



Mr. Steve Teel
Washington State Department of Ecology
Southwest Regional Office, Toxics Cleanup Program
P.O. Box 47775
Olympia, Washington 98504-7775

**Subject: Second Quarter 2014 Groundwater Monitoring Report
Cowlitz BP / Cowlitz Food and Fuel /
Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington**

Dear Mr. Teel:

Leidos Engineering, LLC (Leidos), on behalf of Chevron Environmental Management Company (CEMC), prepared this report summarizing the second quarter 2014 groundwater monitoring event at the above-referenced site (the Site) in Toledo, Washington (Figure 1). Groundwater monitoring at the Site is being performed pursuant to the terms and conditions of Agreed Order No. DE5236.

FIELD ACTIVITIES

Gettler-Ryan, Inc. (Gettler-Ryan) conducted the groundwater monitoring field event from June 12-14, 2014. They measured depth-to-groundwater and checked for the presence of light non-aqueous phase liquid (LNAPL) in 11 of the 17 monitoring wells on the Site. Monitoring wells MW-103, MW-112, MW-115, MW-116, MW-118, and MW-119 could not be accessed during this event due to overgrown vegetation on a portion of the Site south of Mulford Road. Groundwater samples were collected from the 11 accessible monitoring wells using low-flow purging and sampling techniques. Samples were submitted to Eurofins Lancaster Laboratories, Inc. for the following analyses:

- Total petroleum hydrocarbons (TPH) as gasoline-range organics (TPH-GRO) by Washington State Department of Ecology (Ecology) Method NWTPH-Gx;
- TPH as diesel-range organics (TPH-DRO) and heavy oil-range organics (TPH-HRO) by Ecology Method NWTPH-Dx extended;

- TPH-DRO and TPH-HRO by Ecology Method NWTPH-Dx extended with silica-gel cleanup;
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl tertiary-butyl ether (MTBE) by United States Environmental Protection Agency (USEPA) Method 8260B; and
- Dissolved lead by USEPA Method 6020.

Selected samples were also submitted for the following natural attenuation monitoring parameters per SAIC's September 2013 work plan¹:

- Nitrate and sulfate by EPA 300.0;
- Dissolved iron and dissolved manganese by SW846 6010B;
- Sulfide by SM 4500-S2 D-2000;
- Methane by RSKSOP-175 modified; and
- Alkalinity by SM 2320 B-1997.

Purge water generated during this sampling event was treated at the Site by Gettler-Ryan using an activated carbon filtration system. A sample of the treated water (TPWHD-1) was also collected and analyzed for the presence of petroleum constituents. Following treatment, the purge water was containerized in 55-gallon drums, which are stored in a secondary containment overpack at the Site while awaiting laboratory results and Ecology authorization for disposal by surface discharge.

Field data sheets are provided in the Gettler-Ryan groundwater monitoring and sampling data package, which is included as Attachment A.

FINDINGS

During this event, the groundwater elevation across the Site ranged from 100.08 feet in monitoring well B-2 to 99.39 feet in monitoring well MW-110 (relative to the North American Vertical Datum of 1988). Groundwater elevation data from this event indicates that groundwater flow is toward the southeast at a gradient of approximately 0.003 to 0.008 feet per foot (Figure 2). Groundwater elevation at the Site decreased an average of 0.60 feet since the previous monitoring event in February 2014.

LNAPL was not detected in any of the wells monitored.

The following analytes were detected at concentrations exceeding their respective Model Toxics Control Act (MTCA) Method A cleanup levels:

- TPH-GRO was detected in monitoring wells MW-111 and B-4;

1. SAIC, 2013. *Soil Sampling and Natural Attenuation Assessment Work Plan, Cowlitz BP / Cowlitz Food and Fuel / Former Texaco Service Station No. 211556, 101 Mulford Road, Toledo, Washington*. September 25.

- TPH-DRO (analyzed without silica-gel cleanup) was detected in monitoring wells MW-111 and B-3;
- TPH-HRO (analyzed without silica-gel cleanup) was detected in monitoring well MW-114; and
- Dissolved lead was detected in monitoring well MW-111.

Current and historical groundwater elevation data, LNAPL thickness data, and laboratory analytical results are summarized in Table 1, and natural attenuation evaluation field measurements and laboratory analytical data are presented in Table 2. Groundwater analytical results for the most recent four quarters of monitoring are also presented on Figure 3.

Results of the purge-water sample analysis for sample TPWHD-1 were non-detect for all requested analyses.

Laboratory analysis reports are provided as Attachment B.

DISCUSSION

Groundwater monitoring results from this event are consistent with historical data for the Site. Dissolved-phase petroleum-range compounds continue to be consistently detected at concentrations exceeding MTCA Method A cleanup levels in monitoring wells MW-111, B-3, and B-4, which are located on the active station property and immediately downgradient of the UST basin and pump islands.

Based on comparison of TPH-DRO analyses that were performed with and without silica-gel cleanup, detections of TPH-DRO at the Site exceeding Method A cleanup levels are believed to be the result of polar compounds resulting from biodegradation of gasoline-range contamination at the Site, and are not indicative of dissolved-phase diesel in groundwater.

Gettler-Ryan has continued monitoring groundwater for the evaluation of remediation by natural attenuation. Preliminary evaluation of the available data suggests that natural attenuation processes are occurring within the zone of groundwater contamination, which is indicated by increased levels of dissolved iron, dissolved manganese, and methane in the source-area monitoring wells (MW-111, B-3, and B-4). In monitoring wells MW-111 and B-4, reduced levels of sulfate and oxidation reduction potential are also indicators that natural attenuation processes are occurring in this area of the Site.

Gettler-Ryan will continue to perform groundwater monitoring at this Site on a quarterly basis. Collection of natural attenuation parameters in selected monitoring wells will be performed through fourth quarter 2014, after which Leidos will perform a more thorough evaluation of the occurrence of natural attenuation at the Site.

If you have any questions or comments regarding the information presented in this report, please contact me at (425) 482-3323 or via email at russell.s.shropshire@leidos.com.

Sincerely,

Leidos Engineering, LLC



Russell S. Shropshire, PE
Senior Project Manager

Enclosures:

Figure 1 – Vicinity Map

Figure 2 – Potentiometric Map

Figure 3 – Groundwater Analytical Results – September 2013 through June 2014

Table 1 – Groundwater Monitoring Data and Analytical Results

Table 2 – Natural Attenuation Monitoring Parameters

Attachment A – Groundwater Monitoring and Sampling Data Package

Attachment B – Laboratory Analysis Report

cc: Mr. Mark Horne – CEMC
 Mr. Charles Vineyard
 Mr. John Houlihan – Houlihan Law
 Project File

REPORT LIMITATIONS

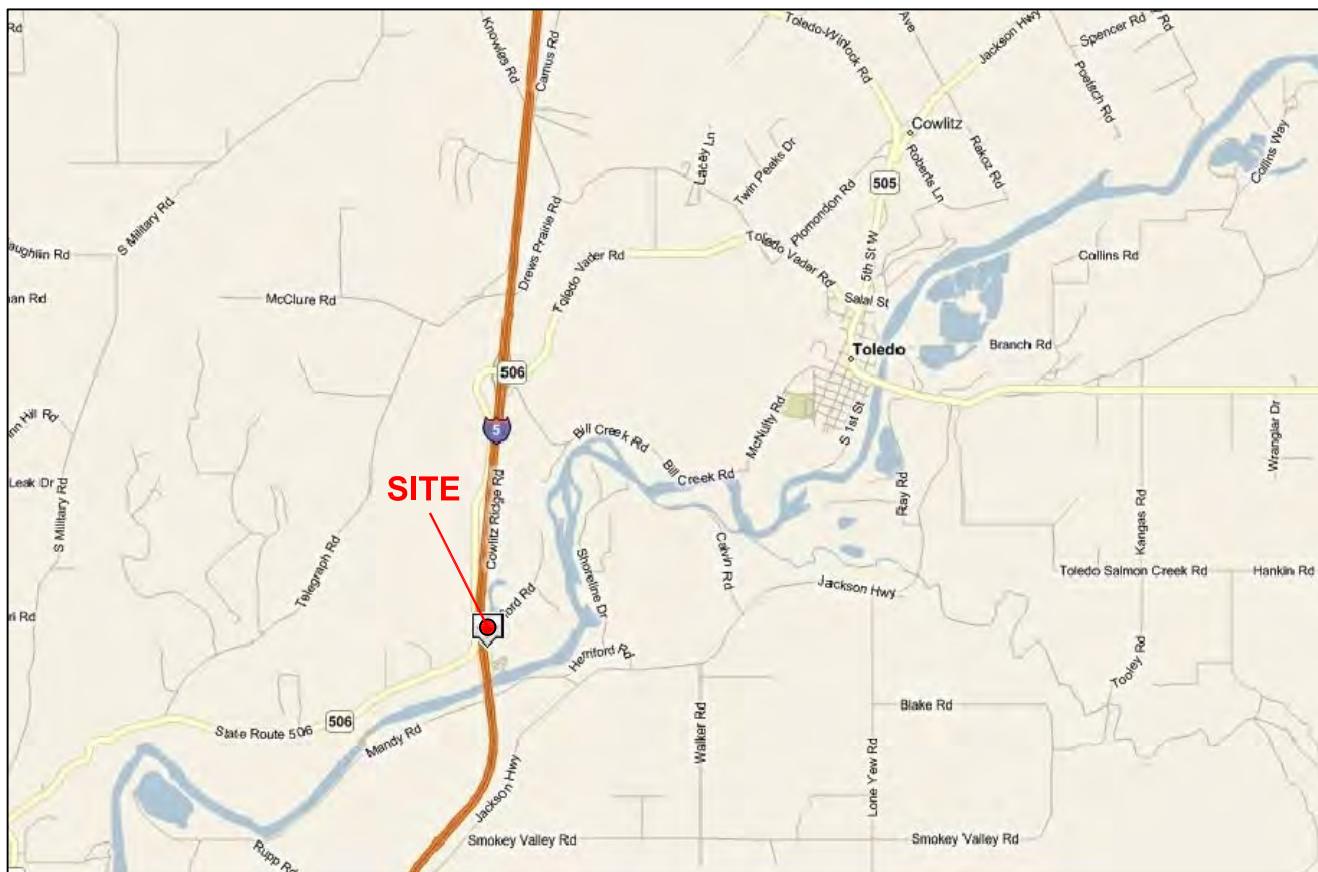
This technical document was prepared on behalf of CEMC and is intended for its sole use and for use by the local, state, or federal regulatory agency that the technical document was sent to by Leidos. Any other person or entity obtaining, using, or relying on this technical document hereby acknowledges that they do so at their own risk, and 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.

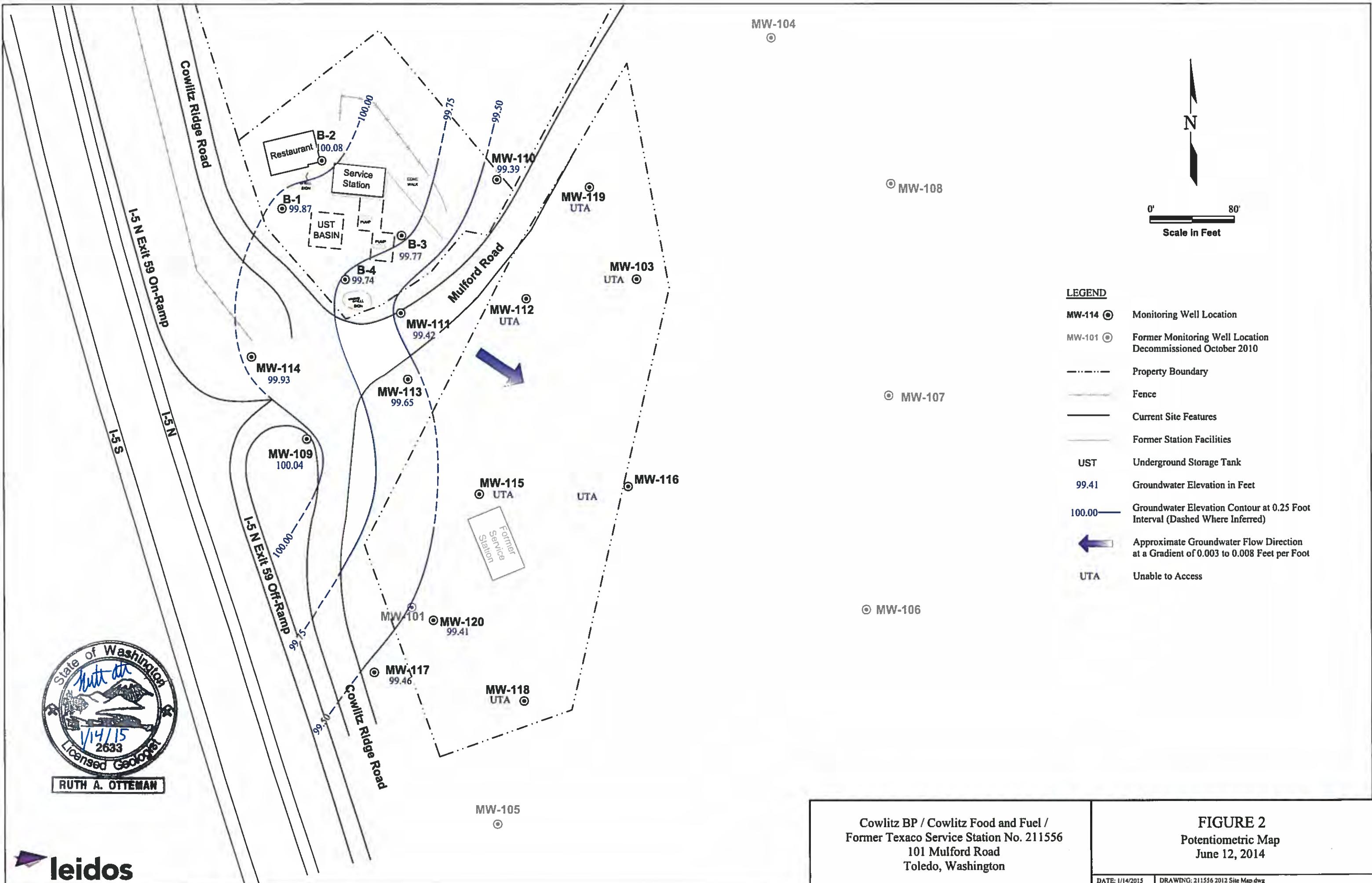
All sources of information on which Leidos has relied in making its conclusions (including direct field observations) are identified by reference in this technical document or in appendices attached to this technical document. Any information not listed by reference or in appendices has not been evaluated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



Cowlitz BP / Cowlitz Food and Fuel /
Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

FIGURE 1
Vicinity Map

DATE: 2/21/2014 DRAWING: 211556_VM.dwg



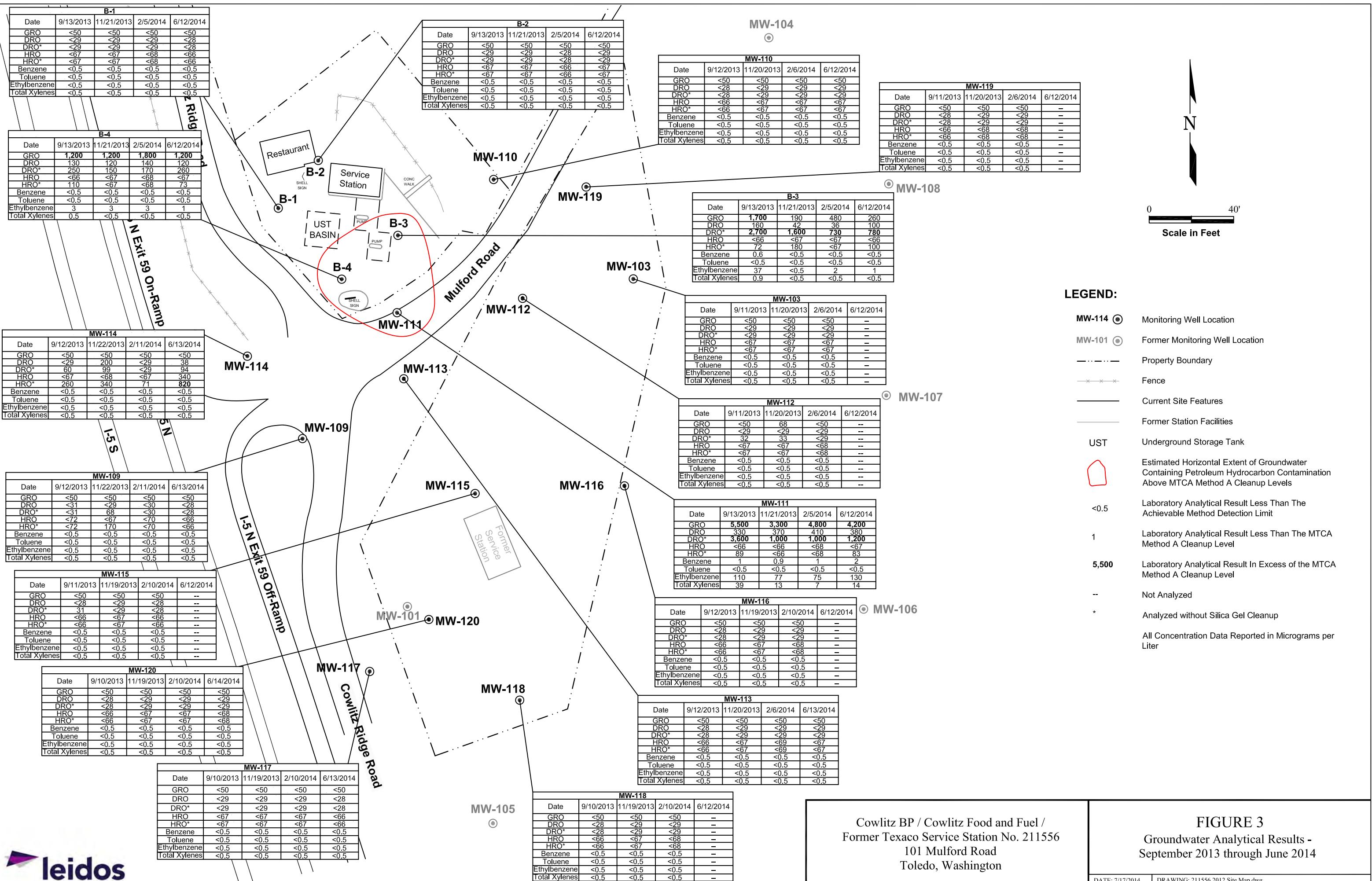


TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-103															
2/14/91		107.81	--	8.08	--	99.73	--	--	--	--	--	--	--	--	--
2/18/92		107.81	--	8.08	--	99.73	--	--	--	--	--	--	--	--	--
3/9/92		107.81	--	7.80	--	100.01	--	<50	--	--	--	--	--	--	--
3/13/92		107.81	--	8.08	--	99.73	<250	<250	<50	--	--	--	--	--	--
4/21/92		107.81	--	7.78	--	100.03	--	--	<50	--	--	--	--	--	--
3/3/94		107.81	--	--	--	--	<250	<250	<50	<13	--	--	--	--	--
6/13/95		107.81	--	8.55	--	99.26	<250	<250	<50	--	--	--	--	--	<3.0
8/22/95		107.81	--	--	--	--	<250	<250	<50	--	--	--	--	--	<2.0
8/23/95		107.81	--	8.91	--	98.90	<250	<250	<50	--	--	--	--	--	<2.0
11/28/95		107.81	--	7.30	--	100.51	<250	<250	<50	--	--	--	--	--	<2.0
3/12/96		107.81	--	8.03	--	99.78	<250	<250	<50	--	--	--	--	--	<2.0
6/26/96		107.81	--	8.67	--	99.14	<250	<250	<50	--	--	--	--	--	<2.0
10/9/96		107.81	--	8.82	--	98.99	<250	<250	<50	--	--	--	--	--	<2.0
2/12/97		107.81	--	7.81	--	100.00	<250	<250	<50	--	--	--	--	--	<2.0
4/22/97		107.81	--	7.42	--	100.39	<250	<250	<50	--	--	--	--	--	<2.0
8/5/97		107.81	--	8.83	--	98.98	257	110	257	--	--	--	--	--	<2.0
11/11/97		107.81	--	9.01	--	98.80	<250	<250	<50	--	--	--	--	--	<2.0
2/11/98		107.81	--	8.03	--	99.78	<250	<250	<50	--	--	--	--	--	<2.0
5/28/98		107.81	--	8.17	--	99.64	<250	<250	<50	--	--	--	--	--	2.84
8/20/98		107.81	--	9.21	--	98.60	<250	<250	<50	--	--	--	--	--	<1.0
11/19/98		107.81	--	9.03	--	98.78	<250	<250	<50	--	--	--	--	--	<1.0
3/11/99		107.81	--	7.51	--	100.30	<250	<250	<50	--	--	--	--	--	<1.0
5/25/99		107.81	--	8.51	--	99.30	<250	<250	<50	--	--	--	--	--	--
8/17/99		107.81	--	8.93	--	98.88	<250	<250	<50	--	--	--	--	--	<1.0
11/19/99		107.81	--	7.18	--	100.63	<250	<250	<80	--	--	--	--	--	<1.0
3/9/00		107.81	--	7.48	--	100.33	<250	<250	<80	--	--	--	--	--	<1.0
6/13/00		107.81	--	8.29	--	99.52	<250	<250	<80	--	--	--	--	--	<1.0
9/26/00		107.81	--	9.05	--	98.76	<250	<250	--	--	--	--	--	--	<1.0
12/13/00		107.81	--	8.65	--	99.16	<250	<250	--	--	--	--	--	--	<1.0
2/28/01		107.81	--	8.34	--	99.47	<250	<250	89	--	--	--	--	--	<1.0
5/2/01		107.81	--	8.12	--	99.69	<250	<250	214	--	--	--	--	--	<1.0
10/30/02		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
4/18/03		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
7/11/03		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
10/31/03		107.81	UNABLE TO LOCATE - COVERED BY SOIL			--	--	--	--	--	--	--	--	--	--

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101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-103 (cont)															
12/30/03		107.81	--	7.32	0.00	100.49	<50	<85	<110	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		107.81	UNABLE TO LOCATE - COVERED BY SOIL				--	--	--	--	--	--	--	--	--
7/20/04		107.81	--	9.09	0.00	98.72	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	--	--
10/7/04		107.81	--	8.66	0.00	99.15	<160	<50	--	--	--	--	--	--	--
1/27/05		107.81	--	7.95	0.00	99.86	<83	<83	<48	--	--	--	--	--	--
4/12/05		107.81	--	7.65	0.00	100.16	<78	<78	<48	--	--	--	--	--	--
7/18/05		107.81	--	8.76	0.00	99.05	<79	<79	<48	--	--	--	--	--	--
10/21/05		107.81	--	8.87	0.00	98.94	<79	<79	<48	--	--	--	--	--	--
9/5/07		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
5/27-28/08		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
8/27-29/08		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
11/17-19/08		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
2/16-18/09		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
5/4-6/09		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
8/19-21/09		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
11/18-20/09		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
2/8-10/10		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
5/12-13/10		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
08/12/10	LFP	107.81	--	8.90	0.00	98.91	30	120	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
11/3-4/10		107.81	--	7.69	0.00	100.12	<29	91	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.17
2/3-4/11	LFP	107.81	--	7.99	0.00	99.82	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.22
05/24/11	LFP	107.81	--	8.25	0.00	99.56	30	340	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.13
8/23-24/11	LFP	107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
11/7-9/11	LFP	107.81	--	8.90	0.00	98.91	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.12
2/6-8/12	LFP	107.81	--	7.80	0.00	100.01	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
5/2-4/12	LFP	107.81	--	8.05	0.00	99.76	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.083
8/1-3/12	LFP	107.81	--	8.95	0.00	98.86	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.088
11/26-28/12	LFP	107.81	--	7.36	0.00	100.45	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.047
02/4-6/13	LFP	107.81	--	7.85	0.00	99.96	<28	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.087
5/6-8/13	LFP	107.81	--	8.60	0.00	99.21	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.13
9/9-13/13	LFP	107.81	--	8.55	0.00	99.26	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
11/18-21/13	LFP	107.81	--	7.62	0.00	100.19	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.21
2/4-11/14	LFP	107.81	--	8.36	0.00	99.45	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
6/12-14/14	LFP	107.81	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--
MW-109															
3/13/92		107.35	--	7.72	0.00	99.63	--	--	<50	--	--	--	--	--	--
4/21/92		107.35	--	7.42	0.00	99.93	--	--	--	--	--	--	--	--	--
3/3/94		107.35	--	--	0.00	--	900	1,500	4,900	--	--	--	--	--	--

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MW-109 (cont.)															
8/22/95		107.35	--	8.57	0.00	98.78	2,900	2,400	<50	--	--	--	--	--	--
11/28/95		107.35	--	5.87	0.00	101.48	480	1,900	72	--	--	--	--	--	<2.0
3/12/96		107.35	--	7.16	0.00	100.19	<250	<750	<50	--	--	--	--	--	<2.0
6/26/96		107.35	--	8.24	0.00	99.11	554	<750	<50	--	--	--	--	--	<2.0
10/9/96		107.35	--	8.54	0.00	98.81	405	<750	<50	--	--	--	--	--	<2.0
2/12/97		107.35	--	5.82	0.00	101.53	393	1,290	<50	--	--	--	--	--	<2.0
4/22/97		107.35	--	7.10	0.00	100.25	356	1,270	<50	--	--	--	--	--	<2.0
8/5/97		107.35	--	8.81	0.00	98.54	560	1,690	<50	--	--	--	--	--	<2.0
11/11/97		107.35	--	7.57	0.00	99.78	269	780	<50	--	--	--	--	--	<2.0
2/11/98		107.35	--	6.20	0.00	101.15	387	1,700	<50	--	--	--	--	--	<2.0
5/28/98		107.35	--	7.62	0.00	99.73	332	920	<50	--	--	--	--	--	2.25
8/20/98		107.35	--	9.00	0.00	98.35	520	1,450	<50	--	--	--	--	--	<1.0
11/19/98		107.35	--	8.21	0.00	99.14	409	1,130	<50	--	--	--	--	--	<1.3
3/11/99		107.35	--	6.94	0.00	100.41	539	2,000	<80	--	--	--	--	--	<1.0
5/25/99		107.35	--	8.13	0.00	99.22	916	--	<80	--	--	--	--	--	--
8/17/99		107.35	--	8.66	0.00	98.69	1,520	7,770	<80	--	--	--	--	--	<1.0
11/19/99		107.35	--	6.65	0.00	100.70	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		107.35	--	5.67	0.00	101.68	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		107.35	--	6.65	0.00	100.70	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		107.35	--	8.36	0.00	98.99	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		107.35	--	7.72	0.00	99.63	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		107.35	--	7.44	0.00	99.91	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		107.35	--	9.50	0.00	97.85	<250	<500	<80	--	--	--	--	--	<1.0
10/30/02		107.35	--	8.69	0.00	98.66	<250	<500	<80	<0.500	<0.500	<0.500	<1.0	--	6.44
1/23/03		107.35	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
4/18/03		107.35	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
7/11/03		107.35	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
10/31/03		107.35	--	7.63	0.00	99.72	<250	<500	<50	<0.500	<0.500	<0.500	<1.0	--	<1.0 ^b
12/31/03		107.35	--	6.42	0.00	100.93	<50	440	2,300	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		107.35	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
7/20/04		107.35	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
10/6/04		107.35	--	7.71	0.00	99.64	<81	110	<50	--	--	--	--	--	--
10/24/05		107.35	--	7.93	0.00	99.42	<81	<100	<48	--	--	--	--	--	--
9/5/07		107.35	--	8.45	0.00	98.90	<79	240	91	--	--	--	--	--	0.15
5/27-28/08		107.35	--	7.86	0.00	99.49	<79	<98	<50	<0.5	0.6	<0.5	<0.5	<0.5	<0.050
8/27-29/08	LFP	107.35	--	7.92	0.00	99.43	<79	<99	<50	<5	<5	<5	<5	<5	<0.050
11/17-19/08	LFP	107.35	--	6.60	0.00	100.75	35	110	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
2/16-18/09	LFP	107.35	--	7.59	0.00	99.76	53	130	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.093

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-109 (cont.)															
5/4-6/09	LFP	107.35	--	7.09	0.00	100.26	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
8/19-21/09	LFP	107.35	--	8.35	0.00	99.00	49	290	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
11/18-20/09	LFP	107.35	--	5.74	0.00	101.61	98	340	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
2/8-10/10	LFP	107.35	--	7.04	0.00	100.31	31	<72	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
5/12-13/10	LFP	107.35	--	7.41	0.00	99.94	60	270	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
08/11/10	LFP	107.35	--	8.90	0.00	98.45	34	300	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.1
11/3-4/10	LFP	107.35	--	6.37	0.00	100.98	65	430	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
2/3-4/11	LFP	107.35	--	7.12	0.00	100.23	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
05/23/11	LFP	107.35	--	7.26	0.00	100.09	47	520	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
8/23-24/11	LFP	107.35	--	8.35	0.00	99.00	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.12
11/7-9/11	LFP	107.35	--	8.00	0.00	99.35	<300	890	84	<0.5	<0.5	0.6	<0.5	<0.5	0.19
2/6-8/12	LFP	107.35	--	6.85	0.00	100.50	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
5/2-4/12	LFP	107.35	--	6.90	0.00	100.45	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
8/1-3/12	LFP	107.35	--	8.13	0.00	99.22	<30	<71	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.034
11/26-28/12	LFP	107.35	--	6.42	0.00	100.93	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.047
02/4-6/13	LFP	107.35	--	6.95	0.00	100.40	<28	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
05/6-8/13	LFP	107.35	--	7.35	0.00	100.00	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
9/9-13/13	LFP	107.35	--	7.34	0.00	100.01	<31/<31	<72/<72	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.62
11/18-22/13	LFP	107.35	--	8.12	0.00	99.23	<29/>68	<67/>170	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
02/4-11/14	LFP	107.35	--	7.33	0.00	100.02	<30/<30	<70/<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.20
6/12-14/14	LFP	107.35	--	7.31	0.00	100.04	<28/<28	<66/<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-- ⁸
MW-110															
8/22/95		108.89	--	9.62	0.00	99.27	400	<750	11,000	--	--	--	--	--	--
11/28/95		108.89	--	8.08	0.00	100.81	540	<750	6,000	--	--	--	--	--	14
3/12/96		108.89	--	8.74	0.00	100.15	340	<750	3,600	--	--	--	--	--	14
6/26/96		108.89	--	9.41	0.00	99.48	274	<750	2,750	--	--	--	--	--	8.14
10/9/96		108.89	--	9.67	0.00	99.22	<250	<750	1,160	--	--	--	--	--	5.96
2/12/97		108.89	--	8.42	0.00	100.47	393	<750	1,830	--	--	--	--	--	11.7
4/22/97		108.89	--	8.18	0.00	100.71	371	<750	1,950	--	--	--	--	--	7.27
8/5/97		108.89	--	9.80	0.00	99.09	282	<750	1,480	--	--	--	--	--	3.16
11/11/97		108.89	--	8.57	0.00	100.32	659	<750	2,330	--	--	--	--	--	22.9
2/11/98		108.89	--	8.54	0.00	100.35	390	<750	2,040	--	--	--	--	--	15.3
5/28/98		108.89	--	8.69	0.00	100.20	324	<750	1,350	--	--	--	--	--	15.5
8/20/98		108.89	--	10.91	0.00	97.98	<250	<750	812	--	--	--	--	--	1.55
11/19/98		108.89	--	9.51	0.00	99.38	258	<750	637	--	--	--	--	--	7.27
3/11/99		108.89	--	8.09	0.00	100.80	486	<500	2,350	--	--	--	--	--	11
5/25/99		108.89	--	9.28	0.00	99.61	<250	--	2,950	--	--	--	--	--	--
8/17/99		108.89	--	9.81	0.00	99.08	<250	<500	749	--	--	--	--	--	2.2

