Holly Park Seattle
FS ID 87473116

SAIC

May 23, 2013

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

Subject: **First 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 first 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 February 14, 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 (TPH-GRO) by Northwest Method NWTPH-Gx;
- TPH as diesel-range organics (TPH-DRO) and TPH as heavy oil-range organics (TPH-HRO) by Northwest Method NWTPH-Dx extended with silica-gel cleanup; and
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by United States Environmental Protection Agency Method 8021B.

SAIC Energy, Environment & Infrastructure, LLC
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REPORT LIMITATIONS

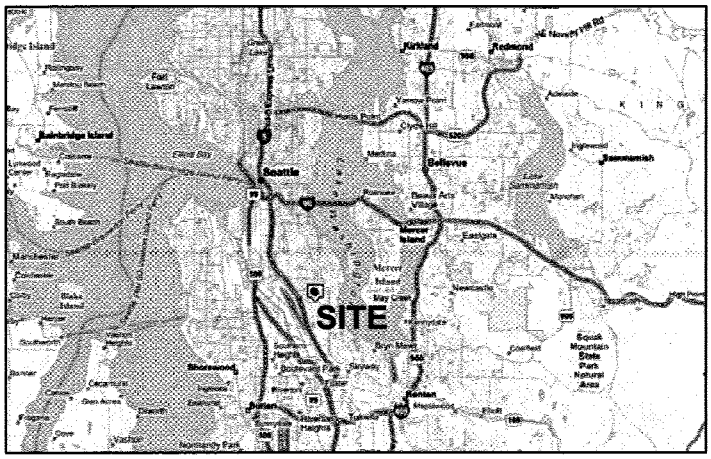
This technical document was prepared on behalf of Chevron and is intended for its sole use and for use by the local, state or federal regulatory agency that the technical document was sent to by SAIC. Any other person or entity obtaining, using, or relying on this technical document hereby acknowledges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

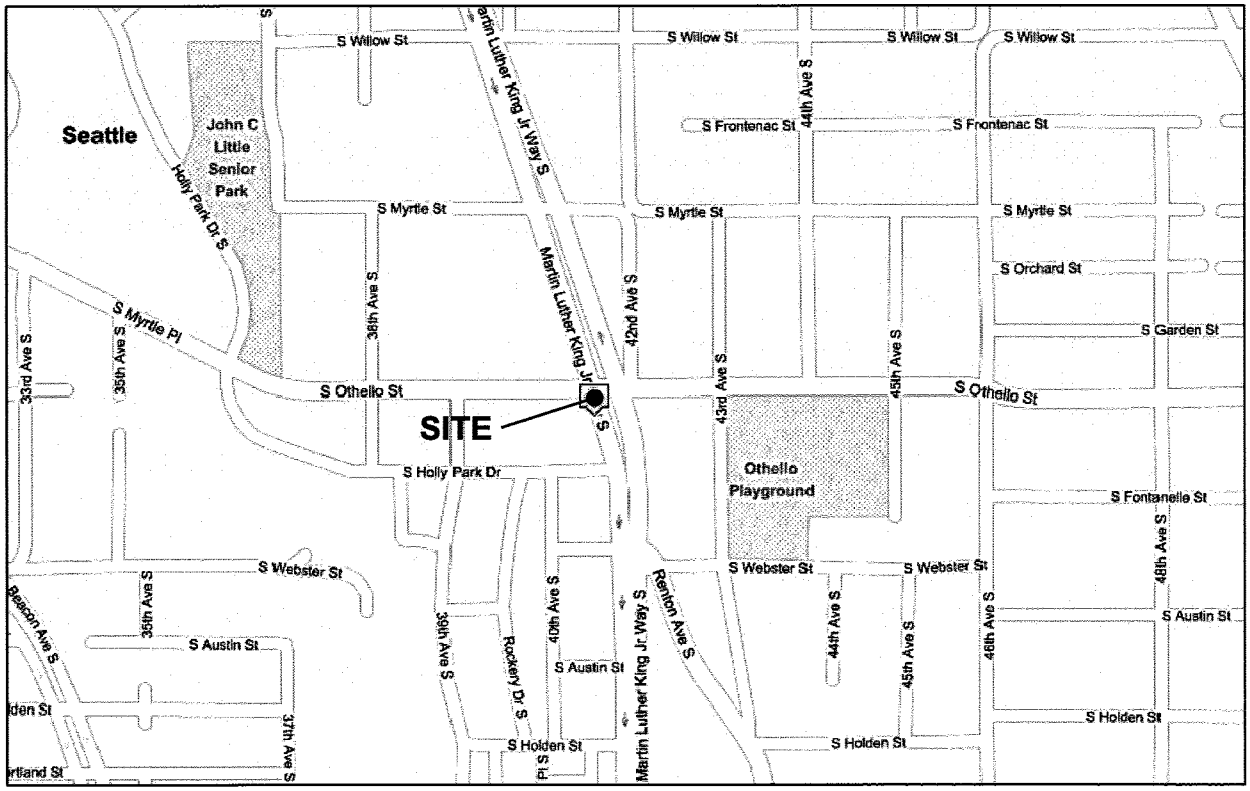
Site history and background information provided in this technical document are based on sources that may include interviews with environmental regulatory agencies and property management personnel and a review of acquired environmental regulatory agency documents and property information obtained from CEMC and others. 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

