October 1, 2013

leidos

RECEIVED

Mr. Mark Horne Chevron Environmental Management Company 6101 Bollinger Canyon Road San Ramon, California 94583 OCT 03 2013 DEPT OF ECOLOGY TCP - NWRO

Subject:

Third Quarter 2013 Groundwater Monitoring and Sampling Report

Former Tidewater Service Station No. 303189

7301 Martin Luther King Jr. Way South

Seattle, Washington

ENTERED

Dear Mr. Horne:

Leidos Engineering, LLC (Leidos; formerly SAIC Energy, Environment & Infrastructure, LLC), on behalf of Chevron Environmental Management Company (CEMC), prepared this letter summarizing the third quarter 2013 groundwater monitoring and sampling event at the former Tidewater Service Station No. 303189 (the site) in Seattle, Washington (Figure 1).

FIELD ACTIVITIES

Gettler-Ryan Inc. (Gettler-Ryan) conducted the groundwater monitoring and sampling field event on August 22, 2013. They collected depth-to-groundwater measurements and checked for the presence of separate-phase hydrocarbons (SPH) in three monitoring wells on site. SPH were observed in monitoring well MW-2. A site map is provided as Figure 2.

Groundwater samples were collected from two of the three monitoring wells. Samples were submitted to Eurofins Lancaster Laboratories, Inc. in Lancaster, Pennsylvania for the following analyses:

- Total petroleum hydrocarbons (TPH) as gasoline-range organics by Northwest Method NWTPH-Gx;
- TPH as diesel-range organics and TPH as heavy oil-range organics by Northwest Method NWTPH-Dx extended with silica-gel cleanup; and
- Benzene, toluene, ethylbenzene, and total xylenes by United States Environmental Protection Agency Method 8021B.

Field data sheets are provided in the Gettler-Ryan groundwater monitoring and sampling data package (Attachment A).

RESULTS

Groundwater elevations are consistent with historical data reported at the site. Petroleum-hydrocarbon constituent concentrations are generally consistent with respect to historical data. SPH thickness in monitoring well MW-2 could not be determined due to heavy viscosity. No analytes were detected at concentrations exceeding the laboratory reporting limits in monitoring wells MW-1 and MW-3.

Historical groundwater elevation data, SPH thickness data, and laboratory analytical results are summarized in Table 1. The laboratory analysis report is provided as Attachment B.

Gettler-Ryan will continue to perform groundwater monitoring and sampling on a quarterly basis. If you have any questions or comments, please contact me at (425) 482-3328 or via email at ottemanr@leidos.com.

Sincerely,

Leidos Engineering, LLC

Ruth Otteman, LG Project Manager Of Wash 10/2//2010 2633 Consed Geodo

Kinga Kozlowska

Environmental Scientist

odoub

Enclosures:

Figure 1 - Vicinity Map

Figure 2 - Site Map

Table 1 - Groundwater Monitoring Data and Analytical Results

Attachment A – Groundwater Monitoring and Sampling Data Package

Attachment B - Laboratory Analysis Report

cc: Ms. Donna Musa – Ecology NW Region, Toxics Cleanup Program 3190 160th Avenue SE, Bellevue, WA 98008-5452

Mr. Larry Hard - Seattle Housing Authority

190 Queen Anne Avenue North, P.O Box 19028, Seattle, WA 98109-1028 Project File

REPORT LIMITATIONS

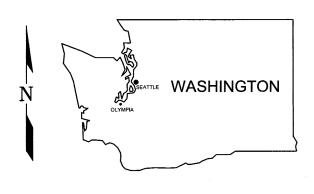
This technical document was prepared on behalf of CEMC and is intended for its sole use and for use by the local, state or federal regulatory agency that the technical document was sent to by Leidos. Any other person or entity obtaining, using, or relying on this technical document hereby acknowledges that they do so at their own risk, and that Leidos shall have no responsibility or liability for the consequences thereof.

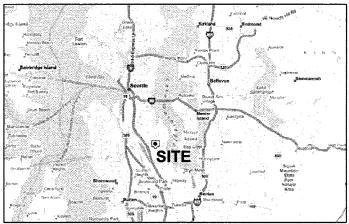
Site history and background information provided in this technical document are based on sources that may include interviews with environmental regulatory agencies and property management personnel and a review of acquired environmental regulatory agency documents and property information obtained from CEMC and others. Leidos has not made, nor has it been asked to make, any independent investigation concerning the accuracy, reliability, or completeness of such information beyond that described in this technical document.

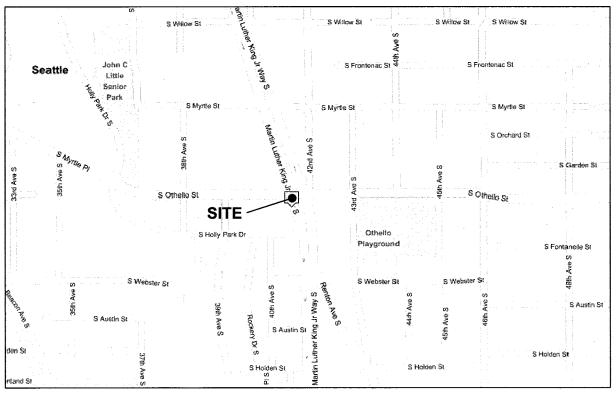
Recognizing reasonable limits of time and cost, this technical document cannot wholly eliminate uncertainty regarding the vertical and lateral extent of impacted environmental media.

Opinions and recommendations presented in this technical document apply only to site conditions and features as they existed at the time of Leidos site visits or site work and cannot be applied to conditions and features of which Leidos is unaware and has not had the opportunity to evaluate.

All sources of information on which SAIC has relied in making its conclusions (including direct field observations) are identified by reference in this technical document or in appendices attached to this technical document. Any information not listed by reference or in appendices has not been evaluated or relied upon by SAIC in the context of this technical document. The conclusions, therefore, represent our professional opinion based on the identified sources of information.







Maps Provided by Seattle.gov



Former Tidewater Service Station No. 30-3189 7301 Martin Luther King Jr. Way South Seattle, Washington FIGURE 1 Vicinity Map

FILE NAME: DATE: 303189_VM.dwg 8/29/2012

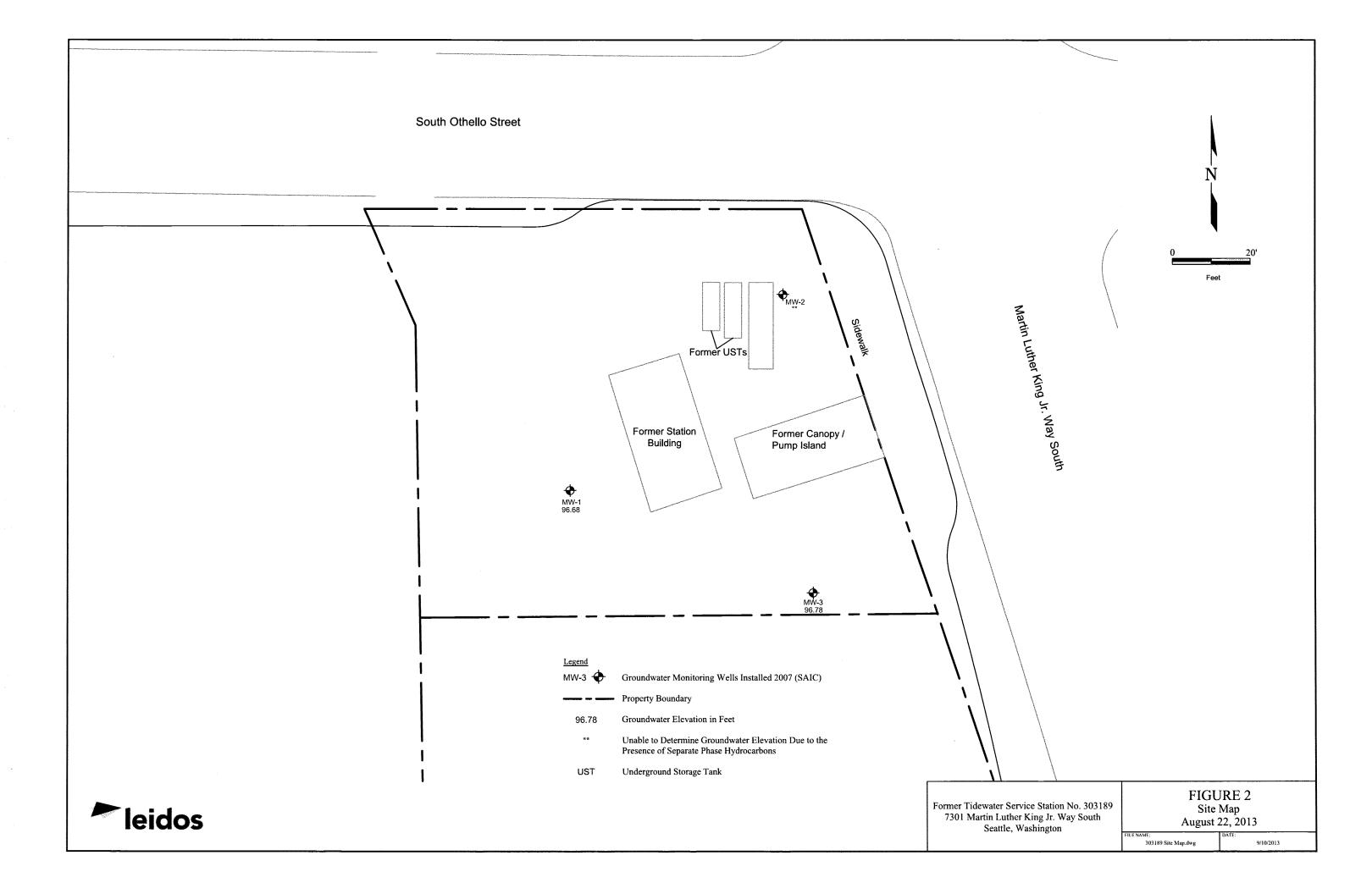


TABLE 1

GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹ FORMER TIDEWATER SERVICE STATION NO. 303189

7301 Martin Luther King Jr. Way South

Seattle, Washington Concentrations reported in μg/L

							centi ations	reported in	μg/L					,	
Well ID/	Purge	TOC ²	DTP	DTW	SPHT	GWE ³						Ethyl-	Total		Total
Date	Method	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	benzene	Xylenes	MTBE	Lead
MW-1		• •													
08/31/07							930	190	<50	<0.5	<0.5	< 0.5	<1.5		0.052
04/24/09	LFP	99.66		2.36	<u></u>	97.30	650	<76	<50	< 0.5	< 0.5	< 0.5	< 0.5	<0.5	
08/12/09	LFP	99.66		4.24		95.42	370	<67	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-
11/14/09	LFP	99.66		1.78		97.88	270 ²	<685	<50	< 0.5	< 0.5	< 0.5	<0.5	< 0.5	
02/11/10	LFP	99.66		1.92		97.74	560	<69	<50	< 0.5	< 0.5	<0.5	< 0.5	< 0.5	
05/24/10	LFP	99.66		2.43		97.23	91	<68	<50	< 0.5	< 0.5	<0.5	< 0.5	< 0.5	
08/04/10	LFP	99.66		3.62		96.04	520	<75	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
11/12/10	LFP	99.66		2.00		97.66	440	<68	<50	<0.5	<0.5	<0.5	< 0.5	< 0.5	
02/23/11	LFP	99.66		2.03		97.63	1,000	270	<50	<0.5	<0.5	< 0.5	< 0.5	< 0.5	
05/06/11	LFP	99.66		2.32		97.34	1,100	210	<50	<0.5	<0.5	< 0.5	< 0.5	< 0.5	
08/18/11	LFP	99.66		4.10		95.56	830	210	<50	< 0.5	< 0.5	<0.5	<0.5	< 0.5	
11/22/11	LFP	99.66		1.88		97.78	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/23/12	LFP	99.66		1.60		98.06	<31	<72	<50	<0.5	< 0.5	<0.5	< 0.5	<0.5	
05/25/12	LFP	99.66		1.80		97.86	<30	<69	<50	< 0.5	<0.5	< 0.5	< 0.5	<0.5	
08/10/12	LFP	100.66		4.02		96.64	<30	<69	<50	<0.5	<0.5	<0.5	<1.5		
11/15/12	LFP	100.66		2.18		98.48	120	160	<50	<0.5	<0.5	<0.5	<1.5		
02/14/13	LFP	100.66		1.84		98.82	<29	<68	<50	<0.5	< 0.5	<0.5	<1.5		
06/01/13	LFP	100.66		1.86		98.80	<29	<67	<50	<0.5	<0.5	<0.5	<1.5		
08/22/13	LFP	100.66	·	3.98		96.68	<29	<67	<50	<0.5	<0.5	<0.5	<1.5		
MW-2	211	100.00				7 3 3 3 3				L	<u> </u>				-
08/31/07	l		I				2,100	1,200	26,000	3,200	190	1,400	3,300	I	
04/24/09	PER	99.05		7.34		91.71	4	-4	16,000	4,100	99	1,500	2,000	<3	
08/12/09	PER	99.05		8.18		90.87	4	- 4	27,000	4,000	100	1,300	1,900	<3	
11/14/09	PER	99.05		5.75		93.30	4	_ 4	19,000	2,800	62	950	1,300	<3	
02/11/10	PER	99.05		6.98		92.07	4	4	25,000	3,400	97	1,600	2,200	<0.5	
05/24/10	PER	99.05		7.42		91.63	-4	4	19,000	2,900	88	1,400	2,000	<1	
08/04/10	PER	99.05		7.92		91.13	4	4	16,000	3,800	110	1,700	2,700	<3	
11/12/10	PER	99.05		6.16		92.89	4	4	16,000	1,900	56	660	680	<1	
02/23/11	PER	99.05		6.09		92.96	4	4	12,000	2,800	60	680	780	<3	
05/06/11	PER	99.05		6.98		92.07	4	4	15,000	3,100	72	1,300	1,400	<3	
08/18/11	1 Dic	99.05	8.20	8.30	0.10	90.83	UNABLE T	O SAMPLE I	DUE TO PRE						
11/22/11		99.05					MPLE DUE								-
02/23/12		99.05	1.55	1.90	0.35	97.43			DUE TO PRE	SENCE OF	<u> </u>				
05/25/12		99.05	7.10	7.85	0.75	91.80	<u> </u>		DUE TO PRE						
08/10/12		99.05	8.14	8.34	0.20	90.87	<u> </u>		DUE TO PRE						
11/15/12		99.05	5.92	6.10	0.18	93.09									
02/14/13		99.05					COLLECT SA								
06/01/13		99.05		1			COLLECT SA						-		
08/22/13		99.05		1			CT SAMPLE				†				
MW-3	I	1	13	<u>_</u>					, 		<u> </u>	<u> </u>			<u> </u>
08/31/07						T	120	<100	<50	<0.5	<0.5	<0.5	<1.5		0.055
04/24/09	LFP	100.00		2.13		97.87	58	<75	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
01/27/07	1	100.00			<u> </u>			1 7.5					<u> </u>		

TABLE 1

GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹ FORMER TIDEWATER SERVICE STATION NO. 303189

7301 Martin Luther King Jr. Way South

Seattle, Washington

Concentrations reported in µg/L

,			····	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	· ·		centrations	i charren in	ME/LI	-0-00				·	,
Well ID/	Purge	TOC ²	DTP	DTW	SPHT	GWE ³			CHARLES			Ethyl-	Total	de de constante de	Total
Date	Method	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	benzene	Xylenes	MTBE	Lead
MW-3 (cont)		,	,		*						· · · · · · · · · · · · · · · · · · ·	300			
08/12/09	LFP	100.00		4.47		95.53	620	170	<50	< 0.5	< 0.5	<0.5	<0.5	< 0.5	
11/14/09	LFP	100.00	==	1.60		98.40	450	370	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-
02/11/10	LFP	100.00		1.59		98.41	160	130	<50	<0.5	< 0.5	< 0.5	< 0.5	<0.5	
05/24/10	LFP	100.00		1.83	95	98.17	910	310	<50	< 0.5	<0.5	< 0.5	<0.5	<0.5	
08/04/10	LFP	100.00	~~	3.84		96.16	55	<74	<50	<0.5	< 0.5	<0.5	< 0.5	<0.5	
11/12/10	LFP	100.00		1.62	***	98.38	67	<71	< 50	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	
02/23/11	LFP	100.00	sin Ra	1.73		98.27	140	<73	<50	< 0.5	< 0.5	< 0.5	<0.5	< 0.5	
05/06/11	LFP	100.00		1.85		98.15	160	82	< 50	< 0.5	< 0.5	< 0.5	< 0.5	<0.5	
08/18/11	LFP	100.00	. 86	4.38	7.0	95.62	56	<74	< 50	<0.5	<0.5	<0.5	<0.5	<0.5	P P
11/22/11	LFP	100.00	0.8	1.58	70	98.42	<30	< 70	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
02/23/12	LFP	100.00		1.65		98.35	<33	<77	< 50	<0.5	< 0.5	<0.5	<0.5	<0.5	
05/25/12	LFP	100.00		1.30		98.70	<29	<67	<50	< 0.5	< 0.5	<0.5	<0.5	< 0.5	F0.10
08/10/12	LFP	101.00		4.23		96.77	<30	<69	<50	< 0.5	<0.5	< 0.5	<1.5		
11/15/12	LFP	101.00		1.79		99.21	75	93	<50	< 0.5	< 0.5	< 0.5	<1.5	es pa	
02/14/13	LFP	101.00		2.17		98.83	<29	<67	<50	< 0.5	< 0.5	< 0.5	<1.5		
06/01/13	LFP	101.00	~-	1.66		99.34	<28	<66	<50	< 0.5	< 0.5	< 0.5	<1.5		
08/22/13	LFP	101.00	***	4.22		96.78	<29	<67	<50	< 0.5	< 0.5	< 0.5	<1.5	~=	
B -9 ⁷															
05/01/02							0.660	0.310	32	530	<100	1,600	4,300		
B-10 ⁷					******										
05/01/02		***	40 107				5.10	< 0.063	26	240	110	240	330	==	1
QA/TRIP BL.	ANK														
04/24/09		88		90					< 50	< 0.5	< 0.5	< 0.5	<0.5	< 0.5	42.00
08/12/09					e 20			96	<50	<0.5	< 0.5	<0.5	<0.5	< 0.5	
11/14/09			**	==		20	1	900.800	<50	< 0.5	< 0.5	< 0.5	<0.5	< 0.5	
02/11/10				**		88			<50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	also disc
05/24/10					to-Oi		80	56	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
08/04/10					~-				<50	<0.5	< 0.5	< 0.5	<0.5	< 0.5	
11/12/10				m 45				# =	<50	<0.5	< 0.5	< 0.5	<0.5	< 0.5	
02/23/11					D-100	***		-	<50	<0.5	< 0.5	<0.5	<0.5	< 0.5	p.p.
05/06/11						40.40			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/18/116	*************	-							<50	<0.5	< 0.5	<0.5	< 0.5	< 0.5	
02/23/12		==	10 (10	==	89				<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/25/12									<50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**
08/10/12									<50	<0.5	< 0.5	<0.5	<1.5	***	
11/15/12		90		~~	20.00				<50	<0.5	< 0.5	<0.5	<1.5		e-e-
02/14/13									<50	<0.5	< 0.5	<0.5	<1.5	==	
06/01/13						,			<50	<0.5	< 0.5	<0.5	<1.5		
08/22/13				##	9-9	p=	56	92	<50	<0.5	<0.5	<0.5	<1.5		
~ · · · · · · · · · · · · · · · · · · ·					oratory Repo				50	0.5	0.5	0.5	0.5	0.5	
	******			MTCA N	Method A Clea			500	800/1,000	5	1,000	700	1,000	0.5	15
Current Method ⁸ : NWTPH-Dx + Extended NWTPH-Gx and USEPA 8021B/8260B											USEPA 7421				

TABLE 1

GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹ FORMER TIDEWATER SERVICE STATION NO. 30-3189

7301 Martin Luther King Jr. Way South Seattle, Washington Concentrations reported in µg/L

Abbreviations:

BTEX = Benzene, toluene, ethylbenzene, and total xylenes

DTP = Depth to Product

DTW = Depth to Water

(ft.) = Feet

GC/MS = gas chromatography/mas spectrometry

GWE = Groundwater Elevation

LFP = Low Flow Purge

MTBE = Methyl Tertiary Butyl Ether

MTCA = Model Toxics Control Act

ND = Non-detect

PER = Peristaltic Pump

QA = Quality Assurance/Trip Blank

QC = Quality control

SAIC = SAIC Energy, Environment & Infrastructure, LLC

SPH = Separate-phase hydrocarbons

SPHT = SPH Thickness

TOC = Top of Casing

TPH-HRO = TPH as heavy oil-range organics

TPH = Total Petroleum Hydrocarbons

TPH-DRO = TPH as diesel-range organics

TPH-GRO = TPH as gasoline-range organics

USEPA = United States Environmental Protection Agency

μg/L = Micrograms per liter

< = The analyte was not detected at or above the reported value

-- = Not Measured/Not Analyzed

Analytical Methods:

After April 24, 2009 and prior to August 10, 2012 BTEX analysis by USEPA Method 8260B.

TPH-GRO by Method NWTPH-Gx.

TPH-DRO and TPH-HRO by Method NWTPH-Dx with silica-gel cleanup.

BTEX and MTBE by USEPA Method 8021B.

- 1 Analytical results in bold font indicate concentrations exceed MTCA Method A cleanup levels.
- 2 TOC elevations are expressed in feet relative to an arbitrary datum.
- 3 When SPH is present, GWE has been corrected using the following formula: GWE = [(TOC DTW) + (SPHT x 0.80)].
- 4 Not sampled due to insufficient water.
- 5 Laboratory report indicates the surrogate data is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract. The TPH-DRO result for the re-extraction is 610 µg/L; the TPH-HRO result for the re-extraction is ND.
- 6 The initial analysis for GCMS volatiles could not be reported due to analytical difficulties. Since only one sample vial was submitted, the analysis was repeated using the remaining sample volume which contained headspace.
- 7 Results for wells B-9 and B-10 were provided by GeoEngineers.
- 8 Laboratory analytical methods for historical data may no be consistent with list of current analytical methods. When necessary, consult original laboratory reports to verify methods used.

Attachment A: Groundwater Monitoring and Sampling Data Package

4,,1

August 29, 2013 G-R #385862

TO:

Ms. Ruth A. Otteman

SAIC

18912 North Creek Parkway, Suite 101

Bothell, WA 98011

FROM:

Deanna L. Harding

Project Coordinator Gettler-Ryan Inc.

6747 Sierra Court, Suite J Dublin, California 94568 RE: Chevron Facility

#303189

(Former Tidewater Service Stn.)

7301 MLK Jr. Way South Seattle, Washington

WE HAVE ENCLOSED THE FOLLOWING:

COPIES

DESCRIPTION

VIA PDF

Groundwater Monitoring and Sampling Data Package Third Quarter Event of August 22, 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/303189

	CHEVRON - SITE CHECK LIST												
	Facility#:	Chevron	#303189		Date:	8:22:13							
	Address:	7301 Martin		ing Jr. Wav		214210							
	City/St.:	Seattle,WA	CONTRACTOR DE LA CONTRA										
	Status of S	ite: Unco) TIME	201		and the second 							
DRUMS:	Please list b				escription, con	idition, labeling, c	ontents, locatio						
	#	Descri	ption	Condition	Labeling	Contents	Location						
		NO VOA	JMA										
<u>o</u>													
WELLS:	Please chec		of ALL WE	ELLS @ site:	i.e., well box	condition, gasket	s, bolts, well						
	1		Well	Well									
Well ID	Gaskets (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Plug Y/N	Lock AAGII		eli Box er/Size/# of Bolts	Other						
NW-1	<i>ω</i> ∞0-			— ———————————————————————————————————	e"W	06816 x 3							
MW-2	6000-			>		NORGE K3							
MW-3	4000 -				e n	legeb x 3							
-	· ·												

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		22.30 AMPRICA	West to consider										
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Additional Cor	mments/Obse	rvations:			er©e ik in konstatil, t								
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#### Standard Operating Procedure, Low-Flow Purging and Sampling

Gettler-Ryan Inc. field personnel adhere to the following Standard Operating Procedure (SOP) for the collection and handling of representative groundwater samples using the Low-Flow (Minimal-Drawdown) Purging technique. This SOP incorporates purging and sampling methods discussed in U.S. EPA, Ground Water Issue, Publication Number EPA/540/S-95/504, April 1996 by Puls, R.W. and M.J. Barcelona - "Low-Flow (Minimal-Drawdown) Ground-Water Sampling Procedures."

A QED Well Wizard™ (or equivalent) bladder pump or Peristaltic Pump will be used to purge and sample selected wells as outlined in the scope-of-work. An in-line flow cell or other multi-parameter meter is used to collect water quality indicating parameters during purging.

#### Initial Pump Discharge Test Procedures

The Static Water Level (SWL) is measured in all wells at the site prior to the installation of the pump or tubing and initiation of the test procedures in any well. In addition, the presence or absence of separate-phase hydrocarbons (SPH) is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot. The SWL measurement and SPH thickness, if any, will be recorded on the field data sheet.

The bladder pump or suction inlet tubing of the peristaltic pump is then positioned with its inlet located within the screened interval of the well. The in-line flow cell is then connected to the discharge tubing. After pump installation, the SWL is allowed to recover to its original level. The pump is then started at a discharge rate between 100 ml to 300 ml per minute with the in-line flow cell connected. The water level is monitored continuously for any change from the original measurement and the discharge rate is adjusted until an optimum discharge rate (ODR) is determined. The goal for the ODR is to produce a stable drawdown of less than 0.1 meter as allowed by site conditions; however the total drawdown from the initial SWL should not exceed 25% of the distance between pump inlet location and the top of the well screen. Once achieved, the ODR will be confirmed by volumetric discharge measurement and recorded on the field data sheet.

#### Purging and Water Quality Parameter Measurement

When the ODR has been determined and the SWL drawdown has been established within the acceptable range, and a minimum of one pump system volume (bladder volume and/or discharge tubing volume) has been purged, field measurements for temperature (T), pH, conductivity (Ec), and if required, oxygen reduction potential (ORP) and dissolved oxygen (DO) will be collected and documented on the field data sheet. Measurements should be taken every three to five minutes until parameters stabilize for three consecutive readings. The minimum parameter subset of T ( $\pm$  10%), pH ( $\pm$  0.1 unit), and Ec ( $\pm$  10 uS) are required to stabilize. Additional parameters that may be required are DO ( $\pm$  0.2 mg/l) and ORP ( $\pm$  20 mV).

### Sample Collection

When water quality parameters have stabilized, and the SWL drawdown remains established within the acceptable range, groundwater sample collection may begin. If used, the in-line flow cell and its tubing are disconnected from the discharge tubing prior to sample collection. Water samples are collected from the discharge tubing into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. 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. 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. 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. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.



# WELL MONITORING/SAMPLING FIELD DATA SHEET

Site Address: 7301 Martin Luther King Jr. Way \$ Event Date:	
Well ID  Well Diameter  Total Depth Depth to Water  Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]:  Sampler:  Date Monitored:  Date Monitored:  Disposable Bailer  Date Monitored:  Date Monitored:  Date Monitored:  Disposable Bailer  Date Monitored:  Date Monitored:  Disposable Sampler:  Date Monitored:  Date Monitored:  Disposable Monitored:  Date Monitored:  Date Monitored:  Disposable Monitored:  Date	
Well ID  Well Diameter  75 in.  Volume Factor (VF)  A*= 0.02  Total Depth Depth to Water  7.54  XVF = x3 case volume = Estimated Purge Volume: gal.  Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: Time Completed: (2400 hr	
Well Diameter         .75         in.         Volume Factor (VF)         3/4"= 0.02 4"= 0.04 2"= 0.17 3"= 0.38 5"= 1.02 6"= 1.50 12"= 5.80           Depth to Water         3.40 ft.         Check if water column is less then 0.50 ft.         2 case volume = Estimated Purge Volume: gal.           Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.40 ft         Time Started: (2400 hr. Time Completed: (2400 hr. Time Comp	
Total Depth  Depth to Water  Sampling Equipment:  Disposable Bailer  Volume Factor (VF)  3/4"= 0.02 4"= 0.02 4"= 0.02 4"= 0.02 4"= 0.02 4"= 0.02 5"= 1.02 6"= 1.50 12"= 5.80  1"= 0.04 2"= 0.17 3"= 0.38 12"= 5.80  12"= 5.80  1"= 0.04 2"= 0.17 3"= 0.38 12"= 5.80  1"= 0.04 1"= 0.02 6"= 1.50 12"= 5.80  1"= 0.04 1"= 0.04 1"= 0.04 12"= 0.02 6"= 1.50 12"= 5.80  1"= 0.04 12"= 0.03 12"= 0.03 12"= 0.03 12"= 0.04 12"= 0.03 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.08 12"= 0.01 12"= 0.04 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 12"= 0.05 12"= 0.04 1	
Depth to Water W/80% Recharge [(Height of Water Column x 0.20) + DTW]:    Depth to Water w/80% Recharge [(Height of Water Column x 0.20) + DTW]:   Disposable Bailer   Disposable Bailer   Depth to Water Stainless Steel Bailer   Depth to Water	
7.64 xVF _ = _ x3 case volume = Estimated Purge Volume: _ gal.  Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _ 5.49	
Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5. 1 Time Started: (2400 hr Time Completed: (2400 hr Time Completed: (2400 hr Disposable Bailer Disposable Bailer Depth to Water: ft	
Purge Equipment: Sampling Equipment: Time Completed:(2400 hi Disposable Bailer Disposable Bailer Depth to Water: ft	
Purge Equipment: Sampling Equipment: Depth to Product: ft  Disposable Bailer Disposable Bailer Depth to Water: ft	;)
Disposable Bailer Disposable Bailer Depth to Water: ft	
Stainless Steel Railer Procesure Pailes	
TOTAL DESIGNATION THE REPORT OF THE PROPERTY O	
Stack Pump Metal Filters Visual Confirmation/Description:	
Suction Pump Peristaltic Pump	
Grundfos QED Bladder Pump Skimmer / Absorbant Sock (circle one)	
Peristaltic Pump Other: Amt Removed from Skimmer: ga	
QED Bladder Pump Amt Removed from Well: ga	
Other: Water Removed: Product Transferred to:	
Product Transierred to.	
Start Time (purge): Weather Conditions:	<del></del>
Sample Time/Date: doub 62213 Water Color: cuony Odor: Y (N)	
Approx. Flow Rate: mlpm Sediment Description: @Exyett	
Did well de-water? No If yes, Time: Volume: gal. DTW @ Sampling: 6.27	
Time Values a MS Gauge C	T\A/
(2400 hr.) (134) PH	
(2400 hr.) (Liters) (\frac{\pm mhos/em \pm \ps}{C}) (C) F) (mg/L) (mV) as param	
1.0 6.21 764 109 1.0 763 446	<u> </u>
1. 6.02 .704 B.9 1.1 B.O.1 4.6	
1900 20 6.22 -794 18.80 1.1 80.3 6.2	_
LABORATORY INFORMATION	
SAMPLE ID (#) CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES	
MW-	
Zx 1 lifer ambers YES HCL LANCASTER NWTPH-Dx w/sgc	
COMMENTS: Depth Pump Set At:	
COMMENTS: Depth Pump Set At:	
COMMENTS: Depth Pump Set At:	



## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#:	Chevron #3031	89	Job Number	: 385862	
Site Address:	7301 Martin Lut	her King Jr. Way S	Event Date:	&:ZZ·13	(inclusive)
City:	Seattle,WA		Sampler:	N.P.	
Well ID	MW-2		Date Monitored	· @·22·13	3
Well Diameter	.75 in.				
Total Depth	9.66 ft.	Volum Factor			3"= 0.38 2"= 5.80
Depth to Water	<b>★</b> ft.	Check if water colum	n is less then 0.		
	xVF		x3 case volume	= Estimated Purge Volume:	gal.
Depth to Water v	w/ 80% Recharge [(He	ight of Water Column x 0.20) +	DTWJ:	Time Started:	(2400 hrs)
Purge Equipment:		Sampling Equipment:		Time Completed:	(2400 hrs)
Discosable Bailer		Disposable Bailer		Depth to Product:	
Stainless Steel Bailer		•	***************************************	Depth to Water:	ft
Stack Pump	***************************************	Pressure Bailer		Hydrocarbon Thickness:	
Suction Pump		Metal Filters	<del></del>	Visual Confirmation/Des	cription:
Grundfos	- AND THE TRANSPORT OF	Peristaltic Pump			
	-	QED Bladder Pump		Skimmer / Absorbant So	ck (circle one)
Peristaltic Pump		Other:		Amt Removed from Skin	nmer: gai
QED Bladder Pump	commence and			Amt Removed from Well	:gal
Other:				Water Removed: Product Transferred to:_	
A STATE OF THE PARTY OF THE PAR					
Start Time (purge)	):	Weather Con	ditions:		3400 330000
Sample Time/Dat	e: /	Water Color:	400	Odor: Y / N	
Approx. Flow Rate				Oddi. 1 / 14	
Did well de-water	OSCIONATION OF THE PROPERTY OF		scription:	750 Jacob 0000000 100 100 100 100 100 100 100 10	one or the contract of the con
Dig well ge-water	rrves,	ı ime: Volun	16:	gal. DTW @ Sampling:	
Time	Volume .	Conductivity	Temperature	D.O. ORF	Gauge DTW
(2400 hr.)	(Liters) pl	(µmhos/cm - p8)	(C/F)	(mg/L) (mV	ac naramatare
				(man)	' are recorded
		**************************************			
Maria Maria Maria	20000000000000000000000000000000000000				
		LABORATORY IN	COMATION		
SAMPLE ID	(#) CONTAINER REI	FRIG. PRESERV. TYPE	LABORATORY	ANALYSES	3
MW-		ES HCL	LANCASTER	NWTPH-Gx/BTEX(8021)	The second secon
	x 1 liter ambers Y	ES HCL	LANCASTER	NWTPH-Dx w/sgc	
			-		
			Second Control of the		
COMMENTS: [	enth Pumn Set A	t: K J. VANE	IN DOIS		A1.
MU)Z OVE			MARKET	O ALLOGATELY G	210)(cx
MANY AND	Market Market Commence	ENVE OF I	HICK B	ACK DILY OUR	STUALLO
in rec	4. 4400D	•		1	
Add/Replaced Lo	ock:	Add/Replaced Plug:		Add/Replaced Bolt:	
-				· ·~ ··· · · · · · · · · · · · · · · ·	



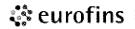
# WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#	Chevron #3	03189		Job Number:	385862		
Site Address:	7301 Martin	Luther	King Jr. Way S	Event Date:	0.1	なら	· (inclusive)
City:	Seattle,WA			Sampler:		9	.(
						<u> </u>	•
Well ID	MW-3		• [	Date Monitored:	en a	2:13	
Well Diameter	. <b>75</b> ir	n.	[				
Total Depth	9.49 ft	<del>.</del>	Volun Facto	ne 3/4"= 0.0 r (VF) 4"= 0.6		"= 0.17 3"= 0.38 '= 1.50 12"= 5.80	
Depth to Water	4.21/ ft		Check if water colum	nn is less then 0.5			
	5.27	xVF		x3 case volume =		olume: —	gal.
Depth to Water	w/ 80% Recharge	– ∋ [(Height of	Water Column x 0.20)	+ DTW]: <u>5.27</u>	Time Starte		(2400 hrs)
					1	leted:	
Purge Equipment:			Sampling Equipment:		Depth to Pr	oduct:	ft
Disposable Bailer			Disposable Bailer		Depth to W	ater:	ft
Stainless Steel Bail	er		Pressure Bailer			n Thickness:	ft
Stack Pump			Vietal Filters		Visual Confi	rmation/Description:	
Suction Pump Grundfos			Peristaltic Pump		Skimmer / A	handani Carlo (-i)	
Peristaltic Pump	<del></del>		QED Bladder Pump			bsorbant Sock (circled by the circled by the circle by the circled by the circle	
QED Bladder Pump		,	Other:		Amt Remov	ed from Well:	gal
Other:	·				Water Remo	oved:	yaı
Other					. 4	nsferred to:	
Ct. 4 T:							
Start Time (purg		-4-0-	Weather Co		SUN		
Sample Time/Da		<u>8.22 13</u>		Vacous	_Odor: Y /(N	)	
Approx. Flow Ra		mlpm	Sediment De	escription: (	GREVIOH		
Did well de-water	er? If	yes, Time	: Volu	me:	gal. DTW@S	ampling:6	.23
Time	Volume		Conductivity	<b>T</b>	2.0		Gauge DTW
(2400 hr.)	(Liters)	pН	(µmhos/em-µS)	Temperature F )	D.O.	ORP	as parameters
	1 -		(printing of the po)	(C) F)	(mg/L)	(mV)	are recorded
<u> </u>	- <u>1.6</u>	6.23	568	18.60	1.0	73.8	4.90
0435	<u> </u>	6.30	610	18.6		74.00	5.03
pasu		6.34	<u>.670</u>	18.4		74.6	6.23
<del></del>			<u>,                                     </u>			•	
			LABORATORY IN	FORMATION			
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY		ANALYSES	<del></del> 1
MW-3	3 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX		
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc	(	
	<del> </del>		<del> </del>				
			<del> </del> -				
			1		<u> </u>	<del></del>	
COMMENTS:	Depth Pump S	Set At:	8-9				
Add/Replaced	Lock:	Add	/Replaced Plug:		Add/Replaced	Polt	<del></del>
		, 100	piacea i lug		~uu/nepiaced	DUIL	

# Chevron Northwest Region Analysis Request/Chain of Custody

seurofins	Lancaster Laboratories		Α	cct.#_	<del> </del>	Troba and a majoria		G	roup	#		introjec manaj		S	oratori imple id with c	#	CONTRACTOR NAME OF						The state of the s		
(1)	Client Information	WATER SOURCE OF CAPE PARTY.	**********	×***** 800	*********	(4)	Mat	rix	5001555555	***************************************	<b>(</b> 5)	383993683	10.50° 10.000	A	naly	800 808	Req	uest	ed	SKXX656948	likka sasasa	***	SCR #:		
Facility #  LHENGON = 3  Site Address  TOUT   M LE  Cheyron PM  MALL   LDC	t3189 6 RWay 5,	WBS	JESE Williami HENNAN	COL		Sediment	1	Surface [			☐ Naphith ☐				Į.	<u>C</u>		Method					Results in Dry W J value reporting Must meet towes	needed t detection	
Consultant Project Mgr.  Consultant Prione #  Characteristics  Consultant Prione #		X	HO ba	Grab G	Composite			NPDES	Z	Total Number of Containers	□ 0921 □ 8260 □	8260 full scan	Oxygenates	NVTPH-Gx	NWTPH Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	wa ∨РН □ WA ЕРН □	Total ☐ Diss. ☐					compounds	irmation Naphthalene ht by 8260	
Sample Identification	KKKAMIKKKKKI CKKKI CKKKI CKI KANAMIKE CHERENI	Date	Time	Ö	Ŏ,	Soll	S	KNOOKED CK	Ō.	<b>MAXXIMA</b>	BTEX	32	1348 1355 <b>8</b>	<u> </u>	Ž.	5	Š.	read	socarence so	31711111111		<b>.</b> (6	) Rema	rks	20/05/00/00/00 98/05/00/00/00
	Commence of the commence of th	Se circle)	JEN V		uished	COLUMN TO A COLUMN TO THE COLU				anni haring ang ang ang ang ang ang ang ang ang a	V			Time	***		Receive						Dete	Time	
Standard	5 day	4 day			C	The state of the s	QŽ	and the second				22 1		14,	røl	5							John		0
72 hour	48 hour	24 hour			nuished		Comm	arcia)	l Car	PEGS?	Date	outener v.a. estrano	500 X X 102 42 4	Time	CHARGE CHARLES	EX 90 20 SHI 15 CO CO CO	Recen	red by				440 - Constant	Date	Time	
8) Data Package (circle  Type I - Full		-RTBU-FI_0:		8	PS_	John Control		Fed			alle trapper	Ott	ner_		*************	1079 MBBQ 1431 31	mecen	rea by					Date	Tine	
Type VI (Raw Data)	Oth	97:	2000000		Te	mpe	eratur	e Up	on	Rec	eipt	STATE OF THE STATE	ent it is victorial	C	'C		Cu	istod	y Sea	als Int	act?	Weekee	Yes	No	ASSESSMENT OF THE PARTY OF THE

Attachment B: Laboratory Analysis Report



### Lancaster Laboratories Environmental

# Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Partial Report - Page 1 of 2

Sample Description: QA Water

Job# 385862

Facility# 303189

LL Sample # WW 7172653 LL Group # 1413895

7301 Martin Luther King Jr Way South - Seattle, WA

Account

# 11260

Project Name: 303189

Collected: 08/22/2013

Chevron

6001 Bollinger Canyon Road

Submitted: 08/23/2013 09:05

Reported: 09/10/2013 13:27

San Ramon CA 94583

MLKQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602 NWTPH-Gx	ug/l	ug/l	
08274	NWTPH-Gx water C7-	C12 n.a.	N.D.	50	1
GC Vo	latiles	SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1
02102	Total Xylenes	1330-20-7	N.D.	1.5	1

#### General Sample Comments

State of Washington Lab Certification No. C259

#### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-	1	13240A94A	08/28/2013 17:28	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	13240A94A	08/28/2013 17:28	Catherine J	1

Sample Description: MW-1 Grab Groundwater

Facility# 303189 Job# 385862

LL Sample # WW 7172654

7301 Martin Luther King Jr Way South - Seattle, WA

LL Group # 1413895 Account # 11260

Project Name: 303189

Collected: 08/22/2013 08:46

Reported: 09/10/2013 13:27

by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 08/23/2013 09:05

L4310

San Ramon CA 94583

MLK01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602 NWTPH-Gx	ug/l	ug/1	
08274	NWTPH-Gx water C7-C1	n.a.	N.D.	50	1
GC Vo	latiles	SW-846 8021B	ug/l	ug/1	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1
02102	Total Xylenes	1330-20-7	N.D.	1.5	1

Reference ID:

1413895100913132631

### Lancaster Laboratories Environmental

# Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Partial Report - Page 2 of 2

#### General Sample Comments

State of Washington Lab Certification No. C259

#### Laboratory Sample Analysis Record

CAT	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tir	ne	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-	1	13240A94A	08/28/2013	18:18	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	13240A94A	08/28/2013	18:18	Catherine J Schwarz	1

Sample Description: MW-3 Grab Groundwater

Facility# 303189 Job# 385862

7301 Martin Luther King Jr Way South - Seattle, WA

LL Sample # WW 7172655

LL Group # 1413895 Account # 11260

Project Name: 303189

Collected: 08/22/2013 09:41 by JP

Chevron

L4310

6001 Bollinger Canyon Road

Submitted: 08/23/2013 09:05

Reported: 09/10/2013 13:27

San Ramon CA 94583

#### MLK03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602 NWTPH-Gx	ug/l	ug/l	
08274	NWTPH-Gx water C7-C	n.a.	N.D.	50	1
GC Vo	latiles	SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1
02102	Total Xylenes	1330-20-7	N.D.	1.5	1

#### General Sample Comments

State of Washington Lab Certification No. C259

#### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	13240A94A	08/28/2013 18:43	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	13240A94A	08/28/2013 18:43	Catherine J Schwarz	1

Reference ID: 1413895100913132631

# Chevron Northwest Region Analysis Request/Chain of Custody

eurofins	Lancaster Laboratories		Ac	ct. # _	119	160	)	Group ir	# I	ns on re	verse s	ide com	_ Sar espond	mple : d with ci	# Z	umbers	265	3-	<i>5</i> 5					
1)	Client Informatio					4	Matrix			(5)			Ar	nalys	es	Requ	este	d ,				SCR #:		
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Issued by Dept. 40 Management



Lancaster Laboratories Environmental

# **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
hа	microgram(s)	mg	milligram(s)
mL	milliliter(s)	<u>.</u>	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

- less than The number following the sign is the <u>limit of quantitation</u>, the smallest amount of analyte which can be reliably determined using this specific test.
- > greater than
- ppm parts per million One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
- ppb parts per billion

Dry weight basis

Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C - result confirmed by reanalysis.

J - estimated value - The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

	Organic Qualifiers		Inorganic Qualifiers
A	TIC is a possible aldol-condensation product	В	Value is <crdl, but="" th="" ≥idl<=""></crdl,>
В	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
	Concentration exceeds the calibration range of	S	Method of standard additions (MSA) used
	the instrument		for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and	W	Post digestion spike out of control limits
	confirmation columns >25%	*	Duplicate analysis not within control limits
U	Compound was not detected	+	Correlation coefficient for MSA < 0.995
Y,Z	Defined in case narrative		

### Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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#### ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

September 11, 2013

Project: 303189

Submittal Date: 08/23/2013 Group Number: 1413895 PO Number: 0015119898 Release Number: SHRILL HOPKINS State of Sample Origin: WA

Client Sample Description	<u>Lancaster Labs (LL) #</u>
QA Water	7172653
MW-1 Grab Groundwater	7172654
MW-3 Grab Groundwater	7172655

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC S

SAIC c/o Gettler-Ryan

Attn: Rachelle Munoz

COPY TO

ELECTRONIC

**SAIC** 

Attn: Jamalyn Green

COPY TO

**ELECTRONIC** 

SAIC

•

COPY TO

Attn: Ruth Otteman

Respectfully Submitted,

Jill M. Parker
Senior Specialist

(717) 556-7262

# Analysis Report

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### Lancaster Laboratories Environmental

# Analysis Report

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Sample Description: QA Water

Submitted: 08/23/2013 09:05

LL Sample # WW 7172653

Facility# 303189 Job# 385862

LL Group # 1413895

7301 Martin Luther King Jr Way South - Seattle, WA

Account # 11260

Project Name: 303189

Collected: 08/22/2013

Chevron

6001 Bollinger Canyon Road

L4310

Reported: 09/11/2013 15:57 San Ramon CA 94583

MLKQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles ECY	7 97-602 NWTPH-Gx	ug/l	ug/l	
08274	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Vo	latiles SW-	-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1
02102	Total Xylenes	1330-20-7	N.D.	1.5	1

#### General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

#### Laboratory Sample Analysis Record Method CAT Analysis Name Trial# Batch# Analysis Analyst Dilution Date and Time Factor No. 08274 NWTPH-Gx water C7-C12 13240A94A 08/28/2013 17:28 ECY 97-602 NWTPH-1 Catherine J Schwarz SW-846 8021B 1 13240A94A Catherine J 02102 Method 8021 Water Master 08/28/2013 17:28 1 Schwarz SW-846 5030B 1 13240A94A 1 01146 GC VOA Water Prep 08/28/2013 17:28 Catherine J Schwarz



### Lancaster Laboratories Environmental

# Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-1 Grab Groundwater

Facility# 303189 Job# 385862

7301 Martin Luther King Jr Way South - Seattle, WA

LL Sample # WW 7172654

LL Group # 1413895

Account # 11260

Project Name: 303189

Collected: 08/22/2013 08:46

Submitted: 08/23/2013 09:05 Reported: 09/11/2013 15:57 by JP

Chevron

6001 Bollinger Canyon Road

L4310

San Ramon CA 94583

#### MLK01

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602	NWTPH-Gx	ug/l	ug/l	
08274	NWTPH-Gx water C7-C	12	n.a.	N.D.	50	1
GC Vo	latiles	SW-846 802	1B	ug/l	ug/l	
02102	Benzene		71-43-2	N.D.	0.5	1
02102	Ethylbenzene		100-41-4	N.D.	0.5	1
02102	Toluene		108-88-3	N.D.	0.5	1
02102	Total Xylenes		1330-20-7	N.D.	1.5	1
	troleum Carbons w/Si	ECY 97-602 modified	NWTPH-Dx	ug/l	ug/l	
12005	DRO C12-C24 w/Si Ge	1	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Ge	1	n.a.	N.D.	67	1
The	reverse surrogate, ca	apric acid, is	present at <1	¿.		

#### General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	.me	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-Cl2	ECY 97-602 NWTPH- Gx	1	13240A94A	08/28/2013	18:18	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	13240A94A	08/28/2013	18:18	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13240A94A	08/28/2013	18:18	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	132400019A	09/09/2013	21:26	Glorines Suarez- Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	132400019A	08/28/2013	21:00	Elaine F Stoltzfus	1



### Lancaster Laboratories Environmental

# Analysis Report

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Sample Description: MW-3 Grab Groundwater

Facility# 303189 Job# 385862

7301 Martin Luther King Jr Way South - Seattle, WA

**LL Sample # WW 7172655** 

LL Group # 1413895 Account

# 11260

Project Name: 303189

Collected: 08/22/2013 09:41

by JP

Chevron

6001 Bollinger Canyon Road

L4310

Submitted: 08/23/2013 09:05 Reported: 09/11/2013 15:57

San Ramon CA 94583

#### MLK03

CAT No.	Analysis Name	-	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602	NWTPH-Gx	ug/l	ug/l	
08274	NWTPH-Gx water C7-	C12	n.a.	N.D.	50	1
GC Vo	latiles	SW-846 802	1B	ug/l	ug/l	
02102	Benzene		71-43-2	N.D.	0.5	1
02102	Ethylbenzene		100-41-4	N.D.	0.5	1
02102	Toluene		108-88-3	N.D.	0.5	1
02102	Total Xylenes		1330-20-7	N.D.	1.5	1
	troleum carbons w/Si	ECY 97-602 modified	NWTPH-Dx	ug/l	ug/l	
-	DRO C12-C24 w/Si G			N.D.	29	
12005	· ·		n.a.		67	1
12005 The	HRO C24-C40 w/Si G reverse surrogate, o		n.a. present at <	N.D. 1%.	b /	1

### General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

#### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-	1	13240A94A	08/28/2013 18:43	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	13240A94A	08/28/2013 18:43	Catherine J. Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13240A94A	08/28/2013 18:43	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	132400019A	09/09/2013 21:45	Glorines Suarez- Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	132400019A	08/28/2013 21:00	Elaine F Stoltzfus	s 1

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# Analysis Report

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Page 1 of 2

### Quality Control Summary

Client Name: Chevron

Group Number: 1413895

Reported: 09/11/13 at 03:57 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

#### Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>MDL</u>	Report <u>Units</u>	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 13240A94A	Sample numbe	er(s): 717	2653-7172	655				
Benzene	N.D.	0.2	ug/l	93	95	80~120	2	30
Ethylbenzene	N.D.	0.2	ug/l	97	99	80-120	2	30
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	98	101	75-135	3	30
Toluene	N.D.	0.2	ug/l	95	97	80-120	1	30
Total Xylenes	N.D.	0.6	ug/l	98	100	80-120	2	30
Batch number: 132400019A	Sample numbe	er(s): 717	2654-7172	655				
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	76	72	32-117	6	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					

#### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Method 8021 Water Master Batch number: 13240A94A Triffunrotoluene-P

	minuorotoidene-r	muorotoluen
7172653	92	73
7172654	92	72
7172655	92	72
Blank	92	73
LCS	91	78
LCSD	91	80
Limits:	51-120	63-135

Analysis Name: NWTPH-Dx water w/ 10g Si Gel

Batch number: 132400019A Orthoterphenyl

7172654 79 7172655 72 Blank 75 LCS 86 LCSD 82

#### *- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Lancaster Laboratories Environmental

# Analysis Report

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Page 2 of 2

## Quality Control Summary

Client Name: Chevron

Group Number: 1413895

Reported: 09/11/13 at 03:57 PM

Surrogate Quality Control

Limits: 50-150

*- Outside of specification

⁽¹⁾ The result for one or both determinations was less than five times the LOQ.

⁽²⁾ The unspiked result was more than four times the spike added.

# Chevron Northwest Region Analysis Request/Chain of Custody

ಭೆ eurofins   Lancaster Laboratories	Acct.	<u> 11960</u>	Group #	Eurofins Lancast 1413895 ctions on reverse side of	at Laboratories us Sample # _/ orrespond with circled	9e only 2653-55 numbers.	
1) Client Informatio	7)	4)	Matrix	<b>(</b> 5)	Analyses	Requested	SCR #:
Facility #  CHAIRON # 303 PS  Site Address  T30   MUK Je. Wary G.  Chevren PM  Consultant Project Mgr.  DEANNA HANDIN O  Consultant Phone #  Consultant Phone #  Sampler  2	STEATION BANGE	Sediment	Water Potable   Ground   Nater   NPDES   Surface   Oil   Air   Test   Number of Contained	III scar	NWTPH-Gx  NWTPH-Dx with Silica Gel Cleanup NWTPH-Dx without Silica Gel Cleanup	WA VPH ☐ WA EPH ☐ Lead Total ☐ Diss. ☐ Method	Results in Dry Weight J value reporting needed Must meet lowest detection limits possible for 8260 compounds S021 MTBE Confirmation Confirm MTBE + Naphthalene Confirm highest hit by 8260 Confirm all hits by 8260 Hunoxy's on highest hit
Sample Identification	den an en	<u> </u>	5 0	THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.			(6) Remarks
(7) Turnaround Time Requested (TAT) (plea	J design x	& A A A A A A A A A A A A A A A A A A A	X		X X	Received by	JOate Time G
7) Turnaround Time Requested (TAT) (plea	4 day	4		8213			Date Time 9
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	O (circle if required)  RTBU-FI_05 (default)	elinquished by UPS	y Commercial Carrie FedEx	er: Other		Received by	8-23-3 (2005)
Type VI (Raw Data) Oth	DANGON	Temperature Upon Receipt 19-3, °C Custody Seals Intact?					COLUMN TO THE OWN DESCRIPTION OF THE OWN DESC

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The white copy should accompany samples to Eurofins Lancaster Laboratories. The yellow copy should be retained by the client. Page 8 of 9

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Lancaster Laboratorie Environmental

# **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meg	milliequivalents	lb.	pound(s)
g g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mĹ	milliliter(s)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
	• •	pg/L	picogram/liter

- < less than The number following the sign is the <u>limit of quantitation</u>, the smallest amount of analyte which can be reliably determined using this specific test.
- > greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis

Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C - result confirmed by reanalysis.

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	Organic Qualifiers		Inorganic Qualifiers
Α	TIC is a possible aldol-condensation product	В	Value is <crdl, but="" th="" ≥ldl<=""></crdl,>
В	Analyte was also detected in the blank	E	Estimated due to interference
С	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
Ε	Concentration exceeds the calibration range of	S	Method of standard additions (MSA) used
	the instrument		for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
Р	Concentration difference between primary and	W	Post digestion spike out of control limits
	confirmation columns >25%	*	Duplicate analysis not within control limits
U	Compound was not detected	+	Correlation coefficient for MSA < 0.995
Y,Z	Defined in case narrative		

### Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

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Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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Holy Park Seather FS 8747316

SAIC.

LUST

JUL 19 2013 DEPT OF ECOLOGY

July 16, 2013

Mr. Mark Horne Chevron Environmental Management Company 6101 Bollinger Canyon Road San Ramon, California 94583

Subject:

Second Quarter 2013 Groundwater Monitoring and Sampling Report

Former Tidewater Service Station No. 30-3189

7301 Martin Luther King Jr. Way South

Seattle, Washington

Dear Mr. Horne:

SAIC Energy, Environment & Infrastructure, LLC (SAIC), on behalf of Chevron Environmental Management Company (CEMC), prepared this letter summarizing the second quarter 2013 groundwater monitoring and sampling event at the former Tidewater Service Station No. 30-3189 (the site) in Seattle, Washington (Figure 1).

#### FIELD ACTIVITIES

Gettler-Ryan Inc. (Gettler-Ryan) conducted the groundwater monitoring and sampling field event on June 1, 2013. They collected depth-to-groundwater measurements and checked for the presence of separate-phase hydrocarbons (SPH) in three monitoring wells on site. SPH were observed in monitoring well MW-2. Depth-to-water and SPH thickness in monitoring well MW-2 could not be determined. A site map is provided as Figure 2.

Groundwater samples were collected from two of the three monitoring wells. Samples were submitted to Eurofins Lancaster Laboratories, Inc. in Lancaster, Pennsylvania for the following analyses:

- Total petroleum hydrocarbons (TPH) as gasoline-range organics by Northwest Method NWTPH-Gx;
- TPH as diesel-range organics and TPH as heavy oil-range organics by Northwest Method NWTPH-Dx extended with silica-gel cleanup; and
- Benzene, toluene, ethylbenzene, and total xylenes by United States Environmental Protection Agency Method 8021B.

Field data sheets are provided in the Gettler-Ryan groundwater monitoring and sampling data package (Attachment A).

#### RESULTS

Groundwater elevations are consistent with historical data reported at the site. Petroleum-hydrocarbon constituent concentrations are generally consistent with respect to historical data. SPH thickness in monitoring well MW-2 could not be determined due to heavy viscosity. No analytes were detected at concentrations exceeding the laboratory reporting limits in monitoring wells MW-1 and MW-3.

Historical groundwater elevation data, SPH thickness data, and laboratory analytical results are summarized in Table 1. The laboratory analysis report is provided as Attachment B.

Gettler-Ryan will continue to perform groundwater monitoring and sampling on a quarterly basis. If you have any questions or comments, please contact me at (425) 482-3328 or via email at otternan@saic.com.

Sincerely,

SAIC Energy, Environment & Infrastructure, LLC

Ruth Otteman, LC Project Manager

Kinga Kozlowska Environmental Scientist

Enclosures:

Figure 1 – Vicinity Map

Figure 2 – Site Map

Table 1 – Groundwater Monitoring Data and Analytical Results

Attachment A – Groundwater Monitoring and Sampling Data Package

Attachment B - Laboratory Analysis Report

cc: Ms. Donna Musa – Ecology NW Region, Toxics Cleanup Program 3190 160th Avenue SE, Bellevue, WA 98008-5452

Mr. Larry Hard - Seattle Housing Authority

190 Queen Anne Avenue North, P.O Box 19028, Seattle, WA 98109-1028

Project File

#### REPORT LIMITATIONS

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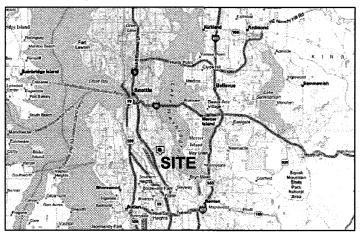
Site history and background information provided in this technical document are based on sources that may include interviews with environmental regulatory agencies and property management personnel and a review of acquired environmental regulatory agency documents and property information obtained from CEMC and others. SAIC has not made, nor has it been asked to make, any independent investigation concerning the accuracy, reliability, or completeness of such information beyond that described in this technical document.

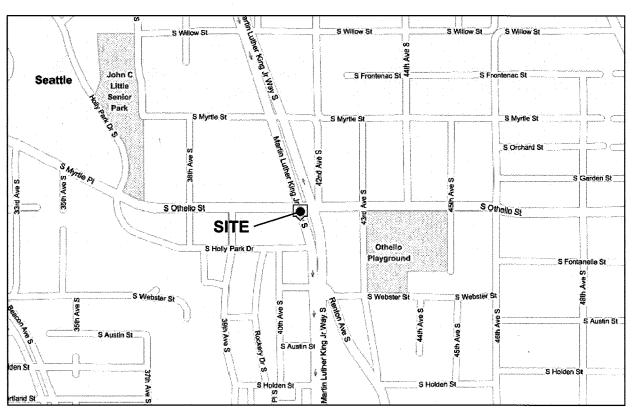
Recognizing reasonable limits of time and cost, this technical document cannot wholly eliminate uncertainty regarding the vertical and lateral extent of impacted environmental media.

Opinions and recommendations presented in this technical document apply only to site conditions and features as they existed at the time of SAIC's site visits or site work and cannot be applied to conditions and features of which SAIC is unaware and has not had the opportunity to evaluate.

All sources of information on which SAIC has relied in making its conclusions (including direct field observations) are identified by reference in this technical document or in appendices attached to this technical document. Any information not listed by reference or in appendices has not been evaluated or relied upon by SAIC in the context of this technical document. The conclusions, therefore, represent our professional opinion based on the identified sources of information.







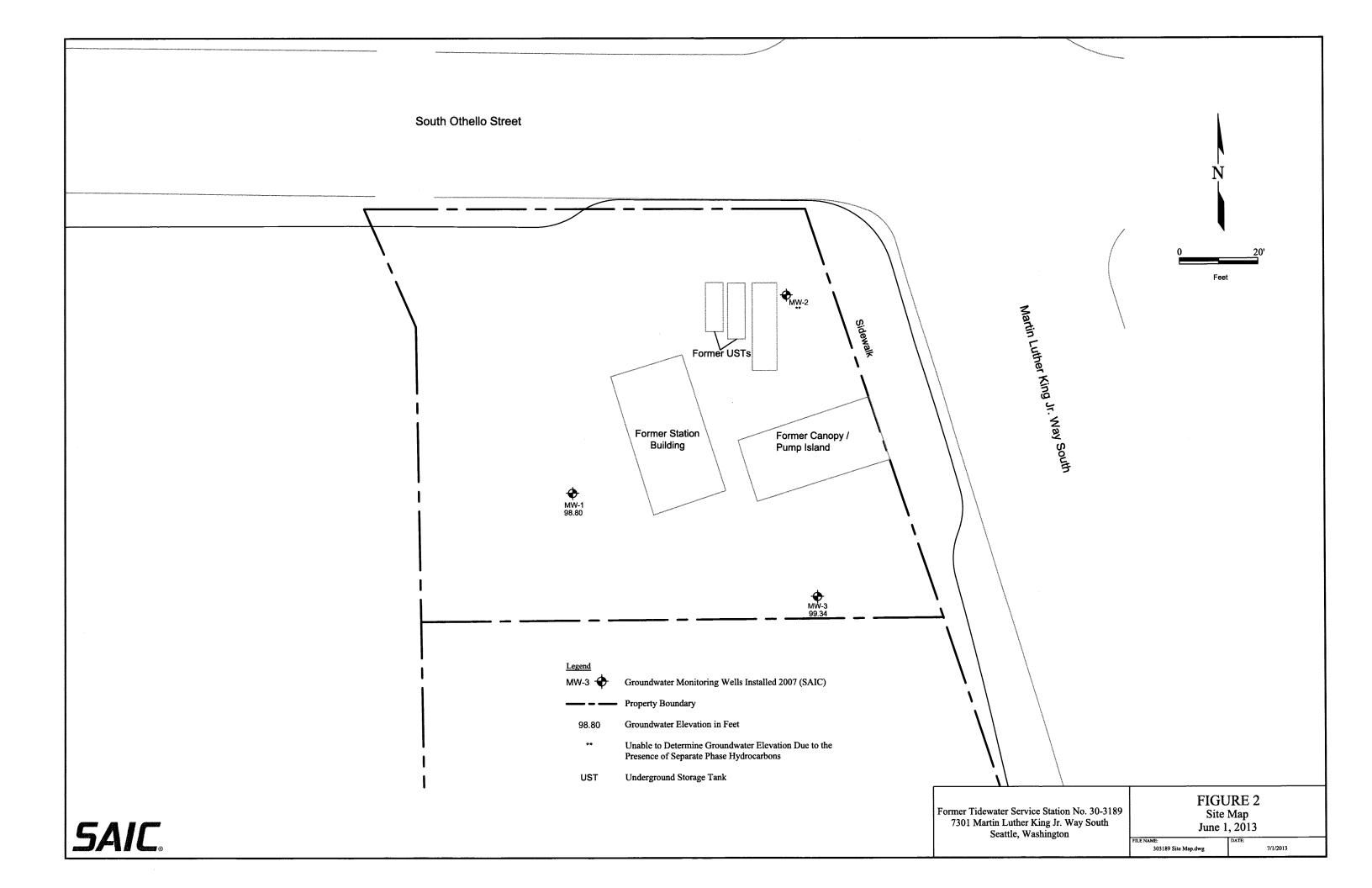
Maps Provided by Seattle.gov



Former Tidewater Service Station No. 30-3189 7301 Martin Luther King Jr. Way South Seattle, Washington FIGURE 1 Vicinity Map

E NAME: 303189_VM.dwg

10/12/2011



### TABLE 1

# GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹ FORMER TIDEWATER SERVICE STATION NO. 30-3189

### 7301 Martin Luther King Jr. Way South

## Seattle, Washington

Concentrations reported in µg/L

Well ID/	D	TOC ²	DTP	DTW	SPHT	GWE ³	Centrations	reported in	µg/L		l ·	Ethyl-	Total		Total
Date	Purge Method			(ft.)	(ft.)	GWE (ft.)	TRU DRA	TPH-HRO	TDU CDA	Benzene	Toluene	benzene	Xylenes	МТВЕ	Lead
MW-1	Method	(ft.)	(ft.)	(11.)	(16.)	(11.)	ורח-טאט	IFH-HKU	IFH-GRO	Denzene	Totalene	Denzene	Hylenes	MIIDE	Loud
08/31/07						==.	930	190	<50	<0.5	<0.5	<0.5	<1.5		0.052
04/24/09	LFP	99.66		2.36		97.30	650	<76	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/12/09	LFP	99.66		4.24		95.42	370	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/14/09	LFP	99.66	<u></u>	1.78		97.88	270 ²	<68 ⁵	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/11/10	LFP	99.66		1.92		97.74	560	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/24/10	LFP	99.66		2.43		97.23	91	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/04/10	LFP	99.66		3.62	<b></b>	96.04	520	<75	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/12/10	LFP	99.66		2.00		97.66	440	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/23/11	LFP	99.66		2.03	<b></b>	97.63	1,000	270	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/06/11	LFP	99.66		2.32		97.34	1,100	210	<50	< 0.5	< 0.5	<0.5	<0.5	<0.5	
08/18/11	LFP	99.66		4.10		95.56	830	210	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/22/11	LFP	99.66		1.88		97.78	<30	<70	<50	< 0.5	<0.5	<0.5	<0.5	<0.5	
02/23/12	LFP	99.66		1.60		98.06	<31	<72	<50	< 0.5	<0.5	<0.5	<0.5	<0.5	
05/25/12	LFP	99.66		1.80		97.86	<30	<69	<50	< 0.5	<0.5	<0.5	<0.5	<0.5	
08/10/12	LFP	100.66	,	4.02		96.64	<30	<69	<50	<0.5	<0.5	<0.5	<1.5		
11/15/12	LFP	100.66		2.18	′ <del></del> -	98.48	120	160	<50	< 0.5	< 0.5	< 0.5	<1.5		
02/14/13	LFP	100.66		1.84		98.82	<29	<68	<50	< 0.5	<0.5	< 0.5	<1.5		
06/01/13	LFP	100.66	* <b></b> .	1.86	<del></del> /	98.80	<29	<67	<50	< 0.5	< 0.5	< 0.5	<1.5		
MW-2															
08/31/07							2,100	1,200	26,000	3,200	190	1,400	3,300		
04/24/09	PER	99.05		7.34		91.71	<b></b> ⁴	4	16,000	4,100	99	1,500	2,000	<3	<del></del>
08/12/09	PER	99.05		8.18		90.87	4	4	27,000	4,000	100	1,300	1,900	<3	
11/14/09	PER	99.05		5.75		93.30	4	<u></u> 4	19,000	2,800	62	950	1,300	<3	1
02/11/10	PER	99.05		6.98		92.07	<b>-</b> -4	4	25,000	3,400	97	1,600	2,200	< 0.5	
05/24/10	PER	99.05		7.42		91.63	4	4	19,000	2,900	88	1,400	2,000	<1	
08/04/10	PER	99.05		7.92		91.13	4	4	16,000	3,800	110	1,700	2,700	<3	
11/12/10	PER	99.05		6.16		92.89	4	4	16,000	1,900	56	660	680	<1	· •-
02/23/11	PER	99.05		6.09		92.96	4	4	12,000	2,800	60	680	780	<3	
05/06/11	PER	99.05		6.98		92.07	4	4	15,000	3,100	72	1,300	1,400	<3	
08/18/11		99.05	8.20	8.30	0.10	90.83	UNABLE TO	O SAMPLE D	UE TO PRES	SENCE OF S	PH		<u></u>		
11/22/11		99.05	UNABLE TO	r'	DTW OR CO	OLLECT SA	MPLE DUE T	O PRESENC	E OF SPH	L					
02/23/12		99.05	1.55	1.90	0.35	97.43	+		OUE TO PRES		<del></del>				
05/25/12		99.05	7.10	7.85	0.75	91.80			UE TO PRES						
08/10/12		99.05	8.14	8.34	0.20	90.87	UNABLE TO	O SAMPLE D	UE TO PRES	SENCE OF S	PH				
11/15/12		99.05	5.92	6.10	0.18	93.09	1		OUE TO PRES		PH		<b></b>		
02/14/13		99.05	7.12				OLLECT SA			·					
06/01/13		99.05	7.06	UNABLE TO	O MEASURE	DTW OR C	OLLECT SAI	MPLE DUE T	O PRESENC	E OF SPH					
MW-3	1					T	<del></del>				<del> </del>			T	
08/31/07							120	<100	<50	<0.5	<0.5	< 0.5	<1.5		0.055
04/24/09	LFP	100.00		2.13		97.87	58	<75	<50	<0.5	<0.5	<0.5	<0.5	<0.5	



### TABLE 1

# GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹ FORMER TIDEWATER SERVICE STATION NO. 30-3189

### 7301 Martin Luther King Jr. Way South

### Seattle, Washington

Concentrations reported in µg/L

Well ID/	D	$TOC^2$	n Th	DTW	SPHT	GWE ³	CHU AUUIS	reported in	µg/L	000000000000000000000000000000000000000	***************************************	Ethyl-	Total		Total
I	Purge	1	DTP		l .		תמת זמת	Tott HOA	TREECDA	Danna	Toluono	benzene	Xylenes	MTBE	Lead
Date	Method	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	IPH-UKU	ТРН-НКО	I PH-GRU	Benzene	Toluene	Delizerie	1 223101103	IVILIDE	Leu
MW-3 (cont) 08/12/09	LFP	100.00		4.47		95.53	620	170	<50	< 0.5	<0.5	<0.5	<0.5	<0.5	1
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~255bb00000_06_01_00	~	se.	1.60		98.40	450	370	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/14/09	LFP LFP	100.00	88	1.59		98.41	160	130	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/11/10	 	100.00					910	310	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/24/10 08/04/10	LFP LFP	100.00		1.83 3.84		98.17 96.16	55	<74	<50	<0.5	<0.5	<0.5	<0.5	<0.5	7-
******************************	LFP	100.00		1.62	==	98.38	67	<71	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/12/10				1.73		98.27	140	<73	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/23/11	LFP	100.00		1.73			160	82	† — — — — — — — — — — — — — — — — — — —	<0.5	<0.5	<0.5	<0.5	<0.5	
05/06/11	LFP LFP	100.00		4.38		98.15 95.62	56	<74	<50 <50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/18/11	LFP	100.00		1.58		93.62 98.42	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/22/11		100.00		1.65		98.35	<33	<77	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/23/12	LFP	100.00	— şa			98.70	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-
05/25/12	LFP	100.00		1.30		96.77	<30	<69	<50	<0.5	<0.5	<0.5	<1.5		
08/10/12	LFP	101.00	==	4.23	==	ļ	75	93	<50	<0.5	<0.5	<0.5	<1.5		
11/15/12	LFP	101.00		1.79		99.21	<29	<67	<50	<0.5	<0.5	<0.5	<1.5		-
02/14/13	LFP	101.00	E	2.17 1.66		98.83	<29	<66	<50	<0.5	<0.5	<0.5	<1.5	7.0	
$\begin{array}{c c} 06/01/13 & \\ \mathbf{B-9}^{7} \end{array}$	LFP	101.00		1.00		99.34	<28	<u> </u>		<0.3	<u> </u>	<u> </u>			
05/01/02							0.660	0.310	32	530	<100	1,600	4,300		*-
B-10 ⁷							0.000	0.310	32	220	<u> </u>	1,000	1 4,500		
05/01/02		Se 80		NI FR	98	==	5.10	< 0.063	26	240	110	240	330		
	ANIZ		••				3.10	1 0.003		210	110	270	1 330		
QA/TRIP BL 04/24/09	AINA		30	••					<50	< 0.5	<0.5	<0.5	<0.5	<0.5	54
08/12/09			99						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/14/09			==						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/11/10									<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/24/10			es	33	==				<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/04/10			es fe						<50	<0.5	<0.5	<0.5	<0.5	<0.5	<u></u>
11/12/10						80			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/23/11		==	e=	==		2-2	-	==	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/06/11			==	==					<50	<0.5	<0.5	<0.5	<0.5	<0.5	75
08/18/11				0.0	==				<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/23/12			==	. *=					<50	<0.5	<0.5	<0.5	<0.5	<0.5	==
05/25/12						~-		7.0	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/10/12					=-				<50	<0.5	<0.5	<0.5	<1.5		
11/15/12							~-	==	<50	<0.5	<0.5	<0.5	<1.5		
02/14/13			er en					40.00	<50	<0.5	<0.5	<0.5	<1.5		
06/01/13									<50	<0.5	<0.5	<0.5	<1.5		96
00.01.10					boratory Repo	orting Limits:	<u> </u>	~-	50	0.5	0.5	0.5	0.5	0.5	
	<u>, , , , , , , , , , , , , , , , , , , </u>		·····		Method A Cle			500	800/1,000	5	1,000	700	1,000	0.5	15
				1711 (11				x + Extended	 		and USEPA	L	J	0.7	USEPA 7421
					Curr	ent Method ⁸ :	IN WITH-D	A T EXICHEG		IN WY I PIN-UX	aliu USEFA	0041D/040UD	,		USERA /421



TABLE 1

GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹ FORMER TIDEWATER SERVICE STATION NO. 30-3189

7301 Martin Luther King Jr. Way South Seattle, Washington

Concentrations reported in µg/L

Δ	h	hı	-01/	12	tin	ns:

BTEX = Benzene, toluene, ethylbenzene, and total xylenes

DTP = Depth to Product

DTW = Depth to Water

(ft.) = Feet

GC/MS = gas chromatography/mas spectrometry

GWE = Groundwater Elevation

LFP = Low Flow Purge

MTBE = Methyl Tertiary Butyl Ether

MTCA = Model Toxics Control Act

ND = Non-detect

PER = Peristaltic Pump

QA = Quality Assurance/Trip Blank

QC = Quality control

SAIC = SAIC Energy, Environment & Infrastructure, LLC

SPH = Separate-phase hydrocarbons

SPHT = SPH Thickness

TOC = Top of Casing

TPH = Total Petroleum Hydrocarbons

TPH-DRO = TPH as diesel-range organics

TPH-GRO = TPH as gasoline-range organics

TPH-HRO = TPH as heavy oil-range organics

USEPA = United States Environmental Protection Agency

 μ g/L = Micrograms per liter

<= The analyte was not detected at or above the reported value

-- = Not Measured/Not Analyzed

Analytical Methods:

After April 24, 2009 and prior to August 10, 2012 BTEX analysis by USEPA Method 8260B.

TPH-GRO by Method NWTPH-Gx.

TPH-DRO and TPH-HRO by Method NWTPH-Dx with silica-gel cleanup.

BTEX and MTBE by USEPA Method 8021B.

Notes:

- 1 Analytical results in bold font indicate concentrations exceed MTCA Method A cleanup levels.
- 2 TOC elevations are expressed in feet relative to an arbitrary datum.
- 3 When SPH is present, GWE has been corrected using the following formula: $GWE = [(TOC DTW) + (SPHT \times 0.80)]$.
- 4 Not sampled due to insufficient water.
- 5 Laboratory report indicates the surrogate data is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract. The TPH-DRO result for the re-extraction is 610 μg/L; the TPH-HRO result for the re-extraction is ND.
- 6 The initial analysis for GCMS volatiles could not be reported due to analytical difficulties. Since only one sample vial was submitted, the analysis was repeated using the remaining sample volume which contained headspace.
- 7 Results for wells B-9 and B-10 were provided by GeoEngineers.
- 8 Laboratory analytical methods for historical data may no be consistent with list of current analytical methods. When necessary, consult original laboratory reports to verify methods used.



Attachment A: Groundwater Monitoring and Sampling Data Package



June 11, 2013 G-R #385862

TO:

Ms. Ruth A. Otteman

SAIC

18912 North Creek Parkway, Suite 101

Bothell, WA 98011

FROM:

Deanna L. Harding

Project Coordinator Gettler-Ryan Inc.

6747 Sierra Court, Suite J

Dublin, California 94568

RE: Chevron Facility

#303189

(Former Tidewater Service Stn.)

7301 MLK Jr. Way South

Seattle, Washington

WE HAVE ENCLOSED THE FOLLOWING:

COPIES

DESCRIPTION

VIA PDF

Groundwater Monitoring and Sampling Data Package Second Ouarter Event of June 1, 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/303189



GETTLER-RYAN INC.

			CHEV/C	ON CIT	E CHECK	'IICT	
			MIII AL		EVITEUN	LIOI	
	Facility#:	Chevron	#303189		Date: 4	2.1.13	
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DRUMS:	Please list b	elow ALL DRU	JMS @ site	e: i.e., drum d	escription, cond	dition, labeling, co	ontents, location
	#	Descri	ption	Condition	Labeling	Contents	Location
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WELLS:	Please chec plug, well loo	L k the condition ck, etc.:	of ALL W	ELLS @ site:	i.e., well box o	ondition, gaskets	, bolts, well
Well ID	Gaskets (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Well Plug Y/N	Well Lock Y/N		I Box /Size/# of Bolts	Other
MW-1	4	6000-		-7	8/1	MORRES 3	Access to the second se
MW-2	<u> </u>	6000			120		
MW-3	L &	6000					
***************************************	analysis of the state of the st				`	Y	
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ditional Com	ments/Obser	vations:					

Standard Operating Procedure, Low-Flow Purging and Sampling

Gettler-Ryan Inc. field personnel adhere to the following Standard Operating Procedure (SOP) for the collection and handling of representative groundwater samples using the Low-Flow (Minimal-Drawdown) Purging technique. This SOP incorporates purging and sampling methods discussed in U.S. EPA, Ground Water Issue, Publication Number EPA/540/S-95/504, April 1996 by Puls, R.W. and M.J. Barcelona - "Low-Flow (Minimal-Drawdown) Ground-Water Sampling Procedures."

A QED Well WizardTM (or equivalent) bladder pump or Peristaltic Pump will be used to purge and sample selected wells as outlined in the scope-of-work. An in-line flow cell or other multi-parameter meter is used to collect water quality indicating parameters during purging.

Initial Pump Discharge Test Procedures

The Static Water Level (SWL) is measured in all wells at the site prior to the installation of the pump or tubing and initiation of the test procedures in any well. In addition, the presence or absence of separate-phase hydrocarbons (SPH) is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot. The SWL measurement and SPH thickness, if any, will be recorded on the field data sheet.

The bladder pump or suction inlet tubing of the peristaltic pump is then positioned with its inlet located within the screened interval of the well. The in-line flow cell is then connected to the discharge tubing. After pump installation, the SWL is allowed to recover to its original level. The pump is then started at a discharge rate between 100 ml to 300 ml per minute with the in-line flow cell connected. The water level is monitored continuously for any change from the original measurement and the discharge rate is adjusted until an optimum discharge rate (ODR) is determined. The goal for the ODR is to produce a stable drawdown of less than 0.1 meter as allowed by site conditions; however the total drawdown from the initial SWL should not exceed 25% of the distance between pump inlet location and the top of the well screen. Once achieved, the ODR will be confirmed by volumetric discharge measurement and recorded on the field data sheet.

Purging and Water Quality Parameter Measurement

When the ODR has been determined and the SWL drawdown has been established within the acceptable range, and a minimum of one pump system volume (bladder volume and/or discharge tubing volume) has been purged, field measurements for temperature (T), pH, conductivity (Ec), and if required, oxygen reduction potential (ORP) and dissolved oxygen (DO) will be collected and documented on the field data sheet. Measurements should be taken every three to five minutes until parameters stabilize for three consecutive readings. The minimum parameter subset of T (\pm 10%), pH (\pm 0.1 unit), and Ec (\pm 10 uS) are required to stabilize. Additional parameters that may be required are DO (\pm 0.2 mg/l) and ORP (\pm 20 mV).

Sample Collection

When water quality parameters have stabilized, and the SWL drawdown remains established within the acceptable range, groundwater sample collection may begin. If used, the in-line flow cell and its tubing are disconnected from the discharge tubing prior to sample collection. Water samples are collected from the discharge tubing into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. 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. 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. 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. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.



WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#	: Chevron #30	13189		Job Number:	385862		
Site Address:	7301 Martin	Luther Ki	ng Jr. Way S	Event Date:	6.1.	13	- (inclusive)
City:	Seattle,WA			Sampler:	1.4	2	_ (
							-
Well ID	MW-)			Date Monitored:	la .	1.13	
Well Diameter	.75 in						-
Total Depth	11.62 ft.		Volum Factor			"= 0.17 3"= 0.38 = 1.50	•
Depth to Water			eck if water colum				
•	9.60	xVF~				olume: -	_ gal.
Depth to Water	w/ 80% Recharge	- ! [(Height of Wa				d:	
						eted:	
Purge Equipment:	:		mpling Equipment:			oduct:	
Disposable Bailer			posable Bailer	,		iter:	ft
Stainless Steel Bail	er		essure Bailer			Thickness:	ft
Stack Pump			tal Filters		Visual Confi	mation/Description	
Suction Pump Grundfos	-		istaltic Pump D Bladder Pump	<u> </u>	Skimmer / A	bsorbant Sock (circ	le one)
Peristaltic Pump			o bladder Pump er:	****		ed from Skimmer:	
QED Bladder Pump	, 	Out			Amt Remove	ed from Well:	gal
Other:					WaterRemo		
					Product Trai	nsferred to:	
Start Time (purg	1e): 0818		Weather Cor	nditions:	SON		
Sample Time/Da	ate: 0860/6		Water Color:	CLEAR	_Odor: Y /N		
Approx. Flow Ra	ate: 0000/0	mlpm	Sediment De	scription:	Odor: Y/N		
•	ate: 0000/0		Sediment De	scription:	_Odor: Y /N		
Approx. Flow Ra	ate: 0000/0	mlpm yes, Time: _	Sediment De	scription:	Odor: Y /N NoNE gal. DTW @ Sa	ampling: <u>3.</u>	Gauge DTW
Approx. Flow Ra Did well de-water	ate: 0000 / 0 ate: 100 / 0 er? 100 / If	mlpm yes, Time: _	Sediment De	scription:	Odor: Y/N		Gauge DTW as parameters
Approx. Flow Ra Did well de-wate	ate: 0000 / 0 ate: 100 / 0 er? 100 If Volume (Liters)	mlpm yes, Time: _	Sediment De — Volur Conductivity (µmhos/cm - µS)	scription:	Odor: Y /N NonE gal. DTW @ Sa D.O. (mg/L)	ORP	Gauge DTW as parameters are recorded
Approx. Flow Ra Did well de-wate	ate: 0000 / 0 ate: 100 / 0 er? 100 If Volume (Liters)	mlpm yes, Time: _	Sediment De Volur Conductivity (\(\pm\) (\(\pm\) \(\pm\) \(\pm\) \(\pm\)	scription:	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
Approx. Flow Ra Did well de-wate	ate: 0000 / 0 ate: 100 / 0 er? 100 If Volume (Liters)	mlpm yes, Time: _ pH	Sediment De — Volur Conductivity (µmhos/cm - µS)	scription:	Odor: Y /N NonE gal. DTW @ Sa D.O. (mg/L)	ORP	Gauge DTW as parameters are recorded
Approx. Flow Ra Did well de-wate	ate: 0000 / 0 ate: 100 / 0 er? 100 If Volume (Liters)	mlpm yes, Time: _ pH	Sediment De Conductivity (pumhos/cm - p3) 366 366	scription:	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded 2.37 2.68
Approx. Flow Ra Did well de-wate	ate: 0000 / 0 ate: 100 / 0 er? 100 If Volume (Liters)	mlpm yes, Time: _ pH (0.76 (0.77 (0.77	Sediment De Volur Conductivity (\(\pm\) + \(\psi\) 366 366 366	Temperature (C) F) 13.B 13.9	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded 2.37
Approx. Flow Ra Did well de-wate Time (2400 hr.) 4934	ate: # # # # # # # # # # # # # # # # # # #	mlpm yes, Time: _ pH 6.76 6.77 6.77	Sediment De Volur Conductivity (\(\pm\) + \(\psi\) + \(\pm\) 366 366 366 ABORATORY IN	Scription: ne: Temperature (C) F) 13.9 13.9 FORMATION	D.O. (mg/L)	ORP (mV) 76.8 76.3 77.4	Gauge DTW as parameters are recorded 2.37
Approx. Flow Ra Did well de-wate Time (2400 hr.) 6936 6939 SAMPLE ID	ate: # CONTAINER	mlpm yes, Time: _ pH (0.76 (0.77 (0.77	Sediment De Volur Conductivity (\(\pm\) + \(\psi\) 366 366 366 366 ABORATORY IN PRESERV. TYPE	Scription: ne: Temperature (C F) 13.9 13.9 13.9 FORMATION LABORATORY	Odor: Y /N NONE gal. DTW @ Sa D.O. (mg/L)	ORP (mV) 76.8 76.3 77.4	Gauge DTW as parameters are recorded 2.37 2.68
Approx. Flow Ra Did well de-wate Time (2400 hr.) 4934	ate: # CONTAINER	mlpm yes, Time: _ pH (0.76 (0.77 (0.77	Sediment De Volur Conductivity (\(\pm\) + \(\psi\) + \(\pm\) 366 366 366 ABORATORY IN	Scription: ne: Temperature (C) F) 13.9 13.9 13.9 FORMATION LABORATORY	Odor: Y /N NONE gal. DTW @ Sa D.O. (mg/L)	ORP (mV) 76.8 76.3 77.4 ANALYSES (8021)	Gauge DTW as parameters are recorded 2.37 2.68
Approx. Flow Ra Did well de-wate Time (2400 hr.) 6936 6939 SAMPLE ID	ate: # CONTAINER (#) CONTAINER x voa vial	pH (0.76 (0.77 (0.77 (0.77 FEFRIG. YES	Sediment De Volur Conductivity (pmhos/cm - p3) 366 366 366 ABORATORY IN PRESERV. TYPE HCL	scription: ne: Temperature (C F) 13.9 13.9 13.9 FORMATION LABORATORY LANCASTER	Odor: Y /N NONE gal. DTW @ Sa D.O. (mg/L)	ORP (mV) 76.8 76.3 77.4 ANALYSES (8021)	Gauge DTW as parameters are recorded 2.37 2.68
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Approx. Flow Ra Did well de-wate Time (2400 hr.) 6936 6939 SAMPLE ID	ate: # CONTAINER (#) CONTAINER x voa vial	pH (0.76 (0.77 (0.77 (0.77 FEFRIG. YES	Sediment De Volur Conductivity (pmhos/cm - p3) 366 366 366 ABORATORY IN PRESERV. TYPE HCL	scription: ne: Temperature (C F) 13.9 13.9 13.9 FORMATION LABORATORY LANCASTER	Odor: Y /N NONE gal. DTW @ Sa D.O. (mg/L)	ORP (mV) 76.8 76.3 77.4 ANALYSES (8021)	Gauge DTW as parameters are recorded 2.37 2.68
Approx. Flow Ra Did well de-wate Time (2400 hr.) 6936 6939 SAMPLE ID	ate: # CONTAINER (#) CONTAINER x voa vial	pH (0.76 (0.77 (0.77 (0.77 FEFRIG. YES	Sediment De Volur Conductivity (pmhos/cm - p3) 366 366 366 ABORATORY IN PRESERV. TYPE HCL	scription: ne: Temperature (C F) 13.9 13.9 13.9 FORMATION LABORATORY LANCASTER	Odor: Y /N NONE gal. DTW @ Sa D.O. (mg/L)	ORP (mV) 76.8 76.3 77.4 ANALYSES (8021)	Gauge DTW as parameters are recorded 2.37 2.68
Approx. Flow Ra Did well de-wate Time (2400 hr.) 6936 6939 WOULD SAMPLE ID MW-\	ate: posso / gate: posso / gat	pH (0.76) (0.77) (0.77) (0.77) REFRIG. YES YES	Sediment De Volur Conductivity (pmhos/cm - p3) . 366 . 366 . 366 ABORATORY IN PRESERV. TYPE HCL HCL	scription: ne: Temperature (C) F) 13.9 13.9 13.9 FORMATION LABORATORY LANCASTER LANCASTER	Odor: Y /N NONE gal. DTW @ Sa D.O. (mg/L)	ORP (mV) 76.8 76.3 77.4 ANALYSES (8021)	Gauge DTW as parameters are recorded 2.37 2.68
Approx. Flow Ra Did well de-wate Time (2400 hr.) \$36 \$39 \$39 \$39 \$39 \$39 \$39 \$39 \$39 \$39 \$39	ate: polso / Gate: No If Volume (Liters) 1.8 2.1 2.1 2x 1 liter ambers Depth Pump S	pH (0.76) (0.77) (0.77) (0.77) REFRIG. YES YES	Sediment De Volur Conductivity (pmhos/cm - p3) . 366 . 366 . 366 ABORATORY IN PRESERV. TYPE HCL HCL	scription: ne: Temperature (C F) 13.9 13.9 13.9 FORMATION LABORATORY LANCASTER	Odor: Y /N NONE gal. DTW @ Sa D.O. (mg/L)	ORP (mV) 76.8 76.3 77.4 ANALYSES (8021)	Gauge DTW as parameters are recorded 2.37 2.68
Approx. Flow Ra Did well de-wate Time (2400 hr.) \$36 \$39 \$39 \$39 \$39 \$39 \$39 \$39 \$39 \$39 \$39	ate: posso / gate: posso / gat	pH (0.76) (0.77) (0.77) (0.77) REFRIG. YES YES	Sediment De Volur Conductivity (pmhos/cm - p3) . 366 . 366 . 366 ABORATORY IN PRESERV. TYPE HCL HCL	scription: ne: Temperature (C) F) 13.9 13.9 13.9 FORMATION LABORATORY LANCASTER LANCASTER	Odor: Y /N NONE gal. DTW @ Sa D.O. (mg/L)	ORP (mV) 76.8 76.3 77.4 ANALYSES (8021)	Gauge DTW as parameters are recorded 2.37 2.68
Approx. Flow Ra Did well de-wate Time (2400 hr.) \$36 \$39 \$39 \$39 \$39 \$39 \$39 \$39 \$39 \$39 \$39	ate: polso / Gate: No If Volume (Liters) 1.8 2.1 2.1 2x 1 liter ambers Depth Pump S	pH (0.76) (0.77) (0.77) (0.77) REFRIG. YES YES	Sediment De Volur Conductivity (pmhos/cm - p3) . 366 . 366 . 366 ABORATORY IN PRESERV. TYPE HCL HCL	scription: ne: Temperature (C) F) 13.9 13.9 13.9 FORMATION LABORATORY LANCASTER LANCASTER	Odor: Y /N NONE gal. DTW @ Sa D.O. (mg/L)	ORP (mV) 76.8 76.3 77.4 ANALYSES (8021)	Gauge DTW as parameters are recorded 2.37 2.68



WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#:	Unevron #3	UJIBB		Job Number:	385862	
Site Address:	7301 Martin	Luther	King Jr. Way S	Event Date:	6.1.13	(inclusive)
City:	Seattle,WA			Sampler:	.1.0	TOTAL PROPERTY OF THE PROPERTY
	ana a	7777				
Well ID	<u> </u>	200		Date Monitored:	6.1.13	
Well Diameter	. 75 ir	ì. 	Volum	ne (3/4"= 0.0	2 1"= 0.04 2"= 0.17	3"= 0.38
Total Depth	9.60 ft			r (VF) 4 = 0.6		12"= 5.80
Depth to Water	<u> </u>	. 🔲	Check if water colum	nn is less then 0.5	60 ft.	
	§	_xVF	Migration out Distinguish	x3 case volume :	= Estimated Purge Volume:	gal.
Depth to Water	w/ 80% Recharge	(Height of	f Water Column x 0.20)	+ DTWJ:	Time Started:	CARL CHARACTER CO. C.
						(2400 hrs)
Purge Equipment:			Sampling Equipment:		Depth to Product:	7.000 n
Disposable Bailer			Disposable Baller		Depth to Water:	
Stainless Steel Baile	er		Pressure Bailer		Hydrocarbon Thicknes	
Stack Pump Suction Pump	-		Metal Filters	9-0	Visual Confirmation/De	
Grundfos /			Peristaltic Pump QEQ Sladder Pump	***************************************	Okimmer / Absorbant (· SWORE
Peristaltic Pump	*******		Other:	C000pm:000000000000000000000000000000000	Amt Removed from Sk	immer: ual
QED Bladder Pump			Miligi.		Amt Removed from W	
Other:					Water Removed:	
	-				Preduct Transferred to	
Start Time (purge	e).		Weather Co	nditions:		
Sample Time/Da	WENT COURSE TO SERVICE THE SER		Water Color:	COMMON CO	Odor: Y / N	2000 mary and the second of th
Approx. Flow Ra	ito:	mipm	Sediment De	THE PROPERTY OF THE PROPERTY O		
Did well de-water	Was a second sec	. '				100 Table 1
DIG NOT GO WATE	"	yes, inne	a volui	ne:	gal. DTW @ Sampling:	
Time	Volume	pH	Conductivity	Temperature	D.O. OI	RP Gauge DTW
(2400 hr.)	(Liters)	μn	(µmhes/cm - µS)	(C/F)		as parameters are recorded
						are recorded

	40,000,000,000,000,000,000,000,000,000,		6940			
	,					
SAMPLE!D	(a) container	and the last the state of the	LABORATORY IN			
MW-	(#) CONTAINER x voa viail	REFRIG. YES	PRESERV. TYPE	LABORATORY	ANALYS	E\$
1510.5	x 1 liter ambers	YES	HCL HCL	The second secon	NWTPH-Gx/BTEX(8021) NWTPH-Dx w/sqc	***************************************
	X 1 71.00.10	120	TIOE .	LANCASTER	INVVIPTI-UX WISGC	
		War and the second seco				
COMMENTS:	Depth Pump S	et At: ,	J. DIFFU	ian ban	WHERE	LEVEL
ale to	-	ADV	· /	1	THE WAR THE STREET	
	aced Gaskex	- 4 +				· ·
8		# p =				
vanvehiacea r	.ock:	Add	/Replaced Plug:		Add/Replaced Bolt:	2007 interior in the contract of the contract



WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#:	Chevron #30318	9	Job Number:	385862		
Site Address:	7301 Martin Lutl	ner King Jr. Way	Event Date:	6.1.	13	- (inclusive)
City	Seattle,WA		Sampler:	7.		
Well ID	MW-3	:	Date Monitored:	6.1	.13	
Well Diameter	75 in.	Volu	ime (3/4"= 0.02		0.17 3"= 0.38	<u>-</u>
Total Depth	9.49 ft.		for (VF) 4"= 0.66		1.50 12"= 5.80	
Depth to Water	1.60 ft.	Check if water colu	mn is less then 0.50	ft.	· · · · · · · · · · · · · · · · · · ·	
	6.65 xVF		_ x3 case volume = 1	Estimated Purge Volu	ıme:	_ gal.
Depth to Water	w/ 80% Recharge [(Hei				The second secon	(2400 hrs)
		<u> </u>	,	Time Complete	ed:	(2400 hrs)
Purge Equipment:		Sampling Equipmen	t:	Depth to Produ	uct:	ft
Disposable Bailer Stainless Steel Baile		Disposable Bailer	· · · · · · · · · · · · · · · · · · ·	Depth to Wate		ft
Stack Pump	· -	Pressure Bailer Metal Filters		1	hickness:	ft
Suction Pump		Peristaltic Pump	<u>X</u>	Visual Confirm	ation/Description	
Grundfos		QED Bladder Pump	X	Skimmer / Abs	orbant Sock (circ	le one)
Peristaltic Pump		Other:		Amt Removed	from Skimmer:	gal
QED Bladder Pump					from Well:	gal
Other:				Water Remove Product Transf		
				Literation in the second		
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-water	te: 100 mlpr	n Sediment [Pescription:	SON Odor: Y I(N) Source Pal. DTW @ San	npling: 2.	83
		Conductivity	:			Gauge DTW
Time (2400 hr.)	Volume (Liters)	Conductivity (umhos/cm - uS)	Temperature C / F)	D.O. (mg/L)	ORP (mV)	as parameters
	(257)	ημπιουσιπ - μο)		1		are recorded
093 <u>4</u> 8937.		<u> </u>	13.5	$-\mathcal{P}_{\perp}$	-a6.3	2.11
may b	111 66	202	17.9	<u> </u>	- 90.95	2.46
<u> </u>		· · · · ·	<u> </u>	$-\varphi$	-96.6	2.65
			•			
		LABORATORY	NFORMATION			
SAMPLE ID		RIG. PRESERV. TYPE	LABORATORY	A	NALYSES	
MW-5	X voa viai Y	ES HCL ES HCL		NWTPH-Gx/BTEX(8)	021)	
	Z Tiller ambers T	ES HCL	LANCASTER	NWTPH-Dx w/sgc		
L	<u>l</u>					
COMMENTS:	Depth Pump Set A	t: 16-	7			
<u>Peplai</u>	Ced Gasket					
Add/Replaced L	_ock:	Add/Replaced Plug:		Add/Replaced B	olt:	

Chevron Northwest Region Analysis Request/Chain of Custody

器 eurofins	Lancaster Laboratories	i de la Propiesión de la Companya d La Companya de la Companya de	A	oct.#	4600		Marian and the second s	_ Grou	⊔p#	Eurofina tions on r			Sa	rnple	#			MITTI WATER A STATE OF THE STAT				THE STATE OF THE S		•
<u>1) - Seadoriad du</u>	Client Informatio)n	******************	SOCIOCOSCIC		(4)	Matrix	Manusian K	ľ	(5)	**************************************	(2888 1988)	A	nalys	3 e s	Req	uest	ed	********	POSITION OF	NAME OF TAXABLE PARTY.	SCR#:		
Facility # 7301 Martin Luti	her King Jr. Way So	was outh, SE/	ATTLE, \	NA.											a mescu irigad			en sommen		KINIKKILIK		30n#:		
Site Address MHO	SAICRO	EN READ PROPERTY AND ASSESSMENT OF THE PARTY ASSESSMENT OF THE PAR	Ruth (Otter	nan				200000000000000000000000000000000000000	. 81					from stock							☐ Results in D		
water and the second se	c., 6747 Sierra Cour	Lead Const n, Suite .	ultant	MORRISH MORRISH WILL	INTERNACIONAL PA	Sediffient	Ground			□ Naphth				Ø			Method					☐ J value repo ☐ Must meet l limits possit	owest det	tection
	ing, (deanne@grinc	:.com), (§	925) 551	-755	5	Sec	තු හි	h l	Containers	3 0928				Gel Cleanup	ee) Olea							compounds		
Consultant Project Mgr. (425) 482-3328	X	US SECRETARIS SERVENTIALIS DE MODIFICIO MANA	President and President and State of St	Marie Charles (Carlot)	***************************************				3 E	风滤	1	ges			lica Ge	田田田	Diss.					Confirm MT	BE + Nap	hthalene
Consultant Phone #	adamiento del mentro, dello i en como di transporto por la gir que esta frenches de comerca deser esta en esta	THE COMMENSATION OF THE PROPERTY.	MERNICAL COMMENSATION	igolismospedetara ne e	Bennessen		Potable NPDES	Air	ঁ	8		Oxygenates		Silica	out Si	WA	П					Confirm high	hits by 821	60
Sampler	J: Pav	AVE	***************************************	3	osite				Number	+MTBE	scan	ŏ	-Ġ×	NWTPH-Dx with Silica	WWTPH-Dx without Silica Gel Cleanup	П	Total					☐ Run		
② Sample Identification			ected Time	Grab	Composite	Soil	Water	Ī	77	ВТЕХ +	8260 full scan		NWTPH-Gx	NWTPH	HULL	WA VPH	ead					(6) Re	marks	***************************************
Annex control		6.1177	т фотоворие систему при надага пред	X			X	Maria in	1	X			X		MATERIAL ELECTRIC			en e		constant		Please forward		CHRIST AND
THE STATE OF THE S	MW 2		0990	<u> </u>			<u> </u>	+	12	-			Y	1	MWWATEN IN SEC.	********	- mar mone	w.Niv.Gooden.e		пиналичения		directly to the I		
select grichte Britische William in der Steine werde der Steine S		Marion Marion Annocation		1			X	1	Ľ	Ľ				1	*****		***************************************	***********	*******					
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NOONET TOTAL PRESENTATION OF THE PROPERTY NOTICE AND A STREET AND A ST	NOTIONATION DECEMBER AND	Particular Association of Control Control	HE ME CONTO DE LA CONTRACTICA CONT				Martin agus en	-				****			KV BINGI SERI			**********	*********	Constrainment	H			
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7) Turnaround Time R Standard		se circle) 4 day			quished	Ĵ	4	<i>)</i>		Date	6 5 4-	3	Time 1 <i>7 f</i>	bØ		Recei	ved by					Date	Tim	¹⁹ (9
72 hour	48 hour	24 hogg	F/EDD	Relind	quished	by	7			Date			Time	Manusconness of the second	A COLOR OF THE COL	Recei	ved by	Garage Marie Marie a	······································	HIPATRICAL SERVICE	**************************************	Date	Tim	. J.C.
8) Data Package (circle	if required) EDD	(circle if re	guired)	8			Commerc			-dimension	With the second	MANAGE COMME	CHARLES CONTRACTOR	(Marganajara		Recei	red by		or electrical designations	erisentensaturais	electrological (b)	Date	Tim	10
Type I - Full	CVX-F	RTBU-FI_05	(default)		IPS_	-	enamenta recommenda estados	edE		Mariement and Control		ner _		Martin Ma		KKREWS: NW	Month page to the latest		likk killi ngayeyny	watermater	NAMES AND ADDRESS OF THE PARTY	CHANGE SERVICE CONTRACTOR OF THE SERVICE CON		mananina camanasia i Mili Mahasa magagayay
Type VI (Raw Data)	Other	r:			Te	mpe	erature l	Jpor	ı Rec	ceipt	The second second		0	C O		Cu	istod	ly Se	als l	ntac	:t?	Yes		No

Attachment B: Laboratory Analysis Report 2425 New Holland Pike, Lancaster, PA 17601 - 717-656-2300 - Fax: 717-656-2681 - www.LancasterLabs.com

ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17601 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

June 19, 2013

Project: 303189

Submittal Date: 06/06/2013 Group Number: 1395172 PO Number: 0015119898 Release Number: HORNE State of Sample Origin: WA

Client Sample Description

Lancaster Labs (LLI) #

QA Water MW-1 Grab Water MW-3 Grab Water 7083887 7083888 7083889

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC

SAIC c/o Gettler-Ryan

Attn: Rachelle Munoz

COPY TO

ELECTRONIC

SAIC

Attn: Jamalyn Green

COPY TO

ELECTRONIC SAIC

Attn: Ruth Otteman

COPY TO

Respectfully Submitted,

Jill M. Parker Senior Specialist

(717) 556-7262

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: QA Water

LLI Sample # WW 7083887

Facility# 303189

Job# 385862 LLI Group # 1395172

7301 Martin Luther King Jr Way South - Seattle, WA

Account

11260

Project Name: 303189

Collected: 06/01/2013

Chevron

6001 Bollinger Canyon Road

L4310

Submitted: 06/06/2013 09:20 Reported: 06/19/2013 12:51

San Ramon CA 94583

MLKQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602 NWTPH-Gx	ug/l	ug/l	
08274	NWTPH-Gx water C7-C1	n.a.	N.D.	50	1
GC Vo	latiles	SW-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Toluene	108-88-3	N.D.	0.5	1
02102	Total Xylenes	1330-20-7	N.D.	1.5	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-	1	13162A53A	06/11/2013 16:24	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	13162A53A	06/11/2013 16:24	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13162A53A	06/11/2013 16:24	Catherine J	1



Analysis Report

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Sample Description: MW-1 Grab Water

LLI Sample # WW 7083888

Facility# 303189 Job# 385862

LLI Group # 1395172

7301 Martin Luther King Jr Way South - Seattle, WA

Account # 11260

Project Name: 303189

Collected: 06/01/2013 08:50

Submitted: 06/06/2013 09:20

Reported: 06/19/2013 12:51

by JP

Chevron

6001 Bollinger Canyon Road

L4310

San Ramon CA 94583

MLK01

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-60	NWTPH-Gx	ug/l	ug/l	
08274	NWTPH-Gx water C7-C	12	n.a.	N.D.	50	1
GC Vo	latiles	SW-846 80	21B	ug/l	ug/l	
02102	Benzene		71-43-2	N.D.	0.5	. 1
02102	Ethylbenzene		100-41-4	N.D.	0.5	1
02102	Toluene		108-88-3	N.D.	0.5	1
02102	Total Xylenes		1330-20-7	N.D.	1.5	1
		ECY 97-602 modified	NWTPH-Dx	ug/l	ug/l	
12005	DRO C12-C24 w/Si Ge	1	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Ge reverse surrogate, ca	1	n.a.	N.D.	67	ī

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-	1	13162A53A	06/12/2013	00:52	Marie D John	1
02102	Method 8021 Water Master	SW-846 8021B	1	13162A53A	06/12/2013	00:52	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	13162A53A	06/12/2013	00:52	Marie D John	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	131620006A	06/18/2013	22:50	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	131620006A	06/11/2013	15:50	Seth A Farrier	1



Analysis Report

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Sample Description: MW-3 Grab Water

Job# 385862 Facility# 303189

LLI Sample # WW 7083889 LLI Group # 1395172

7301 Martin Luther King Jr Way South - Seattle, WA

Account

11260

Project Name: 303189

Collected: 06/01/2013 09:46

Submitted: 06/06/2013 09:20

Reported: 06/19/2013 12:51

by JP

6001 Bollinger Canyon Road

L4310

San Ramon CA 94583

MLK03

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602	NWTPH-Gx	ug/l	ug/l	
08274	NWTPH-Gx water C7-	C12	n.a.	N.D.	50	1
GC Vo	latiles	SW-846 802	21B	ug/l	ug/l	
02102	Benzene		71-43-2	N.D.	0.5	1
02102	Ethylbenzene		100-41-4	N.D.	0.5	1
02102	Toluene		108-88-3	N.D.	0.5	1
02102	Total Xylenes		1330-20-7	N.D.	1.5	1
GC Pe	troleum	ECY 97-602	NWTPH-Dx	ug/l	ug/l	
Hydro	carbons w/Si	modified				
12005	DRO C12-C24 w/Si G	el	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si G	el	n.a.	N.D.	66	1
The	reverse surrogate,	capric acid, i	s present at 1	e .		

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

			•					
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tir	ne	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	13163A53A	06/13/2013	16:12	Marie D John	1
02102	Method 8021 Water Master	SW-846 8021B	1	13163A53A	06/13/2013	16:12	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	13163A53A	06/13/2013	16:12	Marie D John	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	131620006A	06/18/2013	23:15	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	131620006A	06/11/2013	15:50	Seth A Farrier	1



Analysis Report

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Quality Control Summary

Client Name: Chevron

Group Number: 1395172

Reported: 06/19/13 at 12:51 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>MDL</u>	Report <u>Units</u>	LCS %REC	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD Max
Batch number: 13162A53A	Sample numbe	er(s): 708	3887-7083	888				
Benzene	N.D.	0.5	ug/l	110	112	80-120	1	30
Ethylbenzene	N.D.	0.5	ug/l	113	113	80-120	0	30
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	101	102	75-135	1	30
Toluene	N.D.	0.5	ug/l	113	114	80-120	1	30
Total Xylenes	N.D.	1.5	ug/l	116	117	80-120	0	30
Batch number: 13163A53A	Sample numbe	er(s): 708	3889					
Benzene	N.D.	0.5	ug/l	110	110	80-120	1	30
Ethylbenzene	N.D.	0.5	ug/l	113	111	80-120	2	30
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	97	98	75-135	1	30
Toluene	N.D.	0.5	ug/l	112	112	80-120	0	30
Total Xylenes	N.D.	1.5	ug/l	116	114	80-120	1	30
Batch number: 131620006A	Sample numbe	er(s): 708	3888-7083	889				
DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	N.D. N.D.	30. 70.	ug/l ug/l	67	62	32-117	8	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Method 8021 Water Master

Batch number: 13162A53A

	Trifluorotoluene-P	Trifluorotoluene-F	
7083887	91	85	
7083888	91	86	
Blank	90	85	
LCS	89	98	
LCS LCSD	90	100	
Limits:	51-120	63-135	

Analysis Name: Method 8021 Water Master

Batch number: 13163A53A

Trifluorotoluene-P Trifluorotoluene-F

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOO.
- (2) The unspiked result was more than four times the spike added.

Analysis Report

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Quality Control Summary

Client Name: Chevron

Group Number: 1395172

Reported: 06/19/13 at 12:51 PM

Surrogate Quality Control

7083889	90	86					
Blank	90	86					
LCS	90	100					
LCSD	90	101					
Limits:	51-120	63-135			 	 	
Analysis Batch nur	Name: NWTPH-I nber: 13162000 Orthoterphenyl	Ox water w/ 10g Si 0 06A	Gel				
Batch num	nber: 13162000 Orthoterphenyl	Ox water w/ 10g Si 0 06A	Gel				
7083888	Orthoterphenyl	Ox water w/ 10g Si 0	Gel	·			
Batch nur 7083888 7083889	nber: 13162000 Orthoterphenyl	Ox water w/ 10g Si 0	Gel			· · · · · · · · · · · · · · · · · · ·	
7083888	Orthoterphenyl	Ox water w/ 10g Si 0	Gel			· · · · · · · · · · · · · · · · · · ·	
Batch nur 7083888 7083889	nber: 13162000 Orthoterphenyl 73 84	Ox water w/ 10g Si 0	Gel			 	

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody

र्इंड eurotins	Lancaster Laboratories		Ac	ct. # _	119	6	2	_ Gr	For soup #	tions on	s Lan 5 reverse	side con	Labo Sa respon	ratorio imple d with c	# ircled n	e OR	38	887	-8	9				
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7301 Martin Luttl Site Address MHQ Chevron PM Gettler-Ryan, Inconsultant/Office Deanna L. Hard Consultant Project Mgr. (425) 482-3328 Consultant Phone # Sampler 2 Sample Identification	SAICRO SAICRO C., 6747 Sierra Co ing, (deanna@grir X	Lead Consum, Suite Coll Date 6.13	Ruth (ultant) J. Dublin 925) 551 ected Time	Otten	9456	Soil Sediment	Water Potable Cound C	NPDES Surface	Ar Total	208 381W X X X X	8260 mil scan	Oxygenates	L K NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH C WA EPH C	Diss. ☐ Method					Results in Dry 1 J value reportir Must meet low limits possible compounds 8021 MTBE Co Confirm MTBE Confirm all hits Run ON Run Please forward th directly to the Lea	ng needed est detection for 8260 enfirmation + Naphthale it hit by 8260 by 8260 by's on highe by's on all hits arks le lab result 3-R.	ene st hit s
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mĹ	milliliter(s)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
	• •	pg/L	picogram/liter

- less than The number following the sign is the <u>limit of quantitation</u>, the smallest amount of analyte which can be reliably determined using this specific test.
- > greater than
- J estimated value The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).
- ppm parts per million One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

Inorganic Qualifiers

- ppb parts per billion
- Dry weight basis

 Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Orga	anic	Qual	lific	ers

			•
Α	TIC is a possible aldol-condensation product	В	Value is <crdl, but="" th="" ≥idl<=""></crdl,>
В	Analyte was also detected in the blank	Ε	Estimated due to interference
С	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
Ε	Concentration exceeds the calibration range of	S	Method of standard additions (MSA) used
	the instrument		for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
Р	Concentration difference between primary and	W	Post digestion spike out of control limits
	confirmation columns >25%	*	Duplicate analysis not within control limits
U	Compound was not detected	+	Correlation coefficient for MSA < 0.995
X,Y,Z	Defined in case narrative		

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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