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-110 (cont)															
11/19/99		108.89	--	7.77	0.00	101.12	453	--	2,030	--	--	--	--	--	32.4
3/9/00		108.89	--	8.15	0.00	100.74	<250	<500	3,780	--	--	--	--	--	9.59
6/13/00		108.89	--	8.81	0.00	100.08	<250	<500	2,330	--	--	--	--	--	5.45
9/26/00		108.89	--	9.98	0.00	98.91	<250	<500	--	--	--	--	--	--	2.83
12/13/00		108.89	--	9.37	0.00	99.52	<250	<500	1,340	--	--	--	--	--	4.15
2/28/01		108.89	--	9.07	0.00	99.82	<250	<500	1,800	--	--	--	--	--	6.32
5/2/01		108.89	--	8.62	0.00	100.27	<250	<500	905	--	--	--	--	--	4.23
10/30/02		108.89	--	10.28	0.00	98.61	<250	<500	3,880	<2.50	<2.50	22.5	108	--	6.36
1/23/03		108.89	--	8.74	0.00	100.15	<250	<500	1,190	0.902	0.585	9.83	13.9	--	26.5^b
4/18/03		108.89	--	8.40	0.00	100.49	<250	<500	499	1.94	<0.500	0.799	1.65	--	16.8^b
7/11/03		108.89	--	9.99	0.00	98.90	<250	<500	586	1.76	<0.500	1.08	1.11	--	2.11 ^b
10/31/03		108.89	--	9.25	0.00	99.64	<250	<500	184	0.529	<0.500	<0.500	<1.0	--	<1.0 ^b
12/31/03		108.89	--	7.94	0.00	100.95	1,800	410	<99	<10	<2.0	23	25	--	17.3
5/3/04		108.89	--	9.56	0.00	99.33	<250	<500	454	1.8	<0.500	<0.500	<1.0	--	3.86 ^b
7/20/04		108.89	--	10.03	0.00	98.86	<250	<500	308	0.893	<0.500	<0.500	<1.0	--	<1.0 ^b
10/6/04		108.89	--	9.38	0.00	99.51	<79	<99	160	--	--	--	--	--	--
1/27/05		108.89	--	8.65	0.00	100.24	<81	<100	150	--	--	--	--	--	--
4/12/05		108.89	--	8.22	0.00	100.67	370	<100	290	--	--	--	--	--	--
7/18/05		108.89	--	9.50	0.00	99.39	<79	<99	100	--	--	--	--	--	--
7/18/05 (D)		108.89	--	9.50	0.00	99.39	<79	<99	100	--	--	--	--	--	--
10/20/05		108.89	--	9.62	0.00	99.27	82	100	110	--	--	--	--	--	--
9/4/07		108.89	--	10.08	0.00	98.81	<150	220	290	--	--	--	--	--	5
5/27-28/08	LFP	108.89	--	9.52	0.00	99.37	<76	<96	210	<0.5	<0.5	9	0.7	<0.5	9.1
8/27-29/08	LFP	108.89	--	9.60	0.00	99.29	120	<100	240	<5	<5	<5	<5	<5	1.5
11/17-19/08	LFP	108.89	--	8.17	0.00	100.72	410	<68	150	<0.5	<0.5	<0.5	<0.5	<0.5	34.1
2/16-18/09	LFP	108.89	--	9.23	0.00	99.66	58	170	<50	<0.5	<0.5	<0.5	<0.5	<0.5	27.7
5/4-6/09	LFP	108.89	--	8.60	0.00	100.29	380	670	96	<0.5	<0.5	<0.5	<0.5	<0.5	5.4
8/19-21/09	LFP	108.89	--	9.98	0.00	98.91	<30	76	69	<0.5	<0.5	<0.5	<0.5	<0.5	0.63
11/18-20/09	LFP	108.89	--	6.97	0.00	101.92	200	<67	670	<0.5	<0.5	2	<0.5	<0.5	5
2/8-10/10	LFP	108.89	--	8.64	0.00	100.25	51	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	12.5
5/12-13/10	LFP	108.89	--	9.08	0.00	99.81	39	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	4.2
08/11/10	LFP	108.89	--	9.75	0.00	99.14	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.4
11/3-4/10	LFP	108.89	--	8.15	0.00	100.74	49	98	<50	<0.5	<0.5	<0.5	<0.5	<0.5	2.5
2/3-4/11	LFP	108.89	--	8.77	0.00	100.12	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.72
05/24/11	LFP	108.89	--	8.90	0.00	99.99	<29	180	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.43
8/23-24/11	LFP	108.89	--	9.96	0.00	98.93	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.62
11/7-9/11	LFP	108.89	--	9.30	0.00	99.59	<31	<72	95	<0.5	<0.5	<0.5	<0.5	<0.5	0.22
2/6-8/12	LFP	108.89	--	8.40	0.00	100.49	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.22

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COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-110 (cont)															
5/2-4/12	LFP	108.89	--	8.40	0.00	100.49	<31	<72	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.23
8/1-3/12	LFP	108.89	--	8.46	0.00	100.43	50	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.093
11/26-28/12	LFP	108.89	--	7.95	0.00	100.94	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.30
02/4-6/13	LFP	108.89	--	8.38	0.00	100.51	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
05/6-8/13	LFP	108.89	--	9.52	0.00	99.37	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.23
9/9-13/13	LFP	108.89	--	9.03	0.00	99.86	<28/<28	<66/<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.39
11/18-21/13	LFP	108.89	--	8.22	0.00	100.67	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.33
02/4-11/14	LFP	108.89	--	8.98	0.00	99.91	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.16
6/12-14/14	LFP	108.89	--	9.50	0.00	99.39	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.22
MW-111															
8/22/95		107.12	--	7.86	0.00	99.26	360	<750	33,000	--	--	--	--	--	--
11/28/95		107.12	--	6.14	0.00	100.98	640	<750	17,000	--	--	--	--	--	10
3/12/96		107.12	--	6.84	0.00	100.28	290	<750	11,000	--	--	--	--	--	7.6
6/26/96		107.12	--	7.55	0.00	99.57	479	<750	7,690	--	--	--	--	--	4.8
10/9/96		107.12	--	7.81	0.00	99.31	256	<750	3,560	--	--	--	--	--	4.7
2/12/97		107.12	--	6.52	0.00	100.60	631	<750	17,200	--	--	--	--	--	8.7
4/22/97		107.12	--	6.31	0.00	100.81	920	<750	13,800	--	--	--	--	--	5.3
8/5/97		107.12	--	7.90	0.00	99.22	444	<750	4,290	--	--	--	--	--	3.5
11/11/97		107.12	--	6.70	0.00	100.42	770	<750	14,300	--	--	--	--	--	12.4
2/11/98		107.12	--	6.65	0.00	100.47	587	<750	13,600	--	--	--	--	--	8.3
5/28/98		107.12	--	6.89	0.00	100.23	526	<750	11,200	--	--	--	--	--	16.6
8/20/98		107.12	--	9.08	0.00	98.04	637	<750	5,950	--	--	--	--	--	1.7
11/19/98		107.12	--	7.60	0.00	99.52	3,890	<750	10,500,000	--	--	--	--	--	2.2
1/22/99		107.12	--	5.36	0.00	101.76	--	--	19,000	--	--	--	--	--	--
3/11/99		107.12	--	6.19	0.00	100.93	611	<500	6,910	--	--	--	--	--	6.3
5/25/99		107.12	--	7.43	0.00	99.69	388	--	8,500	--	--	--	--	--	4.2
8/17/99		107.12	--	7.98	0.00	99.14	547	<500	17,600	--	--	--	--	--	3
11/19/99		107.12	--	5.87	0.00	101.25	547	--	27,900	--	--	--	--	--	14.4
3/9/00		107.12	--	6.27	0.00	100.85	12,400	646	20,800	--	--	--	--	--	11.8
6/13/00		107.12	--	6.91	0.00	100.21	7,670	<500	29,600	--	--	--	--	--	12.8
9/26/00		107.12	--	8.37	0.00	98.75	--	--	--	--	--	--	--	--	--
12/13/00		107.12	--	7.65	0.00	99.47	13,800	<500	23,100	--	--	--	--	--	4.1
2/28/01		107.12	--	7.26	0.00	99.86	3,740	<500	16,400	--	--	--	--	--	5.6
5/2/01		107.12	--	6.89	0.00	100.23	7,530	<500	17,700	--	--	--	--	--	10.7
10/30/02		107.12	8.42	8.70	0.28	98.64	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL				--	--	--	--	--
1/23/03		107.12	6.95	6.99	0.04	100.16	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL				--	--	--	--	--
4/18/03		107.12	6.83	6.89	0.06	100.28	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL				--	--	--	--	--
7/11/03		107.12	8.18	8.25	0.07	98.93	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL				--	--	--	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-111 (cont)															
10/31/03		107.12	7.45	7.48	0.03	99.66	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL					--	--	--	--
12/31/03		107.12	--	6.40	0.00	100.72	50,000	2,800	300	8.3	6.5	1,100	3,300	--	15.2
05/03/04		107.12	7.76	7.79	0.03	99.35	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL					--	--	--	--
7/20/04		107.12	8.10	8.16	0.06	99.01	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL					--	--	--	--
10/6/04		107.12	--	7.54	0.00	99.58	240	<100	5,700	--	--	--	--	--	--
1/27/05		107.12	--	6.79	0.00	100.33	310	<98	8,800	--	--	--	--	--	--
1/27/05(D)		107.12	--	6.79	0.00	100.33	310	<98	9,100	--	--	--	--	--	--
4/12/05		107.12	--	6.32	0.00	100.80	820	<100	10,000	--	--	--	--	--	--
4/12/05(D)		107.12	--	6.32	0.00	100.80	850	<110	10,000	--	--	--	--	--	--
7/18/05		107.12	--	7.75	0.00	99.37	460	<96	6,300	--	--	--	--	--	--
10/20/05		107.12	--	7.84	0.00	99.28	--	--	--	--	--	--	--	--	--
9/4/07		107.12	--	8.26	0.00	98.86	1,100	<220	6,800	--	--	--	--	--	2.8
9/4/07		107.12	--	--	0.00	--	<81	<100	<50	--	--	--	--	--	<0.047
5/27-28/08		107.12	--	7.64	0.00	99.48	NOT SAMPLED DUE TO OBSTRUCTION IN WELL @ 7 FEET					--	--	--	--
8/27-29/08		107.12	--	7.71	0.00	99.41	NOT SAMPLED DUE TO OBSTRUCTION IN WELL @ 8 FEET					--	--	--	--
11/17-19/08	LFP	107.12	--	6.27	0.00	100.85	2,300	<1,400	18,000	3	<1	300	220	<1	36.8
2/16-18/09	LFP	107.12	--	7.36	0.00	99.76	350	74	20,000	4	2	190	110	<1	8.5
5/4-6/09	LFP	107.12	--	6.62	0.00	100.50	1,200	<70	13,000	8	2	220	120	<0.5	20.1
8/19-21/09	LFP	107.12	--	8.12	0.00	99.00	780	<70	11,000	4	0.6	180	130	<0.5	5.3
11/18-20/09	LFP	107.12	--	5.42	0.00	101.70	400	<68	4,700	5	0.7	53	21	<0.5	6.3
2/08-10/10	LFP	107.12	--	6.79	0.00	100.33	2,700	<140	19,000	16	1	270	110	<0.5	18.8
5/12-13/10	LFP	107.12	--	7.25	0.00	99.87	3,400	380	21,000	10	1	300	110	<1	22.6
08/11/10	LFP	107.12	--	7.92	0.00	99.20	1,300	<700	9,200	4	<1	220	55	<1	20.2
11/3-4/10	LFP	107.12	--	6.12	0.00	101.00	1,700	640	7,000	4	<1	160	68	<1	29.5
2/3-4/11	LFP	107.12	--	6.91	0.00	100.21	2,800	<340	14,000	10	0.9	250	72	<0.5	19.9
05/24/11	LFP	107.12	--	7.03	0.00	100.09	500	130	2,700	<0.5	<0.5	65	15	<0.5	2.8
8/23-24/11	LFP	107.12	--	9.16	0.00	97.96	1,600	<69	6,900	3	<0.5	130	11	<0.5	12.2
11/7-9/11	LFP	107.12	--	7.85	0.00	99.27	4,700	<730	20,000	1	<1	140	26	<1	45.8
2/6-8/12	LFP	107.12	--	6.55	0.00	100.57	690	110	5,100	5	<0.5	140	<0.5	<0.5	22.1
5/2-4/12	LFP	107.12	--	6.50	0.00	100.62	420	<68	4,400	5	0.7	170	23	<0.5	8.9
8/1-3/12	LFP	107.12	--	7.93	0.00	99.19	620	140	6,900	0.6	<0.5	<0.5	12	<0.5	22.9
11/26-28/12	LFP	107.12	--	6.07	0.00	101.05	15,000	<3,500	5,200	4	<0.5	140	32	<0.5	36.1
02/4-6/13	LFP	107.12	--	6.53	0.00	100.59	2,300	710	7,500	<3	<3	120	24	<0.5	17.8
05/6-8/13	LFP	107.12	--	7.46	0.00	99.66	300	<67	5,500	2	<0.5	100	13	<0.5	16.6
9/9-13/13	LFP	107.12	--	7.15	0.00	99.97	330/3,600	<66/89	5,500	1	<0.5	110	39	<0.5	59.4
11/18-22/13	LFP	107.12	--	6.42	0.00	100.70	370/1,000	<66/<66	3,300	0.9	<0.5	77	13	<0.5	17.8
2/4-11/14	LFP	107.12	--	7.11	0.00	100.01	410/1,000	<68/<68	4,800	1	<0.5	75	7	<0.5	27.3
6/12-14/14	LFP	107.12	--	7.70	0.00	99.42	380/1,200	<67/83	4,200	2	<0.5	130	14	<0.5	16.1

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-112															
8/22/95		107.58	--	8.42	0.00	99.16	<250	<750	480	--	--	--	--	--	--
11/28/95		107.58	--	6.73	0.00	100.85	<250	<750	150	--	--	--	--	--	5.8
3/12/96		107.58	--	7.43	0.00	100.15	<250	<750	250	--	--	--	--	--	<2.0
6/26/96		107.58	--	8.12	0.00	99.46	<250	<750	63.8	--	--	--	--	--	<2.0
10/9/96		107.58	--	8.36	0.00	99.22	<250	<750	93.1	--	--	--	--	--	2.62
2/12/97		107.58	--	7.11	0.00	100.47	322	<750	1,250	--	--	--	--	--	2.99
4/22/97		107.58	--	6.85	0.00	100.73	<250	<750	323	--	--	--	--	--	<2.0
8/5/97		107.58	--	8.45	0.00	99.13	<250	<750	124	--	--	--	--	--	<2.0
11/11/97		107.58	--	7.26	0.00	100.32	<250	<750	112	--	--	--	--	--	<2.0
2/11/98		107.58	--	7.25	0.00	100.33	<250	<750	658	--	--	--	--	--	<2.0
5/28/98		107.58	--	7.46	0.00	100.12	315	<750	713	--	--	--	--	--	10.4
8/20/98		107.58	--	9.64	0.00	97.94	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		107.58	--	8.20	0.00	99.38	<250	<750	367	--	--	--	--	--	<1.0
3/11/99		107.58	--	6.79	0.00	100.79	<250	<500	1,370	--	--	--	--	--	1.42
5/25/99		107.58	--	7.97	0.00	99.61	<250	--	<80	--	--	--	--	--	--
8/17/99		107.58	--	8.51	0.00	99.07	<250	<500	106	--	--	--	--	--	<1.6
11/19/99		107.58	--	6.46	0.00	101.12	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		107.58	--	6.85	0.00	100.73	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		107.58	--	7.48	0.00	100.10	<250	<500	824	--	--	--	--	--	2.14
9/26/00		107.58	--	8.66	0.00	98.92	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		107.58	--	8.07	0.00	99.51	<250	<500	<80	--	--	--	--	--	<1.0
2/28/01		107.58	--	7.77	0.00	99.81	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		107.58	--	7.31	0.00	100.27	<250	<500	710	--	--	--	--	--	1.44
10/30/02		107.58	--	8.95	0.00	98.63	<250	<500	95.7	<0.500	<0.500	<0.500	<1.00	--	2.63
1/23/03		107.58	--	7.39	0.00	100.19	<250	<500	178	<0.500	<0.500	0.730	<1.00	--	<1.0 ⁵
4/18/03		107.58	--	7.28	0.00	100.30	<250	<500	93.4	<0.500	<0.500	<0.500	<1.00	--	<1.0 ⁵
7/11/03		107.58	--	8.68	0.00	98.90	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	--	<1.0 ⁵
10/31/03		107.58	--	8.04	0.00	99.54	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	--	<1.0 ⁵
12/30/03		107.58	--	6.62	0.00	100.96	<50	<77	<97	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		107.58	--	8.22	0.00	99.36	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	--	<1.0 ⁵
7/20/04		107.58	--	8.69	0.00	98.89	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	--	--
10/7/04		107.58	--	8.06	0.00	99.52	<82	<100	<50	--	--	--	--	--	--
7/18/05		107.58	--	8.26	0.00	99.32	<77	<96	<48	--	--	--	--	--	--
10/21/05		107.58	--	8.25	0.00	99.33	<82	<100	48	--	--	--	--	--	--
9/5/07		107.58	--	8.79	0.00	98.79	<79	<99	<50	--	--	--	--	--	0.52
5/27-28/08	LFP	107.58	--	8.22	0.00	99.36	<80	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.24
8/27-29/08	LFP	107.58	--	8.26	0.00	99.32	<79	<99	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.92

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-112 (cont)															
11/17-19/08	LFP	107.58	--	6.87	0.00	100.71	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.057
2/16-18/09	LFP	107.58	--	7.92	0.00	99.66	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.51
5/4-06/09	LFP	107.58	--	7.26	0.00	100.32	120	<69	380	2	<0.5	<0.5	<0.5	<0.5	<0.5
8/19-21/09	LFP	107.58	--	8.67	0.00	98.91	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.27
11/18-20/09	LFP	107.58	--	5.58	0.00	102.00	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.36
2/8-10/10	LFP	107.58	--	7.35	0.00	100.23	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.46
5/12-13/10	LFP	107.58	--	7.77	0.00	99.81	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.58
08/12/10	LFP	107.58	--	8.45	0.00	99.13	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.29
11/3-4/10	LFP	107.58	--	6.85	0.00	100.73	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.19
2/3-4/11	LFP	107.58	--	8.21	0.00	99.37	49	89	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.56
05/24/11	LFP	107.58	--	7.58	0.00	100.00	<29	270	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.49
8/23-24/11	LFP	107.58	--	8.52	0.00	99.06	860	<66	72	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
11/7-9/11	LFP	107.58	--	8.35	0.00	99.23	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.24
2/6-8/12	LFP	107.58	--	7.10	0.00	100.48	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.22
5/2-4/12	LFP	107.58	--	7.20	0.00	100.38	<30	<69	68	<0.5	<0.5	<0.5	<0.5	<0.5	1.5
8/1-3/12	LFP	107.58	--	8.45	0.00	99.13	<31	<72	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.39
11/26-28/12	LFP	107.58	--	6.67	0.00	100.91	<30	<71	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.14
02/4-6/13	LFP	107.58	--	7.22	0.00	100.36	<28	<66	50	<0.5	<0.5	<0.5	<0.5	<0.5	0.64
5/6-8/13	LFP	107.58	--	8.00	0.00	99.58	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.47
9/9-13/13	LFP	107.58	--	7.71	0.00	99.87	<29/32	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.85
11/18-22/13	LFP	107.58	--	6.76	0.00	100.82	<29/33	<67/<67	68	<0.5	<0.5	<0.5	<0.5	<0.5	0.58
2/4-11/2014	LFP	107.58	--	7.67	0.00	99.91	<29/<29	<68/<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.38
6/12-14/14	LFP	107.58	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--
MW-113															
8/22/95		108.44	--	9.26	0.00	99.18	320	<750	3,100	--	--	--	--	--	--
11/28/95		108.44	--	7.55	0.00	100.89	<250	<750	180	--	--	--	--	--	<2.0
3/12/96		108.44	--	8.26	0.00	100.18	<250	<750	750	--	--	--	--	--	<2.0
6/26/96		108.44	--	8.95	0.00	99.49	<250	<750	809	--	--	--	--	--	2.43
10/9/96		108.44	--	9.21	0.00	99.23	<250	<750	494	--	--	--	--	--	2.95
2/12/97		108.44	--	7.93	0.00	100.51	<250	<750	1,600	--	--	--	--	--	<2.0
4/22/97		108.44	--	7.71	0.00	100.73	291	<750	748	--	--	--	--	--	<2.0
8/5/97		108.44	--	9.37	0.00	99.07	<250	<750	876	--	--	--	--	--	<2.0
11/11/97		108.44	--	8.04	0.00	100.40	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		108.44	--	8.02	0.00	100.42	<250	<750	76.10	--	--	--	--	--	<2.0
5/28/98		108.44	--	8.31	0.00	100.13	<250	<750	116	--	--	--	--	--	6.26
8/20/98		108.44	--	10.48	0.00	97.96	<250	<750	235	--	--	--	--	--	<1.0
11/19/98		108.44	--	9.02	0.00	99.42	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		108.44	--	7.59	0.00	100.85	<250	<750	162	--	--	--	--	--	<1.0

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-113 (cont)															
5/25/99		108.44	--	8.83	0.00	99.61	<250	--	321	--	--	--	--	--	--
8/17/99		108.44	--	9.34	0.00	99.10	<250	<500	265	--	--	--	--	--	1.2
11/19/99		108.44	--	7.27	0.00	101.17	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		108.44	--	7.66	0.00	100.78	<250	<500	96.70	--	--	--	--	--	<1.0
6/13/00		108.44	--	8.29	0.00	100.15	<250	<500	154	--	--	--	--	--	<1.0
9/26/00		108.44	--	9.51	0.00	98.93	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		108.44	--	8.91	0.00	99.53	<250	588	<80	--	--	--	--	--	<1.0
2/28/01		108.44	--	8.60	0.00	99.84	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		108.44	--	8.14	0.00	100.30	<250	<500	<80	--	--	--	--	--	<1.0
10/30/02		108.44	--	9.85	0.00	98.59	<250	<500	<80	<0.500	<0.500	<0.500	<1.0	--	1.55
1/23/03		108.44	--	8.29	0.00	100.15	<250	<500	<80	<0.500	<0.500	<0.500	<1.0	--	<1.0 ⁵
4/18/03		108.44	--	8.09	0.00	100.35	<250	<500	<50	<0.500	<0.500	<0.500	<1.0	--	<1.0 ⁵
7/11/03		108.44	--	9.51	0.00	98.93	<250	<500	<50	<0.500	<0.500	<0.500	<1.0	--	<1.0 ⁵
10/31/03		108.44	--	8.80	0.00	99.64	<250	<500	<50	<0.500	<0.500	<0.500	<1.0	--	<1.0 ⁵
12/31/03		108.44	--	7.44	0.00	101.00	<50	<77	<97	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		108.44	--	9.14	0.00	99.30	<250	<500	<50	<0.500	<0.500	<0.500	<1.0	--	<1.0 ⁵
7/20/04		108.44	--	9.58	0.00	98.86	<250	<500	<50	<0.500	<0.500	<0.500	<1.0	--	--
10/6/04		108.44	--	8.92	DRY	--	--	--	--	--	--	--	--	--	--
1/27/05		108.44	--	8.15	0.00	--	<84	<110	<48	--	--	--	--	--	--
4/12/05		108.44	--	7.76	0.00	--	<88	<110	<48	--	--	--	--	--	--
7/18/05		108.44	--	9.11	0.00	--	<79	<98	<48	--	--	--	--	--	--
10/26/05		108.44	--	9.10	0.00	--	<82	<100	<48	--	--	--	--	--	--
9/5/07		108.44	--	9.59	0.00	98.85	<82	<100	<50	--	--	--	--	--	0.32
9/5/07 (D)		108.44	--	9.59	0.00	98.85	<82	<100	<50	--	--	--	--	--	0.32
5/27-28/08	LFP	108.44	--	9.02	0.00	99.42	<82	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.16
8/27-29/08	LFP	108.44	--	9.10	0.00	99.34	<81	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.19
11/17-19/08	LFP	108.44	--	7.68	0.00	100.76	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
2/16-18/09	LFP	108.44	--	8.75	0.00	99.69	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.087
5/4-6/09	LFP	108.44	--	8.28	0.00	100.16	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
8/19-21/09	LFP	108.44	--	9.50	0.00	98.94	<31	<71	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.14
11/18-20/09	LFP	108.44	--	6.39	0.00	102.05	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.16
2/8-10/10	LFP	108.44	--	8.15	0.00	100.29	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
5/12-13/10	LFP	108.44	--	8.60	0.00	99.84	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.093
08/12/10	LFP	108.44	--	9.29	0.00	99.15	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.077
11/3-4/10	LFP	108.44	--	7.65	0.00	100.79	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
2/3-4/11	LFP	108.44	--	8.26	0.00	100.18	<30	<71	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-113 (cont)															
05/24/11	LFP	108.44	--	8.42	0.00	100.02	<30	330	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
8/23-24/11	LFP	108.44	--	9.32	0.00	99.12	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.096
11/7-9/11	LFP	108.44	--	9.20	0.00	99.24	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.12
2/6-8/12	LFP	108.44	--	7.95	0.00	100.49	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
5/2-4/12	LFP	108.44	--	8.00	0.00	100.44	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
8/1-3/12	LFP	108.44	--	9.30	0.00	99.14	<31	<72	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.048
11/26-28/12	LFP	108.44	--	7.49	0.00	100.95	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.047
02/4-6/13	LFP	108.44	--	8.06	0.00	100.38	30	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
05/6-8/13	LFP	108.44	--	8.83	0.00	99.61	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
9/9-13/13	LFP	108.44	--	8.56	0.00	99.88	<28/<28	<66/<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.12
11/18-21/13	LFP	108.44	--	7.74	0.00	100.70	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
2/4-11/14	LFP	108.44	--	6.56	0.00	101.88	<29/<29	<69/<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
6/12-14/14	LFP	108.44	--	8.79	0.00	99.65	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
MW-114															
8/22/95		106.89	--	7.47	0.00	99.42	<250	<750	<50	--	--	--	--	--	--
11/28/95		106.89	--	58.30	0.00	48.59	<250	<750	<50	--	--	--	--	--	<2.0
3/12/96		106.89	--	6.39	0.00	100.50	<250	<750	<50	--	--	--	--	--	<2.0
6/26/96		106.89	--	7.11	0.00	99.78	<250	<750	<50	--	--	--	--	--	<2.0
10/9/96		106.89	--	7.42	0.00	99.47	<250	<750	<50	--	--	--	--	--	<2.0
2/12/97		106.89	--	5.47	0.00	101.42	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		106.89	--	14.30	0.00	92.59	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		106.89	--	7.65	0.00	99.24	<250	1,410	<50	--	--	--	--	--	<2.0
11/11/97		106.89	--	6.45	0.00	100.44	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		106.89	--	6.23	0.00	100.66	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		106.89	--	6.44	0.00	100.45	<250	<750	<50	--	--	--	--	--	5.91
8/20/98		106.89	--	8.75	0.00	98.14	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		106.89	--	7.05	0.00	99.84	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		106.89	--	5.90	0.00	100.99	<250	<500	<80	--	--	--	--	--	<1.0
5/25/99		106.89	--	7.10	0.00	99.79	<250	--	<80	--	--	--	--	--	--
8/17/99		106.89	--	7.59	0.00	99.30	<250	607	<80	--	--	--	--	--	<1.0
11/19/99		106.89	--	5.59	0.00	101.30	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		106.89	--	5.98	0.00	100.91	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		106.89	--	6.04	0.00	100.85	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		106.89	--	7.81	0.00	99.08	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		106.89	--	7.06	0.00	99.83	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		106.89	--	6.79	0.00	100.10	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		106.89	--	8.84	0.00	98.05	<250	1,880	<80	--	--	--	--	--	<1.0

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-114 (cont)															
10/30/02		106.89	--	8.32	0.00	98.57	<250	1,090	115	<0.500	<0.500	1.17	5.18	--	1.01
1/23/03		106.89	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--
4/18/03		106.89	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--
7/11/03		106.89	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--
10/31/03		106.89	--	6.61	0.00	100.28	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.0	--	<1.0 ⁵
12/30/03		106.89	--	5.81	0.00	101.08	<50	480	3,600	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		106.89	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--
7/20/04		106.89	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--
10/6/04		106.89	--	6.98	0.00	99.91	<76	<95	<50	--	--	--	--	--	--
10/24/05		106.89	--	7.28	0.00	99.61	<79	<99	<48	--	--	--	--	--	--
9/5/07		106.89	--	7.87	0.00	99.02	94	810	<50	--	--	--	--	--	0.38
5/27-28/08	LFP	106.89	--	7.19	0.00	99.70	<1,600	15,000	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.14
8/27-29/08	LFP	106.89	--	7.30	0.00	99.59	270	2,200	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.25
11/17-19/08	LFP	106.89	--	6.01	0.00	100.88	330	4,600	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.13
2/16-18/09	LFP	106.89	--	6.91	0.00	99.98	210	1,900	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.22
5/4-6/09	LFP	106.89	--	6.42	0.00	100.47	180	1,400	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.43
8/19-21/09	LFP	106.89	--	7.78	0.00	99.11	<30	<71	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.79
11/18-20/09	LFP	106.89	--	5.10	0.00	101.79	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.34
2/8-10/10	LFP	106.89	--	6.38	0.00	100.51	110	790	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.19
5/12-13/10	LFP	106.89	--	6.71	0.00	100.18	<30	80	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.23
08/11/10	LFP	106.89	--	7.45	0.00	99.44	<29	220	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
11/3-4/10	LFP	106.89	--	5.88	0.00	101.01	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.24
2/3-4/11	LFP	106.89	--	6.48	0.00	100.41	60	460	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.10
05/23/11	LFP	106.89	--	6.55	0.00	100.34	55	380	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.36
8/23-24/11	LFP	106.89	--	7.70	0.00	99.19	130	1,500	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.41
11/7-9/11	LFP	106.89	--	7.35	0.00	99.54	120	950	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.19
2/6-8/12	LFP	106.89	--	6.25	0.00	100.64	<29	180	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.088
5/2-4/12	LFP	106.89	--	5.95	0.00	100.94	<30	140	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.72
8/1-3/12	LFP	106.89	--	7.50	0.00	99.39	140	910	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.084
11/26-28/12	LFP	106.89	--	5.88	0.00	101.01	<31	<72	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.19
02/4-6/13	LFP	106.89	--	6.27	0.00	100.62	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.13
05/6-8/13	LFP	106.89	--	6.97	0.00	99.92	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.20
9/9-13/13	LFP	106.89	--	6.96	0.00	99.93	<29/60	<67/260	<50	<0.5	<0.5	<0.5	<0.5	<0.5	2.3
11/18-22/13	LFP	106.89	--	8.36	0.00	98.53	200/99	<68/340	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.10
02/4-11/14	LFP	106.89	--	6.56	0.00	100.33	<29/<29	<67/71	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.12
6/12-14/14	LFP	106.89	--	6.96	0.00	99.93	38/94	340/820	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.18

