Transmittal

February 8, 2018

To: Ted Uecker, Department of Ecology
Eastern Regional Office
4601 N. Monroe Street, Suite 202
Spokane, WA 99205-1295

Ref. No.: 11145847

From: Christina McClelland

GHD Tel: 804-237-0303

Subject: Semi-Annual Groundwater Monitoring – July through December 2017

No. of Copies	Description/Title	Drawing No./ Document Ref.	Issue
1	Semi-Annual Groundwater Monitoring – July through December 2017		

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Remarks:

Copy to: Rich Soloman, P66; Kathy Reimer, Spokane Airport Business Park

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Filing: Correspondence File

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Semi-Annual Groundwater Monitoring – July through December 2017

Phillips 66 Facility No. 6880
Geiger Corrections Facility
Spokane, Washington

GHD | 20818 44th Avenue West Suite 190 Lynnwood WA 98036

11145847| 2MN00| Report No 1 | February 8, 2018

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1. Introduction

GHD Services Inc. (GHD) is submitting this *Semi-Annual Groundwater Monitoring Report – July through December 2017* on behalf of Phillips 66 Company (P66) for the P66 Facility No. 6880, Geiger Corrections Facility located at the intersection of South Spotted Road and West Will D Alton Drive in Spokane, Washington (Site, Figure 1).

The purpose of this semi-annual report is to present the results of groundwater monitoring conducted between July and December 2017. Groundwater monitoring was conducted in accordance with Tetra Tech's work plan dated February 20, 2017. The September 2017 event was the second of two semi-annual events proposed under that work plan. The project underwent a consultant change in 2017 and was transferred from Tetra Tech to GHD.

1.1 Background

The Geiger Corrections facility consists of a Yellowstone Pipeline (YPL) Company pipeline easement within a minimum security prison. The YPL pipeline enters the Corrections facility property near the intersection of South Spotted Road and West Will D Alton Road. Impacted soil and groundwater resulted from a 1979 release of Jet A turbine fuel from the YPL pipeline. In addition, soil contamination was encountered during removal of two heating oil underground storage tanks (USTs) in 1998. Groundwater monitoring has been conducted at the Site on a quarterly to semi-annual frequency since 2001. Groundwater monitoring was not performed between June 2014 and April 2017 in order to evaluate site strategy options and also as a result of various consultant changes. In October 2016, an Underground Injection Control (UIC) Well Registration Form was submitted to the Washington Department of Ecology (Ecology) in order to request authorization to inject hydrogen peroxide as a means of rehabilitating wells MP-1, MW-2, and MW-5D by cleaning the filter pack and adjacent soils. The well rehabilitation for MP-1 and MW-2 was conducted in November 2016; well MW-5D was not rehabilitated because an Oxygen Release Compound (ORC) sock broke off when attempting removal and remains within the well casing. Groundwater monitoring was resumed in April 2017; the project was transferred to GHD in July 2017.

2. September 2017 Groundwater Monitoring Field Activities

2.1 Hydraulic Monitoring and Groundwater Sampling

The semi-annual groundwater monitoring event for the second half of 2017 was conducted on September 14, 2017. Hydraulic monitoring activities consisted of measuring and recording depth to groundwater from below the top of the well casing for 14 wells. Wells used in the hydraulic monitoring are presented on Table 1. A copy of the field data sheet documenting the hydraulic monitoring data is presented in Appendix A. Groundwater samples were collected from 10 wells using low-flow sampling procedures. Wells used in the groundwater quality monitoring are presented on Table 1 and in Figures 2A and 2B. Well MW-7 could not be sampled because the

ORC sock broke off in the well casing and could not be removed at the time. Wells MW-12A and MW-12B are not included in the monitoring program because wells MW-11A and MW-11B provide adequate down-gradient delineation. In addition to the groundwater samples, one field duplicate sample, one matrix spike and one matrix spike duplicate sample, (MS/MSD) were collected for quality assurance purposes. The field duplicate was collected from well MW-11B, and the MS/MSD samples were collected from well MW-4. Trip blanks provided by the subcontracting laboratory were included in each cooler. Samples collected during the event were placed immediately on ice and transported to Eurofins Lancaster Laboratories in Lancaster, Pennsylvania via courier under chain of custody. Sample analyses included total petroleum hydrocarbons (TPH) as gasoline (TPHg) per Ecology Method NWTPH-Gx; TPH as diesel (TPHd) and oil (TPHo) per Ecology Method NWTPH-Dx, and benzene, toluene, ethylbenzene and xylenes (BTEX) and naphthalene per EPA Method 8260B.

The laboratory analytical report is included in Appendix B.

2.2 Investigation Derived Waste

All investigation derived waste (IDW) including purge water and decontamination water was stored on-Site in a DOT-compliant 55-gallon drum for subsequent disposal.

All disposable personal protective equipment were properly decontaminated and placed in the garbage for disposal.

3. Groundwater Monitoring Results

3.1 Groundwater Elevation Data

The purpose of the hydraulic monitoring is to evaluate groundwater flow direction and gradient and gauge light nonaqueous phase liquid (LNAPL) presence, if any. Based on the data collected, depth to groundwater in the 14 wells gauged ranged from 4.79 feet below ground surface (bgs) to 6.27 feet bgs for the shallow groundwater zone and from 31.76 feet bgs to 34.78 feet bgs for the deep groundwater zone. Groundwater flow was toward the east at a gradient of approximately 0.003 foot per foot for the shallow groundwater zone, which is consistent with historical flow direction and gradient, and toward the southeast at a gradient of approximately 0.001 foot per foot for the deep groundwater zone. Groundwater flow direction and gradient has historically been variable for the deep groundwater zone. LNAPL was not detected in any of the wells gauged; LNAPL has never been observed at the Site. Groundwater elevation data are presented in Table 1 and Figures 2A and 2B.

3.2 Groundwater Quality Data

The purpose of the groundwater sampling program for this Site is to evaluate groundwater concentration trends over time. Historical groundwater quality data is presented on Table 1. Groundwater quality data from the September 2017 sampling event is presented on Figures 2A and 2B. The laboratory analytical report for the September 2017 event is presented in Appendix B.

Laboratory analytical results from the September 2017 event indicate concentrations of one or more analyzed constituents were above MTCA Method A cleanup levels for the following:

- TPHg – Well MP-1R, MW-2
- TPHd – Well MP-1R, MW-2, MW-5D

None of the other wells sampled contained concentrations above MTCA Method A cleanup levels. Concentrations continue to decrease and nearly all wells have been compliant with MTCA Method A cleanup levels for more than four consecutive quarters with the exception of MP-1R, MW-2, and MW-5D.

4. Groundwater Monitoring Conclusions

Groundwater flow direction and gradient are consistent with historical data. TPHg and TPHd were detected above the MTCA Method A cleanup level in two shallow zone wells and one deep zone well. GHD recommends reducing the groundwater sampling scope to the following wells:

- Shallow: MP-1R, MW-2
- Deep: MW-5D, MW-7

We propose sampling the wells on a quarterly basis during 2018 to establish current seasonal trends and limiting the analytical suite to TPHg and TPHd only. Hydraulic monitoring will be conducted quarterly for all wells. We also propose removing the ORC sock from well MW-7 so that groundwater samples can be collected. After one year of quarterly monitoring, the sampling frequency will be reassessed.

The next scheduled monitoring and sampling event is during first quarter 2018.

All of Which is Respectfully Submitted,

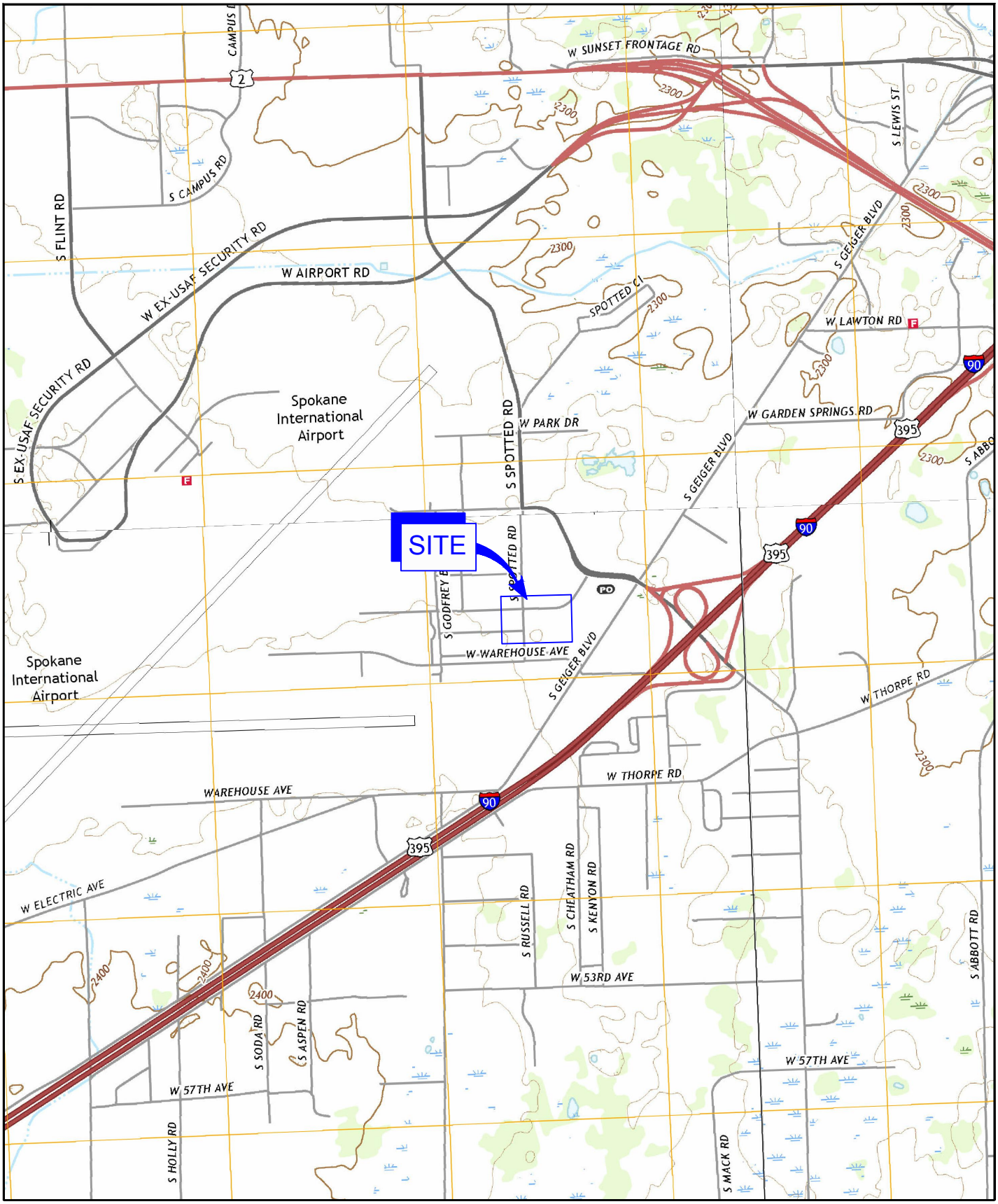
GHD

Christina McClelland, LG

Jeff Gaarder

State of Washington
3154
Licensed Geologist
CHRISTINA McCLELLAND

Figures



Source: USGS QUADRANGLE MAPS: SPOKANE NW, WA. (2017)., SPOKANE SW, WA. (2017)., FOUR LAKES, WA. (2017)., & AIRWAY HEIGHTS, WA. (2017).

0 1000 2000ft

Coordinate System:
WASHINGTON NORTH
STATE PLANE NAD83 FEET

PHILLIPS 66 FACILITY NO. 6880
GEIGER CORRECTIONS FACILITY
SPOKANE, WASHINGTON

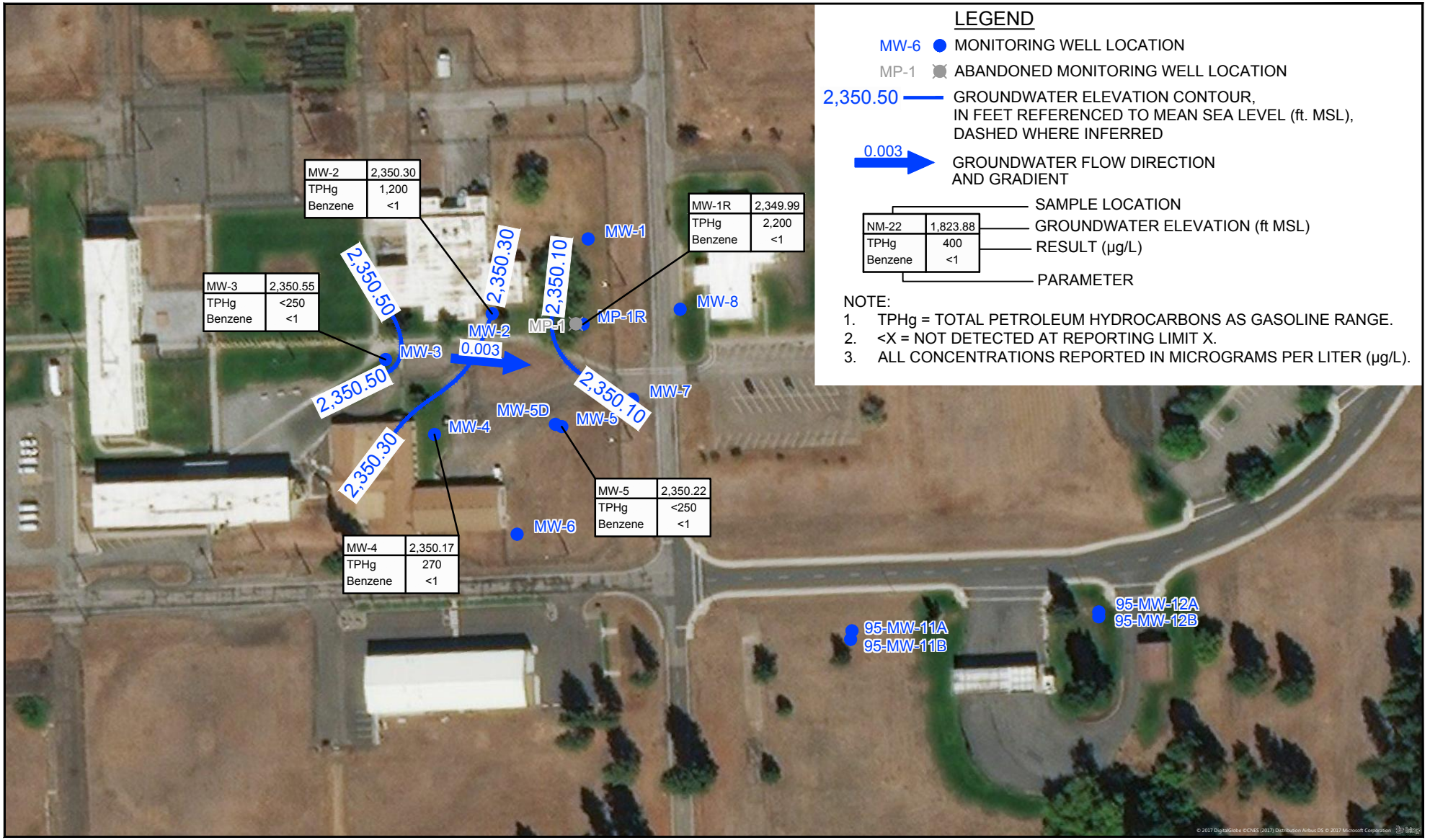
11145847-MN00

Dec 19, 2017

SITE LOCATION MAP

FIGURE 1

CAD File: P:\drawings\11145000s\11145847\11145847-REPORT\11145847-MN00(001)\11145847-MN00(001)GN\11145847-MN00(001)GN-WA001.DWG



