SIT 2.3.1

GETTLER-RYAN INC.

TRANSMITTAL

February 6, 2001
G-R #: 386750

⇒ RELEASE # 583079
SEATTLE HOUSING AUTHORITY
FORMER CHEVRON 20-9335
SEATTLE
UST # 583072

TO: Mr. Matt Miller
Delta Environmental Consultants, Inc.
1200-112th Avenue N. E., Suite C-146,
Bellevue, Washington 98004-3769

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

RE: Chevron Service Station
#20-9335
1225 North 45th Street
Seattle, Washington

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	January 26, 2001	Groundwater Monitoring and Sampling Report Event of December 16, 2000

COMMENTS:

This report is being sent for your review. Please provide any comments/changes and propose any groundwater monitoring modifications for the next event prior to ***February 16, 2001***, at which time the final report will be distributed to the following:

Mr. Brett Hunter, Chevron Products Company, P.O. Box 6004, San Ramon, CA 94583
Mr. John Wietfeld, WDOE Northwest Region, 160th Avenue S.E., Bellevue, WA 98008

☐ Current Site Check List included.

Enclosure

CKM
ENTERED
1/2/02

trans/20-9335-BH

GETTLER-RYAN INC.

January 26, 2001
Job #386750

Mr. Brett Hunter
Chevron Products Company
P.O. Box 6004
San Ramon, CA 94583

Re: **Event of December 16, 2000**
Groundwater Monitoring & Sampling Report
Former Chevron Service Station #20-9335
1225 North 45th Street
Seattle, Washington

Dear Mr. Hunter:

This report documents the most recent groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached).

Static groundwater levels were measured and the wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in any of the wells. Static water level data and groundwater elevations are presented in Table 1. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). Purge water was treated by filtration through granular activated carbon and was subsequently discharged. The field data sheets for this event are attached. The samples were analyzed by North Creek Analytical, Inc. Analytical results are presented in Table 1 and a Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are attached.

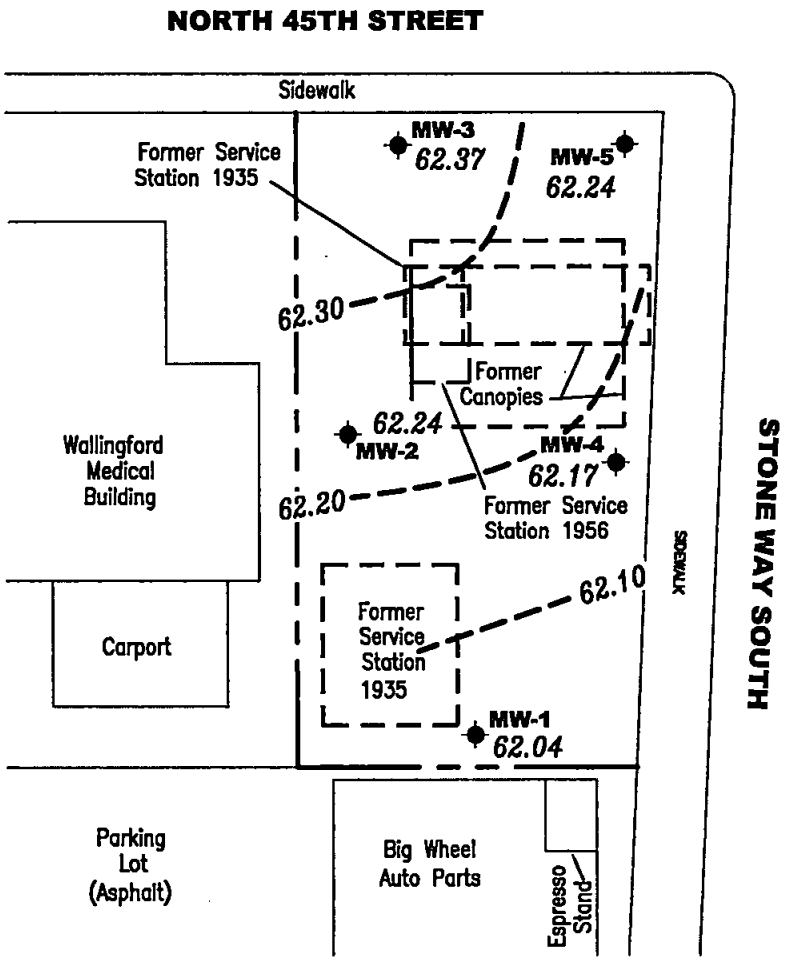
Please call if you have any questions or comments regarding this report. Thank you.