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COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-115															
8/22/95		107.94	--	8.79	0.00	99.15	<250	<750	1,800	--	--	--	--	--	--
11/28/95		107.94	--	7.05	0.00	100.89	<250	<750	460	--	--	--	--	--	<2.0
3/12/96		107.94	--	7.76	0.00	100.18	<250	<750	630	--	--	--	--	--	<2.0
6/26/96		107.94	--	8.45	0.00	99.49	<250	<750	706	--	--	--	--	--	<2.0
10/9/96		107.94	--	8.71	0.00	99.23	<250	<750	722	--	--	--	--	--	2.54
2/12/97		107.94	--	7.48	0.00	100.46	<250	<750	58	--	--	--	--	--	<2.0
4/22/97		107.94	--	7.25	0.00	100.69	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		107.94	--	8.77	0.00	99.17	<250	<750	611	--	--	--	--	--	2.0
11/11/97		107.94	--	7.71	0.00	100.23	<250	<750	57	--	--	--	--	--	<2.0
2/11/98		107.94	--	7.72	0.00	100.22	<250	<750	89.5	--	--	--	--	--	<2.0
5/28/98		107.94	--	7.92	0.00	100.02	<250	<750	<50	--	--	--	--	--	8.08
8/20/98		107.94	--	9.18	0.00	98.76	<250	<750	155	--	--	--	--	--	<1.0
11/19/98		107.94	--	8.58	0.00	99.36	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		107.94	--	7.12	0.00	100.82	<250	<750	<80	--	--	--	--	--	<1.0
5/25/99		107.94	--	8.33	0.00	99.61	<250	--	<80	--	--	--	--	--	--
8/17/99		107.94	--	8.87	0.00	99.07	<250	<500	163	--	--	--	--	--	1.4
11/19/99		107.94	--	6.82	0.00	101.12	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		107.94	--	7.20	0.00	100.74	<250	<500	103	--	--	--	--	--	<1.0
6/13/00		107.94	--	7.82	0.00	100.12	--	--	<80	--	--	--	--	--	<1.0
9/26/00		107.94	--	9.02	0.00	98.92	<250	<500	--	--	--	--	--	--	1.02
12/13/00		107.94	--	8.43	0.00	99.51	<250	<500	313	--	--	--	--	--	<1.0
2/28/01		107.94	--	8.13	0.00	99.81	<250	<500	177	--	--	--	--	--	<1.0
5/2/01		107.94	--	10.37	0.00	97.57	<250	<500	162	--	--	--	--	--	<1.0
10/30/02		107.94	--	9.33	0.00	98.61	<250	<500	175	<0.500	<0.500	<0.500	<1.0	--	4.36
1/23/03		107.94	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--
4/18/03		107.94	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--
7/11/03		107.94	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--
10/31/03		107.94	--	8.30	0.00	99.64	<250	<500	78.9	<0.500	<0.500	<0.500	<1.0	--	<1.0 ^b
12/31/03		107.94	--	6.98	0.00	100.96	<50	<79	<99	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		107.94	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--
7/20/04		107.94	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--
10/6/04		107.94	--	8.43	0.00	99.51	<160	<200	<50	--	--	--	--	--	--
10/21/05		107.94	--	8.67	0.00	99.27	<81	<100	<48	--	--	--	--	--	--
10/21/05(D)		107.94	--	8.67	0.00	99.27	<82	<100	<48	--	--	--	--	--	--
9/5/07		107.94	--	9.11	0.00	98.83	<76	<95	<50	--	--	--	--	--	0.37
5/27-28/08		107.94	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--

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COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-115 (cont)															
8/27-29/08	LFP	107.94	--	8.63	0.00	99.31	<82	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.35
11/17-19/08	LFP	107.94	--	7.25	0.00	100.69	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.097
2/16-18/09	LFP	107.94	--	8.31	0.00	99.63	<31	<71	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.17
5/4-6/09	LFP	107.94	--	7.66	0.00	100.28	42	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.36
8/19-21/09	LFP	107.94	--	9.04	0.00	98.90	320	2,700	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.64
10/19/09	LFP	107.94	--	8.70	0.00	99.24	<29	<68	--	--	--	--	--	--	--
11/18-20/09	LFP	107.94	--	5.85	0.00	102.09	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.92
2/8-10/10	LFP	107.94	--	7.69	0.00	100.25	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.17
5/12-13/10	LFP	107.94	--	8.14	0.00	99.80	30	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.20
08/12/10	LFP	107.94	--	8.81	0.00	99.13	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.92
11/3-4/10	LFP	107.94	--	7.07	0.00	100.87	<30	<70	70	<0.5	<0.5	<0.5	<0.5	<0.5	0.83
2/3-4/11	LFP	107.94	--	7.81	0.00	100.13	33	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
05/24/11	LFP	107.94	--	7.95	0.00	99.99	42	220	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.53
8/23-24/11	LFP	107.94	--	9.05	0.00	98.89	68	74	73	<0.5	<0.5	<0.5	<0.5	<0.5	1.2
11/7-9/11	LFP	107.94	--	8.70	0.00	99.24	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.60
2/6-8/12	LFP	107.94	--	7.55	0.00	100.39	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
5/2-4/12	LFP	107.94	--	7.55	0.00	100.39	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
8/1-3/12	LFP	107.94	--	8.82	0.00	99.12	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.63
11/26-28/12	LFP	107.94	--	7.04	0.00	100.90	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.052
02/4-6/13	LFP	107.94	--	7.58	0.00	100.36	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
05/6-8/13	LFP	107.94	--	8.34	0.00	99.60	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.41
9/9-13/13	LFP	107.94	--	8.09	0.00	99.85	<28/31	<66/<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.89
11/18-21/13	LFP	107.94	--	7.45	0.00	100.49	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.45
2/4-11/14	LFP	107.94	--	8.05	0.00	99.89	<28/<28	<66/<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.43
6/12-14/14	LFP	107.94	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--
MW-116															
8/22/95		107.56	--	8.82	0.00	98.74	<250	<750	<50	--	--	--	--	--	--
3/12/96		107.56	--	8.08	0.00	99.48	<250	<750	<50	--	--	--	--	--	<2.0
10/9/96		107.56	--	8.69	0.00	98.87	<250	<750	<50	--	--	--	--	--	<2.0
2/12/97		107.56	--	7.86	0.00	99.70	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		107.56	--	7.65	0.00	99.91	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		107.56	--	8.71	0.00	98.85	<250	<750	<50	--	--	--	--	--	<2.0
11/11/97		107.56	--	8.07	0.00	99.49	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		107.56	--	8.06	0.00	99.50	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		107.56	--	8.25	0.00	99.31	<250	<750	<50	--	--	--	--	--	4.66
8/20/98		107.56	--	9.05	0.00	98.51	<250	<750	<50	--	--	--	--	--	<1.0

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-116 (cont)															
11/19/98		107.56	--	9.16	0.00	98.40	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		107.56	--	7.64	0.00	99.92	<250	<750	<80	--	--	--	--	--	<1.0
5/25/99		107.56	--	8.40	0.00	99.16	<250	--	<80	--	--	--	--	--	--
8/17/99		107.56	--	8.78	0.00	98.78	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		107.56	--	7.60	0.00	99.96	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		107.56	--	7.70	0.00	99.86	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		107.56	--	8.37	0.00	99.19	--	--	<80	--	--	--	--	--	<1.0
9/26/00		107.56	--	8.88	0.00	98.68	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		107.56	--	8.52	0.00	99.04	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		107.56	--	8.25	0.00	99.31	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		107.56	--	10.84	0.00	96.72	<250	<500	<80	--	--	--	--	--	<1.0
10/30/02		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
4/18/03		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
7/11/03		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
10/31/03		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
12/30/03		107.56	--	7.54	0.00	100.02	<50	<79	<99	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
7/20/04		107.56	--	8.92	0.00	98.64	<284	<568	<50	<0.500	<0.500	<0.500	<1.00	--	--
10/7/04		107.56	--	7.54	0.00	100.02	<75	<94	<50	--	--	--	--	--	--
10/20/05		107.56	--	8.73	0.00	98.83	<81	<100	<48	--	--	--	--	--	--
9/6/07		107.56	--	9.00	0.00	98.56	<76	<95	<50	--	--	--	--	--	0.15
5/27-28/08		107.56	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--
8/27-29/08	LFP	107.56	--	8.68	0.00	98.88	89	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
11/17-19/08	LFP	107.56	--	7.93	0.00	99.63	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
2/16-18/09	LFP	107.56	--	8.45	0.00	99.11	590	350	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
5/4-6/09	LFP	107.56	--	8.20	0.00	99.36	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
8/19-21/09	LFP	107.56	--	8.91	0.00	98.65	34	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
11/18-20/09	LFP	107.56	--	6.85	0.00	100.71	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
2/8-10/10	LFP	107.56	--	8.07	0.00	99.49	<28	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.10
08/12/10	LFP	107.56	--	8.78	0.00	98.78	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
11/3-4/10	LFP	107.56	--	8.04	0.00	99.52	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
2/3-4/11	LFP	107.56	--	8.16	0.00	99.40	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
05/24/11		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
8/23-24/11	LFP	107.56	--	9.00	0.00	98.56	<31	<71	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
11/7-9/11	LFP	107.56	--	8.75	0.00	98.81	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
2/6-8/12	LFP	107.56	--	8.05	0.00	99.51	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-116 (cont)															
5/2/4/12	LFP	107.56	--	8.10	0.00	99.46	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
8/1-3/12	LFP	107.56	--	8.80	0.00	98.76	<30	<71	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.034
11/26-28/12	LFP	107.56	--	7.84	0.00	99.72	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.047
02/4-6/13	LFP	107.56	--	8.04	0.00	99.52	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
05/6-8/13	LFP	107.56	--	8.51	0.00	99.05	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
9/9-13/13	LFP	107.56	--	8.61	0.00	98.95	<28/<28	<66/<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
11/18-21/13	LFP	107.56	--	8.15	0.00	99.41	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.10
2/4-11/14	LFP	107.56	--	8.28	0.00	99.28	<29/<29	<68/<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
6/12-14/14	LFP	107.56	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--
MW-117															
8/22/95		106.57	--	7.45	0.00	99.12	<250	<750	<50	--	--	--	--	--	--
11/28/95		106.57	--	5.45	0.00	101.12	<250	<750	<50	--	--	--	--	--	<2.0
3/12/96		106.57	--	6.32	0.00	100.25	<250	<750	<50	--	--	--	--	--	<2.0
6/26/96		106.57	--	7.18	0.00	99.39	<250	<750	<50	--	--	--	--	--	<2.0
10/9/96		106.57	--	7.42	0.00	99.15	<250	<750	<50	--	--	--	--	--	7.1
2/12/97		106.57	--	5.93	0.00	100.64	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		106.57	--	5.78	0.00	100.79	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		106.57	--	7.58	0.00	98.99	<250	<750	<50	--	--	--	--	--	<2.0
11/11/97		106.57	--	6.21	0.00	100.36	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		106.57	--	6.21	0.00	100.36	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		106.57	--	6.44	0.00	100.13	<250	<750	<50	--	--	--	--	--	2.68
8/20/98		106.57	--	7.90	0.00	98.67	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		106.57	--	7.18	0.00	99.39	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		106.57	--	5.51	0.00	101.06	<250	<500	<80	--	--	--	--	--	<1.0
5/25/99		106.57	--	7.00	0.00	99.57	<250	--	<80	--	--	--	--	--	--
8/17/99		106.57	--	7.56	0.00	99.01	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		106.57	--	5.11	0.00	101.46	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		106.57	--	5.65	0.00	100.92	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		106.57	--	6.25	0.00	100.32	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		106.57	--	7.70	0.00	98.87	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		106.57	--	7.11	0.00	99.46	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		106.57	--	6.78	0.00	99.79	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		106.57	--	8.90	0.00	97.67	<250	<500	<80	--	--	--	--	--	<1.0
10/30/02		106.57	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		106.57	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--	--	--	--
4/18/03		106.57	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--	--	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-117 (cont)															
7/11/03		106.57				MONITORED/SAMPLED ANNUALLY	--	--	--	--	--	--	--	--	--
10/31/03		106.57				UNABLE TO LOCATE - POSSIBLY PAVED OVER	--	--	--	--	--	--	--	--	--
12/30/03		106.57	--	5.46	0.00	101.11	<50	<80	<100	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		106.57				MONITORED/SAMPLED ANNUALLY	--	--	--	--	--	--	--	--	--
7/20/04		106.57				MONITORED/SAMPLED ANNUALLY	--	--	--	--	--	--	--	--	--
10/6/04		106.57	--	7.07	0.00	99.50	<79	<98	<50	--	--	--	--	--	--
10/21/05		106.57	--	7.33	0.00	99.24	<81	<100	<48	--	--	--	--	--	--
9/5/07		106.57	--	7.92	0.00	98.65	<82	<100	<50	--	--	--	--	--	0.22
5/27-28/08	LFP	106.57	--	7.42	0.00	99.15	<80	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.056
8/27-29/08	LFP	106.57	--	7.38	0.00	99.19	<82	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
11/17-19/08	LFP	106.57	--	5.90	0.00	100.67	55	<72	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
2/16-18/09	LFP	106.57	--	7.06	0.00	99.51	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.095
5/4-6/09	LFP	106.57	--	6.51	0.00	100.06	38	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
8/19-21/09	LFP	106.57	--	7.82	0.00	98.75	40	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.073
11/18-20/09	LFP	106.57	--	3.85	0.00	102.72	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
2/8-10/10	LFP	106.57	--	6.43	0.00	100.14	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
5/12-13/10	LFP	106.57	--	6.96	0.00	99.61	36	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
08/12/10	LFP	106.57	--	7.68	0.00	98.89	<29	210	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
11/3-4/10	LFP	106.57	--	5.97	0.00	100.60	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
2/3-4/11	LFP	106.57	--	6.5	0.00	100.07	<31	<72	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
05/24/11	LFP	106.57	--	6.77	0.00	99.80	<30	150	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
8/23-24/11	LFP	106.57	--	7.85	0.00	98.72	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
11/7-9/11	LFP	106.57	--	7.55	0.00	99.02	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
2/6-8/12	LFP	106.57	--	6.20	0.00	100.37	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
5/2-4/12	LFP	106.57	--	6.00	0.00	100.57	<28	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
8/1-3/12	LFP	106.57	--	7.66	0.00	98.91	<32	<75	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.034
11/26-28/12	LFP	106.57	--	5.60	0.00	100.97	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.047
02/4-6/13	LFP	106.57	--	6.29	0.00	100.28	<28	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
05/6-8/13	LFP	106.57	--	7.18	0.00	99.39	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
9/9-13/13	LFP	106.57	--	8.11	0.00	98.46	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
11/18-21/13	LFP	106.57	--	5.99	0.00	100.58	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
2/4-11/14	LFP	106.57	--	6.85	0.00	99.72	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
6/12-14/14	LFP	106.57	--	7.11	0.00	99.46	<28/<28	<66/<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
MW-118															
8/22/95		106.72	--	7.87	0.00	98.85	470	<750	<50	--	--	--	--	--	--
11/28/95		106.72	--	5.76	0.00	100.96	<250	<750	<50	--	--	--	--	--	<2.0

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GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-118 (cont)															
3/12/96		106.72	--	6.67	0.00	100.05	<250	<750	<50	--	--	--	--	--	<2.0
6/26/96		106.72	--	7.51	0.00	99.21	<250	<750	<50	--	--	--	--	--	<2.0
10/9/96		106.72	--	7.78	0.00	98.94	<250	<750	50.1	--	--	--	--	--	<2.0
2/12/97		106.72	--	6.35	0.00	100.37	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		106.72	--	5.98	0.00	100.74	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		106.72	--	7.85	0.00	98.87	<250	<750	<50	--	--	--	--	--	<2.0
11/11/97		106.72	--	6.52	0.00	100.20	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		106.72	--	6.56	0.00	100.16	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		106.72	--	6.85	0.00	99.87	<250	<750	<50	--	--	--	--	--	2.84
8/20/98		106.72	--	7.26	0.00	99.46	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		106.72	--	7.70	0.00	99.02	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		106.72	--	5.81	0.00	100.91	<250	<750	<80	--	--	--	--	--	<1.0
5/25/99		106.72	--	7.39	0.00	99.33	<250	--	<80	--	--	--	--	--	--
8/17/99		106.72	--	7.95	0.00	98.77	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		106.72	--	5.53	0.00	101.19	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		106.72	--	5.99	0.00	100.73	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		106.72	--	7.08	0.00	99.64	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		106.72	--	8.07	0.00	98.65	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		106.72	--	7.53	0.00	99.19	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		106.72	--	7.17	0.00	99.55	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		106.72	--	6.81	0.00	99.91	<250	<500	<80	--	--	--	--	--	<1.0
10/30/02		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
4/18/03		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
7/11/03		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
10/31/03		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
12/30/03		106.72	--	5.71	0.00	101.01	<50	<400	<500	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
7/20/04		106.72	--	8.14	0.00	98.58	<250	<500	<50	<0.500	<0.500	<0.500	<1.00	--	--
10/7/04		106.72	--	7.55	0.00	99.17	<76	<96	<50	--	--	--	--	--	--
10/7/04(D)		106.72	--	7.55	0.00	99.17	<80	160	<50	--	--	--	--	--	--
10/20/05		106.72	--	7.78	0.00	98.94	<83	<100	<48	--	--	--	--	--	--
9/5/07		106.72	--	8.20	0.00	98.52	980	710	<50	--	--	--	--	--	0.13
5/27-28/08		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
8/27-29/08	LFP	106.72	--	7.64	0.00	99.08	260	230	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
11/17-19/08	LFP	106.72	--	6.20	0.00	100.52	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-118 (cont)															
2/16-18/09	LFP	106.72	--	7.29	0.00	99.43	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.068
5/4-6/09	LFP	106.72	--	6.70	0.00	100.02	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
8/19-21/09	LFP	106.72	--	8.04	0.00	98.68	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.23
11/18-20/09	LFP	106.72	--	4.45	0.00	102.27	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
2/8-10/10	LFP	106.72	--	6.65	0.00	100.07	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
5/12-13/10	LFP	106.72	--	7.21	0.00	99.51	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
08/12/10	LFP	106.72	--	7.90	0.00	98.82	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
11/3-4/10	LFP	106.72	--	6.39	0.00	100.33	<29	160	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
2/3-4/11	LFP	106.72	--	6.77	0.00	99.95	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
05/24/11		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
8/23-24/11	LFP	106.72	--	8.15	0.00	98.57	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
11/7-9/11	LFP	106.72	--	7.80	0.00	98.92	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
2/6-8/12	LFP	106.72	--	6.50	0.00	100.22	<28	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
5/2-4/12	LFP	106.72	--	5.85	0.00	100.87	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
8/1-3/12	LFP	106.72	--	7.87	0.00	98.85	97	230	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.042
11/26-28/12	LFP	106.72	--	5.84	0.00	100.88	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.047
02/4-6/13	LFP	106.72	--	6.57	0.00	100.15	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
05/6-8/13	LFP	106.72	--	7.47	0.00	99.25	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
9/9-13/13	LFP	106.72	--	7.28	0.00	99.44	<28/<28	<66/<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
11/18-21/13	LFP	106.72	--	6.57	0.00	100.15	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
2/4-11/14	LFP	106.72	--	7.02	0.00	99.70	<29/<29	<68/<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
6/12-14/14	LFP	106.72	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--
MW-119															
8/22/95		108.35	--	9.22	0.00	99.13	<250	<750	<50	--	--	--	--	--	--
11/28/95		108.35	--	7.54	0.00	100.81	<250	<750	100	--	--	--	--	--	<2.0
3/12/96		108.35	--	8.21	0.00	100.14	<250	<750	240	--	--	--	--	--	2.2
6/26/96		108.35	--	8.91	0.00	99.44	<250	<750	174	--	--	--	--	--	<2.0
10/9/96		108.35	--	9.14	0.00	99.21	<250	<750	78	--	--	--	--	--	2.16
2/12/97		108.35	--	7.84	0.00	100.51	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		108.35	--	7.67	0.00	100.68	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		108.35	--	9.15	0.00	99.20	<250	<750	53.6	--	--	--	--	--	<2.0
11/11/97		108.35	--	8.02	0.00	100.33	264	<750	<50	--	--	--	--	--	<2.0
2/11/98		108.35	--	8.02	0.00	100.33	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		108.35	--	8.20	0.00	100.15	<250	<750	102	--	--	--	--	--	3.33
8/20/98		108.35	--	10.40	0.00	97.95	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		108.35	--	8.98	0.00	99.37	<250	<750	78.5	--	--	--	--	--	1.82

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COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-119 (cont)															
3/11/99		108.35	--	7.61	0.00	100.74	<250	<750	<80	--	--	--	--	--	<1.0
5/25/99		108.35	--	8.77	0.00	99.58	<250	--	<80	--	--	--	--	--	--
8/17/99		108.35	--	9.29	0.00	99.06	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		108.35	--	7.25	0.00	101.10	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		108.35	--	7.63	0.00	100.72	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		108.35	--	8.28	0.00	100.07	<250	<500	413	--	--	--	--	--	2.64
9/26/00		108.35	--	9.44	0.00	98.91	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		108.35	--	8.86	0.00	99.49	<250	<500	--	--	--	--	--	--	1.79
2/28/01		108.35	--	8.56	0.00	99.79	<250	<500	227	--	--	--	--	--	2.64
5/2/01		108.35	--	8.10	0.00	100.25	<250	<500	104	--	--	--	--	--	1.56
10/30/02		108.35	--	9.76	0.00	98.59	<250	<500	<80	<0.500	<0.500	<0.500	<1.00	--	4.2
1/23/03		108.35	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
4/18/03		108.35	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
7/11/03		108.35	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
10/31/03		108.35	--	8.62	0.00	99.73	<250	<500	<50	<0.500	<0.500	<0.500	<1.00	--	1.31 ^b
12/30/03		108.35	--	7.40	0.00	100.95	<50	<77	<96	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		108.35	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
7/20/04		108.35	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
10/7/04		108.35	--	8.85	0.00	99.50	<79	<98	<50	--	--	--	--	--	--
10/20/05		108.35	--	9.08	0.00	99.27	<80	<100	<48	--	--	--	--	--	--
9/5/07		108.35	--	9.53	0.00	98.82	<800	<1,000	<50	--	--	--	--	--	0.57
5/27-28/08		108.35	INACCESSIBLE				--	--	--	--	--	--	--	--	--
8/27-29/08	LFP	108.35	--	9.05	0.00	99.30	<79	<99	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.52
11/17-19/08	LFP	108.35	--	7.65	0.00	100.70	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.29
2/16-18/09	LFP	108.35	--	8.70	0.00	99.65	45	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.44
5/4-6/09	LFP	108.35	--	8.06	0.00	100.29	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.74
8/19-21/09	LFP	108.35	--	9.45	0.00	98.90	36	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.25
11/18-20/09	LFP	108.35	--	6.41	0.00	101.94	32	<68	150	<0.5	<0.5	<0.5	<0.5	<0.5	1
2/8-10/10	LFP	108.35	--	8.11	0.00	100.24	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.33
5/12-13/10	LFP	108.35	--	8.56	0.00	99.79	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.69
08/12/10	LFP	108.35	--	9.22	0.00	99.13	<30	70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.36
11/3-4/10	LFP	108.35	--	7.52	0.00	100.83	38	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	1.3
2/3-4/11	LFP	108.35	--	8.22	0.00	100.13	30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.30
05/24/11	LFP	108.35	--	8.37	0.00	99.98	<30	210	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.49
8/23-24/11	LFP	108.35	UNABLE TO LOCATE				--	--	--	--	--	--	--	--	--
11/7-9/11	LFP	108.35	--	9.10	0.00	99.25	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.34

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COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-119 (cont)															
2/6/8-12	LFP	108.35	--	7.90	0.00	100.45	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
5/2-4/12	LFP	108.35	--	8.00	0.00	100.35	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.26
8/1-3/12	LFP	108.35	--	9.23	0.00	99.12	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.27
11/26-28/12	LFP	108.35	--	7.43	0.00	100.92	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.10
02/4-6/13	LFP	108.35	--	7.99	0.00	100.36	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.099
05/6-8/13	LFP	108.35	--	8.76	0.00	99.59	<28	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
9/9-13/13	LFP	108.35	--	8.51	0.00	99.84	<28/<28	<66/<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.26
11/18-21/13	LFP	108.35	--	7.67	0.00	100.68	<29/<29	<68/<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.80
2/4-11/14	LFP	108.35	--	8.47	0.00	99.88	<29/<29	<68/<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.16
6/12-14/14	LFP	108.35	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--
MW-120															
11/7-9/11	LFP	107.11	--	8.00	0.00	99.11	220	160	740	<0.5	<0.5	<0.5	<0.5	<0.5	1.8
2/6-8/12	LFP	107.11	--	6.80	0.00	100.31	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
5/2-4/12	LFP	107.11	--	6.20	0.00	100.91	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
8/1-3/12	LFP	107.11	--	8.11	0.00	99.00	59	75	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.29
11/26-28/12	LFP	107.11	--	6.21	0.00	100.90	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.047
02/4-6/13	LFP	107.11	--	6.84	0.00	100.27	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
05/6-8/13	LFP	107.11	--	7.64	0.00	99.47	<28	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
9/9-13/13	LFP	107.11	--	7.36	0.00	99.75	<28/<28	<66/<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
11/18-21/13	LFP	107.11	--	6.61	0.00	100.50	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.088
2/4-11/14	LFP	107.11	--	7.32	0.00	99.79	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
6/12-14/14	LFP	107.11	--	7.70	0.00	99.41	<29/<29	<68/<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
B-1															
2/14/91		107.74	--	--	0.00	--	<250	--	5,100	--	--	--	--	--	--
2/14/92		107.74	--	6.90	0.00	100.84	--	--	--	--	--	--	--	--	--
2/18/92		107.74	--	6.72	0.00	101.02	--	--	--	--	--	--	--	--	--
3/13/92		107.74	--	6.93	0.00	100.81	--	--	<50	--	--	--	--	--	--
4/21/92		107.74	--	6.66	0.00	101.08	--	--	--	--	--	--	--	--	--
8/22/95		107.74	--	8.03	0.00	99.71	<250	<750	<50	--	--	--	--	--	--
11/28/95		107.74	--	6.13	0.00	101.61	<250	<750	<50	--	--	--	--	--	<2
3/11/96		107.74	--	6.99	0.00	100.75	<250	<750	<50	--	--	--	--	--	7.5
6/26/96		107.74	--	7.73	0.00	100.01	<250	<750	<50	--	--	--	--	--	<2
10/9/96		107.74	--	8.05	0.00	99.69	<250	<750	<50	--	--	--	--	--	<2
2/12/97		107.74	--	6.46	0.00	101.28	<250	<750	<50	--	--	--	--	--	<2
4/22/97		107.74	--	6.25	0.00	101.49	<250	<750	<50	--	--	--	--	--	<2
8/5/97		107.74	--	8.20	0.00	99.54	<250	<750	<50	--	--	--	--	--	<2

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-1 (cont)															
11/11/97		107.74	--	6.84	0.00	100.90	300	<750	<50	--	--	--	--	--	<2
2/11/98		107.74	--	6.70	0.00	101.04	<250	<750	<50	--	--	--	--	--	<2
5/28/98		107.74	--	6.85	0.00	100.89	<250	<750	<50	--	--	--	--	--	<1
8/20/98		107.74	--	9.42	0.00	98.32	<250	<750	<50	--	--	--	--	--	<1
11/19/98		107.74	--	7.43	0.00	100.31	<250	<750	<50	--	--	--	--	--	<1
3/11/99		107.74	--	6.34	0.00	101.40	<250	<750	<80	--	--	--	--	--	<1
5/25/99		107.74	--	7.60	0.00	100.14	<1,450	--	<80	--	--	--	--	--	--
8/17/99		107.74	--	8.28	0.00	99.46	<250	<500	<80	--	--	--	--	--	<1
11/19/99		107.74	--	5.90	0.00	101.84	<250	--	<80	--	--	--	--	--	<1
3/9/00		107.74	--	6.38	0.00	101.36	<250	<500	<80	--	--	--	--	--	<1
6/12/00		107.74	--	6.26	0.00	101.48	<250	<500	<80	--	--	--	--	--	<1
9/26/00		107.74	--	8.51	0.00	99.23	<250	<500	--	--	--	--	--	--	<1
12/13/00		107.74	--	7.69	0.00	100.05	<250	<500	--	--	--	--	--	--	<1
2/28/01		107.74	--	7.37	0.00	100.37	<250	<500	<80	--	--	--	--	--	<1
5/2/01		107.74	--	6.69	0.00	101.05	<250	<500	109	--	--	--	--	--	<1
10/30/02		107.74	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
1/23/03		107.74	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
4/18/03		107.74	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
7/11/03		107.74	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
10/31/03		107.74	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
12/30/03		107.74	--	6.11	0.00	101.63	<50	<78	<98	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		107.74	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
7/20/04		107.74	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
10/6/04		107.74	--	8.87	0.00	98.87	81	100	<50	--	--	--	--	--	--
10/24/05		107.74	--	7.96	0.00	99.78	<81	<100	<48	--	--	--	--	--	--
9/5/07		107.74	--	8.60	0.00	99.14	<80	<100	<50	--	--	--	--	--	0.13
5/27-28/08	LFP	107.74	--	7.85	0.00	99.89	<75	<94	<50	<0.5	0.6	<0.5	<0.5	<0.5	<0.050
8/27-29/08	LFP	107.74	--	8.00	0.00	99.74	<82	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
11/17-19/08	LFP	107.74	--	6.39	0.00	101.35	83	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
2/16-18/09	LFP	107.74	--	7.55	0.00	100.19	300	2,000	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.098
5/4-6/09	LFP	107.74	--	6.47	0.00	101.27	39	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
8/19-21/09	LFP	107.74	--	8.54	0.00	99.20	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
11/18-20/09	LFP	107.74	--	5.35	0.00	102.39	60	<69	66	<0.5	<0.5	<0.5	<0.5	<0.5	0.22
2/8-10/10	LFP	107.74	--	6.89	0.00	100.85	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
5/12-13/10	LFP	107.74	--	7.34	0.00	100.40	70	82	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
08/11/10	LFP	107.74	--	8.16	0.00	99.58	<30	83	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-1 (cont)															
11/3-4/10	LFP	107.74	--	6.02	0.00	101.72	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
2/3-4/11	LFP	107.74	--	7.03	0.00	100.71	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
05/24/11	LFP	107.74	--	7.10	0.00	100.64	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
8/23-24/11	LFP	107.74	--	8.46	0.00	99.28	<30	<71	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
11/7-9/11	LFP	107.74	--	8.10	0.00	99.64	<28	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
2/6-8/12	LFP	107.74	--	6.75	0.00	100.99	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
5/2-4/12	LFP	107.74	--	6.45	0.00	101.29	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
8/1-3/12	LFP	107.74	--	8.23	0.00	99.51	<30	<71	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.034
11/26-28/12	LFP	107.74	--	6.29	0.00	101.45	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.047
02/4-6/13	LFP	107.74	--	6.81	0.00	100.93	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
05/6-8/13	LFP	107.74	--	8.66	0.00	99.08	<28	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
9/9-13/13	LFP	107.74	--	7.18	0.00	100.56	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
11/18-22/13	LFP	107.74	--	6.64	0.00	101.10	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
2/4-11/14	LFP	107.74	--	7.25	0.00	100.49	<29/<29	<68/<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
6/12-14/14	LFP	107.74	--	7.87	0.00	99.87	<28/<28	<66/<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
B-2															
2/14/91		108.99	--	--	0.00	--	<250	--	180	--	--	--	--	--	--
2/14/92		108.99	--	8.08	0.00	100.91	--	--	--	--	--	--	--	--	--
2/18/92		108.99	--	7.97	0.00	101.02	--	--	--	--	--	--	--	--	--
3/9/92		108.99	--	7.88	0.00	101.11	--	--	--	--	--	--	--	--	--
3/13/92		108.99	--	8.12	0.00	100.87	--	--	--	--	--	--	--	--	--
4/21/92		108.99	--	7.82	0.00	101.17	--	--	--	--	--	--	--	--	--
8/22/95		108.99	--	9.30	0.00	99.69	<250	<750	<50	--	--	--	--	--	--
11/27/95		108.99	--	7.33	0.00	101.66	<250	<750	<50	--	--	--	--	--	<2
3/12/96		108.99	--	8.20	0.00	100.79	<250	<750	<50	--	--	--	--	--	<2
6/27/96		108.99	--	8.95	0.00	100.04	<250	<750	<50	--	--	--	--	--	<2
10/10/96		108.99	--	9.28	0.00	99.71	<250	<750	<50	--	--	--	--	--	<2
2/12/97		108.99	--	7.73	0.00	101.26	<250	<750	<50	--	--	--	--	--	<2
4/22/97		108.99	--	7.41	0.00	101.58	<250	<750	<50	--	--	--	--	--	2
8/5/97		108.99	--	9.40	0.00	99.59	<250	<750	<50	--	--	--	--	--	<2
11/11/97		108.99	--	8.00	0.00	100.99	<250	<750	<50	--	--	--	--	--	<2
2/11/98		108.99	--	7.90	0.00	101.09	<250	<750	<50	--	--	--	--	--	<2
5/28/98		108.99	--	8.03	0.00	100.96	<250	<750	<50	--	--	--	--	--	<1
8/20/98		108.99	--	10.64	0.00	98.35	<250	<750	<50	--	--	--	--	--	<1
11/19/98		108.99	--	8.67	0.00	100.32	<250	<750	<50	--	--	--	--	--	<1
3/11/99		108.99	--	7.56	0.00	101.43	<250	<500	<80	--	--	--	--	--	<1

