t-Butyl alcohol

Table 3
Current Groundwater Analytical Results - Monitored Natural Attenuation Parameters
76 Station No. 7124 (351638)
10151 International Boulevard
Oakland, California

WELL ID	DATE	METHANE (mg/L)	TOTAL ALKALINITY AS CaCO3 (mg/L)	NITRATE AS NO3 (mg/L)	SULFATE (mg/L)	IRON (II) SPECIES (µg/L)	NITRATE AS NO2 (mg/L)	TOTAL SULFIDE (mg/L)	NON-VOLATILE ORGANIC CARBON (mg/L)	DISSOLVED IRON (µg/L)	TOTAL MANGANESE (µg/L)
MW-1	6/15/2016	0.0016	170	40	29	<100	<0.17	<0.10	<1.0	<50	2,600
MW-2	6/15/2016	0.0020	200	<0.44	36	1,000	<0.17	<0.10	<1.0	<50	6,700
MW-3	6/15/2016	0.035	280	<0.44	7.4	1,400	<0.17	<0.10	1.8	<50	6,000
MW-4	6/15/2016	0.0016	250	<0.44	26	1,200	<0.17	<0.50	4.8	<50	1,800

NOTES:
Methane analyzed by Method RSK-175M
Total alkalinity as CaCO3 analyzed by Environmental Protection Agency (EPA) Method 310.1
Nitrate as NO3 and sulfate analyzed by EPA Method 300.0
Iron (II) species analyzed by Method SM-3500-FeD
Nitrate as NO2 analyzed by EPA Method 353.2
Total sulfide analyzed by Method SM-4500SD
Non-volatile organic carbon analyzed by EPA Method 415.1
Dissolved iron and total manganese analyzed by EPA Method 6010B
<# = Analyte not detected at or above indicated laboratory practical quantitation limit
µg/L = Micrograms per liter
-- = Not available/not sampled
ID = Identification
mg/L = Milligrams per liter

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 7124 (351638)
10151 International Boulevard
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
MW-1	37.37	11/2/2011	17.52	19.85	0	<50	<0.50	<0.50	<0.50	<1.0	
	37.37	4/6/2012	14.20	23.17	0	<50	<0.50	<0.50	<0.50	<1.0	
	37.37	6/12/2013	16.81	20.56	0	<50	<0.50	<0.50	<0.50	<1.0	
	37.37	10/7/2013	17.62	19.75	0	<50	<0.50	<0.50	<0.50	<1.0	
	37.37	4/8/2014	17.52	19.85	0	<50	<0.50	<0.50	<0.50	<1.0	
	37.37	10/15/2014	18.29	19.08	0	<50	<0.50	<0.50	<0.50	<1.0	
	37.37	6/17/2015	17.30	20.07	0	<50	<0.50	<0.50	<0.50	<1.0	
	37.37	12/15/2015	17.98	19.39	0	<50	<0.50	<0.50	<0.50	<1.0	
	37.37	**6/15/2016**	**16.22**	**21.15**	**0**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	
MW-2	37.87	11/2/2011	17.15	20.72	0	96	<0.50	<0.50	<0.50	<1.0	
	37.87	4/6/2012	15.63	22.24	0	<50	<0.50	<0.50	<0.50	<1.0	
	37.87	6/12/2013	18.03	19.84	0	<50	<0.50	<0.50	<0.50	<1.0	
	37.87	10/7/2013	18.74	19.13	0	99	<0.50	<0.50	<0.50	<1.0	
	37.87	4/8/2014	17.80	20.07	0	<50	<0.50	<0.50	<0.50	<1.0	
	37.87	10/15/2014	19.31	18.56	0	100	<0.50	<0.50	<0.50	<1.0	
	37.87	6/17/2015	18.55	19.32	0	<50	<0.50	<0.50	<0.50	<1.0	
	37.87	12/15/2015	19.00	18.87	0	66	<0.50	<0.50	<0.50	<1.0	
	37.87	**6/15/2016**	**17.75**	**20.12**	**0**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	
MW-3	37.72	11/2/2011	17.55	20.17	0	880	<0.50	<0.50	<0.50	<1.0	
	37.72	4/6/2012	16.40	21.32	0	1,000	<0.50	<0.50	<0.50	<1.0	
	37.72	6/12/2013	17.95	19.77	0	<50	<0.50	<0.50	<0.50	<1.0	
	37.72	10/7/2013	18.62	19.10	0	880	<0.50	<0.50	<0.50	<1.0	
	37.72	4/8/2014	17.10	20.62	0	320	<0.50	<0.50	<0.50	<1.0	
	37.72	10/15/2014	19.17	18.55	0	1,600	<0.50	<0.50	<0.50	<1.0	
	37.72	6/17/2015	18.34	19.38	0	250	<0.50	<0.50	<0.50	<1.0	
	37.72	12/15/2015	18.83	18.89	0	490	<0.50	<0.50	<0.50	<1.0	
	37.72	**6/15/2016**	**17.57**	**20.15**	**0**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	
MW-4	38.36	11/2/2011	18.27	20.09	0	170	<0.50	<0.50	<0.50	<1.0	
	38.36	4/6/2012	15.68	22.68	0	200	<0.50	<0.50	<0.50	<1.0	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 7124 (351638)
10151 International Boulevard
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
	38.36	6/12/2013	18.65	19.71	0	<50	<0.50	<0.50	<0.50	<1.0	
	38.36	10/7/2013	19.33	19.03	0	95	<0.50	<0.50	<0.50	<1.0	
	38.36	4/8/2014	18.04	20.32	0	<50	<0.50	<0.50	<0.50	<1.0	
	38.36	10/15/2014	19.88	18.48	0	190	<0.50	<0.50	<0.50	<1.0	
	38.36	6/17/2015	19.04	19.32	0	78	<0.50	<0.50	<0.50	<1.0	
	38.36	12/15/2015	19.56	18.80	0	110	<0.50	<0.50	<0.50	<1.0	
	38.36	**6/15/2016**	**18.20**	**20.16**	**0**	**92**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	
QA	--	12/15/2015	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	
	--	**6/15/2016**	**--**	**--**	**--**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	

NOTES:

* TOC and GWE are in feet above mean sea level

<# = Analyte not detected at or above indicated laboratory practical quantitation limit

µg/L = Micrograms per liter

-- = Not available/not sampled

B = Benzene

DTW = Depth to water below TOC

E = Ethylbenzene

ft = Feet

GWE = Groundwater elevation

ID = Identification

LNAPL = Light non-aqueous phase liquid

QA = Quality assurance/trip blank

T = Toluene

TOC = Top of casing

TPH-GRO = Total petroleum hydrocarbons-gasoline range organics

X = Total xylenes

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 7124 (351638)
10151 International Boulevard
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)
MW-1	11/2/2011	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	4/6/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/12/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	10/7/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	4/8/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	10/15/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/17/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	12/15/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/15/2016	**<0.50**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**
MW-2	11/2/2011	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	4/6/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/12/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	10/7/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	4/8/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	10/15/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/17/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	12/15/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/15/2016	**<0.50**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**
MW-3	11/2/2011	35	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	4/6/2012	210	85	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/12/2013	6.5	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	10/7/2013	12	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	4/8/2014	150	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	10/15/2014	27	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/17/2015	3.2	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	12/15/2015	20	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/15/2016	**0.96**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**
MW-4	11/2/2011	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	4/6/2012	1.7	58	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/12/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	10/7/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	4/8/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	10/15/2014	0.63	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/17/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	12/15/2015	0.51	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/15/2016	**<0.50**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**
QA	12/15/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/15/2016	**<0.50**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 7124 (351638)
10151 International Boulevard
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)