Sincerely,

Deanna L. Harding
Project Coordinator

Stephen J. Carter
Senior Geologist

Figure 1: Potentiometric Map
Figure 2: Concentration Map
Table 1: Groundwater Monitoring Data and Analytical Results
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports



EXPLANATION

- Groundwater monitoring well
- 99.99 — Groundwater elevation in feet referenced to an arbitary datum
- 99.99 — Groundwater elevation contour, dashed where inferred.

Approximate groundwater flow direction at a gradient of 0.003 to 0.004 Ft./Ft.

N

0 30

Scale in Feet

Source: Figure modified from drawing provided by Delta Environmental Consultants, Inc.

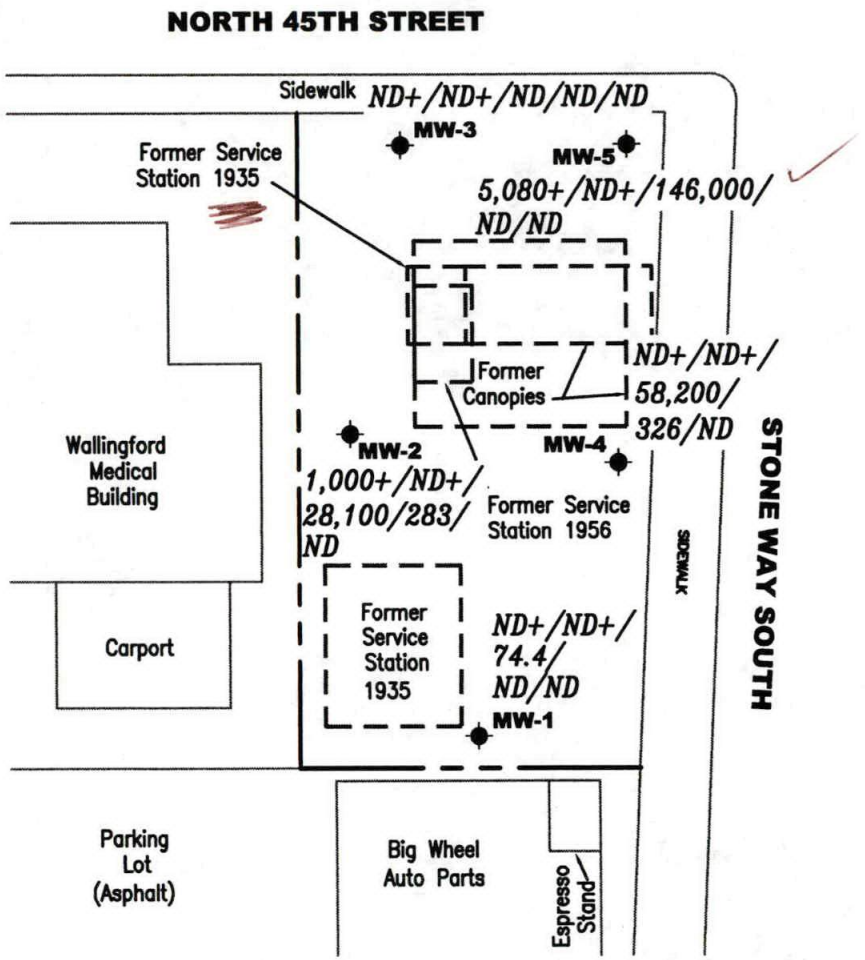
Gettler - Ryan Inc.
6747 Sierra Ct., Suite J
Dublin, CA 94568 (925) 551-7555

POTENTIOMETRIC MAP
Former Chevron Service Station #20-9335
1225 North 45th Street
Seattle, Washington

FIGURE 1

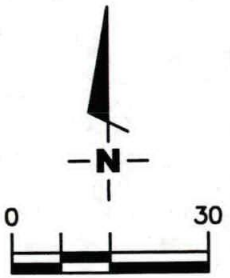
PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
386750		December 16, 2000	

FILE NAME: P:\ENVIRO\CHEVRON\209335\Q01-20-9335.DWG | Layout Tab: Pot4



EXPLANATION

●	Groundwater monitoring well
A/B/C/ D/E	Total Petroleum Hydrocarbons (TPH) as Diesel/TPH as Oil/ TPH as Gasoline/Benzene/ MTBE concentrations in ppb
ND	Not Detected
+	w/silica gel clean-up



Source: Figure modified from drawing provided by Delta Environmental Consultants, Inc.