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0 75 150ft

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PHILLIPS 66 FACILITY NO. 6880
GEIGER CORRECTIONS FACILITY
SPOKANE, WASHINGTON

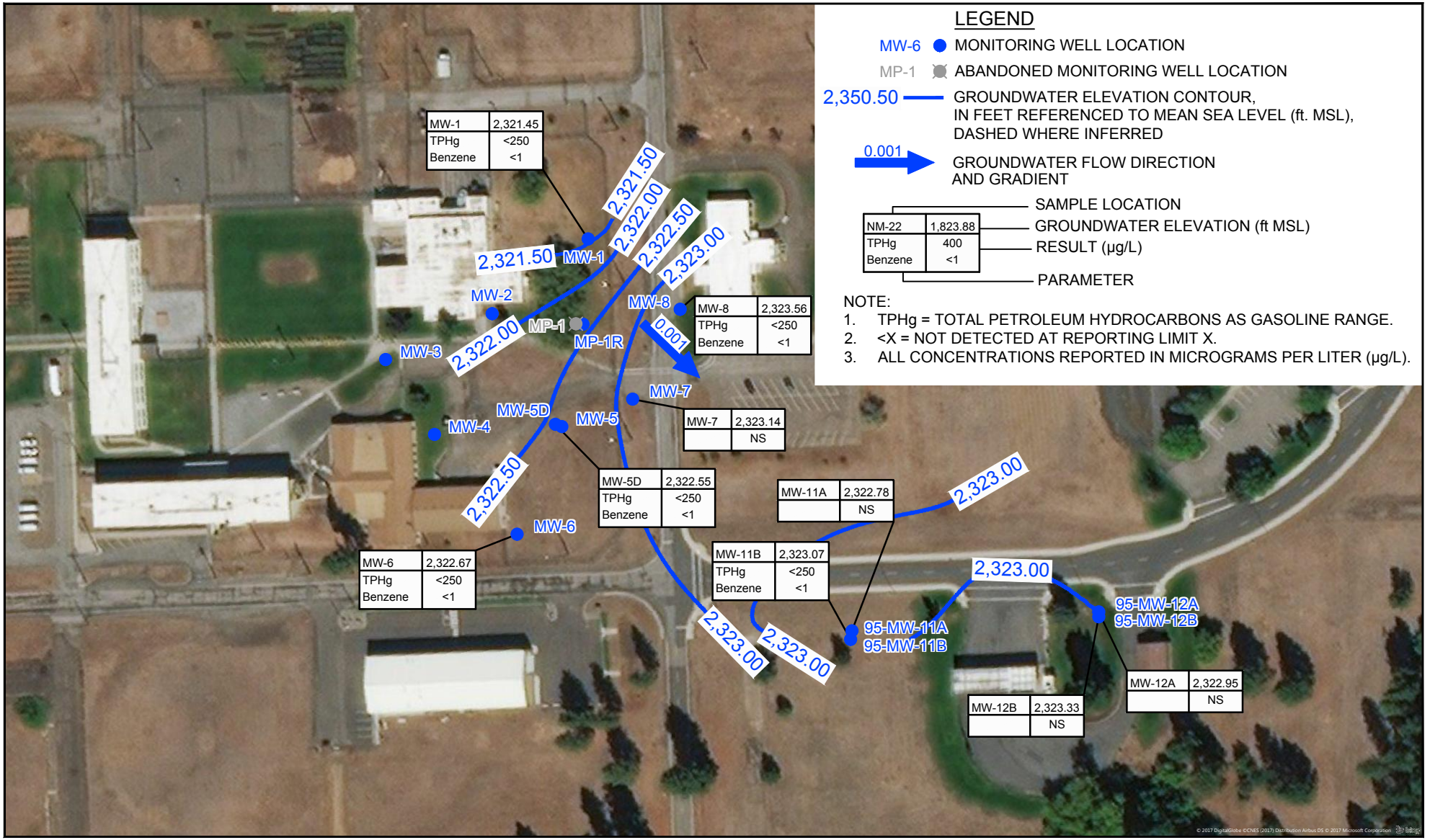
11145847-MN00

Dec 21, 2017

GROUNDWATER CONTOUR AND CHEMICAL CONCENTRATION MAP SHALLOW ZONE - SEPTEMBER 14, 2017

FIGURE 2A

CAD File: P:\drawings\11145000s\11145847\11145847-REPORT\11145847-MN00(001)\11145847-MN00(001)GN\11145847-MN00(001)GN-WA002.DWG



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Coordinate System:
WASHINGTON NORTH
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PHILLIPS 66 FACILITY NO. 6880
GEIGER CORRECTIONS FACILITY
SPOKANE, WASHINGTON

11145847-MN00
Dec 21, 2017

GROUNDWATER CONTOUR AND CHEMICAL CONCENTRATION MAP DEEP ZONE - SEPTEMBER 14, 2017

FIGURE 2B

CAD File: P:\drawings\11145000s\11145847\11145847-REPORT\11145847-MN00(001)\11145847-MN00(001)GN\11145847-MN00(001)GN-WA003.DWG

Tables

Summary of Groundwater Monitoring Data
Phillips 66 Facility No. 6880
Geiger Corrections Facility
Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
Model Toxics Control Act Method A Cleanup Levels							**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MP-1	08/20/01	NS	---	---	---	---	---	---	---	---	---	---	---	---
MP-1	11/30/01	N	---	---	---	---	---	**50,300**	<750	<0.50	<2.0	<1.0	<1.5	**990**
MP-1	03/25/02	N	---	---	---	---	---	**9,650**	<750	<0.50	<2.0	1.9	23	**599**
MP-1	06/04/02	N	---	---	---	---	---	**39,700**	<500	<0.50	<2.0	1.9	<1.5	**353**
MP-1	08/20/02	N	---	---	---	---	---	**19,100**	<500	<0.50	<2.0	1.1	13	**223**
MP-1	10/29/02	N	---	---	---	---	---	**20,900**	<500	<0.50	<2.0	1.2	13	**413**
MP-1	02/19/03	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	4.2	62
MP-1	06/05/03	N	---	---	---	---	---	**9,950**	<500	<0.50	<2.0	<1.0	<1.5	**268**
MP-1	09/09/03	N	---	---	---	---	---	**8,430**	<500	<0.50	<2.0	<1.0	17	**459**
MP-1	12/10/03	N	---	---	---	---	---	**13,600**	<500	<0.50	<2.0	<1.0	5.9	**184**
MP-1	06/03/04	N	---	---	---	---	---	**16,800**	<500	<0.50	<2.0	<1.0	9.5	**246**
MP-1	12/01/04	N	---	---	---	---	---	**14,800**	<500	<0.50	<2.0	1.7	16	**246**
MP-1	06/03/05	N	---	---	---	---	---	**17,400**	<500	<0.50	<2.0	3.1	29	**178**
MP-1	11/21/05	N	---	---	---	---	---	**9,900**	500	<0.50	<2.0	<1.0	17	32
MP-1	06/15/06	N	---	---	---	---	---	**11,200**	<500	<0.50	<2.0	<1.0	18	<20
MP-1	12/19/06	N	---	---	---	---	---	**2,700**	<500	<0.50	<2.0	<1.0	7.2	114
MP-1	05/30/07	N	---	---	---	---	---	**6,100**	<500	<0.50	<2.0	<1.0	19	120
MP-1	10/30/07	removed from sampling schedule due to well obs				---	---	---	---	---	---	---	---	---
MP-1	02/02/11	---	2,354.90	3.96	---	2350.94	---	---	---	---	---	---	---	---
MP-1	04/26/11	---	2,354.90	4.20	---	2350.70	---	---	---	---	---	---	---	---
MP-1	07/12/11	---	2,354.90	DRY	---	---	---	---	---	---	---	---	---	---
MP-1	10/28/11	---	2,354.90	Obstruction in Well at 4.59 F			---	---	---	---	---	---	---	---
MP-1	10/09/13	---	2,354.90	Well Decommissior		---	---	---	---	---	---	---	---	---
MP-1R	10/12/13	N	2,354.78	4.86	---	2349.92	**3,210**	**1,200**	<400	<1.0	<1.0	<1.0	13.9	16.3
MP-1R	03/11/14	N	2,354.78	2.15	---	2352.63	**1,260**	**500**	**500**	<1.0	<1.0	<1.0	<3.0	<4.0
MP-1R	03/11/14	FD	---	---	---	---	**1,300**	**520**	**640**	<1.0	<1.0	<1.0	<3.0	<4.0

Summary of Groundwater Monitoring Data
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Geiger Corrections Facility
Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
Model Toxics Control Act Method A Cleanup Levels							**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MP-1R	06/03/14	N	2,354.78	4.95	---	2349.83	**3,890**	**1,400**	<420	<1.0	<1.0	<1.0	13.5	10.6
MP-1R	04/06/17	N	2,354.78	3.58	---	2351.20	430	290	J110	<0.5	<0.5	<0.5	<0.5	<1.0
MP-1R	04/06/17	FD	---	---	---	---	450	250	J80	<0.5	<0.5	<0.5	<0.5	<1.0
MP-1R	09/14/17	N	2,354.78	4.79	---	2,349.99	**2,200**	**1,400**	140 J	<1	<1	<1	<1	5
MW-1	08/20/01	NS												
MW-1	03/25/02	N	---	---	---	---	---	274	<750	<0.50	<2.0	<1.0	<1.5	<20
MW-1	06/04/02	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-1	08/20/02	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-1	10/29/02	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-1	02/19/03	N	---	---	---	---	---	**9,310**	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-1	02/19/03	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-1	06/05/03	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-1	09/09/03	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-1	12/10/03	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-1	06/03/04	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-1	12/01/04	N	---	---	---	---	---	<250	<500	3.6	<2.0	1.5	2.0	<20
MW-1	06/03/05	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-1	11/21/05	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-1	06/15/06	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-1	12/19/06	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-1	05/30/07	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-1	10/30/07	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-1	06/24/08	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-1	12/03/08	N	---	---	---	---	<50	<29	<68	<0.50	<0.7	<0.80	<0.80	<1.0
MW-1	06/03/09	N	---	---	---	---	<13	<35	<58	<0.12	<0.21	<0.20	<0.15	---
MW-1	11/10/09	N	---	---	---	---	<50	80	<383	<1.0M0	<1.0	<1.0	<3.0	<1.0

Summary of Groundwater Monitoring Data
Phillips 66 Facility No. 6880
Geiger Corrections Facility
Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
Model Toxics Control Act Method A Cleanup Levels							**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-1	02/02/10	N	---	---	---	---	<50	<77	<385	<1.0	<1.0	<1.0	<3.0	<1.0
MW-1	05/18/10	N	---	---	---	---	<50	<76	<379	<1.0	<1.0	<1.0	<3.0	<1.0
MW-1	08/09/10	N	---	---	---	---	<50	<78	<392	<1.0	<1.0	<1.0	<3.0	---
MW-1	11/01/10	N	---	---	---	---	<50	<78	<388	<1.0	<1.0	<1.0	<3.0	---
MW-1	02/02/11	N	---	---	---	---	<50	<77	<385	<1.0	<1.0	<1.0	<3.0	---
MW-1	04/26/11	N	---	---	---	---	<50	<78	<388	<1.0	<1.0	<1.0	<3.0	---
MW-1	07/12/11	N	---	---	---	---	<50	<78	<392	<1.0	<1.0	<1.0	<3.0	---
MW-1	10/27/11	N	---	---	---	---	<50	<78	<390	<1.0	< 1.0	<1.0	<3.0	---
MW-1	10/27/11	FD	---	---	---	---	<50	<78	<390	<1.0	<1.0	<1.0	<3.0	---
MW-1	07/02/12	N	2,354.55	31.90	---	2322.65	<50	<86	<430	<1.0	<1.0	<1.0	<3.0	<1.0
MW-1	07/02/12	FD	---	---	---	---	<50	<82	<410	<1.0	<1.0	<1.0	<3.0	<1.0
MW-1	10/10/12	N	2,354.55	36.02	---	2318.53	<50	<160	<810	<1.0	<1.0	<1.0	<3.0	<1.0
MW-1	10/10/12	FD	---	---	---	---	<50	<160	<800	<1.0	<1.0	<1.0	<3.0	<1.0
MW-1	03/13/13	FD	---	---	---	---	<100	<460	<460	<1.0	<1.0	<1.0	<3.0	<4.0
MW-1	05/15/13	N	2,354.55	32.62	---	2321.93	<100	<430	<430	<1.0	<1.0	<1.0	<3.0	<4.0
MW-1	05/15/13	FD	---	---	---	---	<100	<390	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-1	08/06/13	N	2,354.55	34.22	---	2320.38	<100	<380	<380	<1.0	<1.0	<1.0	<3.0	<4.0
MW-1	08/06/13	FD	---	---	---	---	<100	<430	<430	<1.0	<1.0	<1.0	<3.0	<4.0
MW-1	10/11/13	N	2,354.60	35.79	---	2318.81	<100	<430	<430	<1.0	<1.0	<1.0	<3.0	<4.0
MW-1	10/11/13	FD	---	---	---	---	<100	<430	<430	<1.0	<1.0	<1.0	<3.0	<4.0
MW-1	03/11/14	N	2,354.60	35.45	---	2319.15	<100	<400	**500**	<1.0	<1.0	<1.0	<3.0	<4.0
MW-1	06/03/14	N	2,354.60	33.90	---	2320.70	<100	<400	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-1	06/03/14	FD	---	---	---	---	<100	<400	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-1	04/06/17	N	2,354.60	27.10	---	2327.50	<50	<29	<68	<0.5	<0.5	<0.5	<0.5	<1.0
MW-1	09/14/17	N	2,354.60	33.15	---	2,321.45	<250	<110	<270	<1	<1	<1	<1	<4
MW-2	08/20/01	NS												