NOTES:

<# = Analyte not detected at or above indicated laboratory practical quantitation limit

µg/L = Micrograms per liter

-- = Not available/not sampled

DIPE = Diisopropyl Ether

EDB = 1,2-Dibromoethane

EDC = 1,2-Dichloroethane

ETBE = Ethyl t-butyl ether

ID = Identification

MTBE = Methyl t-butyl ether

QA = Quality assurance/trip blank

TAME = t-Amyl methyl ether

TBA = t-Butyl alcohol

Table 6
Historical Groundwater Analytical Results - Monitored Natural Attenuation Parameters
76 Station No. 7124 (351638)
10151 International Boulevard
Oakland, California

WELL ID	DATE	METHANE (mg/L)	TOTAL ALKALINITY AS CaCO3 (mg/L)	NITRATE AS NO3 (mg/L)	SULFATE (mg/L)	IRON (II) SPECIES (µg/L)	NITRATE AS NO2 (mg/L)	TOTAL SULFIDE (mg/L)	NON-VOLATILE ORGANIC CARBON (mg/L)	DISSOLVED IRON (µg/L)	TOTAL MANGANESE (µg/L)
MW-1	6/13/2013	<0.0010	17.52	24	23	<100	<0.17	<0.50	1.1	<50	31,000
	10/7/2013	0.0015	150	0	22	<100	<0.17	<0.10	3.4	<50	13,000
	4/8/2014	0.0049	170	22	25	<100	<0.17	<0.10	1.3	<50	11,000
	10/15/2014	<0.001	160	27	26	<100	<0.17	<0.50	<1.0	<50	39,000
	6/17/2015	<0.001	170	28	28	<100	<0.17	<0.10	<1.0	<50	2,900
	12/15/2015	<0.0010	170	34	26	<100	<0.17	<0.10	1.0	<50	11,000
	6/15/2016	**0.0016**	**170**	**40**	**29**	**<100**	**<0.17**	**<0.10**	**<1.0**	**<50**	**2,600**
MW-2	6/13/2013	<0.0010	180	<0.44	20	250	<0.17	<0.10	1.0	120	9,700
	10/7/2013	0.0049	200	<0.44	9.6	2,700	<0.17	<0.10	3.2	260	5,600
	4/8/2014	0.007	210	<0.44	33	1,700	<0.17	<0.10	1.4	140	8,400
	10/15/2014	0.011	210	<0.44	20	19,000	<0.17	<0.50	<1.0	200	6,400
	6/17/2015	<0.001	210	<0.44	34	2,500	<0.17	<0.10	<1.0	320	5,300
	12/15/2015	0.027	210	<0.44	23	1,700	<0.17	<0.10	1.3	140	6,300
	6/15/2016	**0.0020**	**200**	**<0.44**	**36**	**1,000**	**<0.17**	**<0.10**	**<1.0**	**<50**	**6,700**
MW-3	6/13/2013	0.0075	260	<0.44	<1.0	3,200	<0.17	<0.10	1.4	160	5,700
	10/7/2013	0.071	260	<0.44	<1.0	9,000	<0.17	<0.10	3.1	710	9,600
	4/8/2014	0.034	290	<0.44	2.1	1,200	<0.17	<0.10	1.3	220	6,000
	10/15/2014	0.069	290	<0.44	<1.0	<100	<0.17	<0.50	<1.0	93	6,900
	6/17/2015	0.11	310	<0.44	<1.0	4,700	<0.17	<0.50	25.0	350	6,300
	12/15/2015	0.13	280	<0.44	<1.0	5,900	<0.17	<0.10	1.6	140	6,900
	6/15/2016	**0.035**	**280**	**<0.44**	**7.4**	**1,400**	**<0.17**	**<0.10**	**1.8**	**<50**	**6,000**
MW-4	6/13/2013	<0.0010	210	<0.44	15	5,200	<0.17	<0.50	4.7	<50	7,900
	10/7/2013	<0.0010	190	<0.44	18	13,000	<0.17	<0.10	8.2	220	5,000
	4/8/2014	<0.0010	130	5	17	280	<0.17	<0.10	12.0	200	1,200
	10/15/2014	0.17	210	<0.44	24	5,800	<0.17	<0.50	1.5	<50	8,000
	6/17/2015	0.0027	210	<0.44	51	2,100	<0.17	<0.10	1.9	<50	2,400
	12/15/2015	0.057	200	2.5	37	2,900	<0.17	<0.10	17	<50	4,200
	6/15/2016	**0.0016**	**250**	**<0.44**	**26**	**1,200**	**<0.17**	**<0.50**	**4.8**	**<50**	**1,800**

NOTES:
<# = Analyte not detected at or above indicated laboratory practical quantitation limit
µg/L = Micrograms per liter
ID = Identification
mg/L = Milligrams per liter