GETTLER - RYAN INC.
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Dublin, CA 94568
(925) 551-7555

CONCENTRATION MAP
Former Chevron Service Station #20-9335
1225 North 45th Street
Seattle, Washington

FIGURE 2

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
386750		December 16, 2000	

FILE NAME: P:\ENVIRO\CHEVRON\20-9335\Q01-20-9335.DWG | Layout Tab: Con4

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station # 20-9335
1225 North 45th Street
Seattle, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	D. Lead (ppm)
MW-1												
97.95	10/11/00[1]	34.50	63.45	--	--	--	--	--	--	--	--	--
	12/16/00	**35.91**	**62.04**	**ND[2,3]**	**ND[2,3]**	**74.4**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND[4]**
MW-2												
98.70	10/11/00[1]	34.50	64.20	--	--	--	--	--	--	--	--	--
	12/16/00	**36.46**	**62.24**	**1,000[3]**	**ND[3]**	**28,100**	**283**	**2,560**	**693**	**4,020**	**ND[2]**	**0.00194[4]**
MW-3												
98.76	10/11/00[1]	34.00	64.76	--	--	--	--	--	--	--	--	--
	12/16/00	**36.39**	**62.37**	**ND[3]**	**ND[3]**	**ND**	**ND**	**0.612**	**ND**	**1.95**	**ND**	**ND[4]**
MW-4												
98.52	10/11/00[1]	35.00	63.52	--	--	--	--	--	--	--	--	--
	12/16/00	**36.35**	**62.17**	**ND[2,3]**	**ND[2,3]**	**58,200**	**326**	**5,520**	**1,430**	**8,520**	**ND[2]**	**0.0123[4]**
MW-5												
99.42	10/11/00[1]	34.50	64.92	--	--	--	--	--	--	--	--	--
	12/16/00	**37.18**	**62.24**	**5,080[3]**	**ND[3]**	**146,000** ✓	**ND[2]**	**15,100**	**4,160**	**24,100**	**ND[2]**	**0.0200[4]**

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station # 20-9335

1225 North 45th Street

Seattle, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	D. Lead (ppm)
Trip Blank												
TB-LB	12/16/00	--	--	--	--	ND	ND	ND	ND	ND	ND	--

	TPH-D	TPH-O	TPH-G	B	T	E	X	MTBE	D. Lead
Current Laboratory Reporting Limits:	250	750	50.0	0.500	0.500	0.500	1.00	5.00	0.00100
MTCA Method A Cleanup Levels:	1,000	1,000	1,000	5.0	40	30	20	--	--
Current Method:	WTPH-D + Extended		WTPH-G and EPA 8021						EPA 6020

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station # 20-9335
1225 North 45th Street
Seattle, Washington

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to December 16, 2000, were compiled from reports prepared by Delta Environmental Consultants Inc.

TOC = Top of Casing
(ft.) = Feet
DTW = Depth to Water
GWE = Groundwater Elevation
TPH-D = Total Petroleum Hydrocarbons as Diesel (Diesel Range Hydrocarbons)
TPH-O = Total Petroleum Hydrocarbons as Oil (Heavy Range Oil Hydrocarbons)
TPH-G = Total Petroleum Hydrocarbons as Gasoline (Gasoline Range Hydrocarbons)

B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl tertiary butyl ether
D. Lead = Dissolved Lead

(ppb) = Parts per billion
(ppm) = Parts per million
ND = Not Detected
-- = Not Measured/Not Analyzed
MTCA = Model Toxics Control Act Cleanup Regulations [WAC 173-340-720(2)(a)(I), as amended 12/93].

* TOC elevations have been provided by Delta Environmental Consultants, Inc. referenced to an assumed datum in feet.

[1] Data provided by Delta Environmental Consultants, Inc.
[2] Detection limit raised. Refer to analytical reports.
[3] TPH-D and TPH-O with silica-gel cleanup.
[4] Filtered at the laboratory.

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

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

After water levels are collected and prior to sampling, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging. Purging continues until these parameters stabilize. Purge water is treated by filtering the water through granular activated carbon and is subsequently discharged to the ground surface at the site.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used for all samples. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

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

A laboratory supplied trip blank accompanies each sampling set. 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 20-9335 — Job#: 386750

Address: 1225 N. 45th St. — Date: 12-16-00

City: Seattle, WA — Sampler: BWN

Well ID: MW 1 — Well Condition: ok

Well Diameter: 2 in. — Hydrocarbon Thickness: Ø (feet) — Amount Bailed (product/water): Ø (Gallons)

Total Depth: 42.00 ft.