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-2 (cont)															
5/25/99		108.99	--	8.82	0.00	100.17	<250	<1,600	<80	--	--	--	--	--	--
8/17/99		108.99	--	9.51	0.00	99.48	<250	<500	<80	--	--	--	--	--	<1
11/19/99		108.99	--	7.08	0.00	101.91	<250	<500	<80	--	--	--	--	--	<1
3/9/00		108.99	--	7.59	0.00	101.40	<250	<500	<80	--	--	--	--	--	<1
6/12/00		108.99	--	8.00	0.00	100.99	<250	<500	<80	--	--	--	--	--	<1
9/26/00		108.99	--	9.74	0.00	99.25	<250	<500	--	--	--	--	--	--	<1
12/13/00		108.99	--	8.91	0.00	100.08	<250	<500	--	--	--	--	--	--	<1
2/28/01		108.99	--	8.59	0.00	100.40	<250	<500	<80	--	--	--	--	--	<1
5/2/01		108.99	--	7.89	0.00	101.10	<250	<500	<80	--	--	--	--	--	<1
10/30/02		108.99	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
1/23/03		108.99	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
4/18/03		108.99	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
7/11/03		108.99	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
10/31/03		108.99	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
12/30/03		108.99	--	7.36	0.00	101.63	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		108.99	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
7/20/04		108.99	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
10/6/04		108.99	--	7.65	0.00	101.34	<79	<99	<50	--	--	--	--	--	--
7/18/05		108.99	--	9.20	0.00	99.79	<77	<96	<48	--	--	--	--	--	--
10/21/05		108.99	--	9.17	0.00	99.82	<82	<100	<48	--	--	--	--	--	--
9/5/07		108.99	--	9.83	0.00	99.16	<81	<100	<50	--	--	--	--	--	0.1
5/27-28/08		108.99	UNABLE TO LOCATE				--	--	--	--	--	--	--	--	--
8/27-29/08	LFP	108.99	--	9.28	0.00	99.71	<80	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
11/17-19/08	LFP	108.99	--	7.57	0.00	101.42	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
2/16-18/09	LFP	108.99	--	8.77	0.00	100.22	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.070
5/4-6/09	LFP	108.99	--	7.69	0.00	101.30	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
8/19-21/09	LFP	108.99	--	9.75	0.00	99.24	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
11/18-20/09	LFP	108.99	--	6.46	0.00	102.53	94	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
2/8-10/10	LFP	108.99	--	8.10	0.00	100.89	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
5/12-13/10	LFP	108.99	--	8.55	0.00	100.44	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
08/11/10	LFP	108.99	--	9.38	0.00	99.61	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
11/3-4/10	LFP	108.99	--	7.20	0.00	101.79	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
2/3-4/11	LFP	108.99	--	8.25	0.00	100.74	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
05/24/11	LFP	108.99	--	8.33	0.00	100.66	<30	140	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
8/23-24/11	LFP	108.99	--	9.70	0.00	99.29	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.26
11/7-9/11	LFP	108.99	--	9.30	0.00	99.69	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
2/6-8/12	LFP	108.99	--	7.95	0.00	101.04	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.10
5/2-4/12	LFP	108.99	--	7.40	0.00	101.59	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080

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GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-2 (cont)															
8/1/12	LFP	108.99	--	8.20	0.00	100.79	<31	<72	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.034
11/26-28/12	LFP	108.99	--	7.47	0.00	101.52	<37	<86	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.047
02/4/6/13	LFP	108.99	--	8.04	0.00	100.95	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
05/6/8/13	LFP	108.99	--	8.89	0.00	100.10	<28	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
9/9-13/13	LFP	108.99	--	8.41	0.00	100.58	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
11/18-22/13	LFP	108.99	--	7.77	0.00	101.22	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
2/4-11/14	LFP	108.99	--	8.47	0.00	100.52	<28/<28	<66/<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
6/12-14/14	LFP	108.99	--	8.91	0.00	100.08	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
B-3															
2/14/91		108.46	--	--	0.00	--	<250	--	98,000	--	--	--	--	--	--
2/14/92		108.46	--	7.82	0.00	100.64	--	--	--	--	--	--	--	--	--
2/18/92		108.46	--	7.82	0.00	100.64	--	--	--	--	--	--	--	--	--
3/9/92		108.46	--	7.55	0.00	100.91	--	--	--	--	--	--	--	--	--
3/13/92		108.46	--	7.82	0.00	100.64	31,000	--	28,000	--	--	--	--	--	--
4/21/92		108.46	--	7.50	0.00	100.96	--	--	--	--	--	--	--	--	--
3/3/94		108.46	--	--	0.00	--	3,940	<750	43,000	--	--	--	--	--	--
8/23/95		108.46	--	8.93	0.00	99.53	2,600	<750	46,000	--	--	--	--	--	--
11/28/95		108.46	--	7.12	0.00	101.34	1,500	<750	63,000	--	--	--	--	--	--
3/12/96		108.46	--	7.85	0.00	100.61	900	<750	42,000	--	--	--	--	--	--
6/27/96		108.46	--	8.67	0.00	99.79	1,510	1,080	37,900	--	--	--	--	--	--
10/10/96		108.46	--	8.97	0.00	99.49	729	<750	16,200	--	--	--	--	--	--
2/12/97		108.46	--	7.55	0.00	100.91	4,060	986	35,200	--	--	--	--	--	--
4/22/97		108.46	--	7.30	0.00	101.16	3,980	767	31,900	--	--	--	--	--	--
8/2/97		108.46	--	9.05	0.00	99.41	3,370	1,270	20,400	--	--	--	--	--	--
11/11/97		108.46	--	6.76	0.00	101.70	3,230	777	28,400	--	--	--	--	--	--
2/11/98		108.46	--	7.54	0.00	100.92	3,240	1,460	28,400	--	--	--	--	--	--
5/28/98		108.46	--	7.76	0.00	100.70	3,360	<750	34,600	--	--	--	--	29.5	--
8/20/98		108.46	--	10.30	0.00	98.16	2,150	<750	32,900	--	--	--	--	<1.89	--
11/19/98		108.46	--	8.39	0.00	100.07	6,650	<3,750	23,800	--	--	--	--	--	--
3/11/99		108.46	--	7.15	0.00	101.31	2,920	<5,000	17,000	--	--	--	--	--	--
5/25/99		108.46	--	8.50	0.00	99.96	1,850	--	30,500	--	--	--	--	--	--
8/17/99		108.46	--	9.15	0.00	99.31	2,570	711	29,600	--	--	--	--	--	--
11/19/99		108.46	--	6.76	0.00	101.70	7,880	--	30,700	--	--	--	--	--	--
3/9/00		108.46	--	7.24	0.00	101.22	<250	<500	10,400	--	--	--	--	--	--
6/13/00		108.46	--	8.15	0.00	100.31	<250	<500	23,000	--	--	--	--	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-3 (cont)															
9/26/00		108.46	--	9.35	0.00	99.11	<250	<500	--	--	--	--	--	--	--
12/13/00		108.46	--	8.58	0.00	99.88	<250	<500	21,600	--	--	--	--	--	--
2/28/01		108.46	--	8.28	0.00	100.18	<250	<500	25,700	--	--	--	--	--	--
5/2/01		108.46	--	7.79	0.00	100.67	<250	<500	17,200	--	--	--	--	--	--
10/30/02		108.46	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
1/23/03		108.46	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
4/18/03		108.46	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
7/11/03		108.46	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
10/31/03		108.46	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
12/30/03		108.46	--	7.04	0.00	101.42	14,000	3,800	<980	<5.0	1.9	130	61	--	17.3
5/3/04		108.46	UNABLE TO LOCATE				--	--	--	--	--	--	--	--	--
7/20/04		108.46	--	9.31	0.00	99.15	1,220	<500	13,200	12.5	<10.0	874	204	--	24.6^d
10/6/04		108.46	--	8.68	0.00	99.78	1,200	<500	13,000	--	--	--	--	--	--
1/27/05		108.46	--	7.70	0.00	100.76	1,100	<190	6,200	--	--	--	--	--	--
4/12/05		108.46	--	7.21	0.00	101.25	1,200	<100	5,300	--	--	--	--	--	--
7/18/05		108.46	--	8.83	0.00	99.63	1,200	<97	6,400	--	--	--	--	--	--
10/21/05		108.46	--	8.85	0.00	99.61	2,400	<510	8,900	--	--	--	--	--	--
9/4/07		108.46	--	9.41	0.00	99.05	1,500	<200	10,000	--	--	--	--	--	--
5/27-28/08	LFP	108.46	--	8.73	0.00	99.73	2,400	<540	3,700	2	2	98	3	<0.5	20.2
8/27-29/08	LFP	108.46	--	8.85	0.00	99.61	2,400	<98	10,000	5	2	230	17	<0.5	21.5
11/17-19/08	LFP	108.46	--	7.13	0.00	101.33	1,700	<690	7,100	<0.5	<0.5	57	2	<0.5	20
2/16-18/09	LFP	108.46	--	8.40	0.00	100.06	1,900	<340	8,800	180	130	130	21	<0.5	19.5
5/4-6/09	LFP	108.46	--	7.65	0.00	100.81	2,400	<340	5,800	68	15	120	7	<0.5	13.1
8/19-21/09	LFP	108.46	--	9.33	0.00	99.13	2,900	<360	5,900	39	10	170	16	<0.5	19
11/18-20/09	LFP	108.46	--	6.35	0.00	102.11	2,200	<340	2,500	1	<0.5	12	1	<0.5	16.5
2/8-10/10	LFP	108.46	--	7.73	0.00	100.73	1,700	140	6,200	2	<0.5	25	1	<0.5	9.9
5/12-13/10	LFP	108.46	--	8.18	0.00	100.28	1,200	<68	8,200	2	<0.5	47	2	<0.5	10.3
08/11/10	LFP	108.46	--	9.00	0.00	99.46	2,700	<340	5,900	7	1.0	270	20	<0.5	19.3
11/3-4/10	LFP	108.46	--	6.96	0.00	101.50	2,500	<350	3,100	0.60	<0.5	24	1	<0.5	13.3
2/3-4/11	LFP	108.46	--	6.70	0.00	101.76	1,400	<340	4,900	0.80	<0.5	53	2	<0.5	10.2
05/24/11	LFP	108.46	--	7.96	0.00	100.50	1,200	300	1,800	1	<0.5	76	3	<0.5	14
8/23-24/11	LFP	108.46	--	9.24	0.00	99.22	960	<72	3,700	8	2	160	8	<0.5	11.7
11/7-9/11	LFP	108.46	--	8.95	0.00	99.51	1,500	460	5,800	7	2	180	6	<0.5	12.3
2/6-8/12	LFP	108.46	--	7.40	0.00	101.06	<31	<71	<50	<0.5	<0.5	<0.5	<0.5	<0.5	4.4
5/2-4/12	LFP	108.46	--	7.50	0.00	100.96	53	<72	1,300	<0.5	<0.5	19	<0.5	0.7	3.9

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-3 (cont)															
8/1/12	LFP	108.46	--	8.24	0.00	100.22	460	110	600	0.6	<0.5	1	<0.5	<0.5	8.0
11/26-28/12	LFP	108.46	--	6.98	0.00	101.48	73	<68	500	<0.5	<0.5	0.8	<0.5	<0.5	7.4
2/4/13	LFP	108.46	--	6.33	0.00	102.13	45	<66	120	<0.5	<0.5	<0.5	<0.5	<0.5	5.6
05/6-8/13	LFP	108.46	--	8.50	0.00	99.96	150	<67	2,600	<0.5	<0.5	73	3	<0.5	8.9
9/9-13/13	LFP	108.46	--	8.09	0.00	100.37	160/2,700	<66/72	1,700	0.6	<0.5	37	0.9	<0.5	16.0
11/18-22/13	LFP	108.46	--	6.45	0.00	102.01	42/1,600	<67/180	190	<0.5	<0.5	<0.5	<0.5	<0.5	11.2
2/4-11/14	LFP	108.46	--	8.10	0.00	100.36	36/730	<67/<67	480	<0.5	<0.5	2	<0.5	<0.5	7.4
6/12-14/14	LFP	108.46	--	8.69	0.00	99.77	100/780	<66/100	260	<0.5	<0.5	1	<0.5	<0.5	8.3
B-4															
2/14/91		107.68	--	--	0.00	--	<250	--	33,000	--	--	--	--	--	--
2/14/92		107.68	--	6.82	0.00	100.86	--	--	--	--	--	--	--	--	--
2/18/92		107.68	--	5.94	0.00	101.74	--	--	--	--	--	--	--	--	--
3/9/92		107.68	--	6.62	0.00	101.06	--	--	--	--	--	--	--	--	--
3/13/92		107.68	--	6.88	0.00	100.80	--	--	21,000	--	--	--	--	--	--
4/21/92		107.68	--	6.57	0.00	101.11	--	--	--	--	--	--	--	--	--
3/3/94		107.68	--	--	0.00	--	1,040	1,250	15,800	--	--	--	--	--	--
8/22/95		107.68	--	7.92	0.00	99.76	840	820	22,000	--	--	--	--	--	--
11/28/95		107.68	--	6.11	0.00	101.57	1,900	990	22,000	--	--	--	--	--	3.1
3/12/96		107.68	--	6.85	0.00	100.83	3,200	2,500	11,000	--	--	--	--	--	4.7
6/26/96		107.68	--	7.58	0.00	100.10	757	<750	16,100	--	--	--	--	--	2.83
10/9/96		107.68	--	7.90	0.00	99.78	543	<750	10,200	--	--	--	--	--	4.13
2/12/97		107.68	--	6.01	0.00	101.67	4,710	4,830	12,200	--	--	--	--	--	2.82
4/22/97		107.68	--	10.10	0.00	97.58	5,840	1,191	15,500	--	--	--	--	--	4.18
8/5/97		107.68	--	8.37	0.00	99.31	2,560	3,160	15,800	--	--	--	--	--	6.26
11/11/97		107.68	--	7.67	0.00	100.01	2,080	1,040	31,100	--	--	--	--	--	4.75
2/11/98		107.68	--	6.45	0.00	101.23	1,340	1,630	3,750	--	--	--	--	--	<2.0
5/28/98		107.68	--	7.25	0.00	100.43	3,180	1,250	2,510	--	--	--	--	--	4.69
8/20/98		107.68	--	9.12	0.00	98.56	1,460	1,240	7,240	--	--	--	--	--	1.17
11/19/98		107.68	--	7.22	0.00	100.46	2,470	3,750	1,880	--	--	--	--	--	<1.0
3/11/99		107.68	--	5.41	0.00	102.27	1,130	585	11,900	--	--	--	--	--	3.54
5/25/99		107.68	--	7.45	0.00	100.23	<1,450	--	5,380	--	--	--	--	--	--
8/17/99		107.68	--	8.06	0.00	99.62	670	868	2,700	--	--	--	--	--	2.3
11/19/99		107.68	--	5.75	0.00	101.93	1,700	--	11,400	--	--	--	--	--	17.5
3/9/00		107.68	--	6.34	0.00	101.34	<1,250	2,830	105,000	--	--	--	--	--	10.9
6/13/00		107.68	--	6.80	0.00	100.88	<250	943	8,810	--	--	--	--	--	6.92

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GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-4 (cont)															
9/26/00		107.68	--	8.31	0.00	99.37	<250	0.565	--	--	--	--	--	--	5
12/13/00		107.68	--	7.54	0.00	100.14	1,250	<500	--	--	--	--	--	--	5.98
2/28/01		107.68	--	7.24	0.00	100.44	<250	<500	12,100	--	--	--	--	--	5.34
5/2/01		107.68	--	6.59	0.00	101.09	15,700	757	12,300	--	--	--	--	--	5.75
10/30/02		107.68	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
1/23/03		107.68	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
4/18/03		107.68	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
7/11/03		107.68	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
10/31/03		107.68	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
12/30/03		107.68	--	6.07	0.00	101.61	17,000	2,000	1,700	<10	<5.0	310	370	--	7.5
5/3/04		107.68	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
7/20/04		107.68	--	8.23	0.00	99.45	<250	<500	4,660	15.1	1.3	42.3	10.1	--	--
10/6/04		107.68	--	7.45	0.00	100.23	390	180	2,300	--	--	--	--	--	--
1/27/05		107.68	--	6.72	0.00	100.96	200	<195	2,800	--	--	--	--	--	--
4/12/05		107.68	--	6.62	0.00	101.06	340	<100	2,600	--	--	--	--	--	--
7/18/05		107.68	--	6.62	0.00	101.06	560	<1,100	1,600	--	--	--	--	--	--
10/21/05		107.68	--	7.81	0.00	99.87	190	260	1,800	--	--	--	--	--	--
9/4/07		107.68	--	8.40	0.00	99.28	310	<100	3,200	--	--	--	--	--	1.8
9/4/07 (D)		107.68	--	8.40	0.00	99.28	340	140	3,300	--	--	--	--	--	1.7
5/27-28/08	LFP	107.68	--	7.52	0.00	100.16	310	330	1,800	3	3	25	7	<0.5	2.9
8/27-29/08	LFP	107.68	--	7.88	0.00	99.80	330	1,100	3,100	1	0.9	22	4	<0.5	1.6
11/17-19/08	LFP	107.68	--	6.26	0.00	101.42	700	2,600	3,500	1	0.7	27	3	<0.5	2.3
2/16-18/09	LFP	107.68	--	7.40	0.00	100.28	440	480	2,000	0.6	<0.5	11	2	<0.5	2
5/4-6/09	LFP	107.68	--	6.46	0.00	101.22	590	1,300	2,100	<0.5	<0.5	20	2	<0.5	1.6
8/19-21/09	LFP	107.68	--	8.35	0.00	99.33	590	810	910	1	<0.5	5	1	<0.5	1.2
11/18-20/09	LFP	107.68	--	5.30	0.00	102.38	490	450	5,700	3	0.7	36	3	<0.5	5.2
2/8-10/10	LFP	107.68	--	6.78	0.00	100.90	400	1,400	350	<0.5	<0.5	4	<0.5	<0.5	0.46
5/12-13/10	LFP	107.68	--	7.23	0.00	100.45	940	7,100	360	<0.5	<0.5	1	<0.5	<0.5	0.15
08/11/10	LFP	107.68	--	8.00	0.00	99.68	600	2,000	170	<0.5	<0.5	1	<0.5	<0.5	0.26
11/3-4/10	LFP	107.68	--	6.19	0.00	101.49	400	1,500	530	<0.5	<0.5	4	0.7	<0.5	1
2/3-4/11	LFP	107.68	--	7.15	0.00	100.53	1,400	4,700	2,200	0.9	0.7	11	1	<0.5	2.9
05/24/11	LFP	107.68	--	7.22	0.00	100.46	300	680	840	<0.5	<0.5	0.8	<0.5	<0.5	1.2
8/23-24/11	LFP	107.68	--	8.50	0.00	99.18	230	<68	1,400	<0.5	<0.5	1	0.6	<0.5	1.4
11/7-9/11	LFP	107.68	--	8.15	0.00	99.53	120	360	950	<0.5	<0.5	1	0.5	<0.5	0.57
2/6-8/12	LFP	107.68	--	6.80	0.00	100.88	64	120	320	<0.5	<0.5	2	<0.5	<0.5	1.6

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COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-4 (cont)															
5/2/4/12	LFP	107.68	--	6.75	0.00	100.93	110	72	580	<0.5	<0.05	2	<0.5	<0.5	1.7
8/1-3/12	LFP	107.68	--	8.26	0.00	99.42	100	190	510	<0.5	<0.5	<0.5	<0.5	<0.5	0.83
11/26-28/12	LFP	107.68	--	6.34	0.00	101.34	320	210	1,200	<0.5	<0.5	8	0.7	<0.5	3.0
02/4-6/13	LFP	107.68	--	6.95	0.00	100.73	150	<69	1,600	<0.5	<0.5	4	<0.5	<0.5	2.5
05/6-8/13	LFP	107.68	--	7.53	0.00	100.15	140	<67	2,400	<0.5	<0.5	4	0.5	<0.5	2.4
9/9-13/13	LFP	107.68	--	7.30	0.00	100.38	130/250	<66/110	1,200	<0.5	<0.5	3	0.5	<0.5	1.6
11/18-22/13	LFP	107.68	--	6.76	0.00	100.92	120/150	<67/<67	1,200	<0.5	<0.5	3	<0.5	<0.5	1.9
2/4-11/14	LFP	107.68	--	7.36	0.00	100.32	140/170	<68/<68	1,800	<0.5	<0.5	3	<0.5	<0.5	2.4
6/12-14/14	LFP	107.68	--	7.94	0.00	99.74	120/260	<67/73	1,200	<0.5	<0.5	1	<0.5	<0.5	1.8
MW-101															
2/14/92		99.51	--	6.94	--	92.57	33,000	--	45,000	--	--	--	--	--	--
2/18/92		99.51	--	6.88	--	92.63	--	--	--	--	--	--	--	--	--
3/9/92		99.51	--	6.76	--	92.75	--	--	--	--	--	--	--	--	--
3/13/92		99.51	--	7.02	--	92.49	--	--	--	--	--	--	--	--	--
4/21/92		99.51	--	7.73	--	91.78	--	--	--	--	--	--	--	--	--
3/3/94		99.51	--	--	--	--	1,730	<750	73,000	--	--	--	--	--	--
8/22/95		99.51	--	7.90	--	91.61	1,300	<750	12,000	--	--	--	--	--	--
11/28/95		99.51	--	6.12	--	93.39	1,400	<750	49,000	--	--	--	--	--	24
3/12/96		99.51	--	6.86	--	92.65	760	<750	43,000	--	--	--	--	--	9.3
6/26/96		99.51	--	7.59	--	91.92	656	<750	22,000	--	--	--	--	--	8.22
10/9/96		99.51	--	7.85	--	91.66	309	<750	5,800	--	--	--	--	--	4.24
2/12/97		99.51	--	6.55	--	92.96	1,090	<750	33,900	--	--	--	--	--	7.04
4/22/97		99.51	--	6.31	--	93.20	1,870	977	21,500	--	--	--	--	--	7.41
11/11/97		99.51	--	6.76	--	92.75	952	<750	23,400	--	--	--	--	--	11.3
2/11/98		99.51	--	6.78	--	92.73	793	<750	28,400	--	--	--	--	--	6.51
5/28/98		99.51	--	6.91	--	92.60	798	<750	11,900	--	--	--	--	--	4.71
8/20/98		99.51	--	8.30	--	91.21	414	<750	4,400	--	--	--	--	--	1.6
11/19/98		99.51	--	7.69	--	91.82	714	<750	5,820	--	--	--	--	--	1.7
3/11/99		99.51	--	6.17	--	93.34	1,200	<500	38,500	--	--	--	--	--	6.82
5/25/99		99.51	--	7.47	--	92.04	1,450	--	18,000	--	--	--	--	--	--
8/17/99		99.51	--	7.99	--	91.52	810	750	2,940	--	--	--	--	--	2.9
11/19/99		99.51	--	5.84	--	93.67	1,010	--	16,300	--	--	--	--	--	15.4
3/9/00		99.51	--	6.25	--	93.26	<250	<500	15,800	--	--	--	--	--	13
6/13/00		99.51	--	6.98	--	92.53	<250	<500	4,870	--	--	--	--	--	4.3
9/26/00		99.51	--	8.15	--	91.36	--	<250	<500	--	--	--	--	--	1.88

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-101 (cont)															
12/13/00		99.51	--	7.65	--	91.86	988	442	<500	--	--	--	--	--	1.13
2/28/01		99.51	--	7.25	--	92.26	<250	<500	2,710	--	--	--	--	--	2.45
5/2/01		99.51	--	9.55	--	89.96	<250	<500	2,280	--	--	--	--	--	2.6
10/30/02		99.54	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--	--
1/23/03		99.54	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--	--
4/18/03		99.54	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--	--
7/11/03		99.54	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--	--
10/31/03		99.54	UNABLE TO LOCATE - POSSIBLY PAVED OVER						--	--	--	--	--	--	--
12/30/03		99.54	--	6.04	0.00	93.50	13,000	890	<96	<5.0	0.6	260	290	--	27.9
5/3/04		99.54	UNABLE TO LOCATE - POSSIBLY PAVED OVER						--	--	--	--	--	--	--
7/20/04		99.54	--	8.18	0.00	91.36	<250	<500	1,040	3.01	<0.500	0.822	1.21	--	<1.0 ⁵
10/6/04		99.51	--	7.54	0.00	91.97	<81	<100	<260	--	--	--	--	--	--
1/27/05		99.51	--	6.78	0.00	92.73	190	<100	2,900	--	--	--	--	--	--
4/12/05		99.51	--	6.32	0.00	93.19	160	<100	1,700	--	--	--	--	--	--
7/18/05		99.51	--	7.78	0.00	91.73	93	<99	240	--	--	--	--	--	--
10/21/05		99.51	--	7.75	0.00	91.76	110	<100	470	--	--	--	--	--	--
9/5/07		99.51	--	8.22	0.00	91.29	110	140	200	--	--	--	--	--	1.2
5/27-28/08	LFP	99.51	--	7.71	0.00	91.80	<80	<99	410	<0.5	<0.5	0.5	<0.5	<0.5	1.2
8/27-29/08	LFP	99.51	--	7.75	0.00	91.76	<79	<99	450	<0.5	<0.5	<0.5	<0.5	<0.5	0.39
11/17-19/08	LFP	99.51	--	6.33	0.00	93.18	74	<68	520	<0.5	<0.5	1	<0.5	<0.5	1.1
2/16-18/09	LFP	99.51	--	7.43	0.00	92.08	68	<67	590	<0.5	<0.5	<0.5	<0.5	<0.5	0.96
5/4-6/09	LFP	99.51	--	6.93	0.00	92.58	66	<68	370	<0.5	<0.5	<0.5	<0.5	<0.5	0.39
8/19-21/09	LFP	99.51	--	8.16	0.00	91.35	65	<70	510	<0.5	<0.5	<0.5	<0.5	<0.5	0.22
11/18-20/09	LFP	99.51	--	4.97	0.00	94.54	42	<69	84	<0.5	<0.5	<0.5	<0.5	<0.5	1
2/8-10/10	LFP	99.51	--	6.82	0.00	92.69	130	190	970	<0.5	<0.5	1	<0.5	<0.5	2.1
5/12-13/10	LFP	99.51	--	7.32	0.00	92.19	64	<70	470	<0.5	<0.5	<0.5	<0.5	<0.5	0.65
08/12/10	LFP	99.51	--	7.96	0.00	91.55	52	<68	370	<0.5	<0.5	<0.5	<0.5	<0.5	0.24
MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED															
MW-102															
2/14/92		--	--	6.94	0.00	--	--	--	--	--	--	--	--	--	--
2/18/92		--	--	6.88	0.00	--	--	--	--	--	--	--	--	--	--
3/9/92		--	--	6.76	0.00	--	--	--	--	--	--	--	--	--	--
3/13/92		--	--	7.02	0.00	--	--	--	150	--	--	--	--	--	--
4/21/92		--	--	7.72	0.00	--	--	--	--	--	--	--	--	--	--
NOT PART OF MONITORING/SAMPLING PROGRAM															

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-104															
2/14/92		100.45	--	8.86	0.00	91.59	--	--	--	--	--	--	--	--	--
02/18/92		100.45	--	8.84	0.00	91.61	--	--	--	--	--	--	--	--	--
3/9/92		100.45	--	8.73	0.00	91.72	--	--	--	--	--	--	--	--	--
3/13/92		100.45	--	8.84	0.00	91.61	--	--	<50	--	--	--	--	--	--
4/21/92		100.45	--	8.72	0.00	91.73	--	--	--	--	--	--	--	--	--
8/22/95		100.45	--	9.30	0.00	91.15	<250	<750	<50	--	--	--	--	--	--
11/27/95		100.45	--	8.39	0.00	92.06	--	--	--	--	--	--	--	--	--
3/12/96		100.45	--	8.78	0.00	91.67	--	--	--	--	--	--	--	--	--
6/27/96		100.45	--	9.00	0.00	91.45	--	--	--	--	--	--	--	--	--
10/10/96		100.45	--	9.18	0.00	91.27	--	--	--	--	--	--	--	--	--
2/12/97		100.45	--	8.65	0.00	91.80	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		100.45	--	8.50	0.00	91.95	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		100.45	--	9.20	0.00	91.25	<250	<750	<50	--	--	--	--	--	<2.0
11/11/97		100.45	--	8.81	0.00	91.64	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		100.45	--	8.83	0.00	91.62	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		100.45	--	8.97	0.00	91.48	<250	<750	<50	--	--	--	--	--	9.54
8/20/98		100.45	--	9.51	0.00	90.94	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		100.45	--	9.82	0.00	90.63	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		100.45	--	8.48	0.00	91.97	<250	<500	<80	--	--	--	--	--	<1.0
5/25/99		100.45	--	8.96	0.00	91.49	<250	--	<80	--	--	--	--	--	--
8/17/99		100.45	--	9.24	0.00	91.21	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		100.45	--	8.40	0.00	92.05	<250	--	<80	--	--	--	--	--	1.0
3/9/00		100.45	--	8.49	0.00	91.96	<250	<50	<80	--	--	--	--	--	<1.0
6/13/00		100.45	--	8.89	0.00	91.56	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		100.45	--	9.32	0.00	91.13	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		100.45	--	9.09	0.00	91.36	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		100.45	--	8.89	0.00	91.56	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		100.45	--	8.79	0.00	91.66	<250	<500	103	--	--	--	--	--	<1.0
10/30/02		100.44	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		100.44	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--
4/18/03		100.44	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--
7/11/03		100.44	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--
10/31/03		100.44	--	9.15	0.00	91.29	<250	<500	<50	<0.500	<0.500	<0.500	<1.00	--	<1.0 ^b
12/30/03		100.44	--	8.39	0.00	92.05	<50	<77	<96	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		100.44	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--

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COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-104 (cont)															
7/20/04		100.44			MONITORED/SAMPLED ANNUALLY		--	--	--	--	--	--	--	--	--
10/7/04		100.45	--	9.09	0.00	91.36	<83	<100	<50	--	--	--	--	--	--
10/20/05		100.45	--	9.19	0.00	91.26	<82	<100	<48	--	--	--	--	--	--
9/6/07		100.45	--	9.42	0.00	91.03	<79	<98	<50	--	--	--	--	--	0.087
5/27-28/08		100.45			INACCESSIBLE	--	--	--	--	--	--	--	--	--	--
8/27-29/08	LFP	100.45	--	9.23	0.00	91.22	<79	<99	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
11/17-19/08	LFP	100.46	--	8.75	0.00	91.71	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
2/16-18/09	LFP	100.46	--	9.01	0.00	91.45	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.1
5/4-6/09	LFP	100.46	--	8.88	0.00	91.58	38	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
8/19-21/09	LFP	100.46	--	9.32	0.00	91.14	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.057
11/18-20/09	LFP	100.46	--	8.08	0.00	92.38	<29	<68	98	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
2/8-10/10	LFP	100.46	--	8.76	0.00	91.70	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.053
MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED															
MW-105															
2/14/92		96.14	--	3.36	0.00	92.78	--	--	--	--	--	--	--	--	--
2/18/92		96.14	--	3.34	0.00	92.80	--	--	--	--	--	--	--	--	--
3/9/92		96.14	--	3.25	0.00	92.89	--	--	--	--	--	--	--	--	--
3/13/92		96.14	--	3.60	0.00	92.54	--	--	<50	--	--	--	--	--	--
4/21/92		96.14	--	3.40	0.00	92.74	--	--	--	--	--	--	--	--	--
8/22/95		96.14	--	5.08	0.00	91.06	<250	900	<50	--	--	--	--	--	--
11/28/95		96.14	--	2.53	0.00	93.61	--	--	--	--	--	--	--	--	--
3/12/96		96.14	--	3.37	0.00	92.77	--	--	--	--	--	--	--	--	--
6/26/96		96.14	--	4.74	0.00	91.40	--	--	--	--	--	--	--	--	--
10/9/96		96.14	--	4.93	0.00	91.21	--	--	--	--	--	--	--	--	--
2/12/97		96.14	--	3.19	0.00	92.95	<250	<750	<50	--	--	--	--	--	2
4/22/97		96.14	--	3.08	0.00	93.06	<250	<750	<50	--	--	--	--	--	2
8/5/97		96.14	--	4.85	0.00	91.29	<250	<750	<50	--	--	--	--	--	2
11/11/97		96.14	--	3.11	0.00	93.03	<250	<750	<50	--	--	--	--	--	2
2/11/98		96.14	--	3.24	0.00	92.90	<250	<750	<50	--	--	--	--	--	2
5/28/98		96.14	--	3.91	0.00	92.23	<250	<750	<50	--	--	--	--	--	6.62
8/20/98		96.14	--	5.28	0.00	90.86	<250	<750	<50	--	--	--	--	--	<1.00
11/19/98		96.14	--	5.37	0.00	90.77	<250	<750	<50	--	--	--	--	--	<1.00
3/11/99		96.14	--	2.43	0.00	93.71	<250	<500	<80	--	--	--	--	--	<1.00
5/25/99		96.14	--	4.29	0.00	91.85	<250	--	<80	--	--	--	--	--	--
8/17/99		96.14	--	5.06	0.00	91.08	<250	<500	<80	--	--	--	--	--	<1.00

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101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-105 (cont)															
11/19/99		96.14	--	3.08	0.00	93.06	<250	--	<80	--	--	--	--	--	<1.00
3/9/00		96.14	--	2.75	0.00	93.39	<250	<500	<80	--	--	--	--	--	<1.00
6/13/00		96.14	--	4.45	0.00	91.69	<250	<500	<80	--	--	--	--	--	<1.00
9/26/00		96.14	--	5.20	0.00	90.94	<250	<500	--	--	--	--	--	--	<1.00
12/13/00		96.14	--	4.67	0.00	91.47	<250	<500	--	--	--	--	--	--	1.37
2/28/01		96.14	--	3.92	0.00	92.22	<250	<500	<80	--	--	--	--	--	<1.00
5/2/01		96.14	--	3.53	0.00	92.61	<250	<750	87	--	--	--	--	--	<1.00
10/30/02		96.15	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		96.15	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--
4/18/03		96.15	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--
7/11/03		96.15	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--
10/31/03		96.15	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
12/31/03		96.15	--	2.45	0.00	93.70	<50	<400	<500	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		96.15	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--
7/20/04		96.15	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--
10/7/04		96.14	--	4.71	0.00	91.43	<160	<200	<50	--	--	--	--	--	--
10/20/05		96.14	--	5.16	0.00	90.98	<82	<100	<48	--	--	--	--	--	--
9/6/07		96.14	--	5.34	0.00	90.80	<100	<81	<50	--	--	--	--	--	0.47
5/27-28/08		96.14	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
8/27-29/08	LFP	96.14	--	5.16	0.00	90.98	<81	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
11/17-19/08	LFP	96.14	--	3.75	0.00	92.39	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
2/16-18/09	LFP	96.14	--	6.15	0.00	89.99	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.57
5/4-6/09	LFP	96.14	--	3.68	0.00	92.46	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
8/19-21/09	LFP	96.14	--	5.25	0.00	90.89	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.064
11/18-20/09	LFP	96.14	--	1.56	0.00	94.58	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.053
2/8-10/10	LFP	96.14	--	3.37	0.00	92.77	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.078
MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED															
MW-106															
2/14/92		99.71	--	8.18	0.00	91.53	--	--	--	--	--	--	--	--	--
2/18/92		99.71	--	8.20	0.00	91.51	--	--	--	--	--	--	--	--	--
3/9/92		99.71	--	8.04	0.00	91.67	--	--	--	--	--	--	--	--	--
3/13/92		99.71	--	8.18	0.00	91.53	--	--	<50	--	--	--	--	--	--
4/21/92		99.71	--	8.02	0.00	91.69	--	--	--	--	--	--	--	--	--
8/22/95		99.71	--	8.79	0.00	90.92	<250	<750	<50	--	--	--	--	--	--
11/28/95		99.71	--	7.63	0.00	92.08	--	--	--	--	--	--	--	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-106 (cont)															
3/12/96		99.71	--	8.04	0.00	91.67	<250	<750	<50	--	--	--	--	--	<2.0
6/26/96		99.71	--	8.61	0.00	91.10	<250	<750	<50	--	--	--	--	--	<2.0
10/9/96		99.71	--	8.65	0.00	91.06	<250	<750	<50	--	--	--	--	--	2.16
2/12/97		99.71	--	7.95	0.00	91.76	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		99.71	--	7.73	0.00	91.98	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		99.71	--	8.68	0.00	91.03	<250	<750	<50	--	--	--	--	--	<2.0
11/11/97		99.71	--	8.07	0.00	91.64	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		99.71	--	8.12	0.00	91.59	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		99.71	--	8.35	0.00	91.36	<250	<750	<50	--	--	--	--	--	4.53
8/20/98		99.71	--	8.96	0.00	90.75	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		99.71	--	9.37	0.00	90.34	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		99.71	--	7.70	0.00	92.01	<250	<50	<80	--	--	--	--	--	1.1
5/25/99		99.71	--	8.32	0.00	91.39	<250	--	<80	--	--	--	--	--	--
8/17/99		99.71	--	8.70	0.00	91.01	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		99.71	--	7.88	0.00	91.83	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		99.71	--	7.74	0.00	91.97	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		99.71	--	8.39	0.00	91.32	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		99.71	--	8.79	0.00	90.92	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		99.71	--	8.51	0.00	91.20	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		99.71	--	8.18	0.00	91.53	<250	<500	<80	--	--	--	--	--	<2.0
5/2/01		99.71	--	8.17	0.00	91.54	<250	<500	88	--	--	--	--	--	<1.0
10/30/02		99.73	--	8.98	0.00	90.75	<250	<500	<80	<0.500	<0.500	<0.500	<1.00	--	<1.0
1/23/03		99.73	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
4/18/03		99.73	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
7/11/03		99.73	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
10/31/03		99.73	--	8.52	0.00	91.21	<250	<500	<50	<0.500	<0.500	<0.500	<1.00	--	<1.0 ³
12/31/03		99.73	--	7.54	0.00	92.19	<50	<78	<98	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		99.73	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
7/20/04		99.73	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
10/7/04		99.71	--	8.50	0.00	91.21	<78	<97	<50	--	--	--	--	--	--
10/20/05		99.71	--	8.70	0.00	91.01	<82	<100	<48	--	--	--	--	--	--
9/6/07		99.71	--	8.88	0.00	90.83	<80	<100	<50	--	--	--	--	--	0.13
5/27-28/08		99.71	INACCESSIBLE				--	--	--	--	--	--	--	--	--
8/27-29/08	LFP	99.71	--	8.72	0.00	90.99	<79	<99	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
11/17-19/08	LFP	99.71	--	8.18	0.00	91.53	30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
2/16-18/09	LFP	99.71	--	8.40	0.00	91.31	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.072

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-106 (cont)															
5/4-6/09	LFP	99.71	--	8.30	0.00	91.41	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
8/19-21/09	LFP	99.71	--	8.65	0.00	91.06	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
11/18-20/09	LFP	99.71	--	7.40	0.00	92.31	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
2/8-10/10	LFP	99.71	--	8.05	0.00	91.66	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED															
MW-107															
2/14/92		100.00	--	8.50	0.00	91.50	--	--	--	--	--	--	--	--	--
2/18/92		100.00	--	8.50	0.00	91.50	--	--	--	--	--	--	--	--	--
3/9/92		100.00	--	8.36	0.00	91.64	--	--	--	--	--	--	--	--	--
3/13/92		100.00	--	8.52	0.00	91.48	--	--	<50	--	--	--	--	--	--
4/21/92		100.00	--	8.36	0.00	91.64	--	--	--	--	--	--	--	--	--
8/22/95		100.00	--	9.06	0.00	90.94	<250	<750	<50	--	--	--	--	--	--
11/28/95		100.00	--	8.00	0.00	92.00	--	--	--	--	--	--	--	--	--
3/12/96		100.00	--	8.36	0.00	91.64	--	--	--	--	--	--	--	--	--
6/26/96		100.00	--	8.89	0.00	91.11	--	--	--	--	--	--	--	--	--
10/9/96		100.00	--	8.94	0.00	91.06	--	--	--	--	--	--	--	--	--
2/12/97		100.00	--	8.25	0.00	91.75	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		100.00	--	8.05	0.00	91.95	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		100.00	--	8.95	0.00	91.05	<250	<809	<50	--	--	--	--	--	<2.0
11/11/97		100.00	--	8.37	0.00	91.63	<250	750	<50	--	--	--	--	--	<2.0
2/11/98		100.00	--	8.44	0.00	91.56	351	750	<50	--	--	--	--	--	<2.0
5/28/98		100.00	--	8.73	0.00	91.27	<250	754	<50	--	--	--	--	--	--
8/20/98		100.00	--	9.24	0.00	90.76	<250	750	<50	--	--	--	--	--	1
11/19/98		100.00	--	9.65	0.00	90.35	<250	750	<50	--	--	--	--	--	<1.0
3/11/99		100.00	--	8.08	0.00	91.92	539	750	<80	--	--	--	--	--	<1.0
5/25/99		100.00	--	8.82	0.00	91.18	<250	<500	<80	--	--	--	--	--	--
8/17/99		100.00	--	8.10	0.00	91.90	<250	--	<80	--	--	--	--	--	<1.0
11/19/99		100.00	--	8.21	0.00	91.79	<250	<500	<80	--	--	--	--	--	<1.0
3/9/00		100.00	--	8.08	0.00	91.92	<250	--	<80	--	--	--	--	--	<1.0
6/13/00		100.00	--	8.88	0.00	91.12	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		100.00	--	9.07	0.00	90.93	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		100.00	--	8.78	0.00	91.22	<250	<500	--	--	--	--	--	--	<1.0

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COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-107 (cont)															
2/28/01		100.00	--	8.63	0.00	91.37	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		100.00	--	8.63	0.00	91.37	<250	<500	88	--	--	--	--	--	<1.0
10/30/02		100.00	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--	--
1/23/03		100.00	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
4/18/03		100.00	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
7/11/03		100.00	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
10/31/03		100.00	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--	--
12/31/03		100.00	--	7.92	0.00	92.08	<50	85	150	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		100.00	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
7/20/04		100.00	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
10/7/04		100.00	--	8.78	0.00	91.22	<80	<100	<50	--	--	--	--	--	--
10/20/05		100.00	--	8.97	0.00	91.03	<81	<100	<48	--	--	--	--	--	--
9/6/07		100.00	--	9.18	0.00	90.82	<78	<98	<50	--	--	--	--	--	0.07
5/27-28/08		100.00	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	--
8/27-29/08	LFP	100.00	--	8.98	0.00	91.02	<79	<99	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
11/17-19/08	LFP	100.00	--	8.46	0.00	91.54	38	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
2/16-18/09	LFP	100.00	--	8.62	0.00	91.38	35	70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.068
5/4-6/09	LFP	100.00	--	8.95	0.00	91.05	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
8/19-21/09	LFP	100.00	--	9.11	0.00	90.89	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.27
11/18-20/09	LFP	100.00	--	7.77	0.00	92.23	99	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
2/8-10/10	LFP	100.00	--	8.25	0.00	91.75	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED															
MW-108															
2/14/92		99.79	--	8.10	0.00	91.69	--	--	--	--	--	--	--	--	--
2/18/92		99.79	--	8.62	0.00	91.17	--	--	--	--	--	--	--	--	--
3/9/92		99.79	--	8.49	0.00	91.30	--	--	--	--	--	--	--	--	--
3/13/92		99.79	--	8.63	0.00	91.16	--	--	<50	--	--	--	--	--	--
4/21/92		99.79	--	8.47	0.00	91.32	--	--	--	--	--	--	--	--	--
8/22/95		99.79	--	9.04	0.00	90.75	<250	<750	<50	--	--	--	--	--	--
11/28/95		99.79	--	7.98	0.00	91.81	--	--	--	--	--	--	--	--	--
3/12/96		99.79	--	8.50	0.00	91.29	--	--	--	--	--	--	--	--	--
6/26/96		99.79	--	8.86	0.00	90.93	--	--	--	--	--	--	--	--	--
10/9/96		99.79	--	8.91	0.00	90.88	--	--	--	--	--	--	--	--	--
2/12/97		99.79	--	8.41	0.00	91.38	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		99.79	--	8.08	0.00	91.71	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		99.79	--	8.94	0.00	90.85	<250	825	<50	--	--	--	--	--	<2.0
11/11/97		99.79	--	8.53	0.00	91.26	<250	<750	<50	--	--	--	--	--	<2.0

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101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-108 (cont)															
2/11/98		99.79	--	8.59	0.00	91.20	<250	873	<50	--	--	--	--	--	<2.0
5/28/98		99.79	--	8.72	0.00	91.07	<250	<750	<50	--	--	--	--	--	4.27
8/20/98		99.79	--	9.20	0.00	90.59	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		99.79	--	9.60	0.00	90.19	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		99.79	--	8.16	0.00	91.63	<250	<500	<80	--	--	--	--	--	<1.0
5/25/99		99.79	--	8.69	0.00	91.10	<250	--	<80	--	--	--	--	--	--
8/17/99		99.79	--	8.96	0.00	90.83	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		99.79	--	8.08	0.00	91.71	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		99.79	--	8.16	0.00	91.63	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		99.79	--	8.69	0.00	91.10	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		99.79	--	9.04	0.00	90.75	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		99.79	--	8.81	0.00	90.98	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		99.79	--	8.60	0.00	91.19	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		99.79	--	8.53	0.00	91.26	<250	<500	<80	--	--	--	--	--	<1.0
10/30/02		99.79	--	9.24	0.00	90.55	<250	<500	<80	<0.500	<0.500	<0.500	<1.0	--	<1.0
1/23/03		99.79	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
4/18/03		99.79	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
7/11/03		99.79	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
10/31/03		99.79	--	8.82	0.00	90.97	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.0	--	<1.0 ⁵
12/31/03		99.79	--	7.95	0.00	91.84	<50	<77	<97	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		99.79	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
7/20/04		99.79	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--	--	--
10/7/04		99.79	--	8.80	0.00	90.99	<80	<100	<50	--	--	--	--	--	--
10/20/05		99.79	--	8.89	0.00	90.90	<81	<100	<48	--	--	--	--	--	--
10/20/05(D)		99.79	--	8.89	0.00	90.90	<81	<100	<48	--	--	--	--	--	--
9/6/07		99.79	--	9.15	0.00	90.64	<80	<100	<50	--	--	--	--	--	0.12
5/27-28/08		99.79	INACCESSIBLE				--	--	--	--	--	--	--	--	--
8/27-29/08	LFP	99.79	--	9.00	0.00	90.79	<78	<98	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
11/17-19/08	LFP	99.79	--	8.48	0.00	91.31	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
2/16-18/09	LFP	99.79	--	8.74	0.00	91.05	1,100	230	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.070
5/4-6/09	LFP	99.79	--	8.62	0.00	91.17	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
8/19-21/09	LFP	99.79	--	9.07	0.00	90.72	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
11/18-20/09	LFP	99.79	--	7.64	0.00	92.15	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
2/8-10/10	LFP	99.79	--	8.50	0.00	91.29	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED															

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COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
TRIP BLANK															
10/30/02		--	--	--	--	--	--	--	--	--	--	--	--	--	--
1/23/03		--	--	--	--	--	--	--	<80	<0.500	<0.500	<0.500	<1.0	--	--
4/18/03		--	--	--	--	--	--	--	<50	<0.500	<0.500	<0.500	<1.0	--	--
QA															
7/11/03		--	--	--	--	--	--	--	<50	<0.500	<0.500	<0.500	<1.00	--	--
10/31/03		--	--	--	--	--	--	--	<50	<0.500	<0.500	<0.500	<1.00	--	--
12/31/03		--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--
5/3/04 ⁶		--	--	--	--	--	--	--	--	--	--	--	--	--	--
7/20/04		--	--	--	--	--	--	--	<50	<0.500	<0.500	<0.500	<1.00	--	--
5/27-28/08		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
8/27-29/08		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/17-19/08		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
2/16-18/09		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
5/4-6/09		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
8/19-21/09		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/18-20/09		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
2/8-10/10		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
5/12-13/10		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/11/10		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/3-4/10		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
2/3-4/11		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/23/11		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
8/23-24/11		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/7-9/11		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
2/6-8/12		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
5/2-4/12		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
8/1-3/12		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/26-28/12		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/4-6/13		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/6-8/13		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead	
QA (cont)																
9/9-13/13	--	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
11/18-22/13	--	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
2/4-11/14	--	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
6/12-14/14	--	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
Standard Laboratory Reporting Limits:								--	--	50	0.5	0.5	0.5	1.0	0.5	0.5
MTCA Method A Cleanup Levels:								500	500	800/1,000	5	1,000	700	1,000	20	15
Current Method: ⁷								NWTPH-Dx Extended								USEPA 6020

Abbreviations:

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
(D) = Duplicate
D. Lead = Dissolved Lead
DTP = Depth to Product
DTW = Depth to Water
(ft.) = Feet
GWE = Groundwater Elevation
LFP = Low Flow Purge

LNAPL = Light Non-Aqueous Phase Liquid
LNAPLT = LNAPL Thickness
(mg/L) = Milligrams per liter
MTBE = Methyl Tertiary Butyl Ether
MTCA = Model Toxics Control Act
QA = Quality Assurance/Trip Blank
T. Lead = Total Lead
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
-- = Not Measured/Not Analyzed

Notes:

- 1 Analytical results in bold font indicate concentrations exceed MTCA Method A cleanup levels.
- 2 TOC elevations have been surveyed in feet relative to the 1988 North American Vertical Datum.
- 3 When LNAPL is present, GWE has been corrected using the following formula: GWE = [(TOC - DTW) + (LNAPLT x 0.80)].
- 4 TPH-DRO and TPH-HRO results with multiple values are reported as follows: with silica gel cleanup / without silica gel cleanup. TPH-DRO and TPH-HRO analyses for monitoring completed between October 2004 and May 2013 was performed with silica gel cleanup. The use of silica gel cleanup for samples collected prior to October 2004 has not been confirmed.
- 5 Laboratory report indicates this sample was laboratory filtered.
- 6 Laboratory indicates they did not receive a QA sample. No results were provided.
- 7 Laboratory analytical methods for historical data may not be consistent with list of current analytical methods. When necessary, consult original laboratory reports to verify methods used.
- 8 Insufficient groundwater to collect sample.

TABLE 2
NATURAL ATTENUATION MONITORING PARAMETERS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

	Upgradient Wells		Crossgradient Wells		Source Area Wells			Near Downgradient Wells		Sentinel Wells	
	B-1	B-2	MW-117	MW-119	B-3	B-4	MW-111	MW-112	MW-113	MW-103	MW-116
Laboratory Results (µg/L)											
Benzene											
9/9-13/13	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	1	<0.5	<0.5	<0.5	<0.5
11/18-22/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	<0.5
2/4-11/14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	<0.5
6/12-14/14	<0.5	<0.5	<0.5	UTA	<0.5	<0.5	2	UTA	<0.5	UTA	UTA
TPH-GRO											
9/9-13/13	<50	<50	<50	<50	1,700	1,200	5,500	<50	<50	<50	<50
11/18-22/13	<50	<50	<50	<50	190	1,200	3,300	68	<50	<50	<50
2/4-11/14	<50	<50	<50	<50	480	1,800	4,800	<50	<50	<50	<50
6/12-14/14	<50	<50	<50	UTA	260	1,200	4,200	UTA	<50	UTA	UTA
TPH-DRO without silica gel cleanup											
9/9-13/13	<29	<29	<29	<28	2,700	250	3,600	32	<28	<29	<28
11/18-22/13	<29	<29	<29	<29	1,600	150	1,000	33	<29	<29	<29
2/4-11/14	<29	<28	<29	<29	730	170	1,000	<29	<29	<29	<29
6/12-14/14	<28	<29	<28	UTA	780	260	1,200	UTA	<29	UTA	UTA
TPH-DRO with silica gel cleanup											
9/9-13/13	<29	<29	<29	<28	160	130	330	<29	<28	<29	<28
11/18-22/13	<29	<29	<29	<29	42	120	370	<29	<29	<29	<29
2/4-11/14	<29	<28	<29	<29	36	140	410	<29	<29	<29	<29
6/12-14/14	<28	<29	<28	UTA	100	120	380	UTA	<29	UTA	UTA
TPH-HRO without silica gel cleanup											
9/9-13/13	<67	<67	<67	<66	<66	110	89	<67	<66	<67	<66
11/18-22/13	<67	<67	<67	<68	180	<67	<66	<67	<67	<67	<67
2/4-11/14	<68	<66	<67	<68	<67	<68	<68	<68	<69	<67	<68
6/12-14/14	<66	<67	<66	UTA	100	73	83	UTA	<67	UTA	UTA
TPH-HRO with silica gel cleanup											
9/9-13/13	<67	<67	<67	<66	72	<66	<66	<67	<66	<67	<66
11/18-22/13	<67	<67	<67	<68	<67	<67	<66	<67	<67	<67	<67
2/4-11/14	<68	<66	<67	<68	<67	<68	<68	<68	<69	<67	<68
6/12-14/14	<66	<67	<66	UTA	<66	<67	<67	UTA	<67	UTA	UTA

TABLE 2
NATURAL ATTENUATION MONITORING PARAMETERS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

	Upgradient Wells		Crossgradient Wells		Source Area Wells			Near Downgradient Wells		Sentinel Wells	
	B-1	B-2	MW-117	MW-119	B-3	B-4	MW-111	MW-112	MW-113	MW-103	MW-116
Nitrate											
9/9-13/13	<250	850	760	590	<250	<250	<250	<250	<250	<250	390
11/18-22/13	<250	580	580	<250	10,500	<250	<250	<250	<250	<250	790
2/4-11/14	660	1,000	440	490	21,100	<250	<250	370	440	<250	630
6/12-14/14	370	570	540	UTA	2,900	<250	<250	UTA	<250	UTA	UTA
Sulfate											
9/9-13/13	4,600	3,300	5,400	4,200	9,000	<1,500	1,700	1,900	3,300	2,800	4,300
11/18-22/13	4,200	3,800	3,900	2,700	4,400	<1,500	<1,500	<1,500	2,100	1,700	4,100
2/4-11/14	4,400	3,400	6,500	3,500	6,900	<1,500	<1,500	2,500	2,900	2,800	3,700
6/12-14/14	3,300	3,000	5,900	UTA	7,000	<1,500	<1,500	UTA	3,700	UTA	UTA
Dissolved Iron											
9/9-13/13	102	<43.0	<43.0	<43.0	20,000	10,900	12,300	3,240	113	<43.0	628
11/18-22/13	45.6	<43.0	<43.0	<43.0	326	10,500	9,940	3,920	<43.0	<43.0	175
2/4-11/14	65.2	<43.0	<43.0	<43.0	2,440	11,400	9,100	1,730	<43.0	<43.0	<43.0
6/12-14/14	57.0	94.0	<43.0	UTA	8,330	10,900	11,200	UTA	<43.0	UTA	UTA
Dissolved Manganese											
9/9-13/13	104	278	2.9	50.6	6,070	2,300	4,740	2,490	76.1	1,460	29.0
11/18-22/13	314	287	3.0	11.1	4,200	2,290	4,310	2,600	1.1	178	13.2
2/4-11/14	221	34.3	2.5	38.4	3,890	2,480	4,750	1,750	4.6	111	5.4
6/12-14/14	225	75.6	2.8	UTA	4,620	2,310	5,330	UTA	11.9	UTA	UTA
Sulfide											
9/9-13/13	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54
11/18-22/13	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54
2/4-11/14	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54
6/12-14/14	<54	<54	<54	UTA	<54	67	<54	UTA	<54	UTA	UTA
Methane											
9/9-13/13	36	15	<3.0	<3.0	360	370	3,000	310	<3.0	12	16
11/18-22/13	140	28	<3.0	14	170	600	3,500	810	<3.0	4.0	<3.0
2/4-11/14	5.2	<3.0	<3.0	<3.0	96	1,100	4,700	100	<3.0	6.5	<3.0
6/12-14/14	22	<3.0	<3.0	UTA	170	430	7,000	UTA	<3.0	UTA	UTA
Alkalinity											
9/9-13/13	109,000	96,300	29,700	95,400	238,000	131,000	202,000	127,000	45,000	116,000	38,800
11/18-22/13	90,600	97,500	14,700	129,000	33,800	120,000	178,000	130,000	40,400	112,000	37,600
2/4-11/14	76,900	75,300	28,900	72,800	83,200	119,000	181,000	110,000	33,200	113,000	38,000
6/12-14/14	66,800	66,900	30,700	UTA	125,000	112,000	174,000	UTA	34,200	UTA	UTA

TABLE 2
NATURAL ATTENUATION MONITORING PARAMETERS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

	Upgradient Wells		Crossgradient Wells		Source Area Wells			Near Downgradient Wells		Sentinel Wells	
	B-1	B-2	MW-117	MW-119	B-3	B-4	MW-111	MW-112	MW-113	MW-103	MW-116
Field Parameters											
Dissolved Oxygen [DO] (mg/L)											
9/9-13/13	0.70	1.07	2.46	2.92	1.67	1.02	0.65	0.8	2.48	0.73	1.40
	0.68	1.05	3.74	2.98	0.96	0.95	0.63	0.79	2.50	0.68	1.34
	0.67	1.02	4.00	3.01	0.95	0.92	0.63	0.78	2.47	0.68	1.32
	--	0.8	4.51	--	--	--	--	--	--	--	--
11/18-22/13	0.42	0.72	4.2	0.81	0.83	0.33	0.58	0.59	2.04	1.09	1.81
	0.42	0.72	4.24	0.79	0.83	0.33	0.57	0.59	2.03	1.09	1.77
	0.42	0.71	4.27	0.78	0.82	0.32	0.55	0.58	2.04	1.06	1.76
	0.42	0.71	4.31	0.77	0.80	0.32	0.54	0.56	2.04	1.02	1.75
2/4-11/14	1.81	1.53	2.64	1.76	1.27	0.83	0.77	1.88	2.91	1.15	2.51
	1.79	1.52	2.60	1.75	1.22	0.83	0.76	1.84	2.87	1.15	2.46
	1.77	1.50	2.57	1.75	1.20	0.83	0.74	1.80	2.84	1.16	2.39
6/12-14/14	0.45	0.64	2.14	--	0.65	0.50	0.57	--	2.47	--	--
	0.46	0.67	2.20	--	0.69	0.56	0.59	--	2.55	--	--
	0.49	0.69	2.24	--	0.70	0.59	0.62	--	2.57	--	--
Oxidation Reduction Potential [ORP] (mV)											
9/9-13/13	99.5	126.3	156.3	90.3	-131.8	-197.0	-86.2	-15.1	260.4	85.9	97.3
	99.1	126.3	156.8	91.8	-138.9	-194.7	-82.0	15.2	258.1	87.1	96.3
	98.3	126.8	157.1	92.3	-139.5	-194.9	-82.0	-13.0	254.9	86.2	92.2
	--	130.4	159.2	--	--	--	--	--	--	--	--
11/18-22/13	59.9	110.7	110.4	126.3	-26.5	-48.4	-48.0	-91.3	124.0	100.0	111.9
	59.8	111.8	110.5	127.1	-27.1	-49.9	-47.6	-31.9	125.7	100.3	112.3
	59.5	112.4	111.2	127.9	-27.3	-50.7	-47.4	-32.0	127.2	100.7	113.2
	59.4	112.8	112.1	128.3	-28.1	-51.4	-47.2	-31.5	128.1	100.1	114.1
2/4-11/14	123.0	128.9	273.4	112.5	118.9	-57.2	-51.2	106.9	117.7	107.4	58.3
	123.4	128.9	272.1	113	119.6	-57.3	-51.3	107.1	118.6	107.7	59.8
	123.1	129.1	270.9	113.4	120.9	-57.5	-51.4	109.0	119.5	108.2	60.6
6/12-14/14	50.1	35.7	97.7	--	97.4	-87.9	-74.5	--	115.0	--	--
	49.0	37.0	99.1	--	99.0	-89.3	-76	--	117.3	--	--
	47.1	38.3	101.1	--	100.6	-91.2	-78.3	--	119.0	--	--

TABLE 2
NATURAL ATTENUATION MONITORING PARAMETERS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

	Upgradient Wells		Crossgradient Wells		Source Area Wells			Near Downgradient Wells		Sentinel Wells	
	B-1	B-2	MW-117	MW-119	B-3	B-4	MW-111	MW-112	MW-113	MW-103	MW-116
pH											
9/9-13/13	6.20	6.29	6.17	6.44	6.48	6.58	6.46	6.55	6.81	6.60	6.18
	6.22	6.29	6.25	6.45	6.51	6.56	6.44	6.54	6.81	6.60	6.16
	6.22	6.30	6.27	6.45	6.51	6.56	6.46	6.53	6.83	6.61	6.17
	--	6.31	6.25	--	--	--	--	--	--	--	--
11/18-22/13	6.51	6.59	6.55	6.49	6.35	6.60	6.55	6.76	6.36	6.79	6.57
	6.48	6.58	6.52	6.48	6.36	6.61	6.55	6.77	6.33	6.76	6.37
	6.48	6.57	6.51	6.47	6.36	6.61	6.55	6.77	6.32	6.76	6.36
	6.47	6.57	6.49	6.46	6.35	6.62	6.55	6.76	6.32	6.75	6.37
2/4-11/14	6.64	6.73	6.39	6.91	5.9	6.78	6.76	6.77	6.45	6.86	6.53
	6.62	6.74	6.39	6.88	6.01	6.79	6.74	6.76	6.44	6.84	6.51
	6.61	6.74	6.38	6.87	6.02	6.79	6.74	6.74	6.43	6.84	6.49
6/12-14/14	6.61	5.94	6.09	--	5.45	6.32	6.22	--	6.10	--	--
	6.04	6.00	6.12	--	5.47	6.35	6.25	--	6.12	--	--
	6.06	6.01	6.14	--	5.49	6.37	6.28	--	6.15	--	--
Temperature (degrees Celsius)											
9/9-13/13	16.7	14.8	16.7	20.0	18.3	19.5	18.4	22.1	16.07	17.8	14.5
	16.7	14.8	16.8	19.9	18.9	19.5	18.4	22.0	16.05	17.8	14.6
	16.7	14.9	16.9	19.9	19.0	19.6	18.4	22.0	16.06	17.6	14.6
	--	14.9	17.09	--	--	--	--	--	--	--	--
11/18-22/13	12.62	8.79	11.81	8.10	15.30	14.50	14.61	9.7	13.08	10.17	12.29
	12.60	8.75	11.77	8.05	15.36	14.46	14.64	9.5	13.01	10.21	12.21
	12.56	8.66	11.72	8.01	15.4	14.41	14.67	9.3	13.00	10.26	12.18
	12.47	8.57	11.69	8.02	15.47	14.36	14.71	9.28	12.94	10.31	12.18
2/4-11/14	7.12	5.59	8.83	3.89	8.31	8.40	10.44	6.69	9.24	3.57	8.33
	7.20	5.66	8.90	3.96	8.26	8.32	10.52	6.77	9.32	3.46	8.22
	7.26	5.71	8.98	4.09	8.18	8.28	10.60	6.84	9.40	3.33	8.14
6/12-14/14	14.15	13.71	13.45	--	16.23	16.41	14.74	--	13.16	--	--
	14.21	13.79	13.53	--	16.27	16.50	14.82	--	13.24	--	--
	14.28	13.83	13.60	--	16.33	16.58	14.90	--	13.31	--	--

TABLE 2
NATURAL ATTENUATION MONITORING PARAMETERS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

	Upgradient Wells		Crossgradient Wells		Source Area Wells			Near Downgradient Wells		Sentinel Wells	
	B-1	B-2	MW-117	MW-119	B-3	B-4	MW-111	MW-112	MW-113	MW-103	MW-116
Conductivity (µS)											
9/9-13/13	0.232	0.238	0.163	0.244	0.687	0.288	0.454	0.804	0.130	0.273	0.114
	0.233	0.236	0.123	0.244	0.97	0.287	0.454	0.803	0.130	0.272	0.114
	0.234	0.233	0.113	0.245	0.698	0.286	0.454	0.803	0.130	0.272	0.113
	--	0.221	0.116	--	--	--	--	--	--	--	--
11/18-22/13	0.180	0.131	0.072	0.209	0.439	0.230	0.338	0.210	0.089	0.215	0.004
	0.178	0.131	0.07	0.209	0.439	0.230	0.339	0.210	0.089	0.215	0.083
	0.176	0.131	0.068	0.209	0.438	0.230	0.339	0.209	0.089	0.215	0.083
	0.175	0.130	0.065	0.209	0.438	0.231	0.339	0.209	0.089	0.215	0.083
2/4-11/14	0.192	0.143	0.113	0.102	0.239	0.199	0.322	0.202	0.054	0.160	0.075
	0.191	0.143	0.113	0.102	0.240	0.199	0.322	0.202	0.054	0.160	0.072
	0.191	0.142	0.112	0.101	0.240	0.198	0.322	0.202	0.054	0.159	0.070
6/12-14/14	0.146	0.140	0.083	--	0.276	0.260	0.394	--	0.087	--	--
	0.149	0.144	0.086	--	0.280	0.263	0.396	--	0.089	--	--
	0.150	0.146	0.088	--	0.281	0.265	0.398	--	0.091	--	--

Abbreviations:

BTEX = Benzene, toluene, ethylbenzene, and total xylenes
(mg/L) = Milligrams per liter
(mV) = Millivolts
µg/L = Micrograms per liter
µg/S = Micrograms per siemen
MTCA = Model Toxics Control Act

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
UTA = Unable to Access
-- = Not Measured/Not Analyzed

Notes:

1 Analytical results in bold font indicate concentrations exceed MTCA Method A cleanup levels.

Attachment A:
Groundwater Monitoring and Sampling Data Package



GETTLER - RYAN INC.

TRANSMITTAL

June 24, 2014
G-R #386773

TO: Mr. Russell Shropshire
Leidos, Inc.
18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: Former Texaco Service Station
#211556/Cowlitz BP
101 Mulford Road
Toledo, Washington
UST Site#10669

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Second Quarter Event of June 12, 13, 14, 2014

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/211556

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 (± 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 LOW FLOW FIELD DATA SHEET

Client/Facility#: **Chevron #211556**
 Site Address: **101 Mulford Road**
 City: **Toledo, WA**

Job Number: **386773**
 Event Date: **6.12.13 / 6.14.13** (inclusive)
 Sampler: **J.Y.**

Well ID: **MW-103**
 Well Diameter: **2 1/4** in.
 Total Depth: **0 30** ft.
 Depth to Water: **UTA** ft.

Date Monitored: **6.12.13**

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

Check if water column is less than 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: _____ (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: _____ gal

Product Transferred to: _____

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 (umhos/cm - μ S)	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
	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At:

UTA - due to vegetation overgrowth

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Plug: _____

Add/Replaced Lock: _____



GETTLER - RYAN INC.

**WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET**

Client/Facility#: **Chevron #211556**
 Site Address: **101 Mulford Road**
 City: **Toledo, WA**

Job Number: **386773**
 Event Date: **6-12-13 / 6-14** (inclusive)
 Sampler: **J.Y.**

Well ID: **MW-109**
 Well Diameter: **2 1/4** in.
 Total Depth: **12.69** ft.
 Depth to Water: **7.31** ft.

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

Check if water column is less than 0.50 ft.

5.38 xVF **-** = **-** x3 case volume = Estimated Purge Volume: **-** gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: **8.300**

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: _____ gal

Product Transferred to: _____

Start Time (purge): **1042**

Weather Conditions: **Rain**

Sample Time/Date: **1100 / 6-13-14**

Water Color: **CLEAR**

Odor: **Y / N**

Approx. Flow Rate: **400** mlpm

Sediment Description:

Did well de-water? **YES**

If yes, Time: **1042** Volume: **# ml** DTW @ Sampling: **7.02**

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{mhos/cm}$) mg	Temperature ($^{\circ}\text{C}$ / $^{\circ}\text{F}$) 14.32	D.O. (mg/L) 1.66	ORP (mV) 94.9	Gauge DTW as parameters are recorded 7.021
1042	7.02	5.72	.452	14.32	1.66	94.9	7.021

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-109	2 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
1	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At:

6.5 - 7.5

INSUF. WATER TO FIL DISSOLVED LEAD BOTTLE

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Plug: _____

Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: **Chevron #211556**
 Site Address: **101 Mulford Road**
 City: **Toledo, WA**

Job Number: **386773**
 Event Date: **6.12 | 13 | 14** (inclusive)
 Sampler: **J.P.**

Well ID: **MU.116**
 Well Diameter: **2 1/4** in.
 Total Depth: **19.83** ft.
 Depth to Water: **9.50** ft.

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

Check if water column is less than 0.50 ft.

10.33 x VF **—** = **—** x 3 case volume = Estimated Purge Volume: **—** gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: **11.60**

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump **x**
 QED Bladder Pump _____
 Other: **YGI mps 566**

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump **x**
 QED Bladder Pump _____
 Other: **TUBING**

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: **—** gal
 Product Transferred to: **—**

Start Time (purge): **0910**

Weather Conditions:

Rain

Sample Time/Date: **0950 16.12.14**

Water Color: **CLEAR**

Odor: **Y/N**

Approx. Flow Rate: **200** mlpm

Sediment Description:

NONE

Did well de-water?

NO

If yes, Time: **—**

Volume: **—**

gal. DTW @ Sampling: **10.11**

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{mhos/cm}$ - μs)	Temperature ($^{\circ}\text{C}$ / $^{\circ}\text{F}$)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
0950	7.2	6.23	.274	13.03	.64	52.5	9.79
0941	8.4	6.16	.277	13.30	.66	54.1	9.96
0944	9.6	6.19	.279	13.30	.69	56.3	10.11

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MU.116	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	1 x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At:

14 - 15

Add/Replaced Gasket: **—**

Add/Replaced Bolt: **—**

Add/Replaced Plug: **K**

Add/Replaced Lock: **R**



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: **Chevron #211556**
 Site Address: **101 Mulford Road**
 City: **Toledo, WA**

Job Number: **386773**
 Event Date: **6.12.13 | 14.14** (inclusive)
 Sampler: **J.P.**

Well ID: **MW.111**
 Well Diameter: **2 1/4** in.
 Total Depth: **17.80** ft.
 Depth to Water: **7.70** ft.

Date Monitored: **6.12.14**

Volume Factor (VF)	3/4" = 0.92	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 than 0.50 ft.

10.10 xVF **-** = **-** x3 case volume = Estimated Purge Volume: **-** gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: **9.72**

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Slack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump **x**
 QED Bladder Pump _____
 Other: **XST MFG 0020**

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump **x**
 QED Bladder Pump _____
 Other: **TUBING**

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:	gal
Product Transferred to:	

Start Time (purge): **1022**
 Sample Time/Date: **1051 16.12.14**
 Approx. Flow Rate: **400** mlpm
 Did well de-water? **NO** If yes, Time: **-** Volume: **-** gal. DTW @ Sampling: **7.80**

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{mhos/cm}$) μs)	Temperature ($^{\circ}\text{C}$ / $^{\circ}\text{F}$)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1040	7.2	6.22	.394	14.74	.57	-74.5	7.80
1043	8.1	6.25	.396	14.82	.59	-76.0	7.80
1046	9.6	6.20	.392	14.90	.62	-78.3	7.80

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW.111	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
2 x 1 liter ambers		YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
1 x 250ml poly		YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
x 500ml poly		YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
2 x voa vial		YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
FF 1 x 250ml poly		YES	FF HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
x 500ml poly		YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
1 x 500ml clear glass		YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
2 x voa vial		YES	HCL	LANCASTER	METHANE (RSKOP-175)
FF 1 x 250ml poly		YES	FF NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At:

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Plug: _____

Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: **Chevron #211556**
 Site Address: **101 Mulford Road**
 City: **Toledo, WA**

Job Number: **386773**
 Event Date: **6.12 / 13 / 14. 14** (inclusive)
 Sampler: **J.P.**

Well ID: **MW-112**
 Well Diameter: **(2) 4** in.
 Total Depth: **17.34** ft.
 Depth to Water: **DTW** ft.

Date Monitored: **6.12.14**

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

Check if water column is less than 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: _____ (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: _____ gal

Product Transferred to: _____

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
	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: **NTA - due to overgrown**

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Plug: _____

Add/Replaced Lock: _____



GETTLER - RYAN INC.

**WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET**

Client/Facility#: **Chevron #211556**
 Site Address: **101 Mulford Road**
 City: **Toledo, WA**

Job Number: **386773**
 Event Date: **6.12.13 / 6.14.14** (inclusive)
 Sampler: **J.P.**

Well ID: **MW-113**
 Well Diameter: **2 1/4** in.
 Total Depth: **102.180** ft.
 Depth to Water: **9.79** ft.
9.39 xVF = —

Volume Factor (VF)	3/4"= 0.02 4"= 0.66	1"= 0.04 5"= 1.02	2"= 0.17 6"= 1.50	3"= 0.38 12"= 5.80
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Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: **102.160** x3 case volume = Estimated Purge Volume: — gal.

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump **—**
 QED Bladder Pump **—**
 Other: **yes mps 5566**

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump **—**
 QED Bladder Pump **—**
 Other: **TOP BAILER**

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: _____ gal
 Product Transferred to: _____

Start Time (purge): **12:46**

Weather Conditions:

Sample Time/Date: **13/6 10.13.14**

Water Color: **CLEAR**

RAIN

Odor: Y **N**

Approx. Flow Rate: **400** mlpm

Sediment Description:

NONE

Did well de-water?

No

If yes, Time:

Volume: —

DTW @ Sampling: **9.13**

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{mhos/cm} = \mu\text{S}$)	Temperature ($^{\circ}\text{C} / ^{\circ}\text{F}$)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
13:04	7.8	6.18	.087	13.16	2.47	115.0	0.91
13:07	8.4	6.12	.009	13.24	2.65	117.3	9.010
13:10	9.6	6.15	.011	13.21	2.67	119.0	9.13

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-113	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
2	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
1	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
2	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
1	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
1	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
2	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
1	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: **13.5 - 14.5**

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Plug: _____

Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.12.14 / 7.17.14 (inclusive)
 Sampler: J.P.

Well ID: MW-114
 Well Diameter: (2) 4 in.
 Total Depth: 14.83 ft.
 Depth to Water: 10.96 ft.

Volume Factor (VF)	3/4"= 0.02 4"= 0.66	1"= 0.04 5"= 1.02	2"= 0.17 6"= 1.50	3"= 0.38 12"= 5.80
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Check if water column is less than 0.50 ft.

9.07 xVF - = - x3 case volume = Estimated Purge Volume: - gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.93

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: yes maps 5620

Sampling Equipment:

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

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: _____ gal

Product Transferred to: _____

Start Time (purge): 0920

Weather Conditions:

Sample Time/Date: 0950 / 6.13.14

Rain

Odor: Y / N

Approx. Flow Rate: 400 mlpm

Sediment Description:

Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.61

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (μ hos/cm μ s)	Temperature ($^{\circ}$ C / $^{\circ}$ F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0930</u>	<u>7.2</u>	<u>6.42</u>	<u>.216</u>	<u>13.27</u>	<u>.56</u>	<u>.1</u>	<u>7.30</u>
<u>0941</u>	<u>0.4</u>	<u>6.45</u>	<u>.210</u>	<u>13.34</u>	<u>.59</u>	<u>.3</u>	<u>7.47</u>
<u>0944</u>	<u>9.12</u>	<u>6.48</u>	<u>.226</u>	<u>13.41</u>	<u>.61</u>	<u>4.1</u>	<u>7.61</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-114</u>	<u>0</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 11.6 - 12.5

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Plug: _____

Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: **Chevron #211556**
 Site Address: **101 Mulford Road**
 City: **Toledo, WA**

Job Number: **386773**
 Event Date: **6-12-13 / 6-14-13** (inclusive)
 Sampler: **J.P.**

Well ID: **NW-16**
 Well Diameter: **2 1/4** in.
 Total Depth: **17.440** ft.
 Depth to Water: **17.4** ft.

Volume Factor (VF)	3/4"= 0.02 4"= 0.66	1"= 0.04 5"= 1.02	2"= 0.17 6"= 1.50	3"= 0.38 12"= 5.80
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Check if water column is less than 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: _____ (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: _____ gal

Product Transferred to: _____

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 ($\mu\text{mhos}/\text{cm}$)	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
	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At:

JTA - due to overgrowth

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Plug: _____

Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: **Chevron #211556**
 Site Address: **101 Mulford Road**
 City: **Toledo, WA**

Job Number: **386773**
 Event Date: **6-12-13 / 6-14-14** (inclusive)
 Sampler: **JK**

Well ID: **MW-116**
 Well Diameter: **2 1/4** in.
 Total Depth: **17.63** ft.
 Depth to Water: **17.4** ft.

Date Monitored: **6-12-14**

Volume Factor (VF)	3/4"= 0.02 4"= 0.66	1"= 0.04 5"= 1.02	2"= 0.17 6"= 1.50	3"= 0.38 12"= 5.80
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Check if water column is less than 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 _____
 Slack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Baifer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)

Time Completed: _____ (2400 hrs)

Depth to Product: _____ ft

Depth to Water: _____ ft

Hydrocarbon Thickness: _____ ft

Visual Confirmation/Description: _____

Skimmer / Absorbant Sock (circle one)

Amt Removed from Skimmer: _____ gal

Amt Removed from Well: _____ gal

Water Removed: _____ gal

Product Transferred to: _____

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 ($\mu\text{mhos/cm}$ - 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
	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At:

17.4 - due to aerogrowth

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Plug: _____

Add/Replaced Lock: _____



GETTLER - RYAN INC.

**WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET**

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6-12/13/14-14 (inclusive)
 Sampler: SJF

Well ID: MW 117
 Well Diameter: (2) 4 in.
 Total Depth: 17.64 ft.
 Depth to Water: 7.11 ft.

Date Monitored: 6-12-14

Volume Factor (VF)	3/4"= 0.02 4"= 0.66	1"= 0.04 5"= 1.02	2"= 0.17 6"= 1.50	3"= 0.38 12"= 5.80
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Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.21

$$\text{DTW} = \frac{\text{Water Column}}{0.8} = \frac{7.11}{0.8} = 8.88$$

$$x \text{VF} = 8.88 \times 0.66 = 5.80$$

$$x3 \text{ case volume} = \text{Estimated Purge Volume: } 5.80 \text{ gal.}$$

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: YETI MPS 5500

Sampling Equipment:

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

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: _____ gal
 Product Transferred to: _____

Start Time (purge): 1133
 Sample Time/Date: 12/12/14-14
 Approx. Flow Rate: 4000 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.51
 Weather Conditions: Rain
 Water Color: CLEAR Odor: Y N
 Sediment Description: None

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{mhos/cm} = \mu\text{s}$)	Temperature ($^{\circ}\text{C} / ^{\circ}\text{F}$)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1151	7.7	6.69	.683	13.45	0.14	97.7	7.29
1154	8.4	6.12	.4810	13.68	2.20	99.1	7.37
1157	9.0	6.14	.4880	13.10p	2.24	101.1	7.51

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW 117</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
<u>2</u>	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
<u>1</u>	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
<u>2</u>	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
<u>1</u>	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
<u>1</u>	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
<u>1</u>	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
<u>1</u>	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
<u>1</u>	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
<u>1</u>	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 13.5 - 14.5

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Plug: _____

Add/Replaced Lock: _____



GETTLER - RYAN INC.

**WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET**

Client/Facility#: **Chevron #211556**
 Site Address: **101 Mulford Road**
 City: **Toledo, WA**

Job Number: **386773**
 Event Date: **6-12/13/14-14 (inclusive)**
 Sampler: **J.Y.**

Well ID: **(Mu) 118**
 Well Diameter: **(2) 4 in.**
 Total Depth: **17.21 ft.**
 Depth to Water: **UTA ft.**

Volume Factor (VF)	3/4"= 0.02 4"= 0.66	1"= 0.04 5"= 1.02	2"= 0.17 6"= 1.50	3"= 0.38 12"= 5.80
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Check if water column is less than 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: _____ (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: _____ gal
 Product Transferred to: _____

Start Time (purge): _____
 Sample Time/Date: /
 Approx. Flow Rate: _____ mlpm
 Did well de-water? _____ If yes, Time: _____

Weather Conditions:
 Water Color: _____ Odor: Y / N _____
 Sediment Description: _____
 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
	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: **UTA - due to overgrowth**

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Plug: _____

Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.12.13 / 6.14 (inclusive)
 Sampler: d11

Well ID: MW-119
 Well Diameter: 2 1/4 in.
 Total Depth: 16.105 ft.
 Depth to Water: DTW ft.

Date Monitored: 6.12.14

Volume Factor (VF)	3/4" = 0.02 4" = 0.66	1" = 0.04 5" = 1.02	2" = 0.17 6" = 1.50	3" = 0.38 12" = 5.80
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Check if water column is less than 0.50 ft.

xVF _____ = _____ x 3 case volume = Estimated Purge Volume: _____ gal.

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

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: _____ gal

Product Transferred to:

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: _____

Start Time (purge): _____
 Sample Time/Date: _____ / _____
 Approx. Flow Rate: _____ mlpm
 Did well de-water? _____ If yes, Time: _____

Weather Conditions:

Water Color: _____ Odor: Y / N _____

Sediment Description: _____

Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{mhos}/\text{cm} = \mu\text{S}$)	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
	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 11ft - due to overgrowth

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Plug: _____

Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: **Chevron #211556**
 Site Address: **101 Mulford Road**
 City: **Toledo, WA**

Job Number: **386773**
 Event Date: **6-12-13 / 6-14-13** (inclusive)
 Sampler: **J.P.**

Well ID: **MW-124**
 Well Diameter: **(2) 4** in.
 Total Depth: **16.67** ft.
 Depth to Water: **7.70** 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 than 0.50 ft.

9.17 x VF **—** = **—** x 3 case volume = Estimated Purge Volume: **—** gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: **9.53**

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump **x**
 QED Bladder Pump _____
 Other: **YODIMPS 8610**

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump **x**
 QED Bladder Pump _____
 Other: **TURBINO**

Time Started: **6-12-13** (2400 hrs)
 Time Completed: **6-14-13** (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: **—** gal
 Product Transferred to: **—**

Start Time (purge): **00223**

Weather Conditions: **Rain**

Sample Time/Date: **06-12-13 / 6-14-13**

Approx. Flow Rate: **4000** mlpm

Water Color: **CLEAR** Odor: **Y/N**

Did well de-water? **NO**

Sediment Description: **NONE**

If yes, Time: **—** Volume: **—** gal. DTW @ Sampling: **7.88**

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (μmho/cm - μS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
0061	7.7	6.42	.292	13.56	1.12	09.3	7.88
0063	9.4	6.44	.292	13.62	1.16	91.0	7.88
0067	9.10	6.46	.292	13.70	1.17	91.90	7.000

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-124	8 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
1	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: **Depth Pump Set At: 13.5 - 14.5**

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Plug: _____

Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: **Chevron #211556**
 Site Address: **101 Mulford Road**
 City: **Toledo, WA**

Job Number: **386773**
 Event Date: **6-12-14 / 6-14-14** (inclusive)
 Sampler: **J.V.**

Well ID: **B-1**
 Well Diameter: **(2) 4** in.
 Total Depth: **19.70** ft.
 Depth to Water: **7.87** ft.
11.9 xVF **-** = **-**

Volume Factor (VF)	3/4"= 0.02 4"= 0.66	1"= 0.04 5"= 1.02	2"= 0.17 6"= 1.50	3"= 0.38 12"= 5.80
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Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: **10.25** x3 case volume = Estimated Purge Volume: **-** gal.

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump **X**
 QED Bladder Pump _____
 Other: **YGI mps 6660**

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

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: _____ gal
 Product Transferred to: _____

Start Time (purge): **1120** Weather Conditions: **RAIN**
 Sample Time/Date: **1150 / 6-12-14** Water Color: **clear** Odor: **Y/N**
 Approx. Flow Rate: **4000** mlpm Sediment Description: **none**
 Did well de-water? **No** If yes, Time: **-** Volume: **-** gal. DTW @ Sampling: **7.92**

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{mhos/cm}$ μs)	Temperature ($^{\circ}\text{C}$ $^{\circ}\text{F}$)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1130	7.2	6.61	.146	14.15	.45	56.1	7.93
1141	8.4	6.64	.149	14.21	.46	49.0	7.92
1144	9.10	6.66	.154	14.28	.49	47.1	7.92

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
B-1	8 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
✓	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
1	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
✓	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
FF	1 x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
1	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
✓	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
FF	1 x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: **16.5 - 10.5**

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Plug: _____

Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: **Chevron #211556**
 Site Address: **101 Mulford Road**
 City: **Toledo, WA**

Job Number: **386773**
 Event Date: **6-12-14 / 6-14-14** (inclusive)
 Sampler: **4-1**

Well ID: **b.1**
 Well Diameter: **(2) 4** in.
 Total Depth: **19.03** ft.
 Depth to Water: **9.91** ft.

Volume Factor (VF)	3/4"= 0.02 4"= 0.66	1"= 0.04 5"= 1.02	2"= 0.17 6"= 1.50	3"= 0.38 12"= 5.80
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Check if water column is less than 0.50 ft.

10.12 xVF **-** = **-** x3 case volume = Estimated Purge Volume: **-** gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: **10.93**

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump **x**
 QED Bladder Pump _____
 Other: **100 ms 661**

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump **x**
 QED Bladder Pump _____
 Other: **500ml**

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:	gal
Product Transferred to:	

Start Time (purge): **1424**
 Sample Time/Date: **1455 / 6-12-14**
 Approx. Flow Rate: **4000** mlpm
 Did well de-water? **N** If yes, Time: **-** Volume: **-** gal. DTW @ Sampling: **9.23**

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{mhos/cm} \cdot \mu\text{s}$)	Temperature ($^{\circ}\text{C}$ / $^{\circ}\text{F}$)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1441	7.2	5.94	.146	13.71	.64	55.7	9.03
1446	8.4	6.06	.141	13.79	.67	37.4	9.14
1448	9.10	10.01	.146	13.83	.69	38.3	9.23

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
b.1	4 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
2	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
1	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
2	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
1	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
2	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
1	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: **10.5 - 10.5**

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Plug: _____

Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: **Chevron #211556**
 Site Address: **101 Mulford Road**
 City: **Toledo, WA**

Job Number: **386773**
 Event Date: **6-12-13 / 6-14-13** (inclusive)
 Sampler: **J.P.**

Well ID **13-3**Date Monitored: **6-12-13**Well Diameter **(2) 4 in.**

Volume Factor (VF)	3/4"= 0.02 4"= 0.66	1"= 0.04 5"= 1.02	2"= 0.17 6"= 1.50	3"= 0.38 12"= 5.80
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Total Depth **13.66 ft.**Depth to Water **8.69 ft.** Check if water column is less than 0.50 ft.**4.97** x VF **—** = **—** x3 case volume = Estimated Purge Volume: **gal.**Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: **9.66****Purge Equipment:**

Disposable Bailer
 Stainless Steel Bailer
 Stack Pump
 Suction Pump
 Grundfos
 Peristaltic Pump
 QED Bladder Pump
 Other: **YETI pump 6610**

Sampling Equipment:

Disposable Bailer
 Pressure Bailer
 Metal Filters
 Peristaltic Pump
 QED Bladder Pump
 Other: **TURBINO**

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: **gal**
 Product Transferred to:

Start Time (purge): **1321**Weather Conditions: **Rain**Sample Time/Date: **1350 / 6-12-14**Water Color: **CLEAR**Odor: **Y/N**Approx. Flow Rate: **150 mlpm**Sediment Description: **NONE**Did well de-water? **No**If yes, Time: **—**Volume: **—** gal. DTW @ Sampling: **8.96**

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
1339	2.7	5.45	.276	16.23	.65	97.4	8.93
1342	3.2	5.47	.280	16.27	.69	99.0	8.99
1345	3.7	5.49	.281	16.33	.70	101.6	8.99

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
13-3	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
2	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
1	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
2	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
1	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
1	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
2	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
1	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At:

11.6' - 12.5'

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Plug: _____

Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: **Chevron #211556**
 Site Address: **101 Mulford Road**
 City: **Toledo, WA**

Job Number: **386773**
 Event Date: **6.12.14 / 6.14.14** (inclusive)
 Sampler: **-1, P**

Well ID: **3.4**
 Well Diameter: **2 1/4** in.
 Total Depth: **14.69** ft.
 Depth to Water: **7.94** ft.

Volume Factor (VF)	3/4" = 0.02 4" = 0.66	1" = 0.04 5" = 1.02	2" = 0.17 6" = 1.50	3" = 0.38 12" = 5.80
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Check if water column is less than 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]: **9.29**

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump **✓**
 Other: **YES** **NO** **SSC**

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump **✓**
 QED Bladder Pump _____
 Other: **TUBING**

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:	gal
Product Transferred to:	

Start Time (purge): **1224**
 Sample Time/Date: **1252** **6.12.14**
 Approx. Flow Rate: **150** mlpm
 Did well de-water? **NO** If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: **0.33**

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{mhos/cm}$)	Temperature ($^{\circ}\text{C}$ $^{\circ}\text{F}$)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1242	2.7	6.32	.260	16.41	.50	-87.9	8.11
1245	3.2	6.35	.263	16.50	.50	-89.3	8.26
1248	3.7	6.37	.265	16.59	.59	-91.0	8.33

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
3.4	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	1 x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	1 x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
FF	2 x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	1 x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	1 x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	1 x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	2 x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
FF	1 x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: **12.5 - 13.5**

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Plug: _____

Add/Replaced Lock: _____

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster
Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
Group # 1481697 Sample # 7498023-35
Instructions on reverse side correspond with circled numbers.

1 Client Information		4 Matrix		5 Analyses Requested																	
Facility #	SS#211556-OML G-R#386773	WBS	Sediment	<input checked="" type="checkbox"/>		SCR #:															
Site Address	101 Mulford Road, TOLEDO, WA			Ground	<input checked="" type="checkbox"/>																
Chevron PM	MHO	LEIDOSRS	Lead Consultant	Surface	<input type="checkbox"/>																
Consultant/Office	Gettier-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA			Oil	<input type="checkbox"/>																
Consultant Project Mgr.	Deanna L. Harding, (deanna@grinc.com)			Air	<input type="checkbox"/>																
Consultant Phone #	(925) 551-7444 x180			Water	<input type="checkbox"/>																
Sampler	J. PAYNE			NPDES	<input type="checkbox"/>																
2 Sample Identification	Collected		Grab	Composite																	
	Date	Time	Soil	Water	Oxygenates	NWTPH-GX	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Method 6020	Lead	Total	Diss.	Method 6020	NITRATE / SULFATE	DISS. IRON / MANGANESE	SULFIDE / NITRATE	ALKALINITY	Remarks	
QA	6-12-14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered.	
B.1	1150	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Amended JLN 6/13/14	
B.2	1455	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
B.3	1350	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
B.4	1252	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
MW-110	0950																				
MW-111	1051	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
7 Turnaround Time Requested (TAT) (please circle)	Standard	5 day	4 day	Relinquished by	Date	Time	Received by	Date	Time	9											
	72 hour	48 hour	EDF/EDD 24 hour	JLN	6-12-14	1700															
8 Data Package (circle if required)	EDD (circle if required)	Relinquished by Commercial Carrier:	Received by	Date	Time	9															
Type I - Full	CVX-RTBU-FI_05 (default)	UPS <input checked="" type="checkbox"/> FedEx _____ Other _____	JLN	6/13/14	0945																
Type VI (Raw Data)	Other: _____	Temperature Upon Receipt 11-43 °C	Custody Seals Intact?	Yes	No																

Chevron Northwest Region Analysis Request/Chain of Custody



**Lancaster
Laboratories**

Acct. # _____ Group # _____ Sample # _____
Instructions on reverse side correspond with circled numbers.

1 Client Information			4 Matrix			5 Analyses Requested											
Facility # SS#211556-OML G-R#386773 WBS									SCR #: _____								
Site Address 101 Mulford Road, TOLEDO, WA																	
Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire																	
Consultant/Office Gettier-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568									<input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits								
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)																	
Consultant Phone # (925) 551-7444 x180																	
Sampler J. PAYNE																	
2 Sample Identification			Collected			Analyses Requested			Remarks								
			Date	Time	Grab	Soil	Water	Oil	Total Number of Containers	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	Lead	Total	Diss.	Method		
			6-13-14	1100	X	X	9	X	8260 full scan	X	X	X	X				
			1113	1315	X	X	16	X		X	X	X	X				
			1114	0950	X	X	16	X		X	X	X	X				
			1117	1202	X	X	16	X		X	X	X	X				
7 Turnaround Time Requested (TAT) (please circle)			Relinquished by			Date 6-13-14 Time 1600			Received by			Date			Time		
Standard 5 day			Relinquished by			Date 6-13-14 Time 1600			Received by			Date			Time		
72 hour 48 hour			Relinquished by			Date			Received by			Date			Time		
8 Data Package (circle if required)			EDD (circle if required)			Relinquished by Commercial Carrier:			Received by			Date			Time		
Type I - Full			CVX-RTBU-FI_05 (default)			UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Other _____											
Type VI (Raw Data)			Other: _____			Temperature Upon Receipt _____ °C			Custody Seals Intact?			Yes			No		

Chevron Northwest Region Analysis Request/Chain of Custody



**Lancaster
Laboratories**

Acct. #

For Eurofins Lancaster Laboratories use only
Group # _____ Sample # _____
Instructions on reverse side correspond with circled numbers

1 Client Information				4 Matrix		5 Analyses Requested				6 Remarks																					
Facility # SS#211556-OML G-R#386773 WBS																															
Site Address 101 Mulford Road, TOLEDO, WA																															
Chevron PMMHO		LEIDOSRS Lead Consultant		Russell Shropshire																											
Consultant/Office Gettier-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568																															
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)																															
Consultant Phone # (925) 551-7444 x180																															
Sampler J. Hayes																															
2 Sample Identification		Collected		3 Grab Composite		4 Matrix		5 Analyses Requested		6 Remarks																					
		Date 10-14-14	Time 0902	Grab <input checked="" type="checkbox"/>	Composite <input type="checkbox"/>	Soil <input type="checkbox"/>	Potable <input type="checkbox"/>	NPDES <input type="checkbox"/>	Surface <input type="checkbox"/>	BTEX + MTBE <input type="checkbox"/>	8021 <input type="checkbox"/>	8260 <input type="checkbox"/>	Naphth <input type="checkbox"/>	NWTPH-Gx <input type="checkbox"/>	NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/>	NWTPH-Dx without Silica Gel Cleanup <input type="checkbox"/>	WA VPH <input type="checkbox"/>	WA EPH <input type="checkbox"/>	Lead <input type="checkbox"/>	Total <input type="checkbox"/>	Diss <input type="checkbox"/>	Method <input checked="" type="checkbox"/>	Results in Dry Weight <input type="checkbox"/>	J value reporting needed <input type="checkbox"/>	Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/>	8021 MTBE Confirmation <input type="checkbox"/>	Confirm MTBE+Naphthalene <input type="checkbox"/>	Confirm highest hit by 8260 <input type="checkbox"/>	Confirm all hits by 8260 <input type="checkbox"/>	Run _____ oxy's on highest hit <input type="checkbox"/>	Run _____ oxy's on all hits <input type="checkbox"/>
										8260 full scan																					
7 Turnaround Time Requested (TAT) (please circle)		Standard 5 day		4 day EDF/EDD		Relinquished by		Date 10-16-14		Time 1300		Received by		Date		Time		9													
		72 hour		48 hour																											
8 Data Package (circle if required)		EDD (circle if required)		CVX-RTBU-FI_05 (default)		Relinquished by Commercial Carrier:		UPS <input checked="" type="checkbox"/>		FedEx <input type="checkbox"/>		Other <input type="checkbox"/>		Received by		Date		Time													
Type I - Full		Other: _____		Temperature Upon Receipt _____ °C		Custody Seals Intact?		Yes		No																					



GETTLER-RYAN INC.

TRANSMITTAL

June 24, 2014
G-R #386773

TO: Mr. Russell Shropshire
Leidos, Inc.
18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: Former Texaco Service Station
#211556/Cowlitz BP
101 Mulford Road
Toledo, Washington
UST Site#10669

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Treated Purge Water Event of June 12, 13, 14, 2014

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/211556

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 (± 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 #211556**
 Site Address: **101 Mulford Road**
 City: **Toledo, WA**

Job Number: **386773**
 Event Date: **6-12-14 / 6-14-14** (inclusive)
 Sampler: **JP**

Well ID **TPWHD-**

Date Monitored: **6-12-14**

Well Diameter **-- in.**

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

Total Depth **-- ft.**

Depth to Water **-- ft.**

Check if water column is less than 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 **X** _____

Suction Pump _____

Grundfos _____

Peristaltic Pump _____

QED Bladder Pump _____

Other: **TURBINO** _____

Sampling Equipment:

Disposable Bailer _____

Pressure Bailer _____

Metal Filters _____

Peristaltic Pump _____

QED Bladder Pump _____

Other: **TURBINO EFF 2** _____

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: _____ gal

Product Transferred to: _____

Start Time (purge): **10:00**

Weather Conditions: **Rain**

Sample Time/Date: **10.30 / 6-14-14**

Water Color: **CLEAR** Odor: **Y / N**

Approx. Flow Rate: _____ gpm.

Sediment Description: **None**

Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: _____

Time
(2400 hr.)

Volume
(gal.)

pH

Conductivity
(μ mhos/cm - μ S)

Temperature
(C / F)

D.O.
(mg/L)

ORP
(mV)

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
TPWHD-	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)

COMMENTS: _____

COLLECT SAMPLE WITH TURBINO OFF OF EFF. 2

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Plug: _____

Add/Replaced Lock: _____

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster
Laboratories

Acct. #

For Eurofins Lancaster Laboratories use only
Group # _____ Sample # _____
Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix		5 Analyses Requested											
Facility # SS#211556-OML G-R#386773 WBS Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire Consultant/Office Gettier-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com) Consultant Phone # (925) 551-7444 x180 Sampler J. PAYNE				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air		<input type="checkbox"/> Naphthalene <input type="checkbox"/> Surface <input type="checkbox"/> 8260 full scan <input type="checkbox"/> BTEX + MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> NWTPH-Gx <input type="checkbox"/> NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Total <input type="checkbox"/> Lead <input type="checkbox"/> Diss. <input type="checkbox"/> Method 8260											
2 Sample Identification		Collected		<input type="checkbox"/> Grab <input type="checkbox"/> Composite Date 6-14-14 Time 1030 TPWHD-1													
				<input type="checkbox"/> Total Number of Containers 9 <input type="checkbox"/> X <input type="checkbox"/> X													
7 Turnaround Time Requested (TAT) (please circle)														8 Data Package (circle if required)		9 Remarks	
<input checked="" type="radio"/> Standard 72-hour		<input type="radio"/> 5 day 48 hour		<input type="radio"/> 4 day EDF/EDD 24 hour		Relinquished by		Date 6-16-14	Time 1300	Received by		Date	Time				
						Relinquished by		Date	Time	Received by		Date	Time				
<input type="checkbox"/> Type I - Full <input type="checkbox"/> Type VI (Raw Data)		<input type="checkbox"/> EDD (circle if required) CVX-RTBU-FI_05 (default)		Relinquished by Commercial Carrier:		<input type="checkbox"/> UPS <input checked="" type="checkbox"/> <input type="checkbox"/> FedEx <input type="checkbox"/> <input type="checkbox"/> Other _____		Received by		Custody Seals Intact?		Yes	No				
Temperature Upon Receipt _____ °C																	
SCR #: _____																	
<input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE & Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits																	
Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered.																	
Please forward lab results directly to the LC and cc: G-R. The TPW samples should be forwarded directly to Doug Lee (dlee@grinc.com).																	

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

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

June 25, 2014

Project: 211556

Submittal Date: 06/13/2014
Group Number: 1481697
PO Number: 0015146917
Release Number: HORNE

State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7498023
B-1 Grab Groundwater	7498024
B-1 Filtered Grab Groundwater	7498025
B-2 Grab Groundwater	7498026
B-2 Filtered Grab Groundwater	7498027
B-3 Grab Groundwater	7498028
B-3 Filtered Grab Groundwater	7498029
B-4 Grab Groundwater	7498030
B-4 Filtered Grab Groundwater	7498031
MW-110 Grab Groundwater	7498032
MW-110 Filtered Grab Groundwater	7498033
MW-111 Grab Groundwater	7498034
MW-111 Filtered Grab Groundwater	7498035

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

ELECTRONIC	Gettler-Ryan Inc.	Attn: Gettler Ryan
COPY TO		
ELECTRONIC	SAIC	Attn: Jamalyn Green
COPY TO		
ELECTRONIC	SAIC	Attn: Russ Shropshire
COPY TO		



Lancaster Laboratories
Environmental

Analysis Report

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

Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252



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

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498023
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 06/13/2014 09:45
Reported: 06/25/2014 14:44

TL-QA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
	GC Volatiles	ECY 97-602 NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F141692AA	06/18/2014 09:11	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F141692AA	06/18/2014 09:11	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14168A94A	06/18/2014 22:55	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14168A94A	06/18/2014 22:55	Miranda P Tillinghast	1



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

Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498024
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 11:50 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 06/13/2014 09:45
Reported: 06/25/2014 14:44

TLB1-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B		ug/l	ug/l	
10943 Benzene		71-43-2	N.D.	0.5	1
10943 Ethylbenzene		100-41-4	N.D.	0.5	1
10943 Methyl Tertiary Butyl Ether		1634-04-4	N.D.	0.5	1
10943 Toluene		108-88-3	N.D.	0.5	1
10943 Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Volatiles	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273 NWTPH-Gx water C7-C12		n.a.	N.D.	50	1
GC Miscellaneous	RSKSOP-175 modified		ug/l	ug/l	
07105 Methane		74-82-8	22	3.0	1
GC Petroleum Hydrocarbons	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
08271 Diesel Range Organics C12-C24		n.a.	N.D.	28	1
08271 Heavy Range Organics C24-C40		n.a.	N.D.	66	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.	28	1
12005 HRO C24-C40 w/Si Gel		n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry	EPA 300.0		ug/l	ug/l	
00368 Nitrate Nitrogen		14797-55-8	370	250	5
00228 Sulfate		14808-79-8	3,300	1,500	5
	SM 2320 B-1997		ug/l as CaCO ₃	ug/l as CaCO ₃	
12150 Total Alkalinity		n.a.	66,800	700	1
	SM 4500-S2 D-2000		ug/l	ug/l	
00230 Sulfide		18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F141692AA	06/18/2014 09:33	Anita M Dale	1



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

Sample Description: B-1 Grab Groundwater
Facility# 211556 **Job#** 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498024
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 11:50 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/13/2014 09:45

San Ramon CA 94583

Reported: 06/25/2014 14:44

TLB1-

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F141692AA	06/18/2014 09:33	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	14168A94A	06/19/2014 01:28	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14168A94A	06/19/2014 01:28	Miranda P Tillinghast	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	141680031A	06/17/2014 23:29	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH- Dx modified	1	141700017A	06/20/2014 15:40	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	141700016A	06/23/2014 12:47	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	141700016A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	141700017A	06/20/2014 02:30	Sherry L Morrow	1
00368	Nitrate Nitrogen	EPA 300.0	1	14164987601A	06/13/2014 20:55	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14164987601A	06/13/2014 20:55	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14168002103A	06/17/2014 21:29	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14167023002A	06/16/2014 11:40	Michèle L Graham	1



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Sample Description: B-1 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498025
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 11:50 by JP

Chevron

6001 Bollinger Canyon Road

L4310

San Ramon CA 94583

Submitted: 06/13/2014 09:45

Reported: 06/25/2014 14:44

TLB1F

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
	Metals Dissolved				
01754	Iron	7439-89-6	ug/l 57.0	ug/l 43.0	1
07058	Manganese	7439-96-5	225	0.83	1
06035	Lead	SW-846 6020 7439-92-1	ug/l N.D.	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457

This sample was field filtered for dissolved metals.

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
01754	Iron	SW-846 6010B	1	141681848003	06/18/2014 20:34	John P Hook	1
07058	Manganese	SW-846 6010B	1	141681848003	06/18/2014 20:34	John P Hook	1
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 18:47	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141681848003	06/18/2014 09:16	Micaela L Dishong	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1



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Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498026
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 14:55 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 06/13/2014 09:45
Reported: 06/25/2014 14:44

TLB2-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B		ug/l	ug/l	
10943 Benzene		71-43-2	N.D.	0.5	1
10943 Ethylbenzene		100-41-4	N.D.	0.5	1
10943 Methyl Tertiary Butyl Ether		1634-04-4	N.D.	0.5	1
10943 Toluene		108-88-3	N.D.	0.5	1
10943 Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Volatiles	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273 NWTPH-Gx water C7-C12		n.a.	N.D.	50	1
GC Miscellaneous	RSKSOP-175 modified		ug/l	ug/l	
07105 Methane		74-82-8	N.D.	3.0	1
GC Petroleum Hydrocarbons	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
08271 Diesel Range Organics C12-C24		n.a.	N.D.	29	1
08271 Heavy Range Organics C24-C40		n.a.	N.D.	67	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%.					
Wet Chemistry	EPA 300.0		ug/l	ug/l	
00368 Nitrate Nitrogen		14797-55-8	570	250	5
00228 Sulfate		14808-79-8	3,000	1,500	5
	SM 2320 B-1997		ug/l as CaCO ₃	ug/l as CaCO ₃	
12150 Total Alkalinity		n.a.	66,900	700	1
	SM 4500-S2 D-2000		ug/l	ug/l	
00230 Sulfide		18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F141691AA	06/18/2014 09:23	Anita M Dale	1



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Sample Description: B-2 Grab Groundwater
Facility# 211556 **Job#** 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498026
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 14:55 by JP

Chevron

6001 Bollinger Canyon Road

L4310

Submitted: 06/13/2014 09:45

San Ramon CA 94583

Reported: 06/25/2014 14:44

TLB2-

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F141691AA	06/18/2014 09:23	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	14168A94A	06/19/2014 02:19	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14168A94A	06/19/2014 02:19	Miranda P Tillinghast	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	141680031A	06/18/2014 00:03	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH- Dx modified	1	141700017A	06/20/2014 16:02	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	141700016A	06/23/2014 13:08	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	141700016A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	141700017A	06/20/2014 02:30	Sherry L Morrow	1
00368	Nitrate Nitrogen	EPA 300.0	1	14164987601A	06/13/2014 21:11	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14164987601A	06/13/2014 21:11	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14168002103A	06/17/2014 20:40	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14167023002A	06/16/2014 11:40	Michèle L Graham	1



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Sample Description: B-2 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498027
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 14:55 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 06/13/2014 09:45
Reported: 06/25/2014 14:44

TLB2F

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved	SW-846 6010B		ug/l	ug/l	
01754 Iron		7439-89-6	94.0	43.0	1
07058 Manganese		7439-96-5	75.6	0.83	1
	SW-846 6020		ug/l	ug/l	
06035 Lead		7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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
01754 Iron		SW-846 6010B	1	141681848003	06/18/2014 20:38	John P Hook	1
07058 Manganese		SW-846 6010B	1	141681848003	06/18/2014 20:38	John P Hook	1
06035 Lead		SW-846 6020	1	141686050001A	06/18/2014 18:49	John P Hook	1
01848 WW SW846 ICP Digest (tot rec)	SW-846 3005A		1	141681848003	06/18/2014 09:16	Micaela L Dishong	1
06050 ICP/MS SW-846 Water Digest	SW-846 3020A		1	141686050001	06/18/2014 10:20	James L Mertz	1



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Sample Description: B-3 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498028
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 13:50 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 06/13/2014 09:45
Reported: 06/25/2014 14:44

TLB3-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B		ug/l	ug/l	
10943 Benzene		71-43-2	N.D.	0.5	1
10943 Ethylbenzene		100-41-4	1	0.5	1
10943 Methyl Tertiary Butyl Ether		1634-04-4	N.D.	0.5	1
10943 Toluene		108-88-3	N.D.	0.5	1
10943 Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Volatiles	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273 NWTPH-Gx water C7-C12		n.a.	260	50	1
GC Miscellaneous	RSKSOP-175 modified		ug/l	ug/l	
07105 Methane		74-82-8	170	3.0	1
GC Petroleum Hydrocarbons	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
08271 Diesel Range Organics C12-C24		n.a.	780	28	1
08271 Heavy Range Organics C24-C40		n.a.	100	66	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.	100	28	1
12005 HRO C24-C40 w/Si Gel		n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry	EPA 300.0		ug/l	ug/l	
00368 Nitrate Nitrogen		14797-55-8	2,900	250	5
00228 Sulfate		14808-79-8	7,000	1,500	5
	SM 2320 B-1997		ug/l as CaCO ₃	ug/l as CaCO ₃	
12150 Total Alkalinity		n.a.	125,000	700	1
	SM 4500-S2 D-2000		ug/l	ug/l	
00230 Sulfide		18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F141692AA	06/18/2014 11:01	Anita M Dale	1



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Sample Description: B-3 Grab Groundwater
Facility# 211556 **Job#** 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498028
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 13:50 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 06/13/2014 09:45
Reported: 06/25/2014 14:44

TLB3-

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F141692AA	06/18/2014 11:01	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14168A94A	06/19/2014 02:44	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14168A94A	06/19/2014 02:44	Miranda P Tillinghast	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	141680031A	06/18/2014 00:20	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700017A	06/20/2014 17:29	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700016A	06/23/2014 13:30	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700016A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700017A	06/20/2014 02:30	Sherry L Morrow	1
00368	Nitrate Nitrogen	EPA 300.0	1	14164987601A	06/13/2014 21:59	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14164987601A	06/13/2014 21:59	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14168002103A	06/17/2014 21:47	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14167023002A	06/16/2014 11:40	Michèle L Graham	1



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

Sample Description: B-3 Filtered Grab Groundwater
Facility# 211556 **Job#** 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498029
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 13:50 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/13/2014 09:45

San Ramon CA 94583

Reported: 06/25/2014 14:44

TLB3F

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
	Metals Dissolved				
01754	Iron	7439-89-6	ug/l 8,330	ug/l 43.0	1
07058	Manganese	7439-96-5		0.83	1
06035	Lead	SW-846 6020 7439-92-1	ug/l 8.3	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457

This sample was field filtered for dissolved metals.

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
01754	Iron	SW-846 6010B	1	141681848003	06/18/2014 20:42	John P Hook	1
07058	Manganese	SW-846 6010B	1	141681848003	06/18/2014 20:42	John P Hook	1
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 18:51	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141681848003	06/18/2014 09:16	Micaela L Dishong	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1



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

Sample Description: B-4 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498030
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 12:52 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 06/13/2014 09:45
Reported: 06/25/2014 14:44

TLB4-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B		ug/l	ug/l	
10943 Benzene		71-43-2	N.D.	0.5	1
10943 Ethylbenzene		100-41-4	1	0.5	1
10943 Methyl Tertiary Butyl Ether		1634-04-4	N.D.	0.5	1
10943 Toluene		108-88-3	N.D.	0.5	1
10943 Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Volatiles	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273 NWTPH-Gx water C7-C12		n.a.	1,200	50	1
GC Miscellaneous	RSKSOP-175 modified		ug/l	ug/l	
07105 Methane		74-82-8	430	3.0	1
GC Petroleum Hydrocarbons	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
08271 Diesel Range Organics C12-C24		n.a.	260	29	1
08271 Heavy Range Organics C24-C40		n.a.	73	67	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.	120	29	1
12005 HRO C24-C40 w/Si Gel		n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry	EPA 300.0		ug/l	ug/l	
00368 Nitrate Nitrogen		14797-55-8	N.D.	250	5
00228 Sulfate		14808-79-8	N.D.	1,500	5
	SM 2320 B-1997		ug/l as CaCO ₃	ug/l as CaCO ₃	
12150 Total Alkalinity		n.a.	112,000	700	1
	SM 4500-S2 D-2000		ug/l	ug/l	
00230 Sulfide		18496-25-8	67	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F141692AA	06/18/2014 11:22	Anita M Dale	1



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Sample Description: B-4 Grab Groundwater
Facility# 211556 **Job#** 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498030
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 12:52 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 06/13/2014 09:45
Reported: 06/25/2014 14:44

TLB4-

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F141692AA	06/18/2014 11:22	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14168A94A	06/19/2014 03:10	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14168A94A	06/19/2014 03:10	Miranda P Tillinghast	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	141680031A	06/18/2014 00:36	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700017A	06/20/2014 17:50	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700016A	06/25/2014 13:23	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700016A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700017A	06/20/2014 02:30	Sherry L Morrow	1
00368	Nitrate Nitrogen	EPA 300.0	1	14164987601B	06/13/2014 22:16	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14164987601B	06/13/2014 22:16	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14168002103A	06/17/2014 21:41	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14167023002A	06/16/2014 11:40	Michèle L Graham	1



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

Sample Description: B-4 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498031
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 12:52 by JP

Chevron

6001 Bollinger Canyon Road

L4310

San Ramon CA 94583

Submitted: 06/13/2014 09:45

Reported: 06/25/2014 14:44

TLB4F

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
	Metals Dissolved				
01754	Iron	7439-89-6	ug/l 10,900	ug/l 43.0	1
07058	Manganese	7439-96-5		0.83	1
06035	Lead	SW-846 6020 7439-92-1	ug/l 1.8	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457

This sample was field filtered for dissolved metals.

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
01754	Iron	SW-846 6010B	1	141681848003	06/18/2014 20:46	John P Hook	1
07058	Manganese	SW-846 6010B	1	141681848003	06/18/2014 20:46	John P Hook	1
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 18:53	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141681848003	06/18/2014 09:16	Micaela L Dishong	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1



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

Sample Description: MW-110 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498032
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 09:50 by JP

Chevron

6001 Bollinger Canyon Road

L4310

San Ramon CA 94583

Submitted: 06/13/2014 09:45

Reported: 06/25/2014 14:44

TL110

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
	GC Volatiles	ECY 97-602 NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
	GC Petroleum Hydrocarbons	ECY 97-602 NWTPH-Dx modified	ug/l	ug/l	
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	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. C457

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
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F141692AA	06/18/2014 11:44	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F141692AA	06/18/2014 11:44	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14168A94A	06/19/2014 06:09	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14168A94A	06/19/2014 06:09	Miranda P Tillinghast	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700017A	06/20/2014 16:23	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700016A	06/23/2014 14:12	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700016A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700017A	06/20/2014 02:30	Sherry L Morrow	1



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Sample Description: MW-110 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498033
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 09:50 by JP

Chevron

6001 Bollinger Canyon Road

L4310

Submitted: 06/13/2014 09:45

San Ramon CA 94583

Reported: 06/25/2014 14:44

T110F

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved 06035 Lead	SW-846 6020	7439-92-1	ug/l 0.22	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457

This sample was filtered in the lab for dissolved metals.

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
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 18:54	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1



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

Sample Description: MW-111 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498034
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 10:51 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 06/13/2014 09:45
Reported: 06/25/2014 14:44

TL111

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B		ug/l	ug/l	
10943 Benzene		71-43-2	2	0.5	1
10943 Ethylbenzene		100-41-4	130	0.5	1
10943 Methyl Tertiary Butyl Ether		1634-04-4	N.D.	0.5	1
10943 Toluene		108-88-3	N.D.	0.5	1
10943 Xylene (Total)		1330-20-7	14	0.5	1
GC Volatiles	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273 NWTPH-Gx water C7-C12		n.a.	4,200	250	5
GC Miscellaneous	RSKSOP-175 modified		ug/l	ug/l	
07105 Methane		74-82-8	7,000	150	50
GC Petroleum Hydrocarbons	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
08271 Diesel Range Organics C12-C24		n.a.	1,200	29	1
08271 Heavy Range Organics C24-C40		n.a.	83	67	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.	380	29	1
12005 HRO C24-C40 w/Si Gel		n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry	EPA 300.0		ug/l	ug/l	
00368 Nitrate Nitrogen		14797-55-8	N.D.	250	5
00228 Sulfate		14808-79-8	N.D.	1,500	5
	SM 2320 B-1997		ug/l as CaCO ₃	ug/l as CaCO ₃	
12150 Total Alkalinity		n.a.	174,000	700	1
	SM 4500-S2 D-2000		ug/l	ug/l	
00230 Sulfide		18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F141692AA	06/18/2014 12:06	Anita M Dale	1



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Sample Description: MW-111 Grab Groundwater
Facility# 211556 **Job#** 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498034
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 10:51 by JP

Chevron

6001 Bollinger Canyon Road

L4310

Submitted: 06/13/2014 09:45

San Ramon CA 94583

Reported: 06/25/2014 14:44

TL111

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F141692AA	06/18/2014 12:06	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	14171B94A	06/24/2014 17:33	Laura M Krieger	5
01146	GC VOA Water Prep	SW-846 5030B	1	14171B94A	06/24/2014 17:33	Laura M Krieger	5
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	141680031A	06/18/2014 18:46	Elizabeth J Marin	50
08271	NWTPH-Dx water	ECY 97-602 NWTPH- Dx modified	1	141700017A	06/20/2014 17:07	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	141700016A	06/23/2014 14:33	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	141700016A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	141700017A	06/20/2014 02:30	Sherry L Morrow	1
00368	Nitrate Nitrogen	EPA 300.0	1	14164987601A	06/13/2014 20:39	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14164987601A	06/13/2014 20:39	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14168002103A	06/17/2014 21:35	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14167023002A	06/16/2014 11:40	Michele L Graham	1



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Sample Description: MW-111 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498035
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 10:51 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/13/2014 09:45

San Ramon CA 94583

Reported: 06/25/2014 14:44

T111F

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved	SW-846 6010B		ug/l	ug/l	
01754 Iron		7439-89-6	11,200	43.0	1
07058 Manganese		7439-96-5	5,330	0.83	1
	SW-846 6020		ug/l	ug/l	
06035 Lead		7439-92-1	16.1	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457

This sample was field filtered for dissolved metals.

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
01754 Iron		SW-846 6010B	1	141681848003	06/18/2014 20:50	John P Hook	1
07058 Manganese		SW-846 6010B	1	141681848003	06/18/2014 20:50	John P Hook	1
06035 Lead		SW-846 6020	1	141686050001A	06/18/2014 18:56	John P Hook	1
01848 WW SW846 ICP Digest (tot rec)	SW-846 3005A		1	141681848003	06/18/2014 09:16	Micaela L Dishong	1
06050 ICP/MS SW-846 Water Digest	SW-846 3020A		1	141686050001	06/18/2014 10:20	James L Mertz	1

Quality Control Summary

Client Name: Chevron
Reported: 06/25/14 at 02:44 PM

Group Number: 1481697

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: F141691AA			Sample number(s): 7498026					
Benzene	N.D.	0.5	ug/l	96		78-120		
Ethylbenzene	N.D.	0.5	ug/l	92		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	90		75-120		
Toluene	N.D.	0.5	ug/l	94		80-120		
Xylene (Total)	N.D.	0.5	ug/l	94		80-120		
Batch number: F141692AA			Sample number(s): 7498023-7498024, 7498028, 7498030, 7498032, 7498034					
Benzene	N.D.	0.5	ug/l	90		78-120		
Ethylbenzene	N.D.	0.5	ug/l	87		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	92		75-120		
Toluene	N.D.	0.5	ug/l	91		80-120		
Xylene (Total)	N.D.	0.5	ug/l	89		80-120		
Batch number: 14168A94A			Sample number(s): 7498023-7498024, 7498026, 7498028, 7498030, 7498032					
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	103		75-135		
Batch number: 14171B94A			Sample number(s): 7498034					
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	103	102	75-135	1	30
Batch number: 141680031A			Sample number(s): 7498024, 7498026, 7498028, 7498030, 7498034					
Methane	N.D.	3.0	ug/l	106		80-120		
Batch number: 141700017A			Sample number(s): 7498024, 7498026, 7498028, 7498030, 7498032, 7498034					
Diesel Range Organics C12-C24	N.D.	30.	ug/l	75	69	50-113	8	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 141700016A			Sample number(s): 7498024, 7498026, 7498028, 7498030, 7498032, 7498034					
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	58	66	32-117	14	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 141681848003			Sample number(s): 7498025, 7498027, 7498029, 7498031, 7498035					
Iron	N.D.	43.0	ug/l	110		90-112		
Manganese	N.D.	0.83	ug/l	109		90-110		
Batch number: 141686050001A			Sample number(s): 7498025, 7498027, 7498029, 7498031, 7498033, 7498035					
Lead	N.D.	0.085	ug/l	100		90-110		
Batch number: 14164987601A			Sample number(s): 7498024, 7498026, 7498028, 7498034					
Nitrate Nitrogen	N.D.	50.	ug/l	95	95	90-110	1	20
Sulfate	N.D.	300.	ug/l	96	95	90-110	1	20
Batch number: 14164987601B			Sample number(s): 7498030					
Nitrate Nitrogen	N.D.	50.	ug/l	95	95	90-110	1	20

*- 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: 1481697

Reported: 06/25/14 at 02:44 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Sulfate	N.D.	300.	ug/l	96	95	90-110	1	20
Batch number: 14167023002A			Sample number(s): 7498024, 7498026, 7498028, 7498030, 7498034					
Sulfide	N.D.	54.	ug/l	96		90-110		
Batch number: 14168002103A			Sample number(s): 7498024, 7498026, 7498028, 7498030, 7498034					
Total Alkalinity	N.D.	700.	ug/l as CaCO ₃	92		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: F141691AA			Sample number(s): 7498026 UNSPK: 7498026						
Benzene	102	102	72-134	0	30				
Ethylbenzene	98	99	71-134	2	30				
Methyl Tertiary Butyl Ether	92	96	72-126	4	30				
Toluene	100	101	80-125	0	30				
Xylene (Total)	97	99	79-125	1	30				
Batch number: F141692AA			Sample number(s): 7498023-7498024, 7498028, 7498030, 7498032, 7498034 UNSPK: 7498024						
Benzene	103	100	72-134	3	30				
Ethylbenzene	97	95	71-134	2	30				
Methyl Tertiary Butyl Ether	94	91	72-126	3	30				
Toluene	99	96	80-125	3	30				
Xylene (Total)	98	97	79-125	1	30				
Batch number: 14168A94A			Sample number(s): 7498023-7498024, 7498026, 7498028, 7498030, 7498032 UNSPK: P498126						
NWTPH-Gx water C7-C12	105	110	75-135	2	30				
Batch number: 141680031A			Sample number(s): 7498024, 7498026, 7498028, 7498030, 7498034 UNSPK: P496299						
Methane	89	77	35-157	10	20				
Batch number: 141681848003			Sample number(s): 7498025, 7498027, 7498029, 7498031, 7498035 UNSPK: P499015 BKG: P499015						
Iron	126 (2)	340 (2)	75-125	6	20	32,200	30,300	6	20
Manganese	148 (2)	41 (2)	75-125	6	20	8,640	8,210	5	20
Batch number: 141686050001A			Sample number(s): 7498025, 7498027, 7498029, 7498031, 7498033, 7498035 UNSPK: P498316 BKG: P498316						
Lead	101	100	89-120	1	20	0.59	0.56	5 (1)	20
Batch number: 14164987601A			Sample number(s): 7498024, 7498026, 7498028, 7498034 UNSPK: P498218 BKG: P498218						
Nitrate Nitrogen	87*		90-110			N.D.	N.D.	0 (1)	20
Sulfate	88*		90-110			460	340	29* (1)	20
Batch number: 14164987601B			Sample number(s): 7498030 UNSPK: 7498030 BKG: 7498030						
Nitrate Nitrogen	94		90-110			N.D.	N.D.	0 (1)	20
Sulfate	95		90-110			N.D.	N.D.	0 (1)	20

*- 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: 1481697
Reported: 06/25/14 at 02:44 PM

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 14167023002A			Sample number(s): 7498024, 7498026, 7498028, 7498030, 7498034 UNSPK: 7498034 BKG: 7498034					
Sulfide	79	79	42-131	0	16 N.D.	N.D.	0 (1)	5
Batch number: 14168002103A			Sample number(s): 7498024, 7498026, 7498028, 7498030, 7498034 UNSPK: P493899 BKG: P493899					
Total Alkalinity	93		17-146		58,100	61,600	6*	5

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: UST VOCs by 8260B - Water

Batch number: F141691AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7498026	98	98	100	98
Blank	96	97	102	98
LCS	98	101	98	96
MS	97	102	99	97
MSD	97	102	100	97
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water

Batch number: F141692AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7498023	97	102	98	95
7498024	99	104	97	95
7498028	101	100	99	97
7498030	96	99	99	99
7498032	97	97	99	96
7498034	98	98	98	100
Blank	99	103	98	96
LCS	100	104	97	96
MS	98	105	97	96
MSD	100	101	100	97
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12

Batch number: 14168A94A

Trifluorotoluene-F

7498023	82
7498024	82
7498026	83

*- 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
Reported: 06/25/14 at 02:44 PM

Group Number: 1481697

Surrogate Quality Control

7498028	90
7498030	109
7498032	81
Blank	83
LCS	90
MS	100
MSD	100

Limits: 63-135

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 14171B94A
Trifluorotoluene-F

7498034	85
Blank	81
LCS	89
LCSD	89

Limits: 63-135

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 141680031A
Propene

7498024	67
7498026	74
7498028	66
7498030	63
7498034	99
Blank	96
LCS	87
MS	86
MSD	77

Limits: 42-131

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 141700016A
Orthoterphenyl

7498024	91
7498026	86
7498028	90
7498030	82
7498032	94
7498034	95
Blank	81
LCS	100
LCSD	101

Limits: 50-150

Analysis Name: NWTPH-Dx water
Batch number: 141700017A
Orthoterphenyl

*- 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
Reported: 06/25/14 at 02:44 PM

Group Number: 1481697

Surrogate Quality Control

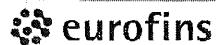
7498024	100
7498026	100
7498028	111
7498030	104
7498032	99
7498034	114
Blank	94
LCS	114
LCSD	106

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

Acct. # 11260

For Eurofins Lancaster Laboratories use only
Group # 1481697 Sample # 7498023-35
Instructions on reverse side correspond with circled numbers.

1 Client Information			4 Matrix			5 Analyses Requested			SCR #: _____	
Facility # SS#211556-OML G-R#366773 Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire Consultant/Office Gettier-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com) Consultant Phone # (925) 551-7444 x180 Sampler J. PAYNE			Sediment <input type="checkbox"/> Soil <input checked="" type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Water <input type="checkbox"/> Surface <input type="checkbox"/> Oil <input type="checkbox"/> Air <input type="checkbox"/>			Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxigenates <input type="checkbox"/> NWTPH-GX <input type="checkbox"/> NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Diss. <input checked="" type="checkbox"/> Method 6020			Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ____ oxy's on highest hit <input type="checkbox"/> Run ____ oxy's on all hits	
2 Sample Identification			Collected			6 Remarks				
			Date	Time		Grab <input type="checkbox"/> Composite <input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Oil <input type="checkbox"/> Air <input type="checkbox"/>			Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered. <i>Mended JLM 6/13/14</i>	
QA 6:14N B.1 1150 X B.2 1455 X B.3 1360 X B.4 1252 X MW.110 0450 MW.111 1051 X										
7 Turnaround Time Requested (TAT) (please circle)			Relinquished by JDP Date 6/12/14 Time 1700 Received by _____ Date _____ Time _____			Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____			9	
Standard 5 day 4 day 72 hour 48 hour EDD/EDD 24 hour			Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____			Received by JDP Date 6/13/14 Time 0945				
8 Data Package (circle if required)			Temperature Upon Receipt 11-4.3 °C			Custody Seals Intact? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Type I - Full			CVX-RTBU-FL_05 (default)						Issued by Dept. 40 Management 7051.03	
Type VI (Raw Data)			Other: _____							

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

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

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 \geq the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

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 \geq 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.

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.