Summary of Groundwater Monitoring Data
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Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
Model Toxics Control Act Method A Cleanup Levels							**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-2	03/25/02	N	---	---	---	---	---	**19,800**	<750	<0.50	<2.0	<1.0	11	**216**
MW-2	06/04/02	N	---	---	---	---	---	**22,100**	<500	<0.50	<2.0	<1.0	8.2	**1,320**
MW-2	08/20/02	N	---	---	---	---	---	**4,970**	<500	<0.50	<2.0	<1.0	6.7	156
MW-2	10/29/02	N	---	---	---	---	---	**13,700**	<500	<0.50	<2.0	<1.0	6.1	**199**
MW-2	10/29/02	FD	---	---	---	---	---	**15,400**	<500	<0.50	<2.0	<1.0	9.3	**328**
MW-2	02/19/03	N	---	---	---	---	---	**10,400**	<500	<0.50	<2.0	<1.0	<1.5	140
MW-2	06/05/03	N	---	---	---	---	---	**4,570**	<500	<0.50	<2.0	<1.0	2.0	134
MW-2	06/05/03	FD	---	---	---	---	---	**4,320**	<500	<0.50	<2.0	<1.0	2.4	**182**
MW-2	09/09/03	N	---	---	---	---	---	**2,560**	<500	<0.50	<2.0	<1.0	<1.5	**203**
MW-2	09/09/03	FD	---	---	---	---	---	**2,440**	<500	<0.50	<2.0	<1.0	<1.5	**204**
MW-2	12/10/03	N	---	---	---	---	---	**42,100**	<500	<0.50	<2.0	<1.0	<1.5	**282**
MW-2	06/03/04	N	---	---	---	---	---	**6,000**	<500	<0.50	2.6	<1.0	6.0	**162**
MW-2	06/03/04	FD	---	---	---	---	---	**6,500**	<500	<0.50	2.1	<1.0	5.4	**170**
MW-2	12/01/04	N	---	---	---	---	---	**2,410**	<500	<0.50	<2.0	<1.0	5.2	38
MW-2	06/03/05	N	---	---	---	---	---	**2,810**	<500	<0.50	<2.0	<1.0	<1.5	129
MW-2	06/03/05	FD	---	---	---	---	---	**2,910**	<500	<0.50	<2.0	<1.0	5.2	129
MW-2	11/21/05	N	---	---	---	---	---	**3,440**	<500	<0.50	<2.0	<1.0	<1.5	24
MW-2	11/21/05	FD	---	---	---	---	---	**3,680**	**500**	<0.50	<2.0	<1.0	<1.5	23
MW-2	06/15/06	N	---	---	---	---	---	**2,750**	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-2	06/16/06	FD	---	---	---	---	---	**11,200**	<500	<0.50	<2.0	<1.0	18	<20
MW-2	12/19/06	N	---	---	---	---	---	**2,340**	<500	<0.50	<2.0	<1.0	2.6	95
MW-2	05/30/07	N	---	---	---	---	---	**2,790**	<500	<0.50	<2.0	<1.0	1.7	98
MW-2	10/30/07	N	---	---	---	---	**2,600**	**1,800**	140	<0.50	<0.70	<0.80	<0.80	<1.0
MW-2	06/24/08	N	---	---	---	---	**1,600**	**830**	<94	<0.50	<0.70	<0.80	<0.80	<1.0
MW-2	12/03/08	N	---	---	---	---	**1,800**	**700**	<69	<0.50	<0.70	<0.80	<0.80	<1.0
MW-2	06/03/09	N	---	---	---	---	**1,730**	**620**	<58	<0.12	<0.21	<0.20	<0.15	---
MW-2	11/10/09	N	---	---	---	---	**2,230**	**821**	<379	<1.0	<1.0	<1.0	<3.0	3.2

Summary of Groundwater Monitoring Data
Phillips 66 Facility No. 6880
Geiger Corrections Facility
Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
Model Toxics Control Act Method A Cleanup Levels							**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-2	02/02/10	N	---	---	---	---	**1,450**	**940**	<388	<1.0	<1.0	<1.0	<3.0	3.9
MW-2	05/18/10	N	---	---	---	---	**1,330**	**1,870**	<392	<1.0	<1.0	<1.0	<3.0	<1.0
MW-2	08/09/10	N	---	---	---	---	**1,200**	**831**	<396	<1.0	<1.0	<1.0	<3.0	---
MW-2	11/01/10	N	---	---	---	---	**1,680**	**2,080**	<388	<1.0	<1.0	<1.0	<3.0	---
MW-2	02/02/11	N	---	---	---	---	**1,700**	**1,170**	<385	<1.0	<1.0	<1.0	<3.0	---
MW-2	04/26/11	N	---	---	---	---	**3,280**	**562**	<392	<1.0	<1.0	<1.0	<3.0	---
MW-2	07/12/11	N	---	---	---	---	**1,020**	**700**	<408	<1.0	<1.0	<1.0	<3.0	---
MW-2	10/27/11	N	---	---	---	---	**2,000**	**920**	<410	<1.0	<1.0	<1.0	<3.0	---
MW-2	07/02/12	N	2,354.55	4.83	---	2349.72	**1,960**	**580**	<380	<1.0	<1.0	<1.0	<3.0	<1.0
MW-2	10/10/12	N	2,354.55	5.06	---	2349.49	**1,500**	**680**	<840	<1.0	<1.0	<1.0	<3.0	7.4
MW-2	03/13/13	N	2,354.55	4.61	---	2349.94	**1,060**	**620**	<420	<1.0	<1.0	<1.0	<3.0	<4.0
MW-2	05/15/13	N	2,354.55	5.09	---	2349.46	**1,220**	**990**	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-2	08/06/13	N	2,354.55	4.68	---	2350.51	**924**	**560**	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-2	10/11/13	N	2,355.19	5.19	---	2350.00	833	**910**	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-2	03/11/14	N	2,355.19	3.21	---	2351.98	**1,900**	**910**	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-2	06/03/14	N	2,355.19	5.10	---	2350.09	**1,870**	**610**	<420	<1.0	<1.0	<1.0	<3.0	<4.0
MW-2	04/06/17	N	2,355.19	4.18	---	2351.01	**1,500**	**1,200**	<73	<0.5	<0.5	<0.5	<0.5	J2.0
MW-2	09/14/17	N	2,355.19	4.89	---	2,350.30	**1,200**	**720**	<260	<1	<1	<1	<1	<4
MW-3	08/20/01	NS												
MW-3	03/25/02	N	---	---	---	---	---	<250	<750	<0.50	<2.0	<1.0	<1.5	<20
MW-3	06/04/02	N	---	---	---	---	---	267	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-3	08/02/02	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-3	10/29/02	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-3	02/19/03	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-3	06/05/03	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-3	09/09/03	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20

Summary of Groundwater Monitoring Data
Phillips 66 Facility No. 6880
Geiger Corrections Facility
Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
Model Toxics Control Act Method A Cleanup Levels							**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-3	12/10/03	N	---	---	---	---	---	<250	<500	<1.5	<2.0	<1.0	<1.5	<20
MW-3	06/03/04	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	12/01/04	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	06/03/05	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-3	11/21/05	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	06/15/06	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-3	12/19/06	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	05/30/07	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-3	10/30/07	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	06/24/08	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	12/03/08	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	06/03/09	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	11/10/09	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	02/02/10	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	05/18/10	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	08/09/10	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	11/01/10	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	02/02/11	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	04/26/11	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	07/12/11	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	10/27/11	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	07/02/12	N	2,355.18	4.92	---	2350.26	NS	---	---	---	---	---	---	---
MW-3	10/11/12	N	2,355.18	5.17	---	2350.01	<50	<160	<820	<1.0	<1.0	<1.0	<3.0	<1.0
MW-3	03/13/13	NS	2,355.18	4.68	---	2350.50	---	---	---	---	---	---	---	---
MW-3	05/15/13	N	2,355.18	5.16	---	2350.02	<100	<390	<390	<1.0	<1.0	<1.0	<3.0	<4.0
MW-3	08/06/13	NS	2,355.18	4.64	---	2350.80	---	---	---	---	---	---	---	---
MW-3	10/11/13	N	2,355.44	5.28	---	2350.16	<100	<420	<420	<1.0	<1.0	<1.0	<3.0	<4.0

Summary of Groundwater Monitoring Data
Phillips 66 Facility No. 6880
Geiger Corrections Facility
Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
Model Toxics Control Act Method A Cleanup Levels							**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-3	03/11/14	NS	2,355.44	3.52	---	2351.92	---	---	---	---	---	---	---	---
MW-3	06/03/14	N	2,355.44	4.98	---	2350.46	<100	<400	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-3	04/06/17	N	2,355.44	4.28	---	2351.16	<50	<28	<66	<0.5	<0.5	<0.5	<0.5	<1.0
MW-3	09/14/17	N	2,355.44	4.89	---	2,350.55	<250	<100	<260	<1	<1	<1	<1	<4
MW-4	08/20/01	NS												
MW-4	03/25/02	N	---	---	---	---	---	**10,600**	<750	1.1	3.2	<1.0	1.9	**526**
MW-4	03/26/02	N	---	---	---	---	---	**5,770**	<750	<0.50	<2.0	<1.0	<1.5	**344**
MW-4	06/04/02	N	---	---	---	---	---	**11,400**	<500	<0.50	<2.0	<1.0	<1.5	**432**
MW-4	06/05/02	N	---	---	---	---	---	**12,500**	<500	<0.50	<2.0	1.1	1.6	**278**
MW-4	08/20/02	N	---	---	---	---	---	**1,500**	<500	<0.50	<2.0	<1.0	<1.5	43
MW-4	10/29/02	N	---	---	---	---	---	**2,220**	<500	<0.50	<2.0	<1.0	<1.5	72
MW-4	02/19/03	N	---	---	---	---	---	**1,570**	<500	<0.50	<2.0	<1.0	<1.5	22
MW-4	06/05/03	N	---	---	---	---	---	**720**	<500	<0.50	<2.0	<1.0	<1.5	40
MW-4	09/09/03	N	---	---	---	---	---	**890**	<500	<0.50	<2.0	<1.0	<1.5	61
MW-4	12/10/03	N	---	---	---	---	---	**2,750**	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-4	06/03/04	N	---	---	---	---	---	**710**	<500	<0.50	<2.0	<1.0	<1.5	41
MW-4	12/01/04	N	---	---	---	---	---	**620**	<500	0.69	<2.0	<1.0	<1.5	22
MW-4	06/03/05	N	---	---	---	---	---	370	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-4	11/21/05	N	---	---	---	---	---	**920**	<500	<0.50	<2.0	<1.0	<1.5	27
MW-4	06/15/06	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-4	12/19/06	N	---	---	---	---	---	360	<500	<0.50	<2.0	<1.0	<1.5	31
MW-4	12/19/06	FD	---	---	---	---	---	380	<500	<0.50	<2.0	<1.0	<1.5	27
MW-4	05/30/07	N	---	---	---	---	---	449	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-4	05/30/07	FD	---	---	---	---	---	445	<500	<0.50	<2.0	<1.0	<1.5	27
MW-4	10/30/07	N	---	---	---	---	700	---	---	<0.50	<0.70	<0.80	<0.80	1.0
MW-4	10/30/07	FD	---	---	---	---	660	**650**	<94	<0.50	<0.70	<0.80	<0.80	<1.0

Summary of Groundwater Monitoring Data
Phillips 66 Facility No. 6880
Geiger Corrections Facility
Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
Model Toxics Control Act Method A Cleanup Levels							**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-4	06/24/08	N	---	---	---	---	190	200	<94	<0.50	<0.70	<0.80	<0.80	<1.0
MW-4	12/03/08	N	---	---	---	---	330	200	<66	<0.50	<0.70	<0.80	<0.80	<1.0
MW-4	06/03/09	N	---	---	---	---	193	120	<59	<0.12	<0.21	<0.20	<0.15	---
MW-4	11/10/09	N	---	---	---	---	380	363	<381	<1.0	<1.0	<1.0	<3.0	2.9
MW-4	02/02/10	N	---	---	---	---	162	286	<388	<1.0	<1.0	<1.0	<3.0	2.7
MW-4	05/18/10	N	---	---	---	---	227	650	<392	<1.0	<1.0	<1.0	<3.0	<1.0
MW-4	08/09/10	N	---	---	---	---	156	123	<385	<1.0	<1.0	<1.0	<3.0	---
MW-4	11/01/10	N	---	---	---	---	374	277	<388	<1.0	<1.0	<1.0	<3.0	---
MW-4	02/02/11	N	---	---	---	---	137	201	<392	<1.0	<1.0	<1.0	<3.0	---
MW-4	04/26/11	N	---	---	---	---	**1,010**	185	<392	<1.0	<1.0	<1.0	<3.0	---
MW-4	07/12/11	N	---	---	---	---	510	210 J	<392	<1.0	<1.0	<1.0	<3.0	---
MW-4	10/27/11	N	---	---	---	---	173	340	<380	<1.0	<1.0	<1.0	<3.0	---
MW-4	07/02/12	N	2,356.37	5.85	---	2350.52	241	180	<380	<1.0	<1.0	<1.0	<3.0	<1.0
MW-4	10/09/12	N	2,356.37	6.15	---	2350.22	113	<160	<810	<1.0	<1.0	<1.0	<3.0	5.1
MW-4	03/13/13	N	2,356.37	5.62	---	2350.75	<100	<410	<410	<1.0	<1.0	<1.0	<3.0	<4.0
MW-4	05/15/13	N	2,356.37	6.05	---	2350.32	136	<390	<390	<1.0	<1.0	<1.0	<3.0	<4.0
MW-4	08/06/13	N	2,356.37	5.68	---	2350.76	120	<400	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-4	10/09/13	N	2,356.44	6.17	---	2350.27	<100	<410	<410	<1.0	<1.0	<1.0	<3.0	<4.0
MW-4	03/11/14	N	2,356.44	4.70	---	2351.74	192	<400	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-4	06/03/14	N	2,356.44	5.93	---	2350.51	277	<400	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-4	04/03/17	N	2,356.44	5.09	---	2351.35	200 J	190	<75	<0.5	<0.5	<0.5	<0.5	<1.0
MW-4	09/14/17	N	2,356.44	6.27	---	2,350.17	270	260	<260	<1	<1	<1	<1	<4
MW-5	08/20/01	NS												
MW-5	03/25/02	N	---	---	---	---	---	**1,360**	<750	**19.1**	121	16	123	27
MW-5	06/04/02	N	---	---	---	---	---	**2,720**	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-5	08/20/02	N	---	---	---	---	---	**774**	<500	<0.50	<2.0	<1.0	1.6	<20

Summary of Groundwater Monitoring Data
Phillips 66 Facility No. 6880
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Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
Model Toxics Control Act Method A Cleanup Levels							**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-5	10/29/02	N	---	---	---	---	---	**2,580**	<500	<0.50	<2.0	<1.0	<1.5	56
MW-5	02/19/03	N	---	---	---	---	---	**1,510**	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-5	06/05/03	N	---	---	---	---	---	**596**	<500	<0.50	<2.0	<1.0	<1.5	28
MW-5	09/09/03	N	---	---	---	---	---	---	---	<0.50	<2.0	<1.0	<1.5	40
MW-5	12/10/03	N	---	---	---	---	---	**5,040**	**800**	<0.50	<2.0	<1.0	<1.5	<20
MW-5	06/03/04	N	---	---	---	---	---	360	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-5	12/01/04	N	---	---	---	---	---	**4,600**	<500	1.8	<2.0	<1.0	<1.5	28
MW-5	06/03/05	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-5	11/21/05	N	---	---	---	---	---	**2,150**	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-5	06/15/06	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-5	12/19/06	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-5	05/30/07	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-5	10/30/07	N	---	---	---	---	250	**2,500**	<94	<0.50	<0.70	<0.80	<0.80	<1.0
MW-5	06/24/08	N	---	---	---	---	<50	170	<94	<0.50	<0.70	<0.80	<0.80	<1.0
MW-5	12/03/08	N	---	---	---	---	240	73	<68	<0.50	<0.70	<0.80	<0.80	<1.0
MW-5	06/03/09	N	---	---	---	---	<13	<36	<59	<0.12	<0.21	<0.20	<0.15	------
MW-5	11/10/09	N	---	---	---	---	<50	315	<381	<1.0	<1.0	<1.0	<3.0	<1.0
MW-5	02/02/10	N	---	---	---	---	<50	81	<388	<1.0	<1.0	<1.0	<3.0	<1.0
MW-5	05/18/10	N	---	---	---	---	<50	126	<396	<1.0	<1.0	<1.0	<3.0	<1.0
MW-5	08/09/10	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	11/01/10	N	---	---	---	---	<50	<78	<388	<1.0	<1.0	<1.0	<3.0	---
MW-5	02/02/11	N	---	---	---	---	<50	<78	<388	<1.0	<1.0	<1.0	<3.0	---
MW-5	04/26/11	N	---	---	---	---	<50	<77	<385	<1.0	<1.0	<1.0	<3.0	---
MW-5	07/12/11	N	---	---	---	---	<50	<78	<392	<1.0 UJ	<1.0 UJ	<1.0 UJ	<3.0 UJ	---
MW-5	10/27/11	N	---	---	---	---	<50	**990**	<400	<1.0	<1.0	<1.0	<3.0	---
MW-5	07/02/12	N	2,354.81	4.73	---	2350.08	<50	<78	<390	<1.0	<1.0	<1.0	<3.0	<1.0
MW-5	10/09/12	N	2,354.81	5.06	---	2349.75	<50	<170	<830	<1.0	<1.0	<1.0	<3.0	<1.0

Summary of Groundwater Monitoring Data
Phillips 66 Facility No. 6880
Geiger Corrections Facility
Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
	Model Toxics Control Act Method A Cleanup Levels						**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-5	03/13/13	N	2,354.81	4.51	---	2350.30	<100	<420	<420	<1.0	<1.0	<1.0	<3.0	<4.0
MW-5	05/15/13	N	2,354.81	5.01	---	2349.80	<100	<390	<390	<1.0	<1.0	<1.0	<3.0	<4.0
MW-5	08/06/13	N	2,354.81	4.67	---	2350.44	<100	<400	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-5	10/09/13	N	2,355.11	5.05	---	2350.06	<100	<380	<380	<1.0	<1.0	<1.0	<3.0	<4.0
MW-5	03/11/14	N	2,355.11	3.40	---	2351.71	<100	<400	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-5	06/03/14	N	2,355.11	5.05	---	2350.06	<100	<420	<420	<1.0	<1.0	<1.0	<3.0	<4.0
MW-5	04/03/17	N	2,355.11	3.95	---	2351.16	<50	<30	<69	<0.5	<0.5	<0.5	<0.5	<1.0
MW-5	09/14/17	N	2,355.11	4.89	---	2,350.22	<250	<100	<260	<1	<1	<1	<1	<4
MW-5D	10/11/13	N	2,355.03	35.57	---	2319.46	614	**1,100**	<450	<1.0	<1.0	<1.0	<3.0	<4.0
MW-5D	03/11/14	N	2,355.03	35.48	---	2319.55	<100	<400	**700**	<1.0	<1.0	<1.0	<3.0	<4.0
MW-5D	06/03/14	N	2,355.03	33.73	---	2321.30	128	<400	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-5D	09/14/17	N	2,355.03	32.48	---	2,322.55	<250	**560**	<250	<1	<1	<1	<1	<4
MW-6	08/20/01	NS												
MW-6	03/25/02	N	---	---	---	---	---	<250	<750	<0.50	<2.0	<1.0	<1.5	<20
MW-6	06/04/02	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-6	08/20/02	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-6	10/29/02	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-6	02/19/03	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-6	06/05/03	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-6	09/09/03	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-6	12/10/03	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-6	06/03/04	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	12/01/04	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	06/03/05	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-6	11/21/05	NS	---	---	---	---	---	---	---	---	---	---	---	---

Summary of Groundwater Monitoring Data
Phillips 66 Facility No. 6880
Geiger Corrections Facility
Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
Model Toxics Control Act Method A Cleanup Levels							**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-6	06/15/06	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-6	12/19/06	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	05/30/07	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-6	10/30/07	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	06/24/08	N	---	---	---	---	<50	<75	<94	<0.50	<0.70	<0.80	<0.80	<1.0
MW-6	12/03/08	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-6	06/03/09	N	---	---	---	---	<13	<35	<58	<0.12	<0.21	<0.20	<0.15	---
MW-6	11/10/09	N	---	---	---	---	<50	135	<396	<1.0	<1.0	<1.0	<3.0	<1.0
MW-6	02/02/10	N	---	---	---	---	<50	<78	<392	<1.0	<1.0	<1.0	<3.0	<1.0
MW-6	05/18/10	N	---	---	---	---	<50	<78	<388	<1.0	<1.0	<1.0	<3.0	<1.0
MW-6	08/09/10	N	---	---	---	---	<50	<78	<392	<1.0	<1.0	<1.0	<3.0	---
MW-6	11/01/10	N	---	---	---	---	<50	<78	<388	<1.0	<1.0	<1.0	<3.0	---
MW-6	02/02/11	N	---	---	---	---	<50	<78	<392	<1.0	<1.0	<1.0	<3.0	---
MW-6	04/26/11	N	---	---	---	---	<50	<78	<388	<1.0	<1.0	<1.0	<3.0	---
MW-6	07/12/11	N	---	---	---	---	<50	<78	<392	<1.0	<1.0	<1.0	<3.0	---
MW-6	10/27/11	N	---	---	---	---	<50	<78	<390	<1.0	<1.0	<1.0	<3.0	---
MW-6	07/02/12	N	2,355.87	32.83	---	2323.04	<50	<82	<410	<1.0	<1.0	<1.0	<3.0	<1.0
MW-6	10/09/12	N	2,355.87	35.71	---	2320.16	<50	<160	<800	<1.0	<1.0	<1.0	<3.0	<1.0
MW-6	03/13/13	N	2,355.87	32.45	---	2323.42	<100	<420	<420	<1.0	<1.0	<1.0	<3.0	<4.0
MW-6	05/15/13	N	2,355.87	33.07	---	2322.80	<100	<420	<420	<1.0	<1.0	<1.0	<3.0	<4.0 UJ
MW-6	08/06/13	N	2,355.87	34.91	---	2321.02	<100	<380	<380	<1.0	<1.0	<1.0	<3.0	<4.0
MW-6	10/11/13	N	2,355.93	38.50	---	2317.43	<100	<380	<380	<1.0	<1.0	<1.0	<3.0	<4.0
MW-6	03/11/14	N	2,355.93	36.59	---	2319.34	<100	<400	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-6	06/03/14	N	2,355.93	34.65	---	2321.28	<100	<400	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-6	04/03/17	N	2,355.93	27.98	---	2327.95	<50	<30	<70	<0.5	<0..5	<0.5	<0.5	<1.0
MW-6	09/14/17	N	2,355.93	33.26	---	2,322.67	<250	<110	<260	<1	<1	<1	<1	<4

Summary of Groundwater Monitoring Data
Phillips 66 Facility No. 6880
Geiger Corrections Facility
Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
Model Toxics Control Act Method A Cleanup Levels							**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-7	08/20/01	NS												
MW-7	03/25/02	N	---	---	---	---	---	**6,280**	<750	<0.50	<2.0	<1.0	25	154
MW-7	06/04/02	N	---	---	---	---	---	**13,100**	<500	<0.50	<2.0	<1.0	**14**	**221**
MW-7	08/21/02	N	---	---	---	---	---	**6,850**	<500	<0.50	<2.0	<1.0	<1.5	65
MW-7	08/21/02	N	---	---	---	---	---	**6,100**	<500	0.82	4.0	1.9	13	92
MW-7	10/29/02	N	---	---	---	---	---	**5,460**	<500	0.70	<2.0	<1.0	**9**	**172**
MW-7	02/19/03	N	---	---	---	---	---	**7,390**	<500	<0.50	<2.0	<1.0	6	<20
MW-7	06/05/03	N	---	---	---	---	---	**770**	<500	0.99	<2.0	<1.0	<1.5	<20
MW-7	09/09/03	NS												
MW-7	09/11/03	N	---	---	---	---	---	**1,250**	<500	<0.50	<2.0	4.7	30	81
MW-7	12/10/03	N	---	---	---	---	---	**7,120**	<500	<0.50	<2.0	1.2	15	114
MW-7	06/03/04	N	---	---	---	---	---	**1,000**	<500	<0.50	<2.0	<1.0	<1.5	48
MW-7	12/01/04	N	---	---	---	---	---	**1540**	<500	<0.50	<2.0	<1.0	<1.5	21
MW-7	06/03/05	N	---	---	---	---	---	**830**	<500	<0.50	<2.0	<1.0	<1.5	24
MW-7	11/21/05	N	---	---	---	---	---	**2,970**	<500	<0.50	<2.0	<1.0	<1.5	48
MW-7	06/15/06	N	---	---	---	---	---	**1,410**	<500	<0.50	<2.0	<1.0	<1.5	23
MW-7	12/19/06	N	---	---	---	---	---	**1,300**	<500	<0.50	6.42	2.74	9.43	24
MW-7	05/30/07	N	---	---	---	---	---	**961**	<500	0.71	<2.0	<1.0	<1.5	<20
MW-7	10/30/07	N	---	---	---	---	**2,700**	**14,000**	<4,700	<0.50	<0.70	<0.80	<0.80	<1.0
MW-7	06/24/08	N	---	---	---	---	**1,600**	**1,200**	<95	<0.50	<0.70	<0.80	<0.80	<1.0
MW-7	12/04/08	N	---	---	---	---	**1,400**	<29	<68	<0.50	<0.70	<0.80	<0.80	<1.0
MW-7	06/04/09	N	---	---	---	---	155	**560**	<58	<0.12	<0.21	<0.20	<0.15	---
MW-7	11/10/09	N	---	---	---	---	577	**7,600**	<388	<1.0	<1.0	<1.0	<3.0	2.7
MW-7	02/02/10	N	---	---	---	---	214	**2,000**	<377	<1.0	<1.0	<1.0	<3.0	2.4
MW-7	05/18/10	N	---	---	---	---	717	**16,900**	<400	<1.0	<1.0	<1.0	<3.0	<1.0
MW-7	08/09/10	N	---	---	---	---	928	**22,100**	<388	<1.0	<1.0	<1.0	<3.0	---
MW-7	11/01/10	N	---	---	---	---	**3,130**	**28,300**	<388	<1.0	<1.0	<1.0	<3.0	---

Summary of Groundwater Monitoring Data
Phillips 66 Facility No. 6880
Geiger Corrections Facility
Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
Model Toxics Control Act Method A Cleanup Levels							**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-7	02/02/11	N	---	---	---	---	704	**10,700**	<392	<1.0	<1.0	<1.0	<3.0	---
MW-7	04/26/11	N	---	---	---	---	**5,710**	**3,690**	<400	<1.0	<1.0	<1.0	<3.0	---
MW-7	07/12/11	N	---	---	---	---	278	**2,540**	<392	<1.0	<1.0	<1.0	<3.0	---
MW-7	10/26/11	N	---	---	---	---	**2,420**	**37,200**	<380	<1.0	<1.0	<1.0	<3.0	---
MW-7	07/02/12	N	2,356.25	31.84	---	2324.41	<50	78	<380	<1.0	<1.0	<1.0	<3.0	<1.0
MW-7	10/10/12	N	2,356.25	35.24	---	2321.01	207	350	<820	<1.0	<1.0	<1.0	<3.0	5.4
MW-7	03/13/13	N	2,356.25	31.94	---	2324.31	104	<440	<440	<1.0	<1.0	<1.0	<3.0	<4.0
MW-7	05/14/13	N	2,356.25	32.74	---	2323.51	< 100	<390	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-7	08/06/13	N	2,356.25	34.54	---	2321.77	250	<420	<420	<1.0	<1.0	<1.0	<3.0	<4.0
MW-7	10/12/13	N	2,356.31	36.11	---	2320.20	410	**600**	< 450	<1.0	<1.0	<1.0	<3.0	<4.0
MW-7	03/11/14	N	2,356.31	35.62	---	2320.69	448	430	**550**	<1.0	<1.0	<1.0	<3.0	<4.0
MW-7	06/04/14	N	2,356.31	34.37	---	2321.94	201	<400	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-7	04/05/17	NS	2,356.31	26.25	---	2330.06	---	---	---	---	---	---	---	---
MW-7	09/14/17	NS	2,356.31	33.17	---	2,323.14	---	---	---	---	---	---	---	---
MW-8	08/20/01	NS												
MW-8	03/25/02	N	---	---	---	---	---	<250	<750	<0.50	<2.0	<1.0	<1.5	<20
MW-8	06/04/02	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-8	08/21/02	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-8	10/29/02	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-8	02/19/03	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-8	06/05/03	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-8	09/09/03	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-8	09/11/03	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-8	12/10/03	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-8	06/03/04	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-8	12/01/04	NS	---	---	---	---	---	---	---	---	---	---	---	---

Summary of Groundwater Monitoring Data
Phillips 66 Facility No. 6880
Geiger Corrections Facility
Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
Model Toxics Control Act Method A Cleanup Levels							**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-8	06/03/05	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-8	11/21/05	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-8	06/15/06	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-8	12/19/06	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-8	05/30/07	N	---	---	---	---	---	<250	<500	<0.50	<2.0	<1.0	<1.5	<20
MW-8	10/30/07	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-8	06/24/08	N	---	---	---	---	<50	<75	<94	<0.50	<0.70	<0.80	<0.80	<1.0
MW-8	12/04/08	N	---	---	---	---	<50	**35,000**	<3,500	<0.50	<0.70	<0.80	<0.80	<1.0
MW-8	06/04/09	N	---	---	---	---	<13.4	<36	<59	<0.12	<0.21	<0.20	<0.15	---
MW-8	11/10/09	N	---	---	---	---	<50	<79	<396	<1.0	<1.0	<1.0	<3.0	<1.0
MW-8	02/02/10	N	---	---	---	---	<50	<76	<381	<1.0	<1.0	<1.0	<3.0	<1.0
MW-8	05/18/10	N	---	---	---	---	<50	<78	<388	<1.0	<1.0	<1.0	<3.0	<1.0
MW-8	08/09/10	N	---	---	---	---	<50	<79	<396	<1.0	<1.0	<1.0	<3.0	---
MW-8	11/01/10	N	---	---	---	---	<50	<78	<388	<1.0	<1.0	<1.0	<3.0	---
MW-8	02/02/11	N	---	---	---	---	<50	<78	<388	<1.0	<1.0	<1.0	<3.0	---
MW-8	04/26/11	N	---	---	---	---	<50	<80	<400	<1.0	<1.0	<1.0	<3.0	---
MW-8	07/12/11	N	---	---	---	---	<50	<77	<385	<1.0	<1.0	<1.0	<3.0	---
MW-8	10/26/11	N	---	---	---	---	<50	<76	<380	<1.0	<1.0	<1.0	<3.0	---
MW-8	07/02/12	N	2,356.57	32.36	---	2324.21	<50	<86	<430	<1.0	<1.0	<1.0	<3.0	<1.0
MW-8	10/10/12	N	2,356.57	35.56	---	2321.01	<50	<170	<830	<1.0	<1.0	<1.0	<3.0	<1.0
MW-8	03/13/13	N	2,356.57	32.66	---	2323.91	<100	<440	<440	<1.0	<1.0	<1.0	<3.0	<4.0
MW-8	05/14/13	N	2,356.57	33.12	---	2323.45	<100	<390	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-8	08/06/13	N	2,356.57	34.83	---	2321.77	<100	<410	<410	<1.0	<1.0	<1.0	<3.0	<4.0
MW-8	10/12/13	N	2,356.60	36.36	---	2320.24	<100	<430	<430	<1.0	<1.0	<1.0	<3.0	<4.0
MW-8	03/11/14	N	2,356.60	36.98	---	2319.62	<100	<400	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-8	06/04/14	N	2,356.60	34.75	---	2321.85	<100	<400	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-8	04/05/17	N	2,356.60	29.20	---	2327.40	<50	<30	<69	<0.5	<0.5	<0.5	<0.5	<1.0

Summary of Groundwater Monitoring Data
Phillips 66 Facility No. 6880
Geiger Corrections Facility
Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
Model Toxics Control Act Method A Cleanup Levels							**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-8	09/14/17	N	2,356.60	33.04	---	2,323.56	<250	<100	<250	<1	<1	<1	<1	<4
MW--1A				removed from sampling schedule due to well obstruction										
MW--1A	02/02/11	NS	2,357.25	Obstruction in Well at 3.25 F			---	---	---	---	---	---	---	---
MW--1A	04/26/11	NS	2,357.25	Obstruction in Well at 3.25 F			---	---	---	---	---	---	---	---
MW--1A	09/14/17	NS	2,357.25	34.47	---	2,322.78	---	---	---	---	---	---	---	---
MW-11B	08/20/01	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-11B	03/25/02	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-11B	06/04/02	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-11B	10/29/02	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-11B	02/19/03	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-11B	06/05/03	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-11B	09/09/03	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-11B	12/10/03	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-11B	06/03/04	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-11B	12/01/04	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-11B	06/03/05	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-11B	11/21/05	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-11B	06/15/06	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-11B	12/19/06	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-11B	05/30/07	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-11B	10/30/07	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-11B	06/24/08	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-11B	12/03/08	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-11B	06/03/09	N	---	---	---	---	<13	<35	<58	<0.12	<0.21	<0.20	<0.15	---
MW-11B	11/10/09	N	---	---	---	---	<50	144	<381	<1.0	<1.0	<1.0	<3.0	<1.0

Summary of Groundwater Monitoring Data
Phillips 66 Facility No. 6880
Geiger Corrections Facility
Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
Model Toxics Control Act Method A Cleanup Levels							**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-11B	02/02/10	N	---	---	---	---	<50	<76	<381	<1.0	<1.0	<1.0	<3.0	<1.0
MW-11B	05/18/10	N	---	---	---	---	<50	<77	<385	<1.0	<1.0	<1.0	<3.0	<1.0
MW-11B	08/09/10	N	---	---	---	---	<50	<78	<392	<1.0	<1.0	<1.0	<3.0	---
MW-11B	11/01/10	N	---	---	---	---	<50	<78	<388	<1.0	<1.0	<1.0	<3.0	---
MW-11B	02/02/11	N	---	---	---	---	<50	<79	<396	<1.0	<1.0	<1.0	<3.0	---
MW-11B	04/26/11	N	---	---	---	---	<50	<80	<400	<1.0	<1.0	<1.0	<3.0	---
MW-11B	07/12/11	N	---	---	---	---	<50	<78	<392	<1.0	<1.0	<1.0	<3.0	---
MW-11B	10/26/11	N	---	---	---	---	<50	<75	<380	<1.0	<1.0	<1.0	<3.0	---
MW-11B	07/02/12	N	2,357.78	33.82	---	2323.96	<50	<77	<380	<1.0	<1.0	<1.0	<3.0	<1.0
MW-11B	10/10/12	N	2,357.78	37.18	---	2320.60	<50	<160	<810	<1.0	<1.0	<1.0	<3.0	<1.0
MW-11B	03/13/13	N	2,357.78	33.67	---	2324.11	<100	<410	<410	<1.0	<1.0	<1.0	<3.0	<4.0
MW-11B	05/14/13	N	2,357.78	34.52	---	2323.26	<100	<450	<450	<1.0	<1.0	<1.0	<3.0	<4.0
MW-11B	08/06/13	N	2,357.78	36.34	---	2321.51	<100	<380	<380	<1.0	<1.0	<1.0	<3.0	<4.0
MW-11B	10/12/13	N	2,357.85	37.96	---	2319.89	<100	<410	<410	<1.0	<1.0	<1.0	<3.0	<4.0
MW-11B	03/12/14	N	2,357.85	38.10	---	2319.75	<100	<400	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-11B	06/04/14	N	2,357.85	35.97	---	2321.88	<100	<400	<400	<1.0	<1.0	<1.0	<3.0	<4.0
MW-11B	04/05/17	N	2,357.85	28.38	---	2329.47	<50	<30	<70	<0.5	<0.5	<0.5	<0.5	<1.0
MW-11B	09/14/17	N	2,357.85	34.78	---	2,323.07	<250	<110	<260	<1	<1	<1	<1	<4
MW-12A	08/20/01	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12A	03/25/02	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12A	06/04/02	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12A	10/29/02	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12A	02/19/03	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12A	06/05/03	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12A	09/09/03	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12A	12/10/03	NS	---	---	---	---	---	---	---	---	---	---	---	---

Summary of Groundwater Monitoring Data
Phillips 66 Facility No. 6880
Geiger Corrections Facility
Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
Model Toxics Control Act Method A Cleanup Levels							**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-12A	06/03/04	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12A	12/01/04	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12A	06/03/05	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12A	11/21/05	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12A	06/15/06	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12A	12/19/06	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12A	05/30/07	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12A	10/30/07	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12A	06/24/08	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12A	12/03/08	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12A	06/03/09	N	---	---	---	---	<13	<35	<58	<0.12	<0.21	<0.20	<0.15	---
MW-12A	11/10/09	not part of current monitoring program			---	---	---	---	---	---	---	---	---	---
MW-12A	07/02/12	NS	2,355.12	31.23	---	2323.89	---	---	---	---	---	---	---	---
MW-12A	10/09/12	NS	2,355.12	34.66	---	2320.46	---	---	---	---	---	---	---	---
MW-12A	03/12/13	NS	2,355.12	30.97	---	2324.15	---	---	---	---	---	---	---	---
MW-12A	05/14/13	NS	2,355.12	32.00	---	2323.12	---	---	---	---	---	---	---	---
MW-12A	08/05/13	NS	2,355.12	33.74	---	2321.48	---	---	---	---	---	---	---	---
MW-12A	10/18/13	NS	2,355.22	35.36	---	2319.86	---	---	---	---	---	---	---	---
MW-12A	03/11/14	NS	2,355.22	35.02	---	2320.20	---	---	---	---	---	---	---	---
MW-12A	06/02/14	NS	2,355.22	33.38	---	2321.84	---	---	---	---	---	---	---	---
MW-12A	04/03/17	NS	2,355.22	25.76	---	2329.46	---	---	---	---	---	---	---	---
MW-12A	09/14/17	NS	2,355.22	32.27	---	2,322.95	---	---	---	---	---	---	---	---
MW-12B	08/20/01	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12B	03/25/02	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12B	06/04/02	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12B	10/29/02	NS	---	---	---	---	---	---	---	---	---	---	---	---

Summary of Groundwater Monitoring Data
Phillips 66 Facility No. 6880
Geiger Corrections Facility
Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
Model Toxics Control Act Method A Cleanup Levels							**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
MW-12B	02/19/03	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12B	06/05/03	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12B	09/09/03	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12B	12/10/03	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12B	06/03/04	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12B	12/01/04	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12B	06/03/05	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12B	11/21/05	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12B	06/15/06	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12B	12/19/06	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12B	05/30/07	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12B	10/30/07	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12B	06/24/08	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12B	12/03/08	NS	---	---	---	---	---	---	---	---	---	---	---	---
MW-12B	06/03/09	N	---	---	---	---	<13	<35	<58	<0.12	<0.21	<0.20	<0.15	---
MW-12B	11/10/09	not part of current monitoring program			---	---	---	---	---	---	---	---	---	---
MW-12B	07/02/12	NS	2,355.02	30.85	---	2324.17	---	---	---	---	---	---	---	---
MW-12B	10/09/12	NS	2,355.02	34.24	---	2320.78	---	---	---	---	---	---	---	---
MW-12B	03/12/13	NS	2,355.02	30.72	---	2324.30	---	---	---	---	---	---	---	---
MW-12B	05/14/13	NS	2,355.02	31.56	---	2323.46	---	---	---	---	---	---	---	---
MW-12B	08/05/13	NS	2,355.02	33.36	---	2321.73	---	---	---	---	---	---	---	---
MW-12B	10/18/13	NS	2,355.09	35.00	---	2320.09	---	---	---	---	---	---	---	---
MW-12B	03/11/14	NS	2,355.09	34.99	---	2320.10	---	---	---	---	---	---	---	---
MW-12B	06/02/14	NS	2,355.09	33.03	---	2322.06	---	---	---	---	---	---	---	---
MW-12B	04/03/17	NS	2,355.09	26.35	---	2328.74	---	---	---	---	---	---	---	---
MW-12B	09/14/17	NS	2,355.09	31.76	---	2,323.33	---	---	---	---	---	---	---	---

Summary of Groundwater Monitoring Data
Phillips 66 Facility No. 6880
Geiger Corrections Facility
Spokane, Washington

							HYDROCARBONS			PRIMARY VOCs				
Sample ID	**Date**	**Sample Type**	**TOC**	**DTW**	**SPH**	**GWE**	**TPHg**	**TPHd**	**TPHo**	**B**	**T**	**E**	**X**	**Naph**
Model Toxics Control Act Method A Cleanup Levels							**800/1000**	**500**	**500**	**5**	**1000**	**700**	**1000**	**160**
							ug/L	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**

Notes:

DTW = Depth to Water in feet

GWE = Groundwater Elevation in feet above mean sea level; before August 13, 2009, relative to arbitrary benchmarks

TOC = Top of Casing in feet above mean sea level; before August 13, 2009, relative to arbitrary benchmarks

All results are in micrograms per liter (µg/L) unless otherwise indicated

TPHg = Total petroleum hydrocarbons as gasoline analyzed by NWTPH---Gx unless otherwise noted. The higher value is based on the assumption that no benzene is present in the groundwater sample. If any detectable amount of benzene is present in the groundwater sample, then the lower TPHg cleanup level is applicab

TPHd = Total petroleum hydrocarbons as diesel, analyzed by NWTPH---Dx with silica gel cleanup unless otherwise noted.

TPHo = Total petroleum hydrocarbons as oil, analyzed by NWTPH---Dx with silica gel cleanup unless otherwise noted.

VOCs = Volatile organic compounds

BTEX = Benzene, toluene, ethylbenzene, and xylenes analyzed by EPA Method 8260B unless otherwise noted.

Total Xylenes = o---xylene + m,p---xylene

<x = Not detected at laboratory reporting limit x

--- = Not analyzed

Concentrations in bold type indicate the analyte was detected above the Model Toxics Control Act (MTCA) Method A cleanup level

Appendices

Appendix A
Groundwater Monitoring Field Data Sheets

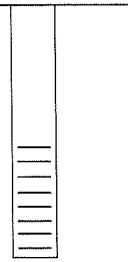
Monitoring Well Record for Low-F. . urging
(Form SP-09)

Project Data:
Project Name: Gieger corrections
Ref. No.: 11145847

Date: 9/14/17
Personnel: EPM/DT

Monitoring Well Data:
Well No.: MW-3
Vapour PID (ppm):
Measurement Point: TOC
Constructed Well Depth (m/ft): 14.0
Measured Well Depth (m/ft): 13.61
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in): 2" PVC
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 4.89



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required:				±3 %	±0.005 or 0.01[5]	±10 %	±10 %	±0.1 Units	±10 mV		
0716	Purging										
0725	100	4.92	0.03	16.21	0.599	30.7	1.50	6.07	86		
0730		4.92	0.03	16.28	0.597	29.4	1.48	6.07	93		
0735		4.92	0.03	16.26	0.596	28.0	1.48	6.07	95		
0750	Sampled	6w.	11145847-091417-DT.MW3								

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

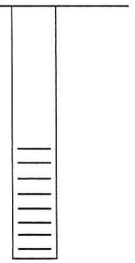
Monitoring Well Record for Low-F... urging
(Form SP-09)

Project Data:

Project Name: Geiger Prison
Ref. No.: 11145847
Date: 9/14/17
Personnel: D. Tinder

Monitoring Well Data:

Well No.: MP - 1R
Vapour PID (ppm):
Measurement Point: TOC
Constructed Well Depth (m/ft): 12.31
Measured Well Depth (m/ft):
Depth of Sediment (m/ft):
Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in): 2" PVC
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 4.79



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required:				±3 %	±0.005 or 0.01[5]	±10 %	±10 %	±0.1 Units	±10 mV		
0800	Start	Pump									
0830	100	4.81	0.02	14.06	1.485	262	1.05	5.96	-101		
0835		4.81	0.02	14.20	1.484	24.4	1.02	5.96	-105		
0840		4.81	0.02	14.18	1.481	25.0	1.00	5.97	-106		
0845	Sampled	GW 11145847-9147-DT-MP1R									

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

Project Name: Geiger Prison
Ref. No.: 1145847
Date: 9/14/17
Personnel: D.T.N.S.

Monitoring Well Data:

Well No.: MW2
Vapour PID (ppm):
Measurement Point: TOC
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 14.21
Depth of Sediment (m/ft):
Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in): 2" PVC
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 4.89

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required[5]:				±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
Start pump 0915											
0930	100	4.93	0.04	17.49	0.642	44.9	0.70	6.78	-140		
0935	↓	4.93	0.04	17.53	0.642	45.6	0.68	6.78	-144		
0940	↓	4.92	0.03	17.57	0.643	42.8	0.68	6.77	-147		
0945	Sampled	GW 1145847 · 9	1417 · DT ·	MW2							

Sample ID: GW · 1145847 · 9/417 · DT · MW2
Sample Time: 0945

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

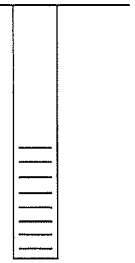
Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

Project Name: Geiger Prison
Ref. No.: 11145847
Date: 9/14/17
Personnel: D. Trudeau

Monitoring Well Data:

Well No.: MW 5
Vapour PID (ppm):
Measurement Point: TOC
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 13.26
Depth of Sediment (m/ft):
Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in): 2" PVC
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 4.89



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required[5]:				±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
Start pump 1015											
1030	100	5.71	0.82	18.69	1.146	179	0.90	5.43	47		
1035	↓	5.81	0.92	18.76	1.143	176	0.80	5.39	61		
1040	↓	5.84	0.95	18.79	1.142	170	0.79	5.38	65		
1045	↓	5.87	0.98	18.85	1.140	177	0.78	5.36	69		
1050	sampled										

Sample ID: GW. 11145847 · 9147. DT . MW5
Sample Time: 1050

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

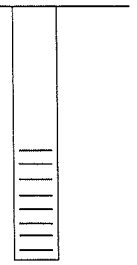
Monitoring Well Record for Low-F. . urging
(Form SP-09)

Project Data:
Project Name: Gieger corrections
Ref. No.: 11145847

Date: 9/14/17
Personnel: EPM/DT

Monitoring Well Data:
Well No.: MW-4
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft): 13.51
Measured Well Depth (m/ft): 13.25
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in): 2"
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 6.27



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required:				±3 %	±0.005 or 0.01[5]	±10 %	±10 %	±0.1 Units	±10 mV		
1013	Purging										
1023	150	6.29		18.28	0.767	3.39	0.24	6.77	-3.9		
1028	"	"		18.38	0.770	2.38	0.26	6.77	-22.1		
1033	"	"		18.36	0.774	2.42	0.20	6.80	-30.8		
1038	"	"		18.34	0.775	2.22	0.22	6.73	-34.8		
1050	Sample	GW-11145847-091417-DT-MW4 collected									

Notes: MS/MSD collected

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

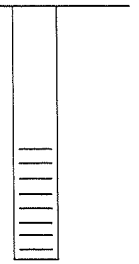
Monitoring Well Record for Low-F. . urging
(Form SP-09)

Project Data:
Project Name: Gieger Corrections
Ref. No.: 11145847

Date: 9/14/17
Personnel: EPM/DT

Monitoring Well Data:
Well No.: MW-5D
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 45.24
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in): 2"
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 32.48



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required:				±3 %	±0.005 or 0.01[5]	±10 %	±10 %	±0.1 Units	±10 mV		
1302	Purging										
1320	150	32.98	0.50	15.60	0.774	74.2	0.80	6.53			
1325		32.99	0.51	15.51	0.773	75.4	0.78	6.54			
1330		32.99	0.51	15.47	0.774	72.7	0.81	6.54			
1335	Sampled	GW 11145847-9147 · DT · MW 5D									

Notes: Sock removed Bladder pump used

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

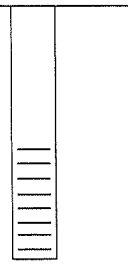
Monitoring Well Record for Low-F. . urging
(Form SP-09)

Project Data:
Project Name: Geiger prison
Ref. No.: 11145847

Date: 9/14/17
Personnel: E. Marse
D. Trudeau

Monitoring Well Data:
Well No.: MW-6
Vapour PID (ppm):
Measurement Point: TOC
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 41.43
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in): 2" PVC
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 33.26



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required:				±3 %	±0.005 or 0.01[5]	±10 %	±10 %	±0.1 Units	±10 mV		
1400	Pump	started									
1430	180	33.73	0.47	13.95	0.424	34.6	2.80	6.45	75		
1435	↓	33.71	0.45	13.91	0.424	32.8	2.85	6.44	77		
1440	↓	33.70	0.44	13.88	0.425		2.85	6.44	78		
1445	Sampled	GW	11145847-9	1417-DT	-MW-6						

Bladder pump used

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

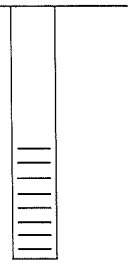
Monitoring Well Record for Low-F. . urging
(Form SP-09)

Project Data:
Project Name: Gieger Corrections
Ref. No.: 11145847

Date: 9/14/17
Personnel: DT/EPM

Monitoring Well Data:
Well No.: MW-1
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft): 50.15
Measured Well Depth (m/ft): 50.11
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 33.15



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required:				±3 %	±0.005 or 0.01[5]	±10 %	±10 %	±0.1 Units	±10 mV		
1520	Purging										
1535	150	33.20	0.05	14.29	0.447	64.7	3.08	6.50	99		
1540		33.20	0.05	14.18	0.447	60.9	3.10	6.48	98		
1545		33.20	0.05	14.13	0.447	65.0	3.07	6.47	100		
1550	Sampled @ 11145847 - 9/14/17 - DT - MW1										

Bladder Pump Used

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

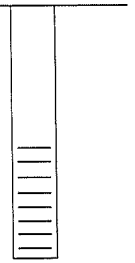
Monitoring Well Record for Low-F . urging
(Form SP-09)

Project Data:
Project Name: Gieger Corrections
Ref. No.: 11145847

Date: 9/14/17
Personnel:

Monitoring Well Data:
Well No.: MW-8
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft): 47.12
Measured Well Depth (m/ft):
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in): 2"
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 33.04



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required:				±3 %	±0.005 or 0.01[5]	±10 %	±10 %	±0.1 Units	±10 mV		
1620	Start	pump									
1640	150	34.26	1.22	13.63	0.684	48.3	1.56	6.51	104		
1645	↓	34.30	1.26	13.58	0.690	31.8	1.48	6.48	98		
1650		34.30	1.26	13.56	0.693	30.7	1.45	6.48	95		
1655	↓	34.31	1.27	13.49	0.694	29.8	1.45	6.48	94		
1700	Sampled	GW · 11145847 · 91417 · DT - MW8									

Bladder pump used

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

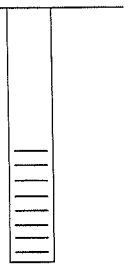
Monitoring Well Record for Low-F. . urging
(Form SP-09)

Project Data:
Project Name: Gieger Corrections
Ref. No.: 11145847

Date: 9/14/17
Personnel: EPM / DT

Monitoring Well Data:
Well No.: 95-MW-11B
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft): 49.05
Measured Well Depth (m/ft): 49.04
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 34.78



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required:				±3 %	±0.005 or 0.01[5]	±10 %	±10 %	±0.1 Units	±10 mV		
1730	Pump Started										
1745	150	34.93	0.15	13.40	0.304	29.40	3.27	6.72	105		
1750				13.36	0.309	14.1	3.36	6.70	107		
1755				13.28	0.311	11.5	3.26	6.69	107		
1758				13.26	0.312	11.43	3.62	6.69	108		
1800	Sample GW-11145847-091417-DT-MW11B collected										
	Dup @ 1820										

Bladder pump used

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Appendix B
Groundwater Monitoring Analytical Report

ANALYSIS REPORT

Prepared by:

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

Prepared for:

GHD
4550 Kruse Way
Suite 300
Lake Oswego OR 97035

Report Date: September 25, 2017

Project: Geiger Corrections Center

Account #: 42241
Group Number: 1851331
PO Number: 34019866
Release Number: 11145847
State of Sample Origin: WA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	GHD	Attn: Eric Maise
Electronic Copy To	GHD	Attn: Jeffrey Cloud
Electronic Copy To	GHD	Attn: Christina McClelland

Respectfully Submitted,

Elisabeth A. Knisley
Project Manager

(717) 556-7262

SAMPLE INFORMATION

Client Sample Description	Collection Information	ELLE#
GW-11145847-091417-DT-MW3 Grab Groundwater	09/14/2017 07:50	9213141
GW-11145847-091417-DT-MP1R Grab Groundwater	09/14/2017 08:45	9213142
GW-11145847-091417-DT-MW2 Grab Groundwater	09/14/2017 09:45	9213143
GW-11145847-091417-DT-MW5 Grab Groundwater	09/14/2017 10:50	9213144
GW-11145847-091417-DT-MW4 Grab Groundwater	09/14/2017 10:50	9213145
GW-11145847-091417-DT-MW4 MS Grab Groundwater	09/14/2017 10:50	9213146
GW-11145847-091417-DT-MW4 MSD Grab Groundwater	09/14/2017 10:50	9213147
GW-11145847-091417-DT-MW5D Grab Groundwater	09/14/2017 13:35	9213148
GW-11145847-091417-DT-MW6 Grab Groundwater	09/14/2017 14:45	9213149
GW-11145847-091417-DT-MW1 Grab Groundwater	09/14/2017 15:50	9213150
GW-11145847-091417-DT-MW8 Grab Groundwater	09/14/2017 17:00	9213151
GW-11145847-091417-DT-MW11B Grab Groundwater	09/14/2017 18:00	9213152
GW-11145847-091417-DT-DUP Grab Groundwater	09/14/2017 18:20	9213153
Trip Blank Water	09/14/2017	9213154

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

Sample Description: GW-11145847-091417-DT-MW3 Grab Groundwater
Geiger Corrections Center

ELLE Sample # WW 9213141
ELLE Group # 1851331
Account # 42241

Project Name: Geiger Corrections Center

Collected: 09/14/2017 07:50 by DT

Submitted: 09/16/2017 09:45
Reported: 09/25/2017 20:39

GHD
4550 Kruse Way
Suite 300
Lake Oswego OR 97035

03GCC

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10945	Naphthalene	91-20-3	N.D.	1	4	1
10945	Toluene	108-88-3	N.D.	0.5	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		ug/l	ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	250	1
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		ug/l	ug/l	ug/l	
12899	DX DRO C12-C24	n.a.	N.D.	47	100	1
12899	DX HRO C24-C40	n.a.	N.D.	100	260	1

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
10945	VOCs- 5ml Water by 8260B UST	SW-846 8260B	1	F172642AA	09/21/2017 16:53	Anthony H Downey	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F172642AA	09/21/2017 16:53	Anthony H Downey	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	17263B20A	09/20/2017 19:51	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	17263B20A	09/20/2017 19:51	Brett W Kenyon	1
12899	DRO/DX Mini-extraction Master	ECY 97-602 NWTPH-Dx modified	1	172610010A	09/20/2017 04:48	Amy Lehr	1
12907	Mini-extraction DRO DX (water)	ECY 97-602 NWTPH-Dx 06/97	1	172610010A	09/18/2017 20:02	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11145847-091417-DT-MP1R Grab Groundwater
Geiger Corrections Center

ELLE Sample # WW 9213142
ELLE Group # 1851331
Account # 42241

Project Name: Geiger Corrections Center

Collected: 09/14/2017 08:45 by DT

Submitted: 09/16/2017 09:45
Reported: 09/25/2017 20:39

GHD
4550 Kruse Way
Suite 300
Lake Oswego OR 97035

1RGCC

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.		0.5	1	1
10945	Ethylbenzene	100-41-4	N.D.		0.5	1	1
10945	Naphthalene	91-20-3	5		1	4	1
10945	Toluene	108-88-3	N.D.		0.5	1	1
10945	Xylene (Total)	1330-20-7	N.D.		0.5	1	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	2,200		50	250	1
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**ug/l**		**ug/l**	**ug/l**	
12899	DX DRO C12-C24	n.a.	1,400		46	100	1
12899	DX HRO C24-C40	n.a.	140	J	100	260	1

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
10945	VOCs- 5ml Water by 8260B UST	SW-846 8260B	1	F172643AA	09/21/2017 23:50	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F172643AA	09/21/2017 23:50	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	17265A94A	09/22/2017 14:16	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	17265A94A	09/22/2017 14:16	Marie D Beamenderfer	1
12899	DRO/DX Mini-extraction Master	ECY 97-602 NWTPH-Dx modified	1	172610010A	09/20/2017 05:12	Amy Lehr	1
12907	Mini-extraction DRO DX (water)	ECY 97-602 NWTPH-Dx 06/97	1	172610010A	09/18/2017 20:02	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11145847-091417-DT-MW2 Grab Groundwater
Geiger Corrections Center

ELLE Sample # WW 9213143
ELLE Group # 1851331
Account # 42241

Project Name: Geiger Corrections Center

Collected: 09/14/2017 09:45 by DT

Submitted: 09/16/2017 09:45
Reported: 09/25/2017 20:39

GHD
4550 Kruse Way
Suite 300
Lake Oswego OR 97035

02GCC

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.5	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10945	Naphthalene	91-20-3	N.D.	1	4	1
10945	Toluene	108-88-3	N.D.	0.5	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	1,200	50	250	1
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12899	DX DRO C12-C24	n.a.	720	47	100	1
12899	DX HRO C24-C40	n.a.	N.D.	100	260	1

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
10945	VOCs- 5ml Water by 8260B UST	SW-846 8260B	1	F172643AA	09/22/2017 00:11	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F172643AA	09/22/2017 00:11	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	17265A94A	09/22/2017 14:42	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	17265A94A	09/22/2017 14:42	Marie D Beamenderfer	1
12899	DRO/DX Mini-extraction Master	ECY 97-602 NWTPH-Dx modified	1	172610010A	09/20/2017 05:36	Amy Lehr	1
12907	Mini-extraction DRO DX (water)	ECY 97-602 NWTPH-Dx 06/97	1	172610010A	09/18/2017 20:02	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11145847-091417-DT-MW5 Grab Groundwater
Geiger Corrections Center

ELLE Sample # WW 9213144
ELLE Group # 1851331
Account # 42241

Project Name: Geiger Corrections Center

Collected: 09/14/2017 10:50 by DT

Submitted: 09/16/2017 09:45
Reported: 09/25/2017 20:39

GHD
4550 Kruse Way
Suite 300
Lake Oswego OR 97035

05GCC

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.5	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10945	Naphthalene	91-20-3	N.D.	1	4	1
10945	Toluene	108-88-3	N.D.	0.5	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	250	1
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12899	DX DRO C12-C24	n.a.	N.D.	46	100	1
12899	DX HRO C24-C40	n.a.	N.D.	100	260	1

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
10945	VOCs- 5ml Water by 8260B UST	SW-846 8260B	1	F172643AA	09/22/2017 00:32	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F172643AA	09/22/2017 00:32	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	17265A94A	09/22/2017 15:07	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	17265A94A	09/22/2017 15:07	Marie D Beamenderfer	1
12899	DRO/DX Mini-extraction Master	ECY 97-602 NWTPH-Dx modified	1	172610010A	09/20/2017 05:59	Amy Lehr	1
12907	Mini-extraction DRO DX (water)	ECY 97-602 NWTPH-Dx 06/97	1	172610010A	09/18/2017 20:02	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11145847-091417-DT-MW4 Grab Groundwater
Geiger Corrections Center

ELLE Sample # WW 9213145
ELLE Group # 1851331
Account # 42241

Project Name: Geiger Corrections Center

Collected: 09/14/2017 10:50 by DT

Submitted: 09/16/2017 09:45
Reported: 09/25/2017 20:39

GHD
4550 Kruse Way
Suite 300
Lake Oswego OR 97035

04GCC

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.5	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10945	Naphthalene	91-20-3	N.D.	1	4	1
10945	Toluene	108-88-3	N.D.	0.5	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	270	50	250	1
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12899	DX DRO C12-C24	n.a.	260	48	110	1
12899	DX HRO C24-C40	n.a.	N.D.	110	260	1

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
10945	VOCs- 5ml Water by 8260B UST	SW-846 8260B	1	F172643AA	09/21/2017 22:45	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F172643AA	09/21/2017 22:45	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	17265A94A	09/22/2017 11:42	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	17265A94A	09/22/2017 11:42	Marie D Beamenderfer	1
12899	DRO/DX Mini-extraction Master	ECY 97-602 NWTPH-Dx modified	1	172610010A	09/20/2017 06:23	Amy Lehr	1
12907	Mini-extraction DRO DX (water)	ECY 97-602 NWTPH-Dx 06/97	1	172610010A	09/18/2017 20:02	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11145847-091417-DT-MW4 MS Grab Groundwater
Geiger Corrections Center

ELLE Sample # WW 9213146
ELLE Group # 1851331
Account # 42241

Project Name: Geiger Corrections Center

Collected: 09/14/2017 10:50 by DT

Submitted: 09/16/2017 09:45
Reported: 09/25/2017 20:39

GHD
4550 Kruse Way
Suite 300
Lake Oswego OR 97035

04GCC

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	22	0.5	1	1
10945	Ethylbenzene	100-41-4	21	0.5	1	1
10945	Naphthalene	91-20-3	19	1	4	1
10945	Toluene	108-88-3	21	0.5	1	1
10945	Xylene (Total)	1330-20-7	61	0.5	1	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	1,500	50	250	1
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12899	DX DRO C12-C24	n.a.	560	45	100	1
12899	DX HRO C24-C40	n.a.	N.D.	100	250	1

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
10945	VOCs- 5ml Water by 8260B UST	SW-846 8260B	1	F172643AA	09/21/2017 23:07	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F172643AA	09/21/2017 23:07	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	17265A94A	09/22/2017 12:08	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	17265A94A	09/22/2017 12:08	Marie D Beamenderfer	1
12899	DRO/DX Mini-extraction Master	ECY 97-602 NWTPH-Dx modified	1	172610010A	09/20/2017 06:46	Amy Lehr	1
12907	Mini-extraction DRO DX (water)	ECY 97-602 NWTPH-Dx 06/97	1	172610010A	09/18/2017 20:02	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11145847-091417-DT-MW4 MSD Grab Groundwater
Geiger Corrections Center

ELLE Sample # WW 9213147
ELLE Group # 1851331
Account # 42241

Project Name: Geiger Corrections Center

Collected: 09/14/2017 10:50 by DT

Submitted: 09/16/2017 09:45
Reported: 09/25/2017 20:39

GHD
4550 Kruse Way
Suite 300
Lake Oswego OR 97035

04GCC

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10945	Benzene	71-43-2	22	0.5	1	1
10945	Ethylbenzene	100-41-4	21	0.5	1	1
10945	Naphthalene	91-20-3	19	1	4	1
10945	Toluene	108-88-3	22	0.5	1	1
10945	Xylene (Total)	1330-20-7	60	0.5	1	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		ug/l	ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	1,500	50	250	1
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		ug/l	ug/l	ug/l	
12899	DX DRO C12-C24	n.a.	610	48	110	1
12899	DX HRO C24-C40	n.a.	N.D.	110	270	1

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
10945	VOCs- 5ml Water by 8260B UST	SW-846 8260B	1	F172643AA	09/21/2017 23:28	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F172643AA	09/21/2017 23:28	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	17265A94A	09/22/2017 12:34	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	17265A94A	09/22/2017 12:34	Marie D Beamenderfer	1
12899	DRO/DX Mini-extraction Master	ECY 97-602 NWTPH-Dx modified	1	172610010A	09/20/2017 07:10	Amy Lehr	1
12907	Mini-extraction DRO DX (water)	ECY 97-602 NWTPH-Dx 06/97	1	172610010A	09/18/2017 20:02	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11145847-091417-DT-MW5D Grab Groundwater
Geiger Corrections Center

ELLE Sample # WW 9213148
ELLE Group # 1851331
Account # 42241

Project Name: Geiger Corrections Center

Collected: 09/14/2017 13:35 by DT

Submitted: 09/16/2017 09:45
Reported: 09/25/2017 20:39

GHD
4550 Kruse Way
Suite 300
Lake Oswego OR 97035

5DGCC

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.5	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10945	Naphthalene	91-20-3	N.D.	1	4	1
10945	Toluene	108-88-3	N.D.	0.5	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	250	1
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12899	DX DRO C12-C24	n.a.	560	45	100	1
12899	DX HRO C24-C40	n.a.	N.D.	100	250	1

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
10945	VOCs- 5ml Water by 8260B UST	SW-846 8260B	1	F172643AA	09/22/2017 00:54	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F172643AA	09/22/2017 00:54	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	17265A94A	09/22/2017 15:33	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	17265A94A	09/22/2017 15:33	Marie D Beamenderfer	1
12899	DRO/DX Mini-extraction Master	ECY 97-602 NWTPH-Dx modified	1	172610010A	09/20/2017 08:20	Amy Lehr	1
12907	Mini-extraction DRO DX (water)	ECY 97-602 NWTPH-Dx 06/97	1	172610010A	09/18/2017 20:02	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11145847-091417-DT-MW6 Grab Groundwater
Geiger Corrections Center

ELLE Sample # WW 9213149
ELLE Group # 1851331
Account # 42241

Project Name: Geiger Corrections Center

Collected: 09/14/2017 14:45 by DT

Submitted: 09/16/2017 09:45
Reported: 09/25/2017 20:39

GHD
4550 Kruse Way
Suite 300
Lake Oswego OR 97035

06GCC

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.5	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10945	Naphthalene	91-20-3	N.D.	1	4	1
10945	Toluene	108-88-3	N.D.	0.5	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	250	1
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12899	DX DRO C12-C24	n.a.	N.D.	48	110	1
12899	DX HRO C24-C40	n.a.	N.D.	110	260	1

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
10945	VOCs- 5ml Water by 8260B UST	SW-846 8260B	1	F172643AA	09/22/2017 01:16	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F172643AA	09/22/2017 01:16	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	17265A94A	09/22/2017 15:58	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	17265A94A	09/22/2017 15:58	Marie D Beamenderfer	1
12899	DRO/DX Mini-extraction Master	ECY 97-602 NWTPH-Dx modified	1	172610010A	09/20/2017 08:44	Amy Lehr	1
12907	Mini-extraction DRO DX (water)	ECY 97-602 NWTPH-Dx 06/97	1	172610010A	09/18/2017 20:02	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11145847-091417-DT-MW1 Grab Groundwater
Geiger Corrections Center

ELLE Sample # WW 9213150
ELLE Group # 1851331
Account # 42241

Project Name: Geiger Corrections Center

Collected: 09/14/2017 15:50 by DT

Submitted: 09/16/2017 09:45
Reported: 09/25/2017 20:39

GHD
4550 Kruse Way
Suite 300
Lake Oswego OR 97035

01GCC

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.5	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10945	Naphthalene	91-20-3	N.D.	1	4	1
10945	Toluene	108-88-3	N.D.	0.5	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	250	1
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12899	DX DRO C12-C24	n.a.	N.D.	48	110	1
12899	DX HRO C24-C40	n.a.	N.D.	110	270	1

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
10945	VOCs- 5ml Water by 8260B UST	SW-846 8260B	1	F172643AA	09/22/2017 01:38	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F172643AA	09/22/2017 01:38	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	17265A94A	09/22/2017 16:50	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	17265A94A	09/22/2017 16:50	Marie D Beamenderfer	1
12899	DRO/DX Mini-extraction Master	ECY 97-602 NWTPH-Dx modified	1	172610010A	09/20/2017 09:07	Amy Lehr	1
12907	Mini-extraction DRO DX (water)	ECY 97-602 NWTPH-Dx 06/97	1	172610010A	09/18/2017 20:02	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11145847-091417-DT-MW8 Grab Groundwater
Geiger Corrections Center

ELLE Sample # WW 9213151
ELLE Group # 1851331
Account # 42241

Project Name: Geiger Corrections Center

Collected: 09/14/2017 17:00 by DT

Submitted: 09/16/2017 09:45
Reported: 09/25/2017 20:39

GHD
4550 Kruse Way
Suite 300
Lake Oswego OR 97035

08GCC

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.5	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10945	Naphthalene	91-20-3	N.D.	1	4	1
10945	Toluene	108-88-3	N.D.	0.5	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	250	1
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12899	DX DRO C12-C24	n.a.	N.D.	45	100	1
12899	DX HRO C24-C40	n.a.	N.D.	100	250	1

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
10945	VOCs- 5ml Water by 8260B UST	SW-846 8260B	1	F172643AA	09/22/2017 02:00	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F172643AA	09/22/2017 02:00	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	17265A94A	09/22/2017 17:15	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	17265A94A	09/22/2017 17:15	Marie D Beamenderfer	1
12899	DRO/DX Mini-extraction Master	ECY 97-602 NWTPH-Dx modified	1	172610010A	09/20/2017 09:31	Amy Lehr	1
12907	Mini-extraction DRO DX (water)	ECY 97-602 NWTPH-Dx 06/97	1	172610010A	09/18/2017 20:02	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11145847-091417-DT-MW11B Grab Groundwater
Geiger Corrections Center

ELLE Sample # WW 9213152
ELLE Group # 1851331
Account # 42241

Project Name: Geiger Corrections Center

Collected: 09/14/2017 18:00 by DT

Submitted: 09/16/2017 09:45
Reported: 09/25/2017 20:39

GHD
4550 Kruse Way
Suite 300
Lake Oswego OR 97035

1BGCC

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.5	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10945	Naphthalene	91-20-3	N.D.	1	4	1
10945	Toluene	108-88-3	N.D.	0.5	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	250	1
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12899	DX DRO C12-C24	n.a.	N.D.	48	110	1
12899	DX HRO C24-C40	n.a.	N.D.	110	260	1

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
10945	VOCs- 5ml Water by 8260B UST	SW-846 8260B	1	F172643AA	09/22/2017 02:21	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F172643AA	09/22/2017 02:21	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	17265A94A	09/22/2017 17:41	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	17265A94A	09/22/2017 17:41	Marie D Beamenderfer	1
12899	DRO/DX Mini-extraction Master	ECY 97-602 NWTPH-Dx modified	1	172610010A	09/20/2017 09:54	Amy Lehr	1
12907	Mini-extraction DRO DX (water)	ECY 97-602 NWTPH-Dx 06/97	1	172610010A	09/18/2017 20:02	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11145847-091417-DT-DUP Grab Groundwater
Geiger Corrections Center

ELLE Sample # WW 9213153
ELLE Group # 1851331
Account # 42241

Project Name: Geiger Corrections Center

Collected: 09/14/2017 18:20 by DT

Submitted: 09/16/2017 09:45
Reported: 09/25/2017 20:39

GHD
4550 Kruse Way
Suite 300
Lake Oswego OR 97035

FDGCC

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.5	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10945	Naphthalene	91-20-3	N.D.	1	4	1
10945	Toluene	108-88-3	N.D.	0.5	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	250	1
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12899	DX DRO C12-C24	n.a.	N.D.	48	110	1
12899	DX HRO C24-C40	n.a.	N.D.	110	260	1

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
10945	VOCs- 5ml Water by 8260B UST	SW-846 8260B	1	F172643AA	09/22/2017 02:42	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F172643AA	09/22/2017 02:42	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	17265A94A	09/22/2017 18:07	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	17265A94A	09/22/2017 18:07	Marie D Beamenderfer	1
12899	DRO/DX Mini-extraction Master	ECY 97-602 NWTPH-Dx modified	1	172610011A	09/20/2017 09:07	Amy Lehr	1
12907	Mini-extraction DRO DX (water)	ECY 97-602 NWTPH-Dx 06/97	1	172610011A	09/18/2017 20:02	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: Trip Blank Water
Geiger Corrections Center

ELLE Sample # WW 9213154
ELLE Group # 1851331
Account # 42241

Project Name: Geiger Corrections Center

Collected: 09/14/2017

Submitted: 09/16/2017 09:45
Reported: 09/25/2017 20:39

GHD
4550 Kruse Way
Suite 300
Lake Oswego OR 97035

TBGCC

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.5	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10945	Naphthalene	91-20-3	N.D.	1	4	1
10945	Toluene	108-88-3	N.D.	0.5	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	250	1

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
10945	VOCs- 5ml Water by 8260B UST	SW-846 8260B	1	F172643AA	09/21/2017 22:02	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F172643AA	09/21/2017 22:02	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	17265A94A	09/22/2017 11:17	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	17265A94A	09/22/2017 11:17	Marie D Beamenderfer	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: GHD
Reported: 09/25/2017 20:39

Group Number: 1851331

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.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: F172642AA	Sample number(s): 9213141		
Benzene	N.D.	0.5	1
Ethylbenzene	N.D.	0.5	1
Naphthalene	N.D.	1	4
Toluene	N.D.	0.5	1
Xylene (Total)	N.D.	0.5	1
Batch number: F172643AA	Sample number(s): 9213142-9213154		
Benzene	N.D.	0.5	1
Ethylbenzene	N.D.	0.5	1
Naphthalene	N.D.	1	4
Toluene	N.D.	0.5	1
Xylene (Total)	N.D.	0.5	1
Batch number: 17263B20A	Sample number(s): 9213141		
NWTPH-Gx water C7-C12	N.D.	50	250
Batch number: 17265A94A	Sample number(s): 9213142-9213154		
NWTPH-Gx water C7-C12	N.D.	50	250
Batch number: 172610010A	Sample number(s): 9213141-9213152		
DX DRO C12-C24	N.D.	45	100
DX HRO C24-C40	N.D.	100	250
Batch number: 172610011A	Sample number(s): 9213153		
DX DRO C12-C24	N.D.	45	100
DX HRO C24-C40	N.D.	100	250

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: F172642AA	Sample number(s): 9213141								
Benzene	20	20.16			101		78-120		
Ethylbenzene	20	19.74			99		78-120		
Naphthalene	20	18.94			95		59-120		
Toluene	20	20.24			101		80-120		
Xylene (Total)	60	58.48			97		80-120		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: GHD
Reported: 09/25/2017 20:39

Group Number: 1851331

LCS/LCSD (continued)

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: F172643AA	Sample number(s): 9213142-9213154								
Benzene	20	20.39			102		78-120		
Ethylbenzene	20	19.96			100		78-120		
Naphthalene	20	16.4			82		59-120		
Toluene	20	20.56			103		80-120		
Xylene (Total)	60	58.17			97		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 17263B20A	Sample number(s): 9213141								
NWTPH-Gx water C7-C12	1100	1039.98			95		80-120		
Batch number: 17265A94A	Sample number(s): 9213142-9213154								
NWTPH-Gx water C7-C12	1100	1135.02			103		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 172610010A	Sample number(s): 9213141-9213152								
DX DRO C12-C24	600	330.3			55		40-122		
Batch number: 172610011A	Sample number(s): 9213153								
DX DRO C12-C24	600	355.68			59		40-122		

MS/MSD

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

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: F172642AA	Sample number(s): 9213141 UNSPK: P213105									
Benzene	N.D.	20	22.57	20	22.04	113	110	78-120	2	30
Ethylbenzene	N.D.	20	22.16	20	22.02	111	110	78-120	1	30
Naphthalene	N.D.	20	18.06	20	18.12	90	91	59-120	0	30
Toluene	N.D.	20	22.51	20	22.6	113	113	80-120	0	30
Xylene (Total)	N.D.	60	64.09	60	64.02	107	107	80-120	0	30
Batch number: F172643AA	Sample number(s): 9213142-9213154 UNSPK: 9213145									
Benzene	N.D.	20	21.97	20	21.88	110	109	78-120	0	30
Ethylbenzene	N.D.	20	20.98	20	20.79	105	104	78-120	1	30
Naphthalene	N.D.	20	18.83	20	19.26	94	96	59-120	2	30
Toluene	N.D.	20	21.17	20	21.71	106	109	80-120	3	30
Xylene (Total)	N.D.	60	61.39	60	60.15	102	100	80-120	2	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 17263B20A	Sample number(s): 9213141 UNSPK: P213158									
NWTPH-Gx water C7-C12	N.D.	1100	1200.7	1100	1183.22	109	108	80-120	1	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: GHD
Reported: 09/25/2017 20:39

Group Number: 1851331

MS/MSD (continued)

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

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 17265A94A	Sample number(s): 9213142-9213154 UNSPK: 9213145									
NWTPH-Gx water C7-C12	270.04	1100	1482.26	1100	1477.1	110	110	80-120	0	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 172610010A	Sample number(s): 9213141-9213152 UNSPK: 9213145									
DX DRO C12-C24	257.34	598	556.7	641	611.84	50	55	40-122	9	20
Batch number: 172610011A	Sample number(s): 9213153 UNSPK: P213158									
DX DRO C12-C24	61.63	628	204.71	639	164.89	23*	16*	40-122	22*	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: VOCs- 5ml Water by 8260B UST
Batch number: F172642AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9213141	99	101	103	98
Blank	98	103	103	95
LCS	99	101	103	99
MS	101	101	104	100
MSD	98	104	105	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260B UST
Batch number: F172643AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9213142	100	102	102	97
9213143	101	104	101	98
9213144	101	102	102	97
9213145	100	103	103	97
9213146	101	104	103	98
9213147	99	103	103	98
9213148	100	101	104	98
9213149	102	102	102	96
9213150	99	102	102	96
9213151	101	103	102	98

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: GHD Group Number: 1851331
Reported: 09/25/2017 20:39

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: VOCs- 5ml Water by 8260B UST
Batch number: F172643AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9213152	100	100	102	95
9213153	102	100	103	95
9213154	101	102	104	95
Blank	101	103	103	95
LCS	99	100	104	98
MS	101	104	103	98
MSD	99	103	103	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 17263B20A

	Trifluorotoluene-F
9213141	87
Blank	87
LCS	91
MS	97
MSD	98
Limits:	63-135

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 17265A94A

	Trifluorotoluene-F
9213142	77
9213143	76
9213144	79
9213145	80
9213146	83
9213147	80
9213148	79
9213149	78
9213150	78
9213151	79
9213152	79
9213153	78
9213154	89
Blank	79
LCS	82
MS	83
MSD	80

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: GHD Group Number: 1851331
Reported: 09/25/2017 20:39

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 17265A94A

Limits: 63-135

Analysis Name: DRO/DX Mini-extraction Master
Batch number: 172610010A

	Orthoterphenyl
9213141	92
9213142	97
9213143	97
9213144	78
9213145	100
9213146	90
9213147	93
9213148	91
9213149	100
9213150	96
9213151	92
9213152	97
Blank	95
LCS	90
MS	90
MSD	93
Limits:	50-150

Analysis Name: DRO/DX Mini-extraction Master
Batch number: 172610011A

	Orthoterphenyl
9213153	97
Blank	100
LCS	97
MS	80
MSD	72
Limits:	50-150

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Phillips 66 Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 422611 For Eurofins Lancaster Laboratories Environmental use only Group # 1851331 Sample # 921314I-S4
Instructions on reverse side correspond with circled numbers.

COC # 031605

Client Information

Site # / AOC # 11145847

Site Address 3507 S Spotted Rd. Spokane WA 99260

SAP PO # PSX PM

Consultant/Office GHD - Lynnwood WA

Consultant Project Mgr. Christina McClelland

Sampler D. Trudeau E. Maise

State where samples were collected: WA

For Compliance: Yes ☐ No ☐

Matrix

Sediment ☐ Soil ☐ | Ground ☒ Potable ☐ Water ☐ | Surface ☐ NPDES ☐ | Air ☐ Oil ☐

Analyses Requested

Preservation Codes

Sample Identification	Collection Date	Collection Time	Grab	Composite	Total # of Containers	NWTPH-Gx	DRO/DX	VOCs 8260B	MS/MSD	Remarks
GW-11145847-091417-DT-MW3	9/14	0750	X		8	X	X	X		
GW-11145847-091417-DT-MPIR		0845	X		8	X	X	X		
GW-11145847-091417-DT-MW2		0945	X		8	X	X	X		
GW-11145847-091417-DT-MW5		1050	X		8	X	X	X		
GW-11145847-091417-DT-MW4		1050	X		24	X	X	X	X	MS/MSD
GW-11145847-091417-DT-MW5D		1335	X		8	X	X	X		
GW-11145847-091417-DT-MW6		1445	X		8	X	X	X		
GW-11145847-091417-DT-MW1		1550	X		8	X	X	X		
GW-11145847-091417-DT-MW8		1700	X		8	X	X	X		
GW-11145847-091817-DT-MW11B		1800	X		8	X	X	X		

SCR #: _____

Preservation Codes

H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 O = Other

Remarks

Turnaround Time Requested (TAT) (please circle)
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Standard 5 day 72 hour 48 hour 24 hour

Data Package Options (please circle if required)
Full Validation Reduced Raw Data
TX TRRP MAMCP CTRCP NYASP A/B
NJFull NJRed Other: _____

EDD Needed? Yes (Format: _____) No

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	9/15/17	1330	[signature]		
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
			[signature]	9/16/17	945

Relinquished by Commercial Carrier: UPS_____ FedEx X Other_____

Temperature upon receipt 2.7-9.5 °C

Custody Seals Intact? (Yes) No NA

Phillips 66 Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 42241 For Eurofins Lancaster Laboratories Environmental use only Group # 185133 Sample # 921314I-54
Instructions on reverse side correspond with circled numbers.

COC # 031604

SCR #: _____

Client Information

Site # / AOC # 11145847

Site Address 3507 S. Spotted Rd. Spokane WA 99260

SAP PO # PSX PM

Consultant/Office GHD Lynnwood WA

Consultant Project Mgr. Christina McClelland

Sampler D. Trudeau E. Maise

State where samples were collected: WA

For Compliance: Yes ☐ No ☐

Matrix

Soil ☐ Sediment ☐ Water ☒ Ground ☐ Potable ☐ Surface ☐ NPDES ☐ Oil ☐ Air ☐

Analyses Requested

Preservation Codes

Sample Identification	Collection Date	Collection Time	Grab	Composite	Total # of Containers	NWTPH-Gx	DRO/DX	VOCs 8260B
GW-11145847-091417-DT-DUP	9/14	1820	X		8	X	X	X

Preservation Codes

H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 O = Other

Remarks

Turnaround Time Requested (TAT) (please circle)
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Standard 5 day 72 hour 48 hour 24 hour

Data Package Options (please circle if required)

Full Validation Reduced Raw Data
TX TRRP MAMCP CTRCP NYASP A/B
NJFull NJRed Other: _____

EDD Needed? Yes (Format: _____) No

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	9/15/17	1330	[signature]		
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
			[signature]	9/16/17	945

Relinquished by Commercial Carrier: UPS_____ FedEx X Other_____

Temperature upon receipt 2.9-5.5°C

Custody Seals Intact? (Yes) No NA

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Sample Administration Receipt Documentation Log

Doc Log ID: 194674

Group Number(s): 185131

Client: Phillips 66

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/16/2017 9:45
Number of Packages:	4	Number of Projects:	2
State/Province of Origin:	WA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	4
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Simon Nies (25112) at 12:43 on 09/16/2017

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	2.9	DT	Wet	Y	Bagged	N
2	DT42-01	4.5	DT	Wet	Y	Bagged	N
3	DT42-01	3.2	DT	Wet	Y	Bagged	N
4	DT42-01	3.6	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

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

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	non-detect
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	less than
>	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.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) 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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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.