Depth to Water: 35.91 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66	6" = 1.50	12" = 5.80

6.09 X VF .17 = 1 X 3 (case volume) = Estimated Purge Volume: 3 (gal.)

Purge Equipment: (Disposable Bailer) Bailer, Stack, Suction, Grundfos, Other: _____

Sampling Equipment: (Disposable Bailer) Bailer, Pressure Bailer, Grab Sample, Other: _____

Starting Time: 14:00 — Weather Conditions: Rain

Sampling Time: 14:15 — Water Color: tan — Odor: no

Purging Flow Rate: _____ gpm. — Sediment Description: _____

Did well de-water? no — If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F/C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
14:03	1	6.89	269	12.4			
14:06	2	6.86	261	12.3			
14:09	3	6.85	258	12.0			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW 1	3 VOA VIAL	Y	HCl	~~SEQUOIA~~ NCA	TPH(G)/btex/mtbe
MW 1	1 Amber L		NP	↓	TPH(D) + Ext
MW 1	1 500mL Pl.		NP	↓	Dissolved Lead

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/ Facility # Chevron 20-9335 — Job#: 386750

Address: 1225 N. 45th St. — Date: 12-16-00

City: Seattle, WA — Sampler: BWN

Well ID: MW 2 — Well Condition: ok

Well Diameter: 2 in. — Hydrocarbon Thickness: Ø (feet) — Amount Bailed (product/water): Ø (Gallons)

Total Depth: 42.00 ft.

Depth to Water: 36.46 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66	6" = 1.50	12" = 5.80

5.54 X VF .17 = .9 X 3 (case volume) = Estimated Purge Volume: 3 (gal.)

Purge Equipment: (Disposable Bailer) Bailer, Stack, Suction, Grundfos, Other: ____

Sampling Equipment: (Disposable Bailer) Bailer, Pressure Bailer, Grab Sample, Other: ____

Starting Time: 14:25 — Weather Conditions: Rain

Sampling Time: 14:40 — Water Color: gray — Odor: Yes

Purging Flow Rate: ____ gpm. — Sediment Description: ____

Did well de-water? no — If yes; Time: ____ Volume: ____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
14:30	1	6.86	281	12.5			
14:33	2	6.81	276	12.4			
14:36	3	6.79	271	12.1			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW2	3 VOA VIAL	Y	HCl	~~SEQUOIA~~ NCA	TPH(G)/btex/mtbe
MW2	1 Amber L	↓	NP	↓	TPH(D)+Ext
MW2	1 500mL Pl.	↓	NP	↓	Dissolved Lead

COMMENTS: ____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Facility # Chevron 20-9335 — Job#: 386750

Address: 1225 N. 45th St. — Date: 12-16-00

City: Seattle, WA — Sampler: BWN

Well ID: MW 3 — Well Condition: OK

Well Diameter: 2 in. — Hydrocarbon Thickness: Ø (feet) — Amount Bailed (product/water): Ø (Gallons)

Total Depth: 45.00 ft.

Depth to Water: 36.39 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

8.61 X VF .17 = 1.46 X 3 (case volume) = Estimated Purge Volume: 4 (gal.)

Purge Equipment: (Disposable Bailer) / Bailer / Stack / Suction / Grundfos / Other: _____

Sampling Equipment: (Disposable Bailer) / Bailer / Pressure Bailer / Grab Sample / Other: _____

Starting Time: 15:15 — Weather Conditions: Rain

Sampling Time: 15:35 — Water Color: tan — Odor: no

Purging Flow Rate: _____ gpm. — Sediment Description: _____

Did well de-water? no — If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
15:19	1.4	6.79	271	12.5			
15:23	2.7	6.77	268	12.4			
15:27	4	6.72	261	12.2			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW 3	3 VOA VIAL	Y	HCl	~~SEQUOIA~~ NZA	TPH(G)/btex/mtbe
MW 3	1 Amber L	↓	NP	↓	TPH(D) + Ext
MW 3	1 500mL pl.	↓	NP	↓	Dissolved Lead

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/ Facility: Chevron # 20-9335 — Job#: 386750

Address: 1225 N. 45th St. — Date: 12-16-00

City: Seattle, WA — Sampler: BWN

Well ID: MW 4 — Well Condition: ok

Well Diameter: 2 in. — Hydrocarbon Thickness: 0 (feet) — Amount Bailed (product/water): 0 (Gallons)

Total Depth: 42.00 ft.

Depth to Water: 36.35 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66	6" = 1.50	12" = 5.80

5.65 x VF .17 = .1 X 3 (case volume) = Estimated Purge Volume: 3 (gal.)