Lancaster Laboratories
Environmental

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

June 26, 2014

Project: 211556

Submittal Date: 06/14/2014
Group Number: 1481949
PO Number: 0015146917
Release Number: HORNE
State of Sample Origin: WA

Client Sample Description

MW-109 Grab Groundwater
MW-113 Grab Groundwater
MW-113 Filtered Grab Groundwater
MW-114 Grab Groundwater
MW-114 Filtered Grab Groundwater
MW-117 Grab Groundwater
MW-117 Filtered Grab Groundwater

Lancaster Labs (LL)

7499464
7499466
7499467
7499469
7499470
7499471
7499472

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

ELECTRONIC Gettler-Ryan Inc.
COPY TO
ELECTRONIC SAIC
COPY TO
ELECTRONIC SAIC
COPY TO

Attn: Gettler Ryan
Attn: Jamalyn Green
Attn: Russ Shropshire



Lancaster Laboratories
Environmental

Analysis Report

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Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252



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Sample Description: MW-109 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7499464
LL Group # 1481949
Account # 11260

Project Name: 211556

Collected: 06/13/2014 11:00 by JP

Chevron

6001 Bollinger Canyon Road

L4310

San Ramon CA 94583

Submitted: 06/14/2014 10:10

Reported: 06/26/2014 09:05

MR109

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles					
10943	SW-846 8260B Benzene	71-43-2	N.D.	ug/l 0.5	1
10943	Ethylbenzene	100-41-4	N.D.	ug/l 0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	ug/l 0.5	1
10943	Toluene	108-88-3	N.D.	ug/l 0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	ug/l 0.5	1
GC Volatiles					
08273	ECY 97-602 NWTPH-Gx NWTPH-Gx water C7-C12	n.a.	N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
08271	ECY 97-602 NWTPH-Dx modified Diesel Range Organics C12-C24	n.a.	N.D.	ug/l 28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	ug/l 66	1
GC Petroleum Hydrocarbons w/Si					
12005	ECY 97-602 NWTPH-Dx modified DRO C12-C24 w/Si Gel	n.a.	N.D.	ug/l 28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	ug/l 66	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

Trip blank vials were not received by the laboratory for this sample group.

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
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F141702AA	06/19/2014 07:57	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F141702AA	06/19/2014 07:57	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14170B20A	06/20/2014 15:34	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170B20A	06/20/2014 15:34	Miranda P Tillinghast	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700017A	06/20/2014 16:45	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700016A	06/23/2014 14:55	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700016A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700017A	06/20/2014 02:30	Sherry L Morrow	1



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Sample Description: MW-113 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7499466
LL Group # 1481949
Account # 11260

Project Name: 211556

Collected: 06/13/2014 13:15 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 06/14/2014 10:10
Reported: 06/26/2014 09:05

MR113

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B		ug/l	ug/l	
10943 Benzene		71-43-2	N.D.	0.5	1
10943 Ethylbenzene		100-41-4	N.D.	0.5	1
10943 Methyl Tertiary Butyl Ether		1634-04-4	N.D.	0.5	1
10943 Toluene		108-88-3	N.D.	0.5	1
10943 Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Volatiles	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273 NWTPH-Gx water C7-C12		n.a.	N.D.	50	1
GC Miscellaneous	RSKSOP-175 modified		ug/l	ug/l	
07105 Methane		74-82-8	N.D.	3.0	1
GC Petroleum Hydrocarbons	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
08271 Diesel Range Organics C12-C24		n.a.	N.D.	29	1
08271 Heavy Range Organics C24-C40		n.a.	N.D.	67	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%.					
Wet Chemistry	EPA 300.0		ug/l	ug/l	
00368 Nitrate Nitrogen		14797-55-8	N.D.	250	5
00228 Sulfate		14808-79-8	3,700	1,500	5
	SM 4500-S2 D-2000		ug/l	ug/l	
00230 Sulfide		18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457
Trip blank vials were not received by the laboratory for this sample group.

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
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D141691AA	06/18/2014 11:48	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D141691AA	06/18/2014 11:48	Anita M Dale	1
08273	NWTPH-Gx water C7-C12 Gx	ECY 97-602 NWTPH-	1	14170B20A	06/20/2014 16:02	Miranda P Tillinghast	1



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Sample Description: MW-113 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7499466
LL Group # 1481949
Account # 11260

Project Name: 211556

Collected: 06/13/2014 13:15 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/14/2014 10:10

San Ramon CA 94583

Reported: 06/26/2014 09:05

MR113

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01146	GC VOA Water Prep	SW-846 5030B	1	14170B20A	06/20/2014 16:02	Miranda P Tillinghast	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	141700030A	06/19/2014 20:47	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700019A	06/20/2014 19:38	Glorines Suarez-Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700018A	06/23/2014 16:42	Glorines Suarez-Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700018A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700019A	06/20/2014 02:30	Sherry L Morrow	1
00368	Nitrate Nitrogen	EPA 300.0	1	14165987601A	06/14/2014 19:17	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14165987601A	06/14/2014 19:17	Sandra J Miller	5
00230	Sulfide	SM 4500-S2 D-2000	1	14170023001A	06/19/2014 10:15	Susan E Hibner	1



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Sample Description: MW-113 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7499467
LL Group # 1481949
Account # 11260

Project Name: 211556

Collected: 06/13/2014 13:15 by JP

Chevron

6001 Bollinger Canyon Road

L4310

San Ramon CA 94583

Submitted: 06/14/2014 10:10

Reported: 06/26/2014 09:05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved	SW-846 6010B		ug/l	ug/l	
01754 Iron		7439-89-6	N.D.	43.0	1
07058 Manganese		7439-96-5	11.9	0.83	1
	SW-846 6020		ug/l	ug/l	
06035 Lead		7439-92-1	N.D.	0.085	1
Wet Chemistry	SM 2320 B-1997		ug/l as CaCO3	ug/l as CaCO3	
12150 Total Alkalinity		n.a.	34,200	700	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered.

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
01754 Iron		SW-846 6010B	1	141681848003	06/18/2014 20:55	John P Hook	1
07058 Manganese		SW-846 6010B	1	141681848003	06/18/2014 20:55	John P Hook	1
06035 Lead		SW-846 6020	1	141686050002A	06/19/2014 07:12	Choon Y Tian	1
01848 WW SW846 ICP Digest (tot rec)	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141681848003	06/18/2014 09:16	Micaela L Dishong	1
06050 ICP/MS SW-846 Water Digest	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	141686050002	06/18/2014 10:38	James L Mertz	1
12150 Total Alkalinity	Total Alkalinity	SM 2320 B-1997	1	14168002103A	06/17/2014 21:19	Kenneth A Bell	1



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Sample Description: MW-114 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7499469
LL Group # 1481949
Account # 11260

Project Name: 211556

Collected: 06/13/2014 09:50 by JP

Chevron

6001 Bollinger Canyon Road

L4310

San Ramon CA 94583

Submitted: 06/14/2014 10:10

Reported: 06/26/2014 09:05

MR114

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles					
10943	SW-846 8260B Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles					
08273	ECY 97-602 NWTPH-Gx NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons					
08271	ECY 97-602 NWTPH-Dx modified Diesel Range Organics C12-C24	n.a.	94	29	1
08271	Heavy Range Organics C24-C40	n.a.	820	67	1
GC Petroleum Hydrocarbons w/Si					
12005	ECY 97-602 NWTPH-Dx modified DRO C12-C24 w/Si Gel	n.a.	38	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	340	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

Trip blank vials were not received by the laboratory for this sample group.

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
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D141691AA	06/18/2014 12:11	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D141691AA	06/18/2014 12:11	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14170B20A	06/20/2014 16:31	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170B20A	06/20/2014 16:31	Miranda P Tillinghast	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700019A	06/20/2014 21:05	Glorines Suarez-Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700018A	06/23/2014 17:03	Glorines Suarez-Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700018A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700019A	06/20/2014 02:30	Sherry L Morrow	1



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Sample Description: MW-114 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7499470
LL Group # 1481949
Account # 11260

Project Name: 211556

Collected: 06/13/2014 09:50 by JP

Chevron

6001 Bollinger Canyon Road

L4310

Submitted: 06/14/2014 10:10

San Ramon CA 94583

Reported: 06/26/2014 09:05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved 06035	Lead SW-846 6020	7439-92-1	ug/l 0.18	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457

This sample was lab filtered for dissolved metals.

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
06035	Lead	SW-846 6020	1	141686050002A	06/19/2014 07:14	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	141686050002	06/18/2014 10:38	James L Mertz	1



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Sample Description: MW-117 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7499471
LL Group # 1481949
Account # 11260

Project Name: 211556

Collected: 06/13/2014 12:02 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 06/14/2014 10:10
Reported: 06/26/2014 09:05

MR117

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B		ug/l	ug/l	
10943 Benzene		71-43-2	N.D.	0.5	1
10943 Ethylbenzene		100-41-4	N.D.	0.5	1
10943 Methyl Tertiary Butyl Ether		1634-04-4	N.D.	0.5	1
10943 Toluene		108-88-3	N.D.	0.5	1
10943 Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Volatiles	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273 NWTPH-Gx water C7-C12		n.a.	N.D.	50	1
GC Miscellaneous	RSKSOP-175 modified		ug/l	ug/l	
07105 Methane		74-82-8	N.D.	3.0	1
GC Petroleum Hydrocarbons	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
08271 Diesel Range Organics C12-C24		n.a.	N.D.	28	1
08271 Heavy Range Organics C24-C40		n.a.	N.D.	66	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.	28	1
12005 HRO C24-C40 w/Si Gel		n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry	EPA 300.0		ug/l	ug/l	
00368 Nitrate Nitrogen		14797-55-8	540	250	5
00228 Sulfate		14808-79-8	5,900	1,500	5
	SM 4500-S2 D-2000		ug/l	ug/l	
00230 Sulfide		18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457
Trip blank vials were not received by the laboratory for this sample group.

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
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D141691AA	06/18/2014 12:34	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D141691AA	06/18/2014 12:34	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14170B20A	06/20/2014 16:59	Miranda P Tillinghast	1



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Sample Description: MW-117 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7499471
LL Group # 1481949
Account # 11260

Project Name: 211556

Collected: 06/13/2014 12:02 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/14/2014 10:10

San Ramon CA 94583

Reported: 06/26/2014 09:05

MR117

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01146	GC VOA Water Prep	SW-846 5030B	1	14170B20A	06/20/2014 16:59	Miranda P Tillinghast	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	141700030A	06/19/2014 21:04	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700019A	06/20/2014 20:00	Glorines Suarez-Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700018A	06/23/2014 17:24	Glorines Suarez-Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700018A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700019A	06/20/2014 02:30	Sherry L Morrow	1
00368	Nitrate Nitrogen	EPA 300.0	1	14165987601A	06/14/2014 20:06	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14165987601A	06/14/2014 20:06	Sandra J Miller	5
00230	Sulfide	SM 4500-S2 D-2000	1	14170023001A	06/19/2014 10:15	Susan E Hibner	1



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Sample Description: MW-117 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7499472
LL Group # 1481949
Account # 11260

Project Name: 211556

Collected: 06/13/2014 12:02 by JP

Chevron

6001 Bollinger Canyon Road

L4310

San Ramon CA 94583

Submitted: 06/14/2014 10:10

Reported: 06/26/2014 09:05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved	SW-846 6010B		ug/l	ug/l	
01754 Iron		7439-89-6	N.D.	43.0	1
07058 Manganese		7439-96-5	2.8	0.83	1
	SW-846 6020		ug/l	ug/l	
06035 Lead		7439-92-1	N.D.	0.085	1
Wet Chemistry	SM 2320 B-1997		ug/l as CaCO3	ug/l as CaCO3	
12150 Total Alkalinity		n.a.	30,700	700	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered.

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
01754 Iron		SW-846 6010B	1	141681848003	06/18/2014 20:59	John P Hook	1
07058 Manganese		SW-846 6010B	1	141681848003	06/18/2014 20:59	John P Hook	1
06035 Lead		SW-846 6020	1	141686050002A	06/19/2014 07:21	Choon Y Tian	1
01848 WW SW846 ICP Digest (tot rec)	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141681848003	06/18/2014 09:16	Micaela L Dishong	1
06050 ICP/MS SW-846 Water Digest	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	141686050002	06/18/2014 10:38	James L Mertz	1
12150 Total Alkalinity	Total Alkalinity	SM 2320 B-1997	1	14168002103A	06/17/2014 20:46	Kenneth A Bell	1

Quality Control Summary

Client Name: Chevron Group Number: 1481949
Reported: 06/26/14 at 09:05 AM

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: D141691AA			Sample number(s): 7499466, 7499469, 7499471					
Benzene	N.D.	0.5	ug/l	96		78-120		
Ethylbenzene	N.D.	0.5	ug/l	99		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	96		75-120		
Toluene	N.D.	0.5	ug/l	98		80-120		
Xylene (Total)	N.D.	0.5	ug/l	100		80-120		
Batch number: F141702AA			Sample number(s): 7499464					
Benzene	N.D.	0.5	ug/l	90		78-120		
Ethylbenzene	N.D.	0.5	ug/l	86		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	91		75-120		
Toluene	N.D.	0.5	ug/l	86		80-120		
Xylene (Total)	N.D.	0.5	ug/l	87		80-120		
Batch number: 14170B20A			Sample number(s): 7499464, 7499466, 7499469, 7499471					
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	101	101	75-135	0	30
Batch number: 141700030A			Sample number(s): 7499466, 7499471					
Methane	N.D.	3.0	ug/l	103		80-120		
Batch number: 141700017A			Sample number(s): 7499464					
Diesel Range Organics C12-C24	N.D.	30.	ug/l	75	69	50-113	8	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 141700019A			Sample number(s): 7499466, 7499469, 7499471					
Diesel Range Organics C12-C24	N.D.	30.	ug/l	72	71	50-113	2	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 141700016A			Sample number(s): 7499464					
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	58	66	32-117	14	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 141700018A			Sample number(s): 7499466, 7499469, 7499471					
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	63	70	32-117	11	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 141681848003			Sample number(s): 7499467, 7499472					
Iron	N.D.	43.0	ug/l	110		90-112		
Manganese	N.D.	0.83	ug/l	109		90-110		
Batch number: 141686050002A			Sample number(s): 7499467, 7499470, 7499472					
Lead	N.D.	0.085	ug/l	98		90-110		
Batch number: 14165987601A			Sample number(s): 7499466, 7499471					

*- 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: 1481949						
Reported:	06/26/14 at 09:05 AM							
<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Nitrate Nitrogen	N.D.	50.	ug/l	95	93	90-110	3	20
Sulfate	N.D.	300.	ug/l	96	93	90-110	3	20
Batch number:	14168002103A	Sample number(s): 7499467, 7499472						
Total Alkalinity		N.D.	700. ug/l as CaCO ₃	92		90-110		
Batch number:	14170023001A	Sample number(s): 7499466, 7499471						
Sulfide		N.D.	54. ug/l	92		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>BKG MAX</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: D141691AA			Sample number(s): 7499466, 7499469, 7499471 UNSPK: P499499					
Benzene	106	108	72-134	1	30			
Ethylbenzene	109	109	71-134	1	30			
Methyl Tertiary Butyl Ether	101	102	72-126	2	30			
Toluene	108	108	80-125	1	30			
Xylene (Total)	110	109	79-125	0	30			
Batch number: F141702AA			Sample number(s): 7499464 UNSPK: 7499464					
Benzene	100	100	72-134	0	30			
Ethylbenzene	98	97	71-134	0	30			
Methyl Tertiary Butyl Ether	99	95	72-126	4	30			
Toluene	101	100	80-125	1	30			
Xylene (Total)	98	98	79-125	1	30			
Batch number: 141700030A			Sample number(s): 7499466, 7499471 UNSPK: P501998					
Methane	82	81	35-157	1	20			
Batch number: 141681848003			Sample number(s): 7499467, 7499472 UNSPK: P499015 BKG: P499015					
Iron	126 (2)	340 (2)	75-125	6	20	32,200	30,300	6
Manganese	148 (2)	41 (2)	75-125	6	20	8,640	8,210	5
Batch number: 141686050002A			Sample number(s): 7499467, 7499470, 7499472 UNSPK: P495786 BKG: P495786					
Lead	106	103	89-120	3	20	0.14	0.15	3 (1)
Batch number: 14165987601A			Sample number(s): 7499466, 7499471 UNSPK: 7499466 BKG: 7499466					
Nitrate Nitrogen	99		90-110		N.D.	N.D.	0 (1)	20
Sulfate	96		90-110		3,700	3,700	0 (1)	20
Batch number: 14168002103A			Sample number(s): 7499467, 7499472 UNSPK: P493899 BKG: P493899					
Total Alkalinity	93		17-146		58,100	61,600	6*	5
Batch number: 14170023001A			Sample number(s): 7499466, 7499471 UNSPK: P499437 BKG: P499437					
Sulfide	81	90	42-131	4	16	7,400	6,700	9* (1)

*- 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
Reported: 06/26/14 at 09:05 AM

Group Number: 1481949

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: UST VOCs by 8260B - Water

Batch number: D141691AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7499466	100	99	99	98
7499469	99	96	99	98
7499471	100	98	99	97
Blank	100	97	99	98
LCS	99	100	99	99
MS	100	99	98	99
MSD	100	100	98	98

Limits: 80-116 77-113 80-113 78-113

Analysis Name: UST VOCs by 8260B - Water

Batch number: F141702AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7499464	100	102	99	100
Blank	101	99	100	99
LCS	101	105	100	98
MS	100	105	98	98
MSD	101	104	98	99

Limits: 80-116 77-113 80-113 78-113

Analysis Name: NWTPH-Gx water C7-C12

Batch number: 14170B20A

Trifluorotoluene-F

7499464	91
7499466	91
7499469	90
7499471	90
Blank	90
LCS	92
LCSD	92

Limits: 63-135

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

Batch number: 141700016A

Orthoterphenyl

7499464	94
Blank	81
LCS	100
LCSD	101

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.

Quality Control Summary

Client Name: Chevron
Reported: 06/26/14 at 09:05 AM

Group Number: 1481949

Surrogate Quality Control

Analysis Name: NWTPH-Dx water
Batch number: 141700017A
Orthoterphenyl

7499464	97
Blank	94
LCS	114
LCSD	106

Limits: 50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 141700018A
Orthoterphenyl

7499466	88
7499469	85
7499471	87
Blank	89
LCS	91
LCSD	104

Limits: 50-150

Analysis Name: NWTPH-Dx water
Batch number: 141700019A
Orthoterphenyl

7499466	97
7499469	104
7499471	101
Blank	103
LCS	106
LCSD	104

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 141700030A
Propene

7499466	79
7499471	87
Blank	102
LCS	102
MS	81
MSD	81

Limits: 42-131

*- 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

Acct. # 11260

For Eurofins Lancaster Laboratories use only
Group # 1481949 Sample # 7409464-73
Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix				5 Analyses Requested				6 Remarks					
Facility # SS#211556-OML G-R#386773 WBS Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire Consultant/Office Gettier-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com) Consultant Phone # (925) 551-7444 x180 Sampler J. Payne				94568 Group 94568 Total Number of Containers <input type="checkbox"/> Sediment <input type="checkbox"/> Potable Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Air				8021 + MTBE BTEX + MTBE 80260 Naphth 8260 full scan <input type="checkbox"/> Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup NWTPH-Dx without Silica Gel Cleanup WA VPH WA EPH Lead Diss. Method 6020				SCR #: _____ <ul style="list-style-type: none"> <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits <p><i>NITRATE Surface</i></p> <p><i>06/13/14 10:00 AM</i></p> <p><i>TOLEDO/MOUNTAIN</i></p> <p><i>Accuracy</i></p> <p><i>COC AMENDED</i></p> <p><i>ON 06-17-14</i></p> <p><i>MWC</i></p> <p>Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered.</p> <p>Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Doug Lee (dlee@orion.com)</p>					
2 Sample Identification		Collected		Grab	Composite	Soil	Oil	Water	NPDES	Surface	Air	8021 + MTBE	Naphth	WA VPH	WA EPH		
MW-109	6-13-14	1100	X			X	9	X		X		X	X	X	X		
MW-113		1315	X			X	16	X		X		X	X	X	X		
MW-114		0930	X			X	16	X		X	X	X	X	X	X		
MW-117		1202	X			X	16	X		X	X	X	X	X	X		
																Date	Date
																Time	Time
7 Turnaround Time Requested (TAT) (please circle)				Relinquished by				Received by				Date					
<input checked="" type="radio"/> Standard 5 day 72 hour				4 day EDF/EDD 24 hour				Date 6-13-14 Time 10:00				Date _____					
												Time _____					
												Date _____					
												Time _____					
8 Data Package (circle if required)		EDD (circle if required)		Relinquished by Commercial Carrier:				Received by				Date					
Type I - Full Type VI (Raw Data)		CVX-RTBU-FI_05 (default) Other: _____		UPS <input checked="" type="checkbox"/> FedEx _____ Other _____				Date _____				Time _____					
												Date _____					
												Time _____					
Temperature Upon Receipt 11-3.3 °C								Custody Seals Intact? Yes _____ No _____									

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

Issued by Dept. 40 Management

7051.03

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

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 \geq the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

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 \geq 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.

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.



Lancaster Laboratories
Environmental

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

June 26, 2014

Project: 211556

Submittal Date: 06/17/2014
Group Number: 1482431
PO Number: 0015146917
Release Number: HORNE
State of Sample Origin: WA

Client Sample Description

QA NA Water
MW-120 Grab Groundwater
MW-120 Filtered Grab Groundwater

Lancaster Labs (LL) #

7501459
7501460
7501461

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

ELECTRONIC Gettler-Ryan Inc.
COPY TO
ELECTRONIC SAIC
COPY TO
ELECTRONIC SAIC
COPY TO
ELECTRONIC Gettler-Ryan
COPY TO

Attn: Gettler Ryan
Attn: Jamalyn Green
Attn: Russ Shropshire
Attn: Doug Lee



Lancaster Laboratories
Environmental

Analysis Report

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

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252



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

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7501459
LL Group # 1482431
Account # 11260

Project Name: 211556

Collected: 06/14/2014

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 06/17/2014 09:35
Reported: 06/26/2014 09:04

MRTTB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
	GC Volatiles	ECY 97-602 NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D141711AA	06/20/2014 07:45	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D141711AA	06/20/2014 07:45	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14170B20A	06/20/2014 14:38	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170B20A	06/20/2014 14:38	Miranda P Tillinghast	1



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Sample Description: MW-120 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7501460
LL Group # 1482431
Account # 11260

Project Name: 211556

Collected: 06/14/2014 09:02 by JP

Chevron

6001 Bollinger Canyon Road

L4310

San Ramon CA 94583

Submitted: 06/17/2014 09:35

Reported: 06/26/2014 09:04

MR120

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles					
10943	SW-846 8260B Benzene	71-43-2	N.D.	ug/l 0.5	1
10943	Ethylbenzene	100-41-4	N.D.	ug/l 0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	ug/l 0.5	1
10943	Toluene	108-88-3	N.D.	ug/l 0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	ug/l 0.5	1
GC Volatiles					
08273	ECY 97-602 NWTPH-Gx NWTPH-Gx water C7-C12	n.a.	N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
08271	ECY 97-602 NWTPH-Dx modified Diesel Range Organics C12-C24	n.a.	N.D.	ug/l 29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	ug/l 68	1
GC Petroleum Hydrocarbons w/Si					
12005	ECY 97-602 NWTPH-Dx modified DRO C12-C24 w/Si Gel	n.a.	N.D.	ug/l 29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	ug/l 68	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D141711AA	06/20/2014 08:08	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D141711AA	06/20/2014 08:08	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14170B20A	06/20/2014 17:27	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170B20A	06/20/2014 17:27	Miranda P Tillinghast	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700019A	06/20/2014 20:22	Glorines Suarez-Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700018A	06/23/2014 17:46	Glorines Suarez-Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700018A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700019A	06/20/2014 02:30	Sherry L Morrow	1



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Sample Description: MW-120 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7501461
LL Group # 1482431
Account # 11260

Project Name: 211556

Collected: 06/14/2014 09:02 by JP

Chevron

6001 Bollinger Canyon Road

L4310

Submitted: 06/17/2014 09:35

San Ramon CA 94583

Reported: 06/26/2014 09:04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved 06035	Lead SW-846 6020	7439-92-1	ug/l N.D.	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457

This sample was lab filtered for dissolved metals.

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
06035	Lead	SW-846 6020	1	141756050004A	06/25/2014 17:39	Maria A Orrs	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	141756050004	06/25/2014 09:13	Micaela L Dishong	1

Quality Control Summary

Client Name: Chevron
Reported: 06/26/14 at 09:04 AM

Group Number: 1482431

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: D141711AA								
Benzene	N.D.	0.5	ug/l	100		78-120		
Ethylbenzene	N.D.	0.5	ug/l	99		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	103		75-120		
Toluene	N.D.	0.5	ug/l	101		80-120		
Xylene (Total)	N.D.	0.5	ug/l	100		80-120		
Batch number: 14170B20A								
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	101	101	75-135	0	30
Batch number: 141700019A								
Diesel Range Organics C12-C24	N.D.	30.	ug/l	72	71	50-113	2	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 141700018A								
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	63	70	32-117	11	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 141756050004A								
Lead	N.D.	0.082	ug/l	105		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: D141711AA									
Benzene	106	100	72-134	6	30				
Ethylbenzene	105	99	71-134	5	30				
Methyl Tertiary Butyl Ether	103	97	72-126	6	30				
Toluene	106	99	80-125	6	30				
Xylene (Total)	106	100	79-125	6	30				
Batch number: 141756050004A									
Lead	102	101	89-120	1	20	0.10	0.096	4 (1)	20

*- 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: 1482431

Reported: 06/26/14 at 09:04 AM

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: UST VOCs by 8260B - Water

Batch number: D141711AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7501459	104	99	97	96
7501460	103	101	97	97
Blank	104	99	97	99
LCS	101	102	98	99
MS	103	99	98	99
MSD	103	101	98	98

Limits: 80-116 77-113 80-113 78-113

Analysis Name: NWTPH-Gx water C7-C12

Batch number: 14170B20A

Trifluorotoluene-F

7501459	89
7501460	89
Blank	90
LCS	92
LCSD	92

Limits: 63-135

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

Batch number: 141700018A

Orthoterphenyl

7501460	100
Blank	89
LCS	91
LCSD	104

Limits: 50-150

Analysis Name: NWTPH-Dx water

Batch number: 141700019A

Orthoterphenyl

7501460	103
Blank	103
LCS	106
LCSD	104

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

Acct. # 11260

For Eurofins Lancaster Laboratories use only
Group # 482431 Sample # 747501459-61
Instructions on reverse side correspond with circled numbers.
AT 6/11/14 @

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

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 \geq the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

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 \geq 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.

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.



Lancaster Laboratories
Environmental

Analysis Report

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

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

June 26, 2014

Project: 211556

Submittal Date: 06/17/2014
Group Number: 1482432
PO Number: 0015146917
Release Number: HORNE
State of Sample Origin: WA

Client Sample Description

TPWHD-1 Grab Groundwater
TPWHD-1 Filtered Grab Groundwater

Lancaster Labs (LL) #

7501462
7501463

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

ELECTRONIC	Gettler-Ryan Inc.	Attn: Gettler Ryan
COPY TO		
ELECTRONIC	SAIC	Attn: Jamalyn Green
COPY TO		
ELECTRONIC	SAIC	Attn: Russ Shropshire
COPY TO		
ELECTRONIC	Gettler-Ryan	Attn: Doug Lee
COPY TO		



Lancaster Laboratories
Environmental

Analysis Report

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

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252



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

Sample Description: TPWHD-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7501462
LL Group # 1482432
Account # 11260

Project Name: 211556

Collected: 06/14/2014 10:30 by JP

Chevron

6001 Bollinger Canyon Road

L4310

San Ramon CA 94583

Submitted: 06/17/2014 09:35

Reported: 06/26/2014 09:04

TPH-1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
	GC Volatiles	ECY 97-602 NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
	GC Petroleum Hydrocarbons	ECY 97-602 NWTPH-Dx modified	ug/l	ug/l	
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	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. C457

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
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D141712AA	06/20/2014 08:19	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D141712AA	06/20/2014 08:19	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14170B20A	06/20/2014 15:06	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170B20A	06/20/2014 15:06	Miranda P Tillinghast	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700019A	06/20/2014 20:43	Glorines Suarez-Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700018A	06/23/2014 18:07	Glorines Suarez-Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700018A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700019A	06/20/2014 02:30	Sherry L Morrow	1



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Sample Description: TPWHD-1 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7501463
LL Group # 1482432
Account # 11260

Project Name: 211556

Collected: 06/14/2014 10:30 by JP

Chevron

6001 Bollinger Canyon Road

L4310

Submitted: 06/17/2014 09:35

San Ramon CA 94583

Reported: 06/26/2014 09:04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved 06035	Lead SW-846 6020	7439-92-1	ug/l N.D.	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457

This sample was lab filtered for dissolved metals.

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
06035	Lead	SW-846 6020	1	141756050004A	06/25/2014 17:41	Maria A Orrs	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	141756050004	06/25/2014 09:13	Micaela L Dishong	1

Quality Control Summary

Client Name: Chevron
Reported: 06/26/14 at 09:04 AM

Group Number: 1482432

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: D141712AA			Sample number(s): 7501462					
Benzene	N.D.	0.5	ug/l	90		78-120		
Ethylbenzene	N.D.	0.5	ug/l	88		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	96		75-120		
Toluene	N.D.	0.5	ug/l	89		80-120		
Xylene (Total)	N.D.	0.5	ug/l	91		80-120		
Batch number: 14170B20A			Sample number(s): 7501462					
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	101	101	75-135	0	30
Batch number: 141700019A			Sample number(s): 7501462					
Diesel Range Organics C12-C24	N.D.	30.	ug/l	72	71	50-113	2	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 141700018A			Sample number(s): 7501462					
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	63	70	32-117	11	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 141756050004A			Sample number(s): 7501463					
Lead	N.D.	0.082	ug/l	105		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: D141712AA			Sample number(s): 7501462 UNSPK: 7501462					
Benzene	106	103	72-134	3	30			
Ethylbenzene	107	103	71-134	4	30			
Methyl Tertiary Butyl Ether	106	102	72-126	4	30			
Toluene	104	102	80-125	3	30			
Xylene (Total)	107	104	79-125	3	30			
Batch number: 141756050004A			Sample number(s): 7501463 UNSPK: P502028 BKG: P502028					
Lead	102	101	89-120	1	20	0.10	0.096	4 (1) 20

*- 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: 1482432

Reported: 06/26/14 at 09:04 AM

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: UST VOCs by 8260B - Water

Batch number: D141712AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7501462	102	98	98	97
Blank	101	97	97	98
LCS	105	102	97	100
MS	101	100	97	99
MSD	103	101	97	98
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12

Batch number: 14170B20A

Trifluorotoluene-F

7501462	87
Blank	90
LCS	92
LCSD	92

Limits: 63-135

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

Batch number: 141700018A

Orthoterphenyl

7501462	83
Blank	89
LCS	91
LCSD	104

Limits: 50-150

Analysis Name: NWTPH-Dx water

Batch number: 141700019A

Orthoterphenyl

7501462	100
Blank	103
LCS	106
LCSD	104

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.

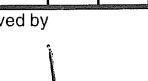
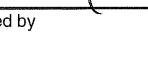
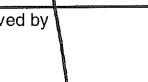
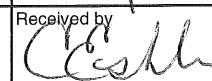
Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster
Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
Group # 1432432 Sample # 7501462-63
Instructions on reverse side correspond with circled numbers.

1 Client Information Facility # SS#211556-OML G-R#386773 WBS Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO Lead Consultant LEIDOSRS Russell Shropshire Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com) Consultant Phone # (925) 551-7444 x180 Sampler J. PAYNE				4 Matrix Grab <input type="checkbox"/> Composite <input type="checkbox"/> Soil <input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Oil <input type="checkbox"/> Air <input type="checkbox"/>		5 Analyses Requested Total Number of Containers BTEX + MTBE 8021 8260 Naphth <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates NWTPH-Gx <input type="checkbox"/> NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 6220						SCR #: _____			
2 Sample Identification TPWHD-1 6-14-14 1030 <input checked="" type="checkbox"/>		Collected Date 6-14-14 <input checked="" type="checkbox"/> Time 1030 <input checked="" type="checkbox"/>		3											
														6 Remarks Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered.	
														Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Doug Lee (dilee@grinc.com).	
7 Turnaround Time Requested (TAT) (please circle) Standard 5 day 72 hour EDD/EDD 4 day 24 hour				Relinquished by  Date 6-16-14 Time 1300		Received by  Date <input type="text"/> Time <input type="text"/>		Relinquished by  Date <input type="text"/> Time <input type="text"/>		Received by  Date <input type="text"/> Time <input type="text"/>					
8 Data Package (circle if required) Type I - Full Type VI (Raw Data)		EDD (circle if required) CVX-RTBU-FI_05 (default) Other: _____		Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Other <input type="checkbox"/>				Received by  Date 6/17/14 Time 0935							
Temperature Upon Receipt 0.9 °C						Custody Seals Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>									

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

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 \geq the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

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 \geq 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.

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