SAIC

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	10/12/2011

South Othello Street

N

0 20'

Feet

MW-2
**

B-9

Former USTs

Sidewalk

Martin Luther King Jr. Way South

Former Station Building

Former Canopy / Pump Island

MW-1
98.82

B-10

MW-3
98.83

Legend

MW-3	Groundwater Monitoring Wells Installed 2007 (SAIC)
SB-10	Geoprobe Boring Installed 2002 (GeoEngineers)
———	Property Boundary
98.82	Groundwater Elevation in Feet
**	Unable to Determine Groundwater Elevation Due to the Presence of Separate Phase Hydrocarbons

SAIC

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

FIGURE 2
Site Map
February 14, 2013

FILE NAME: 303189 Site Map.dwg

DATE: 3/11/2013

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
FORMER TIDEWATER SERVICE STATION NO. 30-3189
7301 Martin Luther King Jr. Way South
Seattle, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	SPHT (ft.)	GWE[3] (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	Total 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	--	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]	<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	--	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	--	--
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	--[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		99.05	8.20	8.30	0.10	90.83	UNABLE TO SAMPLE DUE TO PRESENCE OF SPH					--	--	--	--
11/22/11		99.05	UNABLE TO MEASURE DTW OR COLLECT SAMPLE DUE TO PRESENCE OF SPH								--	--	--	--	--
02/23/12		99.05	1.55	1.90	0.35	97.43	UNABLE TO SAMPLE DUE TO PRESENCE OF SPH					--	--	--	--
05/25/12		99.05	7.10	7.85	0.75	91.80	UNABLE TO SAMPLE DUE TO PRESENCE OF SPH					--	--	--	--
08/10/12		99.05	8.14	8.34	0.20	90.87	UNABLE TO SAMPLE DUE TO PRESENCE OF SPH					--	--	--	--
11/15/12		99.05	5.92	6.10	0.18	93.09	UNABLE TO SAMPLE DUE TO PRESENCE OF SPH					--	--	--	--
02/14/13		99.05	7.12	UNABLE TO MEASURE DTW OR COLLECT SAMPLE DUE TO PRESENCE OF SPH								--	--	--	--
MW-3															
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	--
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	--	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	--

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TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
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 = 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
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.

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 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

GETTLER-RYAN INC.

TRANSMITTAL

February 27, 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 **First Quarter Event of February 14, 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.

CHEVRON - SITE CHECK LIST

Facility#:	Chevron #303189 Date: 2.14.13
Address:	7301 Martin Luther King Jr. Way South
City/St.:	Seattle,WA
Status of Site:	VACANT LOT

DRUMS: Please list below ALL DRUMS @ site: i.e., drum description, condition, labeling, contents, location of drum:

#	Description	Condition	Labeling	Contents	Location
	NO DRUMS				

WELLS: Please check the condition of ALL WELLS @ site: i.e., well box condition, gaskets, bolts, well plug, well lock, etc.:

Well ID	Gaskets (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Well Plug Y / N	Well Lock Y / N	Well Box Manufacturer/Size/# of Bolts	Other
MW-1	R	OOOO	[illegible]	[illegible]	8" MORRIS x3	RETAP
MW-2	R	OOOO	[illegible]	[illegible]	8" MORRIS x3	↓
MW-3	R	OOOO	[illegible]	[illegible]	8" MORRIS x3	↓
			PVC CAPS	NO LOCKS REQ'D		

Additional Comments/Observations:

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 (± 10%), pH (± 0.1 unit), and Ec (± 10 uS) are required to stabilize. Additional parameters that may be required are DO (± 0.2 mg/l) and ORP (± 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.