Purge Equipment: Disposable Bailer; Bailer; Stack; Suction; Grundfos; Other: _____

Sampling Equipment: Disposable Bailer; Bailer; Pressure Bailer; Grab Sample; Other: _____

Starting Time: 14:50 — Weather Conditions: Rain

Sampling Time: 15:05 — Water Color: gray — Odor: Yes

Purging Flow Rate: _____ gpm. — Sediment Description: _____

Did well de-water? no — If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F/C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
14:53	1	6.78	281	12.7			
14:56	2	6.76	276	12.4			
14:59	3	6.75	273	12.3			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW 4	3 VOA VIAL	Y	HCl	~~SEQUOIA~~ NCA	TPH(G)/btex/mtbe
MW 4	1 Amber L	↓	NP	↓	TPH(D) + Ext
MW 4	1 500ml Pl.	↓	NP	↓	Dissolved Lead

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Facility # Chevron 20-9335 — Job#: 386750

Address: 1225 N. 45th St. — Date: 12-16-00

City: Seattle, WA — Sampler: BWN

Well ID: MW 5 — Well Condition: ok

Well Diameter: 2 in. — Hydrocarbon Thickness: Ø (feet) — Amount Bailed (product/water): Ø (Gallons)

Total Depth: 42.00 ft.

Depth to Water: 37.18 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

4.82 X VF .17 = .8 X 3 (case volume) = Estimated Purge Volume: 2.5 (gal.)

Purge Equipment: (Disposable Bailer), Bailer, Stack, Suction, Grundfos, Other: _____

Sampling Equipment: (Disposable Bailer), Bailer, Pressure Bailer, Grab Sample, Other: _____

Starting Time: 15:45 — Weather Conditions: Rain

Sampling Time: 16:00 — Water Color: lt. gray — Odor: ND

Purging Flow Rate: _____ gpm. — Sediment Description: _____

Did well de-water? no — If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW 5	3 VOA VIAL	Y	HCl	~~Sequoia~~ NCA	TPH(G)/btex/mtbe
MW 5	1 Amber L	↓	NP	↓	TPH(D) + Ext
MW 5	1 500mL P	↓	NP	↓	Dissolved Lead

COMMENTS: _____

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☐ No BOL0461

Chain-of-Custody-Record

Chevron Products Co.
P.O. BOX 6004
San Ramon, CA 94583
FAX (925)842-8370

Chevron Facility Number #20-9335
Facility Address 1225 N. 45TH ST., SEATTLE, WA
Consultant Project Number 386750
Consultant Name Gettler-Ryan Inc.
Address 6747 Sierra Court, Suite G, Dublin, CA 94568
Project Contact (Name) Deanna L. Harding
(Phone) 925-551-7555 (Fax Number) 925-551-7899

Chevron Contact (Name) MR. BRETT HUNTER
(Phone) 925-842-8695
Laboratory Name North Creek Analytical
Laboratory Service Order
Laboratory Service Code
Samples Collected by (Name) Ben Newton
Signature Ben Newton

State Method: ☐ CA ☐ OR ☒ WA ☐ NW Series ☐ CO ☐ UT

Sample Number	Number of Containers	Matrix: S = Soil A = Air W = Water C = Charcoal	Sample Preservation	Date/Time	BTEX/MTBE+TPH GAS (8020 + 8015)	BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oxygenates (8260)	Purgeable Halocarbons (8010)	Purgeable Organics (8260)	Extractable Organics (8270)	Oil and Grease (5520)	Metals (ICAP or AA) CdCrPbZnNi	BTEX (8020)	BTEX/MTBE/Naph. (8020)	TPH - HCID	TPH-D Extended w/Silica-gel	Dissolved Lead				Lab Sample No.
																				BOL0461	-01	Ben
TB LB	1	W	HCl	12-16-00	X												X	X			02	mtbe by
MW1	5			14:15	X												X	X			03	8260 on
MW2	5			14:40	X												X	X			04	all 8020
MW3	5			15:35	X												X	X			05	hits mtbe
MW4	5			15:05	X												X	X			06	
MW5	5	↓	↓	16:00	X																	

Remarks: * Please filter for Dissolved Lead *

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Iced Y/N
Ben Newton	GR Inc	12/18/00 11:15	Marcus Dellos	NCA	12/19 10:15	
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Iced Y/N
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time	Iced Y/N

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

< 0° w/n

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8223
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