ATTACHMENT D

HYDROGRAPHS

Chart 1 - Hydrograph for Well MW-1

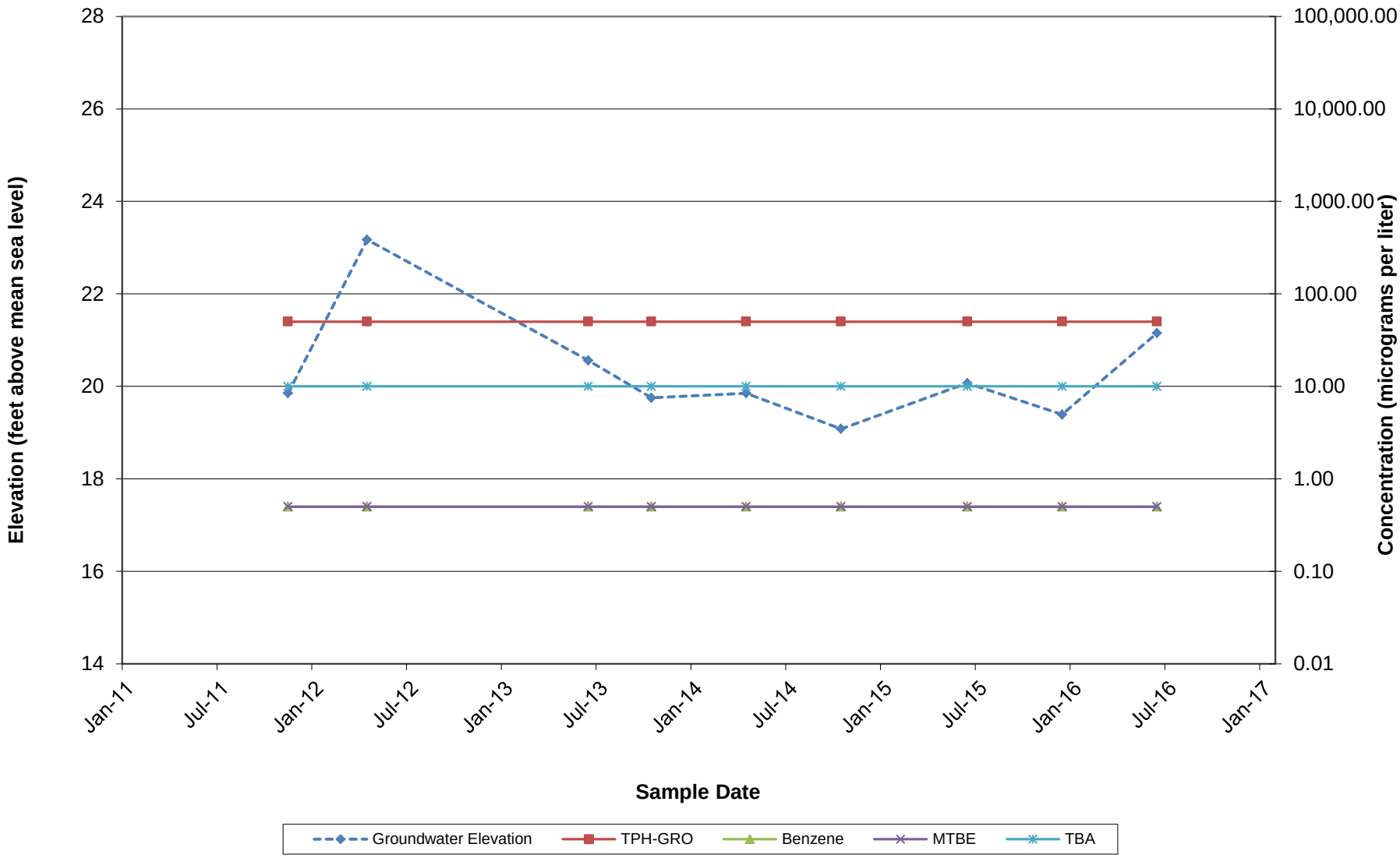


Chart 2 - Hydrograph for Well MW-2

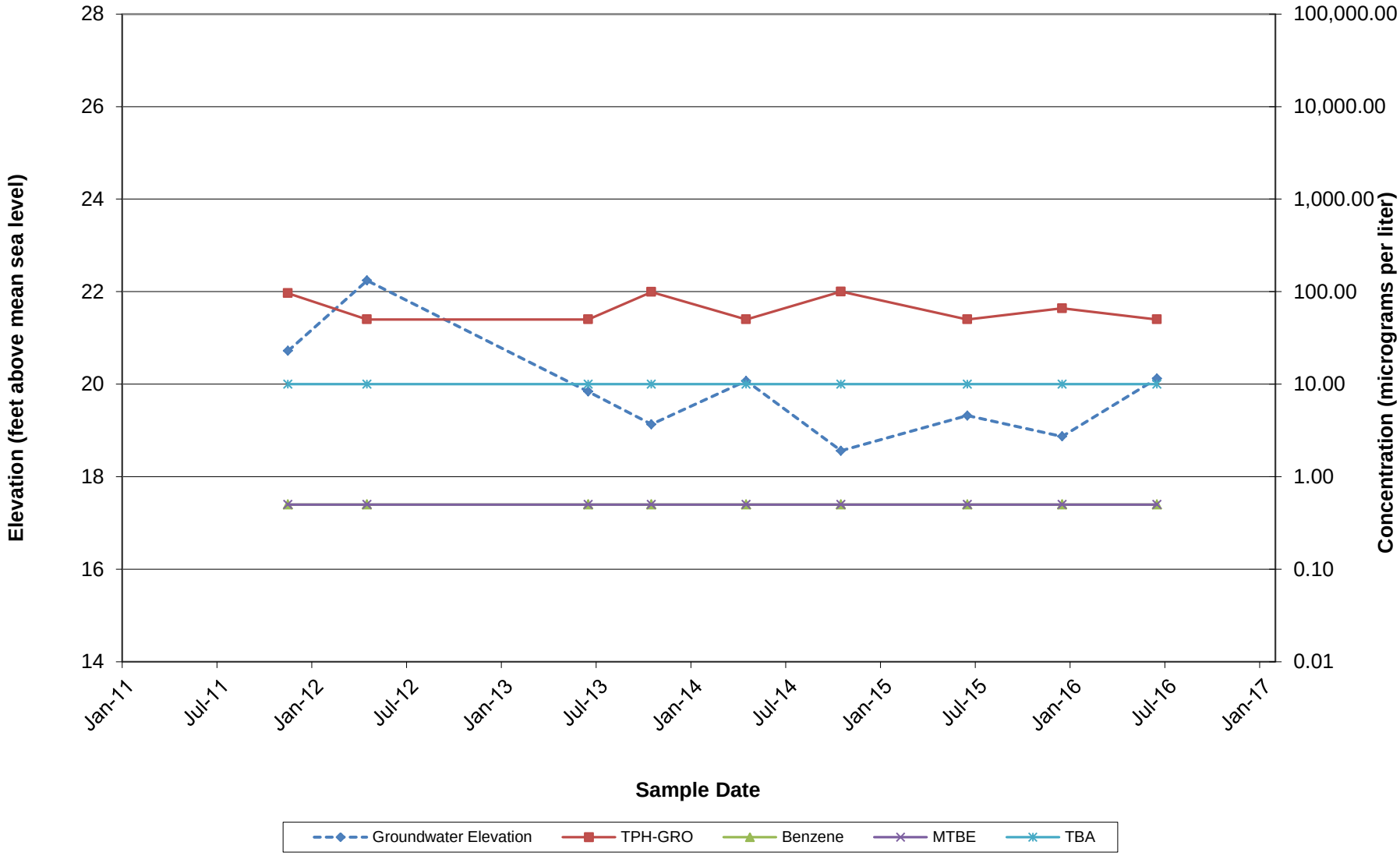


Chart 3 - Hydrograph for Well MW-3

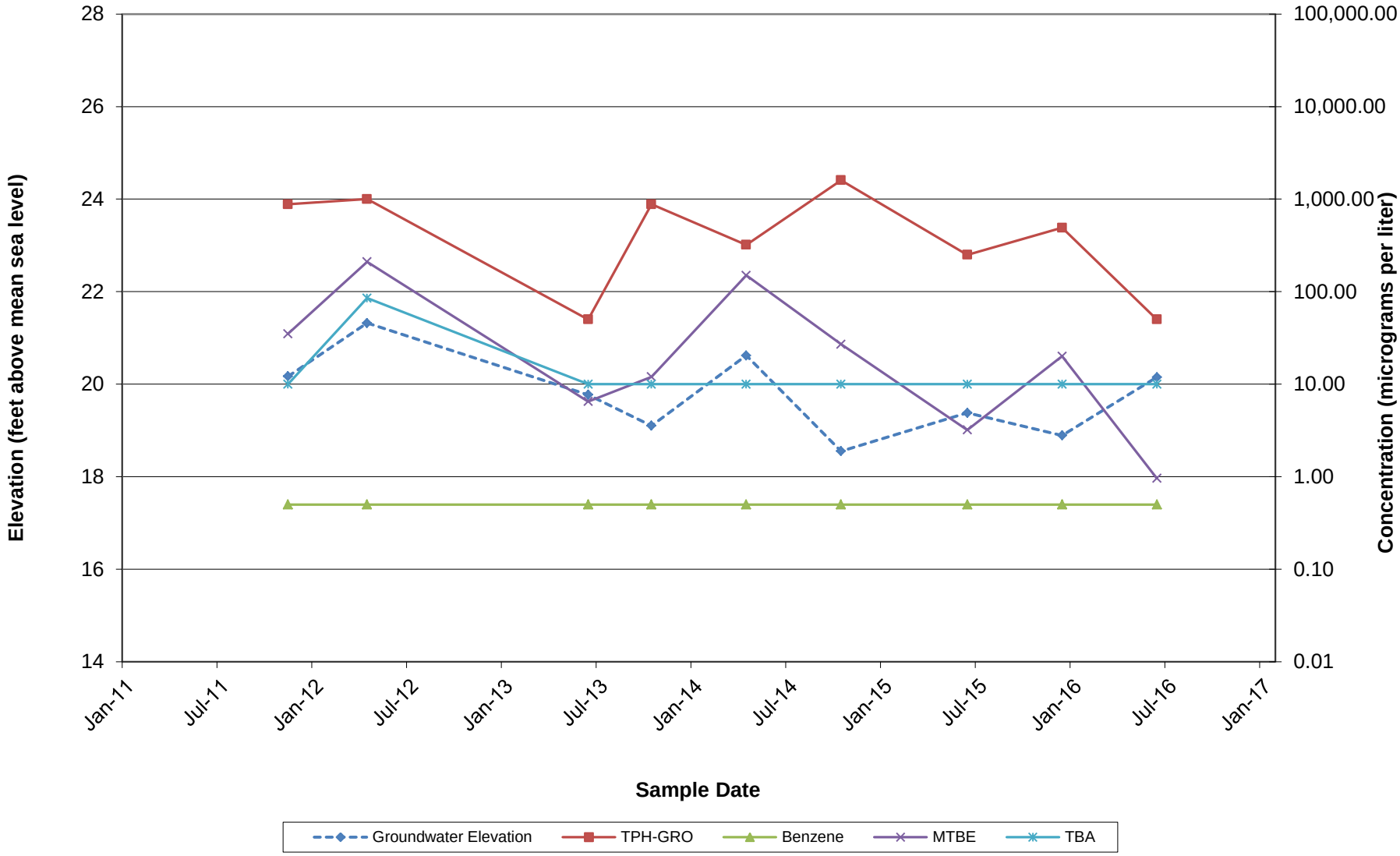
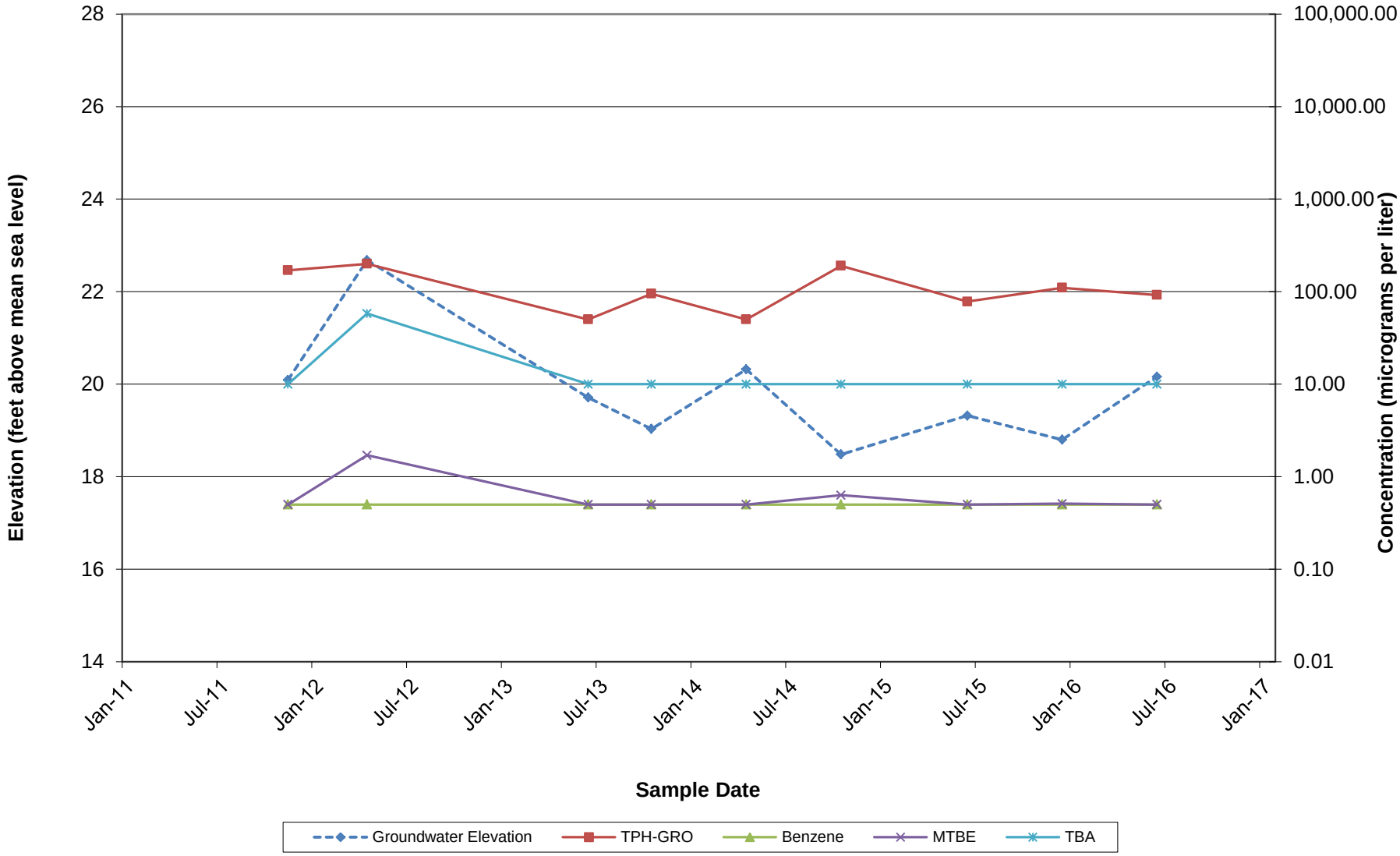


Chart 4 - Hydrograph for Well MW-4



ATTACHMENT E

FIELD PROCEDURES AND FIELD LOGS

GETTLER-RYAN INC.

TRANSMITTAL

June 24, 2016
G-R #385639

TO: Ms. Tamera Rogers
Arcadis
6296 San Ignacio Ave., Suite C & D
San Jose, California 95119

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
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 **First Semi-Annual Event of June 15, 2016**

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: 6/15/16
Sampler: JD

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									12" emco	Y
MW-2	OK										
MW-3	OK										
MW-4	OK	OK	M x 1	B x 1	OK					12" Morrison	

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: 6/15/16 (inclusive)
City: Oakland, CA Sampler: JH

Well ID MW-1 Date Monitored: 6/15/16
Well Diameter 4 in.
Total Depth 29.77 ft.
Depth to Water 16.22 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

13.55 xVF .66 = 8.94 x3 case volume = Estimated Purge Volume: 26.82 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 18.93

Purge Equipment:

Disposable Bailer	
Stainless Steel Bailer	
Stack Pump	X
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: ltr
Amt Removed from Well: ltr
Water Removed: ltr

Start Time (purge): 0520 Weather Conditions: Foggy
Sample Time/Date: 0550 / 6/15/16 Water Color: Cloudy Odor: Y / N
Approx. Flow Rate: 3 gpm. Sediment Description: Low silt
Did well de-water? No If yes, Time: Volume: gal. DTW @ Sampling: 18.71