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #303189 Job Number: 385862
Site Address: 7301 Martin Luther King Jr. Way S Event Date: 1.14.13 (inclusive)
City: Seattle,WA Sampler: J.P

Well ID MW-1 Date Monitored: 1.14.13
Well Diameter .75 in.
Total Depth 11.62 ft.
Depth to Water 1.84 ft.
9.68 xVF — = — x3 case volume = Estimated Purge Volume: — gal.

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

☐ Check if water column is less then 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 3.77

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

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

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

Start Time (purge): 1001 Weather Conditions: Sun
Sample Time/Date: 1030 / 1.14.13 Water Color: cloudy Odor: Y (N)
Approx. Flow Rate: 100 mlpm Sediment Description: grey
Did well de-water? No If yes, Time: — Volume: — gal. DTW @ Sampling: 3.61

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C) F	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1019	1.8	6.92	1.364	11.2		-30.4	3.23
1022	2.1	6.92	1.366	11.9		-31.6	3.88
1025	2.4	6.92	1.366	10.9		-31.4	4.36

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	3 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX(8021)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Depth Pump Set At: 7-05
RECHARGE R. GAGNET

Add/Replaced Lock: NA Add/Replaced Plug: Add/Replaced Bolt:

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #303189 | Job Number: 385862
Site Address: 7301 Martin Luther King Jr. Way S | Event Date: 2.14.13 (inclusive)
City: Seattle,WA | Sampler: JP

Well ID: MW-2 | Date Monitored: 2.14.13
Well Diameter: .75 in.
Total Depth: 9.65 ft.
Depth to Water: * ft.

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

☐ Check if water column is less then 0.50 ft.

____ xVF ____ = ____ x3 case volume = Estimated Purge Volume: ____ gal.

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

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

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

Time Started: 1315 (2400 hrs)
Time Completed: 1620 (2400 hrs)
Depth to Product: 7.12 ft
Depth to Water: * ft
Hydrocarbon Thickness: * ft
Visual Confirmation/Description: BLACK SHEEN
~~Skimmer / Absorbant Sock (circle one)~~
Amt Removed from Skimmer: 0 gal
Amt Removed from Well: 0 gal
Water Removed: 0
Product Transferred to: 0

Start Time (purge): ____ Weather Conditions: ____
Sample Time/Date: ____ / ____ Water Color: ____ Odor: Y / N
Approx. Flow Rate: ____ mlpm Sediment Description: ____
Did well de-water? ____ If yes, Time: ____ Volume: ____ gal. DTW @ Sampling: ____

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX(8021)
	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Depth Pump Set At: * DIFFICULTY W/ ACCURATE GAUGING OF PRODUCT / WATER. HOSE @ IS DRAGGING OIL BELOW WATER TABLE. L. GASKET

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #303189 Job Number: 385862
Site Address: 7301 Martin Luther King Jr. Way S Event Date: 2.14.13 (inclusive)
City: Seattle,WA Sampler: J.P

Well ID MW-3 Date Monitored: 2.14.13
Well Diameter .75 in.
Total Depth 9.49 ft.
Depth to Water 2.17 ft.

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

☐ Check if water column is less then 0.50 ft.

7.32 xVF — = — x3 case volume = Estimated Purge Volume: — gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 3.63

Purge Equipment:

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

Sampling Equipment:

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

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

Start Time (purge): 0900 Weather Conditions: SUN
Sample Time/Date: 0948 / 2.14.13 Water Color: CLEAR Odor: Y / (N)
Approx. Flow Rate: 200 mlpm Sediment Description: NONE
Did well de-water? ~~YES~~ NO If yes, Time: — Volume: — gal. DTW @ Sampling: 3.51

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (~~µmhos/cm~~ - ~~pS~~)	Temperature (C) F	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
0918	1.90	6.89	.789	10.8	.22	11.4	3.69
0921	2.1	6.90	.788	10.6	.21	11.7	4.10
0924	2.4	6.90	.788	10.7	.22	11.6	4.80

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-3	3 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX(8021)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Depth Pump Set At: T-8'
RECHARGE L. GASKET

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____

Chevron Northwest Region Analysis Request/Chain of Custody

Lancaster Laboratories

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Acct. #: ______ Group #: ______ Sample #: ______