Gettler-Ryan Inc. - Dublin	Project: Chevron #20-9335	
6747 Sierra Court Suite G	Project Number: 386750	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	01/05/01 10:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB LB	B0L0461-01	Water	12/16/00 12:00	12/19/00 10:15
MW1	B0L0461-02	Water	12/16/00 14:15	12/19/00 10:15
MW2	B0L0461-03	Water	12/16/00 14:40	12/19/00 10:15
MW3	B0L0461-04	Water	12/16/00 15:35	12/19/00 10:15
MW4	B0L0461-05	Water	12/16/00 15:05	12/19/00 10:15
MW5	B0L0461-06	Water	12/16/00 16:00	12/19/00 10:15

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Robert Greer, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8223
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

Gettler-Ryan Inc. - Dublin	Project: Chevron #20-9335	
6747 Sierra Court Suite G	Project Number: 386750	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	01/05/01 10:34

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB LB (B0L0461-01) Water Sampled: 12/16/00 12:00 Received: 12/19/00 10:15									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	0L27004	12/27/00	12/27/00	WTPH-G/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*81.3 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*88.1 %*	*50-150*			"	"	"	"	
MW1 (B0L0461-02) Water Sampled: 12/16/00 14:15 Received: 12/19/00 10:15									
Gasoline Range Hydrocarbons	**74.4**	50.0	ug/l	1	0L27004	12/27/00	12/27/00	WTPH-G/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*94.8 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*103 %*	*50-150*			"	"	"	"	
MW2 (B0L0461-03) Water Sampled: 12/16/00 14:40 Received: 12/19/00 10:15									
Gasoline Range Hydrocarbons	**28100**	5000	ug/l	100	0L27004	12/27/00	12/27/00	WTPH-G/8021B	
Benzene	**283**	50.0	"	"	"	"	"	"	
Toluene	**2560**	50.0	"	"	"	"	"	"	
Ethylbenzene	**693**	50.0	"	"	"	"	"	"	
Xylenes (total)	**4020**	100	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	500	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*92.7 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*101 %*	*50-150*			"	"	"	"	

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Gettler-Ryan Inc. - Dublin	Project: Chevron #20-9335	
6747 Sierra Court Suite G	Project Number: 386750	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	01/05/01 10:34

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW3 (B0L0461-04) Water Sampled: 12/16/00 15:35 Received: 12/19/00 10:15									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	0L27004	12/27/00	12/27/00	WTPH-G/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	**0.612**	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	**1.95**	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*80.4 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*91.5 %*	*50-150*			"	"	"	"	
MW4 (B0L0461-05) Water Sampled: 12/16/00 15:05 Received: 12/19/00 10:15									
Gasoline Range Hydrocarbons	**58200**	10000	ug/l	200	0L27004	12/27/00	12/27/00	WTPH-G/8021B	
Benzene	**326**	100	"	"	"	"	"	"	
Toluene	**5520**	100	"	"	"	"	"	"	
Ethylbenzene	**1430**	100	"	"	"	"	"	"	
Xylenes (total)	**8520**	200	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1000	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*99.4 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*109 %*	*50-150*			"	"	"	"	
MW5 (B0L0461-06) Water Sampled: 12/16/00 16:00 Received: 12/19/00 10:15									
Gasoline Range Hydrocarbons	**146000**	50000	ug/l	1000	0L27004	12/27/00	12/27/00	WTPH-G/8021B	
Benzene	ND	500	"	"	"	"	"	"	
Toluene	**15100**	500	"	"	"	"	"	"	
Ethylbenzene	**4160**	500	"	"	"	"	"	"	
Xylenes (total)	**24100**	1000	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5000	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*91.2 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*102 %*	*50-150*			"	"	"	"	

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Gettler-Ryan Inc. - Dublin	Project: Chevron #20-9335	
6747 Sierra Court Suite G	Project Number: 386750	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	01/05/01 10:34

Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C36 by WTPH-D (extended) with Silica Gel Clean-up