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0523	9	6.53	456	17.6	PRE: 1.1	PRE: 108
0526	18	6.61	462	17.4		
0529	27	6.78	489	17.1		
					POST: 1.3	POST: 131

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	6 x voa vial	YES	HCL	BC LABS	TPH-GRO(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(376.2)
	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: 6/15/16 (inclusive)
City: Oakland, CA Sampler: JH

Well ID MW-2 Date Monitored: 6/15/16
Well Diameter 4 in.
Total Depth 25.22 ft.
Depth to Water 17.75 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

7.47 xVF .66 = 4.93 x3 case volume = Estimated Purge Volume: 14.79 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 19.24

Purge Equipment:
Disposable Bailer
Stainless Steel Bailer
Stack Pump X
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: ltr
Amt Removed from Well: ltr
Water Removed: ltr

Start Time (purge): 0600 Weather Conditions: Cloudy
Sample Time/Date: 0630 / 6/15/16 Water Color: Cloudy Odor: Y / (N)
Approx. Flow Rate: 1 gpm. Sediment Description: cloudy
Did well de-water? No If yes, Time: Volume: gal. DTW @ Sampling: 19.08

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0605	5	6.39	464	17.8	PRE: 1.3	PRE: 150
0610	10	6.47	475	17.6		
0615	15	6.62	491	17.3		
					POST: 1.5	POST: 182

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-2	6 x voa vial	YES	HCL	BC LABS	TPH-GRO(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(376.2)
	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: 6/15/16 (inclusive)
City: Oakland, CA Sampler: JH

Well ID MW-3 Date Monitored: 6/15/16
Well Diameter 4 in.
Total Depth 25.11 ft.
Depth to Water 17.57 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.