SCR #: ______

~~SS#303189-OML G-R#385862~~

Facility #: ______ WBS: ______

Site Address: 7301 Martin Luther King Jr. Way South, SEATTLE, WA

Chevron PM: MHO Lead Consultant: SAICRO Offemen

Consultant/Office: G-R, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568

Consultant Prj. Mgr.: Deanna L. Harding (deanna@grinc.com)

Consultant Phone #: 925-551-7555 Fax #: 925-551-7899

Sampler: J. PAYNE

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water (☐ Potable ☐ NPDES)	Oil ☐ Air ☐	Total Number of Containers	BTEX + MTBE 8021 ☐ 8260 ☐ Naphth ☐	8260 full scan	___ Oxygenates	NWTPH GX	NWTPH DX ☐ Silica Gel Cleanup	Lead Total ☐ Diss ☐ Method ___	☐ WAVPH ☐ WAEPH	NWTPH H HCID ☐ quantification				
QA	2.14.13		x			x		2	x			x								
MW-1	↓	1038	✓			x		5	x			✓	✓							
MW-3	↓	0948	✓			x		5	✓			✓	✓							

☐ Results in Dry Weight
☐ J value reporting needed
☐ Must meet lowest detection limits possible for 8260 compounds
☐ 8021 MTBE Confirmation
☐ Confirm MTBE + Naphthalene
☐ Confirm highest hit by 8260
☐ Confirm all hits by 8260
☐ Run ____ oxy's on highest hit
☐ Run ____ oxy's on all hits

Comments /Remarks

Please forward the lab results directly to the Lead Consultant and cc: G-R.

Turnaround Time Requested (TAT) (please circle)

(STD. TAT) 72 hour 48 hour
24 hour 4 day 5 day

EDF/EDD

Data Package Options (please circle if required)

QC Summary Type I – Full
Type VI (Raw Data)

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	2.15.13	1330			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

Relinquished by Commercial Carrier:
UPS (FedEx) Other ______

Received by: ______ Date ______ Time ______

Temperature Upon Receipt ______ C°

Custody Seals Intact? Yes No

Attachment B:
Laboratory Analysis Report

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2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

February 28, 2013

Project: 303189

Submittal Date: 02/16/2013
Group Number: 1369385
PO Number: 0015103600
Release Number: HORNE
State of Sample Origin: WA

Client Sample Description	Lancaster Labs (LLI) #
QA Water	6955777
MW-1 Grab Water	6955778
MW-3 Grab Water	6955779

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

ELECTRONIC COPY TO	SAIC c/o Gettler-Ryan	Attn: Rachelle Munoz
ELECTRONIC COPY TO	SAIC	Attn: Jamalyn Green
ELECTRONIC COPY TO	SAIC	Attn: Ruth Otteman

Respectfully Submitted,

Jill M. Parker
Senior Specialist

(717) 556-7262

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Analysis Report

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Sample Description: QA Water
Facility# 303189 Job# 385862
7301 Martin Luther King Jr Way South - Seattle, WA

LLI Sample # WW 6955777
LLI Group # 1369385
Account # 11260

Project Name: 303189

Collected: 02/14/2013

Submitted: 02/16/2013 09:20
Reported: 02/28/2013 14:21

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

MLKQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08274	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Volatiles	**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-Gx	1	13057A94A	02/27/2013 12:50	Marie D John	1
02102	Method 8021 Water Master	SW-846 8021B	1	13057A94A	02/27/2013 12:50	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	13057A94A	02/27/2013 12:50	Marie D John	1

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Analysis Report

Sample Description: MW-1 Grab Water
Facility# 303189 Job# 385862
7301 Martin Luther King Jr Way South - Seattle, WA

LLI Sample # WW 6955778
LLI Group # 1369385
Account # 11260

Project Name: 303189

Collected: 02/14/2013 10:38 by JP

Submitted: 02/16/2013 09:20
Reported: 02/28/2013 14:21

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 Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08274	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Volatiles	**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
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

The reverse surrogate, capric 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 Time	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13057A94A	02/27/2013 14:31	Marie D John	1
02102	Method 8021 Water Master	SW-846 8021B	1	13057A94A	02/27/2013 14:31	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	13057A94A	02/27/2013 14:31	Marie D John	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	130510013A	02/27/2013 05:41	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	130510013A	02/20/2013 21:00	Karen L Beyer	1

Sample Description: MW-3 Grab Water
Facility# 303189 Job# 385862
7301 Martin Luther King Jr Way South - Seattle, WA

LLI Sample # WW 6955779
LLI Group # 1369385
Account # 11260

Project Name: 303189

Collected: 02/14/2013 09:48 by JP

Submitted: 02/16/2013 09:20
Reported: 02/28/2013 14:21

Chevron
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 Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08274	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Volatiles	**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
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

The reverse surrogate, capric 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 Time	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13057A94A	02/27/2013 14:57	Marie D John	1
02102	Method 8021 Water Master	SW-846 8021B	1	13057A94A	02/27/2013 14:57	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	13057A94A	02/27/2013 14:57	Marie D John	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	130510013A	02/27/2013 06:04	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	130510013A	02/20/2013 21:00	Karen L Beyer	1

Quality Control Summary

Client Name: Chevron Group Number: 1369385
Reported: 02/28/13 at 02:21 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 Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 13057A94A	Sample number(s): 6955777-6955779							
Benzene	N.D.	0.5	ug/l	101		80-120		
Ethylbenzene	N.D.	0.5	ug/l	100		80-120		
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	109		75-135		
Toluene	N.D.	0.5	ug/l	101		80-120		
Total Xylenes	N.D.	1.5	ug/l	100		80-120		
Batch number: 130510013A	Sample number(s): 6955778-6955779							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	55	65	50-120	17	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 13057A94A	Sample number(s): 6955777-6955779 UNSPK: P958894								
Benzene	110	114	80-130	3	30				
Ethylbenzene	108	111	80-133	3	30				
NWTPH-Gx water C7-C12	104	110	75-135	5	30				
Toluene	108	112	80-133	3	30				
Total Xylenes	108	111	80-132	3	30				

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: 13057A94A

	Trifluorotoluene-P	Trifluorotoluene-F
6955777	89	73
6955778	90	74
6955779	90	86
Blank	90	89

*- 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.

Quality Control Summary

Client Name: Chevron
Group Number: 1369385
Reported: 02/28/13 at 02:21 PM

Surrogate Quality Control

LCS	89	91
MS	89	82
MSD	89	84
Limits:	51-120	63-135

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 130510013A

	Orthoterphenyl
6955778	94
6955779	107
Blank	87
LCS	80
LCSD	93
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

Lancaster Laboratories

For Lancaster Laboratories use only
Acct. #: 11260 Group #: 1369385 Sample #: 6955777-19

Facility #: SS#303189-OML G-R#385862 WBS:
Site Address: 7301 Martin Luther King Jr. Way South, SEATTLE, WA
Chevron PM: MHO Lead Consultant: SAICRO Otteman
Consultant/Office: G-R, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568
Consultant Prj. Mgr.: Deanna L. Harding (deanna@grinc.com)
Consultant Phone #: 925-551-7555 Fax #: 925-551-7899
Sampler: J. Payne

SCR #:

Analyses Requested — Preservation Codes

- ☐ Results in Dry Weight
- ☐ J value reporting needed
- ☐ Must meet lowest detection limits possible for 8260 compounds
- ☐ 8021 MTBE Confirmation
- ☐ Confirm MTBE + Naphthalene
- ☐ Confirm highest hit by 8260
- ☐ Confirm all hits by 8260
- ☐ Run ____ oxy's on highest hit
- ☐ Run ____ oxy's on all hits

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Matrix: Water	Matrix: Oil ☐ Air ☐	Total Number of Containers	BTEX + 8021 ☐ 8260 ☐ Naphth ☐	8260 full scan	Oxygenates ____	NWTPH GX	NWTPH DX ☐ Silica Gel Cleanup	Lead Total ☐ Diss. ☐ Method ____	☐ WAVPH ☐ WAEPH	NWTPH H HCID ☐ quantification
QA	2.14.13		X			X		2	X			X				
MW-1	↓	1038	X			X		5	X			X	X			
MW-3	↓	0948	X			X		5	X			X	X			

Comments /Remarks

Please forward the lab results directly to the Lead Consultant and cc: G-R.

Turnaround Time Requested (TAT) (please circle)
STD. TAT 72 hour 48 hour
~~24 hour~~ 4 day 5 day
~~EDF/EDD~~

Data Package Options (please circle if required)
QC Summary Type I – Full
Type VI (Raw Data)

Relinquished by:	Date	Time	Received by:	Date	Time
	2-15-13	1330			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by Commercial Carrier: UPS FedEx Other			Received by:	2/16/13	0920

Temperature Upon Receipt 0.9 C°
Custody Seals Intact? Yes No

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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)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

<	less than - The number following the sign is the limit of quantitation, 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.
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:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

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.