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW1 (B0L0461-02) Water Sampled: 12/16/00 14:15 Received: 12/19/00 10:15									
Diesel Range Hydrocarbons	ND	0.281	mg/l	1	0L21010	12/21/00	12/24/00	WTPH-D	
Heavy Oil Range Hydrocarbons	ND	0.844	"	"	"	"	"	"	
Surrogate: 2-FBP	*53.1 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*63.3 %*	*50-150*			"	"	"	"	
MW2 (B0L0461-03) Water Sampled: 12/16/00 14:40 Received: 12/19/00 10:15									
Diesel Range Hydrocarbons	**1.00**	0.250	mg/l	1	0L21010	12/21/00	12/24/00	WTPH-D	
Heavy Oil Range Hydrocarbons	ND	0.750	"	"	"	"	"	"	
Surrogate: 2-FBP	*66.5 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*61.3 %*	*50-150*			"	"	"	"	
MW3 (B0L0461-04) Water Sampled: 12/16/00 15:35 Received: 12/19/00 10:15									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	0L21010	12/21/00	12/24/00	WTPH-D	
Heavy Oil Range Hydrocarbons	ND	0.750	"	"	"	"	"	"	
Surrogate: 2-FBP	*55.0 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*63.2 %*	*50-150*			"	"	"	"	
MW4 (B0L0461-05) Water Sampled: 12/16/00 15:05 Received: 12/19/00 10:15									
Diesel Range Hydrocarbons	ND	0.470	mg/l	1	0L21010	12/21/00	12/24/00	WTPH-D	
Heavy Oil Range Hydrocarbons	ND	1.41	"	"	"	"	"	"	
Surrogate: 2-FBP	*58.0 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*60.0 %*	*50-150*			"	"	"	"	
MW5 (B0L0461-06) Water Sampled: 12/16/00 16:00 Received: 12/19/00 10:15									
Diesel Range Hydrocarbons	**5.08**	0.250	mg/l	1	0L21010	12/21/00	12/24/00	WTPH-D	
Heavy Oil Range Hydrocarbons	ND	0.750	"	"	"	"	"	"	
Surrogate: 2-FBP	*%*	*50-150*			"	"	"	"	*S-02*
Surrogate: Octacosane	*64.6 %*	*50-150*			"	"	"	"	

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Gettler-Ryan Inc. - Dublin	Project: Chevron #20-9335	
6747 Sierra Court Suite G	Project Number: 386750	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	01/05/01 10:34

Dissolved Metals by EPA 6000/7000 Series Methods

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW1 (B0L0461-02) Water	**Sampled: 12/16/00 14:15**	**Received: 12/19/00 10:15**							**Q-30**
Lead	ND	0.00100	mg/l	1	0L21008	12/21/00	12/21/00	EPA 6020	
MW2 (B0L0461-03) Water	**Sampled: 12/16/00 14:40**	**Received: 12/19/00 10:15**							**Q-30**
Lead	**0.00194**	0.00100	mg/l	1	0L21008	12/21/00	12/21/00	EPA 6020	
MW3 (B0L0461-04) Water	**Sampled: 12/16/00 15:35**	**Received: 12/19/00 10:15**							**Q-30**
Lead	ND	0.00100	mg/l	1	0L21008	12/21/00	12/21/00	EPA 6020	
MW4 (B0L0461-05) Water	**Sampled: 12/16/00 15:05**	**Received: 12/19/00 10:15**							**Q-30**
Lead	**0.0123**	0.00100	mg/l	1	0L21008	12/21/00	12/21/00	EPA 6020	
MW5 (B0L0461-06) Water	**Sampled: 12/16/00 16:00**	**Received: 12/19/00 10:15**							**Q-30**
Lead	**0.0200**	0.00100	mg/l	1	0L21008	12/21/00	12/21/00	EPA 6020	

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Gettler-Ryan Inc. - Dublin	Project: Chevron #20-9335	
6747 Sierra Court Suite G	Project Number: 386750	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	01/05/01 10:34

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0L27004: Prepared 12/27/00 Using EPA 5030B (P/T)										
Blank (0L27004-BLK1)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	5.00	"							
Surrogate: 4-BFB (FID)	*39.7*		"	*48.0*		*82.7*	*50-150*			
Surrogate: 4-BFB (PID)	*44.6*		"	*48.0*		*92.9*	*50-150*			
LCS (0L27004-BS1)										
Gasoline Range Hydrocarbons	501	50.0	ug/l	500		100	70-130			
Surrogate: 4-BFB (FID)	*52.6*		"	*48.0*		*110*	*50-150*			
Duplicate (0L27004-DUP1)					**Source: B0L0461-05**					
Gasoline Range Hydrocarbons	61600	1000	ug/l		58200			5.68	25	
Surrogate: 4-BFB (FID)	*70.3*		"	*48.0*		*146*	*50-150*			
Duplicate (0L27004-DUP2)					**Source: B0L0461-03**					
Gasoline Range Hydrocarbons	28800	25000	ug/l		28100			2.46	25	
Surrogate: 4-BFB (FID)	*42.0*		"	*48.0*		*87.5*	*50-150*			
Matrix Spike (0L27004-MS1)					**Source: B0L0464-03**					
Benzene	9.71	0.500	ug/l	10.0	ND	97.1	70-130			
Toluene	9.81	0.500	"	10.0	ND	97.2	70-130			
Ethylbenzene	10.0	0.500	"	10.0	ND	100	70-130			
Xylenes (total)	29.5	1.00	"	30.0	ND	97.5	70-130			
Methyl tert-butyl ether	10.0	5.00	"	10.0	ND	100	70-130			
Surrogate: 4-BFB (PID)	*47.5*		"	*48.0*		*99.0*	*50-150*			