7.54 xVF .66 = 4.97 x3 case volume = Estimated Purge Volume: 14.92 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 19.07

Purge Equipment:

Disposable Bailer	
Stainless Steel Bailer	
Stack Pump	X
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: ltr
Amt Removed from Well: ltr
Water Removed: ltr

Start Time (purge): 0645 Weather Conditions: Cloudy
Sample Time/Date: 0715 / 6/15/16 Water Color: Cloudy Odor: Y / N
Approx. Flow Rate: 1 gpm. Sediment Description: Cloudy
Did well de-water? NO If yes, Time: Volume: gal. DTW @ Sampling: 18.86

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0650	5	7.48	569	17.4	PRE: 1.1	PRE: 132
0655	10	7.33	582	17.5		
0700	15	7.26	604	17.6		
					POST: 1.4	POST: 160

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-3	6 x voa vial	YES	HCL	BC LABS	TPH-GRO(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(376.2)
	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: 6/15/16 (inclusive)
City: Oakland, CA Sampler: JH

Well ID MW-4 Date Monitored: 6/15/16
Well Diameter 4 in.
Total Depth 24.90 ft.
Depth to Water 18.20 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.

6.70 xVF .66 = 4.42 x3 case volume = Estimated Purge Volume: 13.26 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 19.54

Purge Equipment:		Sampling Equipment:	
Disposable Bailer		Disposable Bailer	X
Stainless Steel Bailer		Pressure Bailer	
Stack Pump	X	Metal Filters	
Peristaltic Pump		Peristaltic Pump	
QED Bladder Pump		QED Bladder Pump	
Other:		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: ltr
Amt Removed from Well: ltr
Water Removed: ltr

Start Time (purge): 0730 Weather Conditions: Clear
Sample Time/Date: 0800 / 6/15/16 Water Color: Cloudy Odor: Y / (N)
Approx. Flow Rate: 1 gpm. Sediment Description: Lt. Silt
Did well de-water? NO If yes, Time: Volume: gal. DTW @ Sampling: 19.37

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0735	5	7.32	531	17.3	PRE: 1.1	PRE: 112
0740	10	7.45	547	17.2		
0745	15	7.56	560	17.2		
					POST: 1.5	POST: 140

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	6 x voa vial	YES	HCL	BC LABS	TPH-GRO(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(376.2)
	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: 7121	Union Oil Consultant: Arcadis
Site Global ID: T0600173591	Consultant Contact: T. Rogers
Site Address: 10151 International Blvd Oakland CA	Consultant Phone No.: 408-797-2013
	Sampling Company: Cretha Enviro Inc
Union Oil PM: N Arceneaux	Sampled By (PRINT): J. Herrera
Union Oil PM Phone No.: 925-790-6912	Sampler Signature:
Charge Code: NWRTB-0 351638 -0- LAB	**BC Laboratories, Inc.**
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.	**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 (C6 - C12)	BTEX/MTBE/OXYS by EPA 8260B	~~Ethanol by EPA 8260B~~ Alkalinity	~~EPA 8260B Full list with OXYS~~ TOC	Nitrate/Nitrite/Sulfide by EPA 300.0	Sulfide (376.2)	Ferrous Iron	Total Manganese	Methane		Notes / Comments
QA	W-S-A		160615	—	2		X	X									
MW-1	W-S-A			0550	13				X	X	X	X	X	X	X		
MW-2	W-S-A			0630													
MW-3	W-S-A			0715													
MW-4	W-S-A			0800													
	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:
	Cretha Inc	6/15/16 1345						
Received By	**Company**	**Date / Time:**	**Received By**	**Company**	**Date / Time :**	**Received By**	**Company**	**Date / Time:**
Mary Boyer	BC (A),	6 15 16 1345						

ATTACHMENT F

LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY DOCUMENTATION

Date of Report: 06/28/2016

Tamera Rogers

Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Client Project:	351638
BCL Project:	7124
BCL Work Order:	1616578
Invoice ID:	B239124

Enclosed are the results of analyses for samples received by the laboratory on 6/15/2016. 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

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: T. Rogers
Site Address: 10151 International Blvd Oakland CA	Consultant Phone No.: 408-797-2013
Union Oil PM: N. ARCENEAUX	Sampling Company: Gettler Ryan Inc
Union Oil PM Phone No.: 925-790-6912	Sampled By (PRINT): J. Hazelton
Charge Code: NWRTB-0 351638 -0- LAB 16.16578	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

	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 (C6 - C12)	BTEX/MTBE/OXYS by EPA 8260B	Alkalinity	TOC	Nitrate/Nitrite/Sulfate/Phosphorus	Sulfide (376.2)	Ferrous Iron	Total Manganese	Methane		Notes / Comments
1	QA	W-S-A		160615	—	2		X	X									
2	MW-1	W-S-A			0550	13				X	X	X	X	X	X	X		
3	MW-2	W-S-A			0630													
4	MW-3	W-S-A			0715													
5	MW-4	W-S-A			0800													
		W-S-A																
		W-S-A																
		W-S-A																
		W-S-A																
		W-S-A																
		W-S-A																
		W-S-A																

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

Special Instructions

SHORT HOLDING TIME

Cr^{+6}	NO_3	NO_2		OP	SS
DO	Cl_2	BOD		MBAS	COT

CHK BY

DISTRIBUTION WHITE YELLOW PINK SUB-OUT ☐

Relinquished By	Company	Date / Time:	Relinquished By	Company	Date / Time :	Relinquished By	Company	Date / Time:
	GR Inc	6/15/16 1345	Hany Bogen	BCLAB	6-15-16		BC	6/15/16 2210
Received By	**Company**	**Date / Time:**	**Received By**	**Company**	**Date / Time :**	**Received By**	**Company**	**Date / Time:**
Hany Bogen	BCLAB	6-15-16 1345		BC	6/15/16 1835		BCLABS	6.15.16 2210

Chain of Custody and Cooler Receipt Form for 1616578 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 1616578

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☑ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

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: 0.97 Container: PE Thermometer ID: 208 Date/Time 6-15 2250

Temperature: (A) 0.0 °C / (C) 0.1 °C Analyst Init ARL

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES		I	F	J	F					
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz		J	J	J	J					
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE		K	K	K	K					
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON		M	M	M	M					
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	AB									
40ml VOA VIAL		ABC-F	ABC-F	ABC-F	ABC-F					
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504 ~~DBCL~~		GH	GH	GH	GH					
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON		L	L	L	L					
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: Date/Time: 6-15-16 2325
A = Actual / C = Corrected

Rev 21 05/23/2016
[S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20]

Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 06/28/2016 18:31
Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1616578-01	**COC Number:**	---	**Receive Date:** 06/15/2016 22:10
	Project Number:	7124	**Sampling Date:** 06/15/2016 00:00
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	QA-W-160615	**Lab Matrix:** Water
	Sampled By:	GRD	**Sample Type:** Blank Water
			Delivery Work Order:
			Global ID: T0600173591
			Location ID (FieldPoint): QA
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1616578-02	**COC Number:**	---	**Receive Date:** 06/15/2016 22:10
	Project Number:	7124	**Sampling Date:** 06/15/2016 05:50
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-1-W-160615	**Lab Matrix:** Water
	Sampled By:	GRD	**Sample Type:** Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
			Delivery Work Order:
			Global ID: T0600173591
			Location ID (FieldPoint): MW-1
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1616578-03	**COC Number:**	---	**Receive Date:** 06/15/2016 22:10
	Project Number:	7124	**Sampling Date:** 06/15/2016 06:30
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-2-W-160615	**Lab Matrix:** Water
	Sampled By:	GRD	**Sample Type:** Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
			Delivery Work Order:
			Global ID: T0600173591
			Location ID (FieldPoint): MW-2
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 06/28/2016 18:31
Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1616578-04	**COC Number:**	---	**Receive Date:**	06/15/2016 22:10
	Project Number:	7124	**Sampling Date:**	06/15/2016 07:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-3-W-160615	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
	Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time Delivery Work Order: Global ID: T0600173591 Location ID (FieldPoint): MW-3 Matrix: W Sample QC Type (SACode): CS Cooler ID:			
1616578-05	**COC Number:**	---	**Receive Date:**	06/15/2016 22:10
	Project Number:	7124	**Sampling Date:**	06/15/2016 08:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-4-W-160615	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
	Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time Delivery Work Order: Global ID: T0600173591 Location ID (FieldPoint): MW-4 Matrix: W Sample QC Type (SACode): CS Cooler ID:			

Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 06/28/2016 18:31
Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1616578-01 | **Client Sample Name:** 7124, QA-W-160615, 6/15/2016 12:00:00AM

Constituent	Result	Units	PQL	MDL	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)	94.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	90.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/16/16	06/16/16 16:14	IO1	MS-V12	1	BZF1102

Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 06/28/2016 18:31
Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1616578-01 | **Client Sample Name:** 7124, QA-W-160615, 6/15/2016 12:00:00AM

Constituent	Result	Units	PQL	MDL	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)	102	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/20/16	06/20/16 18:10	AKM	GC-V9	1	BZF1288

Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 06/28/2016 18:31
Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1616578-02 | **Client Sample Name:** 7124, MW-1-W-160615, 6/15/2016 5:50:00AM

Constituent	Result	Units	PQL	MDL	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)	98.7	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	91.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/16/16	06/16/16 19:12	IO1	MS-V12	1	BZF1102

Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 06/28/2016 18:31
Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1616578-02 | **Client Sample Name:** 7124, MW-1-W-160615, 6/15/2016 5:50:00AM

Constituent	Result	Units	PQL	MDL	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)	96.4	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/20/16	06/20/16 18:31	AKM	GC-V9	1	BZF1288

Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 06/28/2016 18:31
Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Gas Testing in Water

BCL Sample ID: 1616578-02 | **Client Sample Name:** 7124, MW-1-W-160615, 6/15/2016 5:50:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methane	**0.0016**	**mg/L**	**0.0010**		**RSK-175M**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	RSK-175M	06/28/16	06/28/16 10:25	JH2	GC-V1	1	BZF2287

Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 06/28/2016 18:31
Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Water Analysis (General Chemistry)

BCL Sample ID: 1616578-02 | **Client Sample Name:** 7124, MW-1-W-160615, 6/15/2016 5:50:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Alkalinity as CaCO3	**170**	**mg/L**	**4.1**		**EPA-310.1**	ND		1
Nitrate as NO3	**40**	**mg/L**	**0.44**		**EPA-300.0**	ND		2
Sulfate	**29**	**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	ND	mg/L	1.0		EPA-415.1	ND		6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-310.1	06/20/16	06/20/16 09:36	RML	MET-1	1	BZF1602
2	EPA-300.0	06/16/16	06/16/16 13:41	EMW	IC1	1	BZF1398
3	SM-3500-FeD	06/16/16	06/16/16 17:13	RCC	KONE-1	1	BZF1629
4	EPA-353.2	06/16/16	06/16/16 10:19	RCC	KONE-1	1	BZF1438
5	SM-4500SD	06/20/16	06/20/16 09:00	DIW	SPEC06	1	BZF1671
6	EPA-415.1	06/16/16	06/17/16 08:40	ALW	TOC2	1	BZF1405

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Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Metals Analysis

BCL Sample ID: 1616578-02 | **Client Sample Name:** 7124, MW-1-W-160615, 6/15/2016 5:50:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Iron	ND	ug/L	50		EPA-6010B	ND		1
Total Manganese	**2600**	**ug/L**	**10**		**EPA-6010B**	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	06/16/16	06/27/16 13:59	JCC	PE-OP3	1	BZF1452
2	EPA-6010B	06/20/16	06/21/16 18:49	JRG	PE-OP2	1	BZF1655

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Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1616578-03 | **Client Sample Name:** 7124, MW-2-W-160615, 6/15/2016 6:30:00AM

Constituent	Result	Units	PQL	MDL	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)	106	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	94.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	95.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/16/16	06/16/16 19:30	IO1	MS-V12	1	BZF1102

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Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1616578-03 | **Client Sample Name:** 7124, MW-2-W-160615, 6/15/2016 6:30:00AM

Constituent	Result	Units	PQL	MDL	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)	102	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/20/16	06/20/16 18:52	AKM	GC-V9	1	BZF1288

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Project Manager: Tamera Rogers

Gas Testing in Water

BCL Sample ID: 1616578-03 | **Client Sample Name:** 7124, MW-2-W-160615, 6/15/2016 6:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methane	**0.0020**	**mg/L**	**0.0010**		**RSK-175M**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	RSK-175M	06/28/16	06/28/16 10:30	JH2	GC-V1	1	BZF2287

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Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Water Analysis (General Chemistry)

BCL Sample ID: 1616578-03 | **Client Sample Name:** 7124, MW-2-W-160615, 6/15/2016 6:30:00AM

Constituent	Result	Units	PQL	MDL	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	**36**	**mg/L**	**1.0**		**EPA-300.0**	ND		2
Iron (II) Species	**1000**	**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	ND	mg/L	1.0		EPA-415.1	ND		6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-310.1	06/20/16	06/20/16 09:49	RML	MET-1	1	BZF1602
2	EPA-300.0	06/16/16	06/16/16 13:58	EMW	IC1	1	BZF1398
3	SM-3500-FeD	06/16/16	06/16/16 17:13	RCC	KONE-1	1	BZF1629
4	EPA-353.2	06/16/16	06/16/16 10:23	RCC	KONE-1	1	BZF1438
5	SM-4500SD	06/20/16	06/20/16 09:00	DIW	SPEC06	1	BZF1671
6	EPA-415.1	06/16/16	06/17/16 08:55	ALW	TOC2	1	BZF1405

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Project Manager: Tamera Rogers

Metals Analysis

BCL Sample ID: 1616578-03 | **Client Sample Name:** 7124, MW-2-W-160615, 6/15/2016 6:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Iron	ND	ug/L	50		EPA-6010B	ND		1
Total Manganese	**6700**	**ug/L**	**10**		**EPA-6010B**	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	06/16/16	06/27/16 14:01	JCC	PE-OP3	1	BZF1452
2	EPA-6010B	06/20/16	06/21/16 18:52	JRG	PE-OP2	1	BZF1655

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Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1616578-04 | **Client Sample Name:** 7124, MW-3-W-160615, 6/15/2016 7:15:00AM

Constituent	Result	Units	PQL	MDL	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	**0.96**	**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)	92.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/16/16	06/16/16 19:47	IO1	MS-V12	1	BZF1102

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Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1616578-04 | **Client Sample Name:** 7124, MW-3-W-160615, 6/15/2016 7:15:00AM

Constituent	Result	Units	PQL	MDL	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)	96.1	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/20/16	06/20/16 19:33	AKM	GC-V9	1	BZF1288

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Reported: 06/28/2016 18:31
Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Gas Testing in Water

BCL Sample ID: 1616578-04 | **Client Sample Name:** 7124, MW-3-W-160615, 6/15/2016 7:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methane	**0.035**	**mg/L**	**0.0010**		**RSK-175M**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	RSK-175M	06/28/16	06/28/16 10:34	JH2	GC-V1	1	BZF2287

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Reported: 06/28/2016 18:31
Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Water Analysis (General Chemistry)

BCL Sample ID: 1616578-04 | **Client Sample Name:** 7124, MW-3-W-160615, 6/15/2016 7:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Alkalinity as CaCO3	**280**	**mg/L**	**4.1**		**EPA-310.1**	ND		1
Nitrate as NO3	ND	mg/L	0.44		EPA-300.0	ND		2
Sulfate	**7.4**	**mg/L**	**1.0**		**EPA-300.0**	ND		2
Iron (II) Species	**1400**	**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	**1.8**	**mg/L**	**1.0**		**EPA-415.1**	ND		6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-310.1	06/20/16	06/20/16 09:55	RML	MET-1	1	BZF1602
2	EPA-300.0	06/16/16	06/16/16 14:15	EMW	IC1	1	BZF1398
3	SM-3500-FeD	06/16/16	06/16/16 17:13	RCC	KONE-1	1	BZF1629
4	EPA-353.2	06/16/16	06/16/16 10:23	RCC	KONE-1	1	BZF1438
5	SM-4500SD	06/20/16	06/20/16 09:00	DIW	SPEC06	1	BZF1671
6	EPA-415.1	06/16/16	06/17/16 09:10	ALW	TOC2	1	BZF1405

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Project: 7124
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Project Manager: Tamera Rogers

Metals Analysis

BCL Sample ID: 1616578-04 | **Client Sample Name:** 7124, MW-3-W-160615, 6/15/2016 7:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Iron	ND	ug/L	50		EPA-6010B	ND		1
Total Manganese	**6000**	**ug/L**	**10**		**EPA-6010B**	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	06/16/16	06/27/16 14:02	JCC	PE-OP3	1	BZF1452
2	EPA-6010B	06/20/16	06/21/16 18:54	JRG	PE-OP2	1	BZF1655

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Reported: 06/28/2016 18:31
Project: 7124
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Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1616578-05 | **Client Sample Name:** 7124, MW-4-W-160615, 6/15/2016 8:00:00AM

Constituent	Result	Units	PQL	MDL	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)	103	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	96.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	91.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/16/16	06/17/16 12:45	IO1	MS-V12	1	BZF1102

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Reported: 06/28/2016 18:31
Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1616578-05 | **Client Sample Name:** 7124, MW-4-W-160615, 6/15/2016 8:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C6 - C12)	**92**	**ug/L**	**50**		**EPA-8015B**	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	96.9	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/20/16	06/20/16 19:12	AKM	GC-V9	1	BZF1288

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Reported: 06/28/2016 18:31
Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Gas Testing in Water

BCL Sample ID: 1616578-05 | **Client Sample Name:** 7124, MW-4-W-160615, 6/15/2016 8:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methane	**0.0016**	**mg/L**	**0.0010**		**RSK-175M**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	RSK-175M	06/28/16	06/28/16 10:38	JH2	GC-V1	1	BZF2287

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Reported: 06/28/2016 18:31
Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Water Analysis (General Chemistry)

BCL Sample ID: 1616578-05 | **Client Sample Name:** 7124, MW-4-W-160615, 6/15/2016 8:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Alkalinity as CaCO3	**250**	**mg/L**	**4.1**		**EPA-310.1**	ND		1
Nitrate as NO3	ND	mg/L	0.44		EPA-300.0	ND		2
Sulfate	**26**	**mg/L**	**1.0**		**EPA-300.0**	ND		2
Iron (II) Species	**1200**	**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	0.50		SM-4500SD	ND	A07	5
Non-Volatile Organic Carbon	**4.8**	**mg/L**	**1.0**		**EPA-415.1**	ND		6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-310.1	06/20/16	06/20/16 10:01	RML	MET-1	1	BZF1602
2	EPA-300.0	06/16/16	06/16/16 14:32	EMW	IC1	1	BZF1398
3	SM-3500-FeD	06/16/16	06/16/16 17:13	RCC	KONE-1	1	BZF1629
4	EPA-353.2	06/16/16	06/16/16 10:23	RCC	KONE-1	1	BZF1438
5	SM-4500SD	06/20/16	06/20/16 09:00	DIW	SPEC06	5	BZF1671
6	EPA-415.1	06/16/16	06/17/16 09:24	ALW	TOC2	1	BZF1405

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Reported: 06/28/2016 18:31
Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Metals Analysis

BCL Sample ID: 1616578-05 | **Client Sample Name:** 7124, MW-4-W-160615, 6/15/2016 8:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Iron	ND	ug/L	50		EPA-6010B	ND		1
Total Manganese	**1800**	**ug/L**	**10**		**EPA-6010B**	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	06/16/16	06/27/16 14:04	JCC	PE-OP3	1	BZF1452
2	EPA-6010B	06/20/16	06/21/16 18:57	JRG	PE-OP2	1	BZF1655

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Reported: 06/28/2016 18:31
Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BZF1102						
Benzene	BZF1102-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BZF1102-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BZF1102-BLK1	ND	ug/L	0.50		
Ethylbenzene	BZF1102-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BZF1102-BLK1	ND	ug/L	0.50		
Toluene	BZF1102-BLK1	ND	ug/L	0.50		
Total Xylenes	BZF1102-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BZF1102-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BZF1102-BLK1	ND	ug/L	10		
Diisopropyl ether	BZF1102-BLK1	ND	ug/L	0.50		
Ethanol	BZF1102-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BZF1102-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	**BZF1102-BLK1**	**105**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BZF1102-BLK1**	**94.7**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BZF1102-BLK1**	**98.0**	%	**80 - 120 (LCL - UCL)**		

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San Jose, CA 95119

Reported: 06/28/2016 18:31
Project: 7124
Project Number: 351638
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

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: BZF1102										
Benzene	BZF1102-BS1	LCS	19.530	25.000	ug/L	78.1		70 - 130		
Toluene	BZF1102-BS1	LCS	21.790	25.000	ug/L	87.2		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BZF1102-BS1	LCS	11.100	10.000	ug/L	111		75 - 125		
Toluene-d8 (Surrogate)	BZF1102-BS1	LCS	10.000	10.000	ug/L	100		80 - 120		
4-Bromofluorobenzene (Surrogate)	BZF1102-BS1	LCS	9.4400	10.000	ug/L	94.4		80 - 120		

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Volatile Organic Analysis (EPA Method 8260B)

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: BZF1102	Used client sample: N										
Benzene	MS	1612122-94	ND	23.410	25.000	ug/L		93.6		70 - 130	
	MSD	1612122-94	ND	22.040	25.000	ug/L	6.0	88.2	20	70 - 130	
Toluene	MS	1612122-94	ND	25.580	25.000	ug/L		102		70 - 130	
	MSD	1612122-94	ND	25.130	25.000	ug/L	1.8	101	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1612122-94	ND	11.480	10.000	ug/L		115		75 - 125	
	MSD	1612122-94	ND	11.110	10.000	ug/L	3.3	111		75 - 125	
Toluene-d8 (Surrogate)	MS	1612122-94	ND	9.9300	10.000	ug/L		99.3		80 - 120	
	MSD	1612122-94	ND	9.6600	10.000	ug/L	2.8	96.6		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1612122-94	ND	9.6900	10.000	ug/L		96.9		80 - 120	
	MSD	1612122-94	ND	9.8200	10.000	ug/L	1.3	98.2		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: BZF1288						
Gasoline Range Organics (C6 - C12)	BZF1288-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (FID Surrogate)	**BZF1288-BLK1**	**103**	%	**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: BZF1288										
Gasoline Range Organics (C6 - C12)	BZF1288-BS1	LCS	920.94	1000.0	ug/L	92.1		85 - 115		
a,a,a-Trifluorotoluene (FID Surrogate)	BZF1288-BS1	LCS	42.163	40.000	ug/L	105		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: BZF1288	Used client sample: N										
Gasoline Range Organics (C6 - C12)	MS	1616196-01	ND	878.72	1000.0	ug/L		87.9		70 - 130	
	MSD	1616196-01	ND	1061.9	1000.0	ug/L	18.9	106	20	70 - 130	
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1616196-01	ND	41.944	40.000	ug/L		105		70 - 130	
	MSD	1616196-01	ND	40.163	40.000	ug/L	4.3	100		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: BZF2287						
Methane	BZF2287-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: BZF2287										
Methane	BZF2287-BS1	LCS	0.011065	0.010843	mg/L	102		80 - 120		
	BZF2287-BSD1	LCSD	0.011245	0.010843	mg/L	104	1.6	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: BZF1398						
Nitrate as NO3	BZF1398-BLK1	ND	mg/L	0.44		
Sulfate	BZF1398-BLK1	ND	mg/L	1.0		
QC Batch ID: BZF1405						
Non-Volatile Organic Carbon	BZF1405-BLK1	ND	mg/L	1.0		
QC Batch ID: BZF1438						
Nitrite as NO2	BZF1438-BLK1	ND	mg/L	0.17		
QC Batch ID: BZF1602						
Total Alkalinity as CaCO3	BZF1602-BLK1	ND	mg/L	4.1		
QC Batch ID: BZF1629						
Iron (II) Species	BZF1629-BLK1	ND	ug/L	100		
QC Batch ID: BZF1671						
Total Sulfide	BZF1671-BLK1	ND	mg/L	0.10		

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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: BZF1398										
Nitrate as NO3	BZF1398-BS1	LCS	21.103	22.134	mg/L	95.3		90 - 110		
Sulfate	BZF1398-BS1	LCS	95.047	100.00	mg/L	95.0		90 - 110		
QC Batch ID: BZF1405										
Non-Volatile Organic Carbon	BZF1405-BS1	LCS	5.2740	5.0000	mg/L	105		85 - 115		
QC Batch ID: BZF1438										
Nitrite as NO2	BZF1438-BS1	LCS	1.6057	1.6425	mg/L	97.8		90 - 110		
QC Batch ID: BZF1602										
Total Alkalinity as CaCO3	BZF1602-BS3	LCS	106.04	100.00	mg/L	106		90 - 110		
QC Batch ID: BZF1629										
Iron (II) Species	BZF1629-BS1	LCS	2627.3	2500.0	ug/L	105		90 - 110		
QC Batch ID: BZF1671										
Total Sulfide	BZF1671-BS1	LCS	0.51378	0.50000	mg/L	103		90 - 110		

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Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BZF1398	Used client sample: N										
Nitrate as NO3	DUP	1616580-01	44.427	46.127		mg/L	3.8		10		
	MS	1616580-01	44.427	90.137	44.715	mg/L		102		80 - 120	
	MSD	1616580-01	44.427	90.342	44.715	mg/L	0.2	103	10	80 - 120	
Sulfate	DUP	1616580-01	392.77	392.57		mg/L	0.0		10		
	MS	1616580-01	392.77	588.15	202.02	mg/L		96.7		80 - 120	
	MSD	1616580-01	392.77	589.35	202.02	mg/L	0.2	97.3	10	80 - 120	
QC Batch ID: BZF1405	Used client sample: N										
Non-Volatile Organic Carbon	DUP	1616563-02	0.94200	ND		mg/L			10		
	MS	1616563-02	0.94200	6.0482	5.0251	mg/L		102		80 - 120	
	MSD	1616563-02	0.94200	6.0894	5.0251	mg/L	0.7	102	10	80 - 120	
QC Batch ID: BZF1438	Used client sample: Y - Description: MW-1-W-160615, 06/15/2016 05:50										
Nitrite as NO2	DUP	1616578-02	ND	ND		mg/L			10		
	MS	1616578-02	ND	1.7176	1.7289	mg/L		99.3		90 - 110	
	MSD	1616578-02	ND	1.7215	1.7289	mg/L	0.2	99.6	10	90 - 110	
QC Batch ID: BZF1602	Used client sample: Y - Description: MW-1-W-160615, 06/15/2016 05:50										
Total Alkalinity as CaCO3	DUP	1616578-02	166.74	165.98		mg/L	0.5		10		
QC Batch ID: BZF1629	Used client sample: Y - Description: MW-1-W-160615, 06/15/2016 05:50										
Iron (II) Species	DUP	1616578-02	ND	ND		ug/L			10		
QC Batch ID: BZF1671	Used client sample: N										
Total Sulfide	DUP	**1616563-02**	**ND**	**ND**		**mg/L**			**10**		
	MS	**1616563-02**	**ND**	**0.39006**	**0.50000**	**mg/L**		**78.0**		**80 - 120**	**Q03**
	MSD	**1616563-02**	**ND**	**0.38855**	**0.50000**	**mg/L**	**0.4**	**77.7**	**10**	**80 - 120**	**Q03**

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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: BZF1452						
Dissolved Iron	BZF1452-BLK1	ND	ug/L	50		
QC Batch ID: BZF1655						
Total Manganese	BZF1655-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: BZF1452										
Dissolved Iron	BZF1452-BS1	LCS	1065.6	1000.0	ug/L	107		85 - 115		
QC Batch ID: BZF1655										
Total Manganese	BZF1655-BS1	LCS	484.35	500.00	ug/L	96.9		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: BZF1452	Used client sample: N										
Dissolved Iron	DUP	1616437-01	ND	ND		ug/L			20		
	MS	1616437-01	ND	1004.8	1020.4	ug/L		98.5		75 - 125	
	MSD	1616437-01	ND	1080.7	1020.4	ug/L	7.3	106	20	75 - 125	
QC Batch ID: BZF1655	Used client sample: N										
Total Manganese	DUP	1616577-02	1834.6	1792.0		ug/L	2.4		20		
	MS	1616577-02	1834.6	2215.8	500.00	ug/L		76.2		75 - 125	
	MSD	1616577-02	1834.6	2298.8	500.00	ug/L	3.7	92.8	20	75 - 125	

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Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A07	Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
Q03	Matrix spike recovery(s) is(are) not within the control limits.