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Gettler-Ryan Inc. - Dublin	Project: Chevron #20-9335	
6747 Sierra Court Suite G	Project Number: 386750	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	01/05/01 10:34

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0L27004: Prepared 12/27/00 Using EPA 5030B (P/T)										
Matrix Spike Dup (0L27004-MSD1)					**Source: B0L0464-03**					
Benzene	9.81	0.500	ug/l	10.0	ND	98.1	70-130	1.02	15	
Toluene	9.88	0.500	"	10.0	ND	97.9	70-130	0.711	15	
Ethylbenzene	10.0	0.500	"	10.0	ND	100	70-130	0	15	
Xylenes (total)	29.7	1.00	"	30.0	ND	98.2	70-130	0.676	15	
Methyl tert-butyl ether	9.73	5.00	"	10.0	ND	97.3	70-130	2.74	15	
Surrogate: 4-BFB (PID)	*48.0*		"	*48.0*		*100*	*50-150*			

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Gettler-Ryan Inc. - Dublin	Project: Chevron #20-9335	
6747 Sierra Court Suite G	Project Number: 386750	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	01/05/01 10:34

Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C36 by WTPH-D (extended) with Silica Gel Clean-up - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0L21010: Prepared 12/21/00 Using EPA 3510C/600 Series										
Blank (0L21010-BLK1)										
Diesel Range Hydrocarbons	ND	0.250	mg/l							
Heavy Oil Range Hydrocarbons	ND	0.750	"							
Surrogate: 2-FBP	*0.212*		"	*0.320*		*66.3*	*50-150*			
Surrogate: Octacosane	*0.197*		"	*0.320*		*61.6*	*50-150*			
LCS (0L21010-BS1)										
Diesel Range Hydrocarbons	1.34	0.250	mg/l	2.00		67.0	50-150			
Surrogate: 2-FBP	*0.224*		"	*0.320*		*70.0*	*50-150*			
Duplicate (0L21010-DUP1)					**Source: B0L0430-05**					
Diesel Range Hydrocarbons	1.72	0.479	mg/l		1.37			22.7	44	
Heavy Oil Range Hydrocarbons	ND	1.44	"		ND				44	
Surrogate: 2-FBP	*0.394*		"	*0.613*		*64.3*	*50-150*			
Surrogate: Octacosane	*0.417*		"	*0.613*		*68.0*	*50-150*			
Duplicate (0L21010-DUP2)					**Source: B0L0461-05**					
Diesel Range Hydrocarbons	ND	0.473	mg/l		ND			28.0	44	
Heavy Oil Range Hydrocarbons	ND	1.42	"		ND				44	
Surrogate: 2-FBP	*0.441*		"	*0.606*		*72.8*	*50-150*			
Surrogate: Octacosane	*0.413*		"	*0.606*		*68.2*	*50-150*			

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Gettler-Ryan Inc. - Dublin	Project: Chevron #20-9335	
6747 Sierra Court Suite G	Project Number: 386750	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	01/05/01 10:34

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0L21008: Prepared 12/21/00 Using EPA 3005A										
Blank (0L21008-BLK1)										
Lead	ND	0.00100	mg/l							
LCS (0L21008-BS1)										
Lead	0.196	0.00100	mg/l	0.200		98.0	80-120			
Matrix Spike (0L21008-MS1)					**Source: B0L0398-05**					
Lead	0.203	0.00100	mg/l	0.200	ND	101	75-125			
Matrix Spike Dup (0L21008-MSD1)					**Source: B0L0398-05**					
Lead	0.204	0.00100	mg/l	0.200	ND	102	75-125	0.491	20	

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Gettler-Ryan Inc. - Dublin	Project: Chevron #20-9335	
6747 Sierra Court Suite G	Project Number: 386750	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	01/05/01 10:34

Notes and Definitions

Q-30	This sample was laboratory filtered since it was not field filtered as is required by the methodology.
S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference