WCEC
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December 19, 2023

Kyle Parker
Toxics Cleanup Program
Department of Ecology – Central Regional Office
1250 W. Alder Street, Union Gap, WA 98903

Re: **September 2023 Groundwater Monitoring Report** for North Central Petroleum, Inc., Gasoline Spill, SR 17 Near MP 123, Bridgeport, WA, Facility Site# 25378742, Cleanup Site# 2088.

Dear Mr. Parker:

Enclosed for your review is the S**eptember 2023 Groundwater Monitoring Report** for North Central Petroleum, Inc., Gasoline Spill, Bridgeport, Washington. Please call or contact me via email me at mmorris@wcec.com, if you have any questions or concerns. Thank you for your time and consideration of this report.

Sincerely,

Myles Morris
Senior Project Manager, WCEC

Enclosure

cc: Don Michelson, North Central Petroleum; 27 Hahn Road, Omak, WA 98841

ec: Kyle Parker, Department of Ecology; kypa461@ecy.wa.gov
John Roach, Federated Insurance; pcclaims@fedins.com

September 2023

Groundwater Monitoring Report

North Central Petroleum Spill

SR 17 Near MP 123

Bridgeport, WA 98813

Facility Site No.: 25378742, Cleanup Site No.: 2088

Prepared for:

Don Michelson

27 Hahn Rd.

Omak, WA 98841

Prepared by:

West Central Environmental Consultants, Inc.

1030 South Ave. W.

Missoula, MT 59801

December 19, 2023

WCEC Project No. 99-2946-90

TABLE OF CONTENTS

Figures

Tables

1.0 Introduction

This report documents the September 2023 groundwater monitoring event completed for the North Central Petroleum Spill located at mile post (MP) 122.6 of State Route (SR) Highway 17 near Bridgeport, WA. The Washington Department of Ecology (Ecology) requested additional investigation to define the extent of soil and groundwater impacts north of the highway as a required condition of a No Further Action (NFA) determination for the site [Ecology, 2018]. Groundwater monitoring activities were completed as outlined in the *June 2021 Soil Boring Investigation Report* submitted to Ecology on September 30, 2021.

1.1 Site Location

The site is located in a rural area of Douglas County, Washington where the primary land use is agricultural. The spill occurred adjacent to SR 17 approximately 14 miles east of Bridgeport, WA and 2.7 miles west of Leahy Junction at MP 122.6. The approximate geographic coordinates are 47.926169, -119.447942. The Public Land Survey System (PLSS) description for the site is the SW/4, NW/4, Section 16, and the SE/4, NE/4, Section 17, Township 28 North, Range 27 East. An intermittent stream (East Foster Creek) is located south of the spill site. Depth to first shallow groundwater varies from approximately 1 to 7 feet below ground surface (bgs) depending on seasonal fluctuations [WCEC, 2015]. The groundwater flow direction is generally to the west-northwest. Subsurface soil consists of silty sand with minor amounts of clay and gravel.

1.2 Site History

Approximately 6,900 gallons of unleaded gasoline were released at the site as the result of a petroleum transport trailer vehicle accident that occurred on December 1, 1994. Excavation of contaminated soil was conducted by LMH Environmental (LMH) in December 1994 at locations north and south of the highway [LMH, 1995]. The excavations were restricted laterally by the highway embankment and vertically by the presence of shallow groundwater. Approximately 770 cubic yards of contaminated soil was removed from the excavations. Soil samples were collected from the pit bottom and sidewalls of the excavations at the completion of excavation activities. The analytical results from these excavation soil samples indicated that gasoline constituents remained underneath the highway right-of-way (ROW) and to the north of the highway at concentrations exceeding applicable Model Toxics Control Act (MTCA) Method A cleanup levels (CULs).

Two sumps (North Sump and South Sump) were installed in the excavations during backfilling to provide a means for future sampling of groundwater in the excavation backfill [Figure 2]. The sumps were constructed of slotted 4-foot diameter pre-cast concrete manholes bedded in oversized gravel [LMH, 1995]. On the north side of the highway, a layer of oversized gravel was also placed along the entire length of the excavation floor

within the highway right-of-way to a depth of approximately 1 foot above the water table to facilitate total fluids recovery from the north excavation through the North Sump as a potential remedial method.

Four groundwater monitoring wells (MP1-MP4) were installed in September 1996 as part of a soil/groundwater investigation to assess constituent concentrations in source area and downgradient locations, primarily south of the highway [Summit, 1997]. Groundwater samples were obtained from 13 borehole locations during the September 1996 investigation, with maximum concentrations of benzene registered at nearly 5,000 µg/L and TPH-G over 50,000 µg/L. Groundwater monitoring of permanent wells MP1 through MP4 was conducted on at least an annual basis from 1997 to 2014. Groundwater concentrations in samples collected from all four monitoring wells were below the applicable Method A CULs for all constituents of concern (COCs) for four consecutive quarters in 2014/15 [WCEC, 2015].

In response to Ecology's request for further investigation in the source area north of the highway, WCEC supervised the installation of six soil boreholes (SB1-SB6) and three temporary wells (SB2, SB3, and SB5) on June 2, 2021. Two soil samples were obtained from each of the soil boreholes based on the results of field screening for hydrocarbon impacts. Groundwater samples were collected from the three temporary wells and the North Sump. Samples were submitted for laboratory analysis of WTPH-Gas, BTEX, and MTBE. Exceedances of Method A CULs for soil and groundwater were recorded at SB2, SB3, SB5, and the North Sump [WCEC, 2021].

Based on the results from the June 2021 soil boring investigation, four groundwater monitoring wells (MW1-MW4) were installed in the source area north of the highway on July 11, 2023 to delineate the extent and magnitude of source area groundwater impacts. An additional six soil boreholes (SB7-SB12) were advanced north of the highway ROW fence on Washington Department of Natural Resources (DNR) property to assess residual petroleum concentrations in this area [WCEC, 2023]. Soil samples were obtained from the soil boreholes and monitoring well borings depending on the results of field screening for hydrocarbon impacts. Soil and groundwater samples were submitted for laboratory analysis of WTPH-Gas, BTEX, and MTBE. According to the analytical results from boreholes SB7 through SB12, soil concentrations in the excavation area north of the ROW fence are below Method A CULs for all constituents of concern (COCs) [Table 4]. Method A CULs for groundwater were exceeded in samples from monitoring well MW3 [Table 2], coinciding with the location of soil borehole SB3 [Figure 4].

1.3 Scope of Work

The following scope of work was completed to further define the extent and magnitude of petroleum impacts at the spill source north of the highway:

- Conducting a groundwater monitoring event during low groundwater conditions in September 2023. Groundwater samples were submitted to Pace for analysis of NWTPH-Gx, EPA 8260B (BTEX and MTBE), EPA 300.0 (Sulfate), and EPA 353.2 (Nitrate + Nitrite).

- Preparation and submittal of a Groundwater Monitoring Report within 60 days of receipt of laboratory analytical data. Newly obtained data will also be uploaded into the Environmental Information Management (EIM) system database according to Ecology's requirements.

2.0 Groundwater Monitoring

2.1 Groundwater Monitoring Procedures

Groundwater sampling of monitoring wells MW1-MW4 was performed on September 26, 2023. Well sampling was conducted according to WCEC standard sampling procedures using a low flow peristaltic pump for purging and sample collection. Groundwater parameters for pH, dissolved oxygen, conductivity, salinity, temperature, oxidation-reduction potential, and turbidity were obtained using a multi-parameter YSI field meter with a flow through cell attached to the peristaltic pump. Groundwater sampling field data sheets are contained in Appendix B. Note that groundwater field parameters were not obtained from MW1 due to insufficient groundwater present.

Monitoring wells were purged until all groundwater parameters stabilized. Groundwater samples were collected in method-specific laboratory containers, packed on ice, and delivered under chain of custody to Pace in Minneapolis, Minnesota. Pace was instructed to analyze the groundwater samples for WTPH-Gx, BTEX, and MTBE via EPA 8260B. The groundwater samples were also analyzed for the biodegradation indicators sulfate (EPA 300.0) and nitrate (EPA 353.2) to assess microbial activity in the source area. Monitoring well MW1 did not yield enough groundwater to fill sample bottles for biodegradation indicators analysis.

2.2 Groundwater Analytical Results

Groundwater analytical results from the September 2023 monitoring event are summarized in the following paragraphs and in Tables 2 and 3. Method A CUL exceedances are displayed on Figure 4. The complete laboratory analytical results package is contained in Appendix A.

Groundwater sampled from monitoring wells MW1, MW2, and MW4 was below the Method A CULs for all constituents of concern.

Groundwater sampled from monitoring well MW3 contained WTPH-Gas (3,720 µg/L) and benzene (27.2 µg/L) at concentrations exceeding the Method A CULs.

2.3 Groundwater Flow Direction and Gradient

The depth to static water level in the monitoring wells was measured during the groundwater monitoring event using an electronic water level indicator accurate to 0.01 feet. Depth to water measurements varied

from 3.66 feet bgs at MW3 to 8.91 feet bgs at MW1. Groundwater elevations were calculated using the established well survey data and the current depth to water measurements. Cumulative groundwater elevation data is presented in Table 1. A potentiometric surface map displaying the data collected during the September 2023 monitoring event is included as Figure 3. The calculated groundwater flow direction was to the west-northwest under a hydraulic gradient of 0.002. This flow direction generally follows the anticipated flow direction based on local surface topography and the drainage direction of East Foster Creek.

3.0 Discussion and Recommendations

3.1 Field Work Summary

Groundwater monitoring activities were completed on September 26, 2023, including the collection of depth to water measurements and groundwater samples from monitoring wells MW1-MW4. Groundwater samples were submitted for laboratory analysis of WTPH-Gas, BTEX, MTBE, sulfate, and nitrate. The September 2023 monitoring event was conducted during seasonal low groundwater conditions.

3.2 Discussion of Results

Based on the results of the June 2021 and July 2023 soil boring investigations and subsequent groundwater sampling events, soil and groundwater concentrations in the source area north of the highway exceed Method A CULs [Figure 4]. The greatest constituent concentrations in soil were encountered at a depth of 6 feet bgs in the SB3 borehole, with a WTPH-Gas concentration of 2,030 mg/kg and a benzene concentration of 0.956 mg/kg [Table 4]. Similarly, groundwater concentrations in the SB3 temporary well were elevated with a WTPH-Gas result of 12,300 µg/L and a benzene result of 77.5 µg/L [Table 5]. Monitoring well MW3 was installed at the SB3 borehole location and also currently exceeds Method A CULs for WTPH-Gas and benzene in groundwater [Table 2]. The highest benzene concentration in groundwater was found in the North Sump sample from June 2021, with a result of 198 µg/L [Table 2]. MTBE was not detected above the laboratory MRLs in any of the soil or groundwater samples obtained during the June 2021 and July 2023 soil boring investigations and groundwater sampling events. Based on the analytical results from boreholes SB7 through SB12, soil concentrations in the excavation area north of the ROW fence are below Method A CULs for all constituents of concern (COCs) [Table 4].

In downgradient locations, the last detection of a COC at the site above Method A CULs was benzene at monitoring well MP2 in September 2012 [Table 2]. MTBE was first detected in downgradient well MP4 during the September 2004 sampling event. MTBE is the most soluble and readily mobilized constituent in gasoline. Samples from monitoring well MP4 contained MTBE at concentrations above the laboratory MRLs during the June 2015 and September 2015 monitoring events, however, the last exceedance of the Method A CUL for MTBE in MP4 occurred in September 2007. Groundwater sampled from all of the downgradient wells (MP1-MP4) was below the Method A CULs for all COCs for four consecutive quarterly monitoring events from December 2014 to June 2015. Sampling of the downgradient monitoring wells MP1 through MP4 has subsequently been discontinued with the approval of Ecology.

The cumulative analytical dataset indicates that natural attenuation processes at the site have been effective in reducing downgradient dissolved constituent concentrations to levels below Method A CULs. However,

natural attenuation alone has not sufficiently diminished COC concentrations in the source area north of the highway. An active remedial strategy will likely be necessary in the source area to augment natural attenuation processes and further reduce COC concentrations to below CULs. Analysis of natural attenuation parameters collected during the 2023 monitoring events indicate that dissolved oxygen and nitrate are depleted within the footprint of the plume when compared to background conditions as represented by upgradient monitoring well MW1 [Table 3]. The depletion of these terminal electron acceptors, in addition to the corresponding negative ORP values recorded, provides evidence that anaerobic degradation processes are occurring. This site-specific data will aid in selecting the appropriate remedial strategy for the source area that considers the current redox potential of the groundwater system.

3.3 Recommendations

The recent soil boring investigations and groundwater sampling events have provided sufficient data to delineate the extent and magnitude of residual source area contamination in both soil and groundwater. Impacts are primarily limited to the area north of the highway and south of the ROW fence, with the highest concentrations found in the vicinity of the North Sump and MW3/SB3. WCEC recommends semiannual groundwater monitoring of source area wells MW1 through MW4 during high and low groundwater conditions to evaluate fluctuations in constituent concentrations related to seasonal variations in groundwater inputs. Based on this schedule, the next groundwater monitoring event is tentatively planned for June 2024 during high groundwater conditions. WCEC will make further recommendations for potential remedial options at the site based on the results of the June 2024 groundwater monitoring event.

4.0 References

LMH Environmental. (LMH, 1995). *Report of Gasoline Spill*. March 25, 1995.

Summit Envirosolutions. (Summit, 1996). *Proposal for Land Application of Remediated Soil*. October 31, 1996.

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Washington State Department of Ecology. (Ecology, 2013). *Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC.* Revised 2013. Washington State Department of Ecology Toxics Cleanup Program, Publication No. 94-06.

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West Central Environmental Consultants. (WCEC, 2015). *December through September 2015 Groundwater Monitoring Summary Report*. October 6, 2015.

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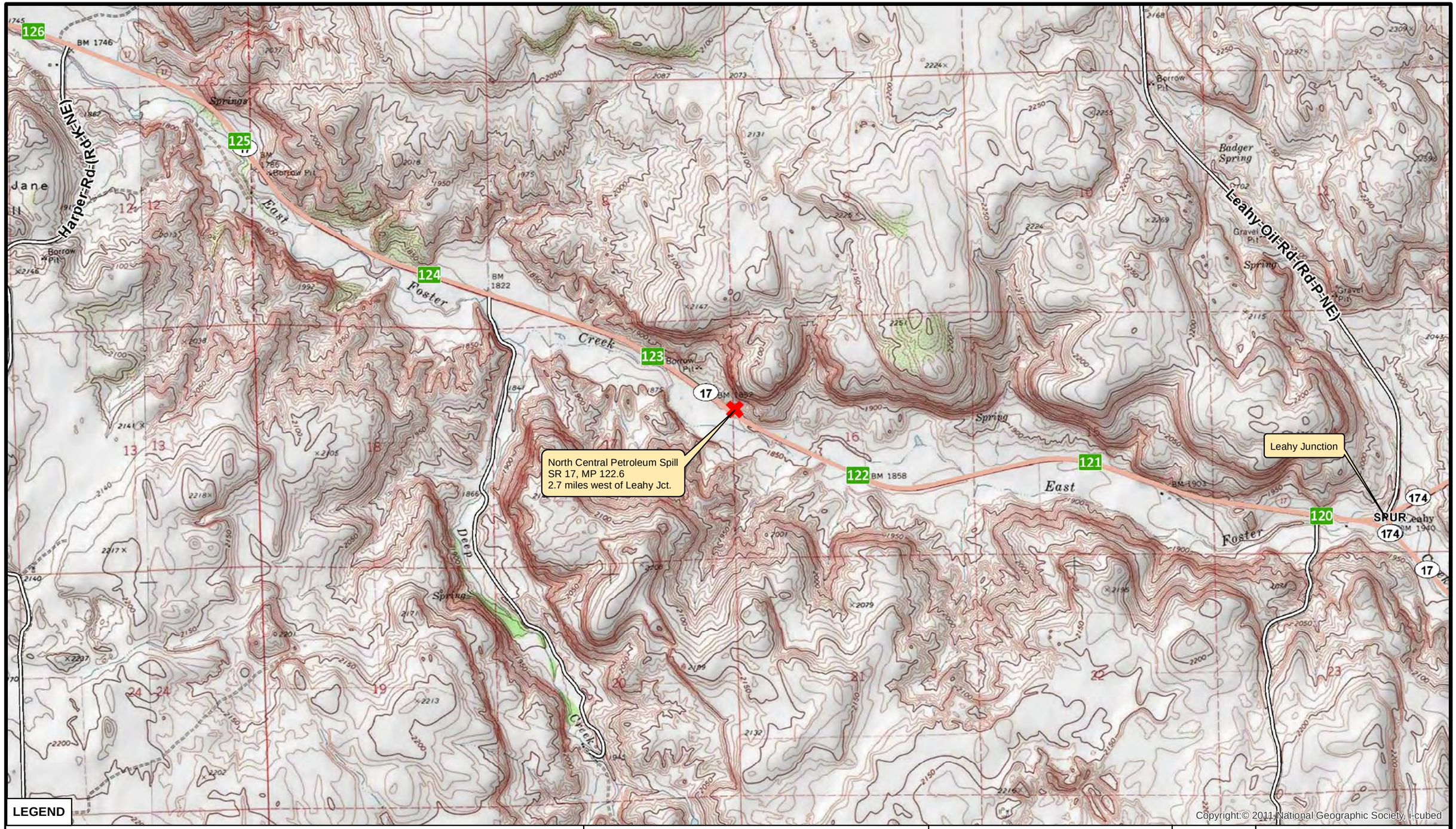
Figures



LEGEND

✖ Site Location

N

2,000 1,000 0 1 in = 2,000 ft 2,000

Site Location

North Central Petroleum Spill
SR 17 Near MP 123
Bridgeport, WA

DRAWN BY: MM
DATE: 01/06/20
SCALE: 1:24,000

PROJECT NUMBER: 99-2946-90

IMAGE SOURCE: ESRI BASEMAPS

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FIGURE 1

LEGEND

- Monitoring Well
- Sump
- Property Boundary (Approximate)
- North Excavation - 1994

Site Details

North Central Petroleum Spill
SR 17 Near MP 123
Bridgeport, WA

DRAWN BY: MM
DATE: 09/11/23
SCALE: 1:360

PROJECT NUMBER: 99-2946-90

IMAGE SOURCE: ESRI BASEMAPS

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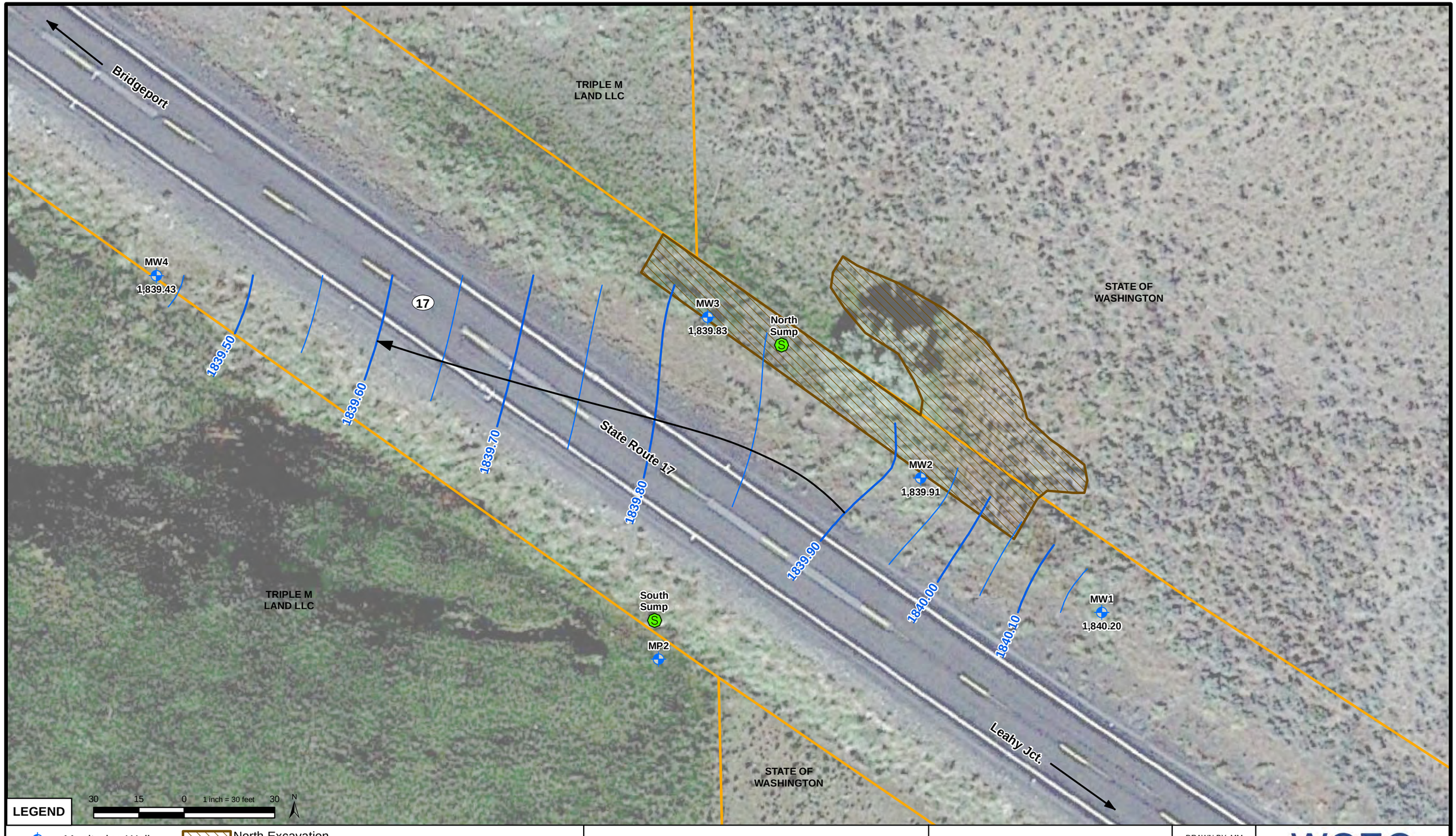
FIGURE 2



LEGEND

- Monitoring Well
- Sump
- Property Boundary (Approximate)
- North Excavation - 1994
- Groundwater Elevation Contour (ft)

Potentiometric Surface 9-26-23

North Central Petroleum Spill
SR 17 Near MP 123
Bridgeport, WA

DRAWN BY: MM
DATE: 10/23/23
SCALE: 1:360

PROJECT NUMBER: 99-2946-90
IMAGE SOURCE: ESRI BASEMAPS

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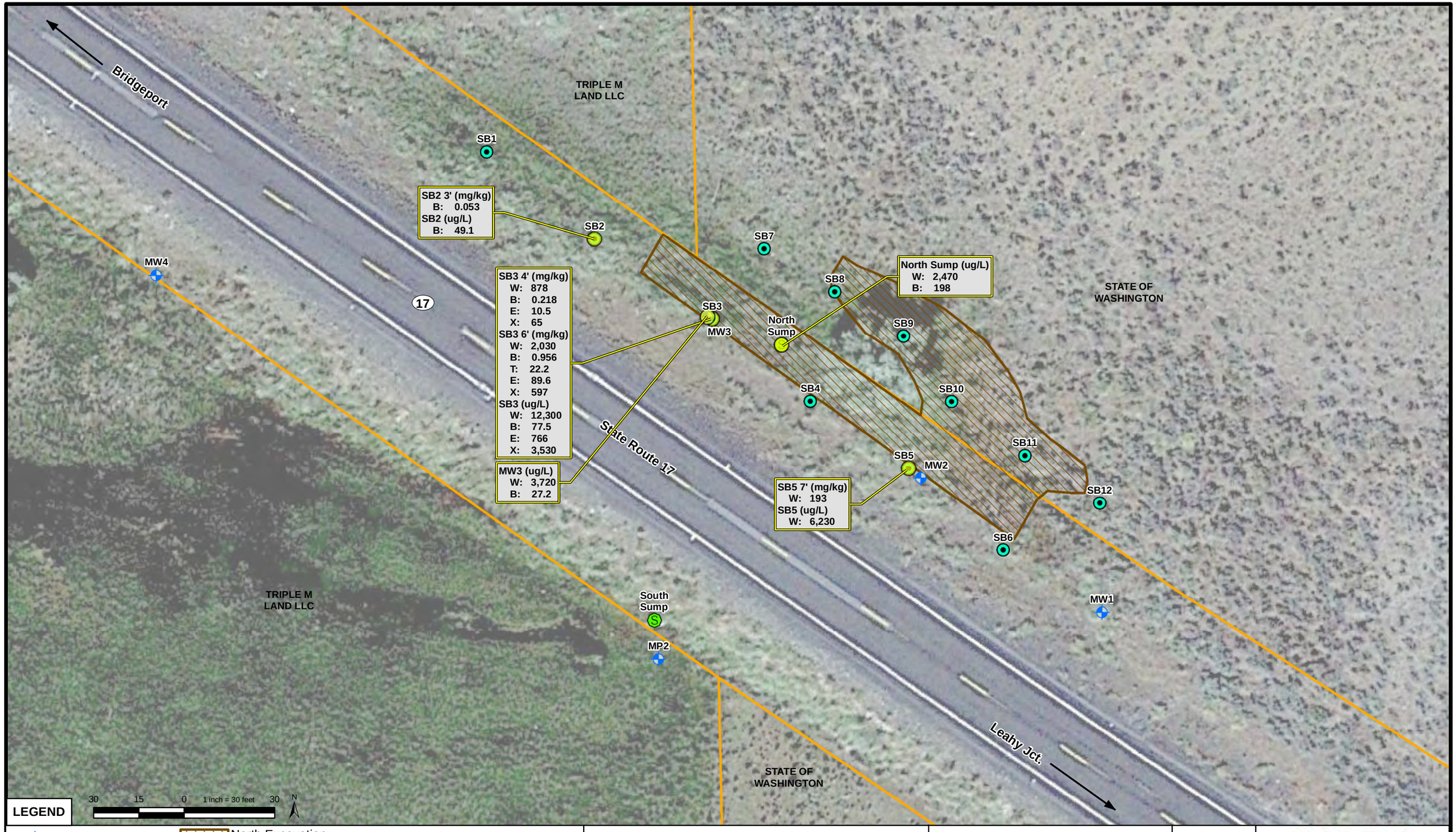
FIGURE 3



MTCA Method A	Soil (mg/kg)	Groundwater (ug/L)
W: WTPH-Gas	30	800
B: Benzene	0.03	5
T: Toluene	7	1,000
E: Ethylbenzene	6	700
X: Xylenes	9	1,000

Cleanup Level Exceedances

North Central Petroleum Spill
SR 17 Near MP 123
Bridgeport, WA

DRAWN BY: MM
DATE: 12/14/23
SCALE: 1:360

PROJECT NUMBER: 99-2946-90
IMAGE SOURCE: ESRI BASEMAPS

WCEC ENVIRONMENTAL CONSULTANTS

FIGURE 4

Tables

TABLE 1
Groundwater Elevation Data
North Central Petroleum, Inc., Gasoline Spill, Bridgeport, WA

Monitor Point	Sample Date	Top of Casing Elevation	Depth to Groundwater	Groundwater Elevation
MW1				
	07/12/23	1849.11	8.10	1841.01
	09/26/23	1849.11	8.91	1840.20
MW2				
	07/12/23	1845.61	4.68	1840.93
	09/26/23	1845.61	5.70	1839.91
MW3				
	07/12/23	1843.49	2.64	1840.85
	09/26/23	1843.49	3.66	1839.83
MW4				
	07/12/23	1843.11	2.90	1840.21
	09/26/23	1843.11	3.68	1839.43

All measurements in feet (ft).

99-2946-90

TABLE 1 Continued (Page 2 of 5 Pages)

Groundwater Elevation Data

North Central Petroleum, Inc., Gasoline Spill, Bridgeport, WA

Monitor Point	Sample Date	Top of Casing Elevation	Depth to Groundwater	Groundwater Elevation
MP1				
	09/10/96	101.38	2.71	98.67
	09/17/97	101.38	2.33	99.05
	03/24/98	101.38	1.32	100.06
	10/11/98	101.38	1.31	100.07
	03/28/99	101.38	0.94	100.44
	09/28/99	101.38	2.53	98.85
	03/10/00	101.38	2.22	99.16
	09/20/00	101.38	2.41	98.97
	03/14/01	101.38	1.91	99.47
	03/21/02	101.38	2.20	99.18
	09/10/02	101.38	5.40	95.98
	09/03/03	101.38	4.41	96.97
	09/02/04	101.38	4.41	96.97
	09/06/05	101.38	5.20	96.18
	09/13/06	101.38	4.94	96.44
	09/24/07	101.38	5.13	96.25
	09/03/08	101.38	5.36	96.02
	09/02/09	101.38	5.64	95.74
	09/07/10	101.38	5.41	95.97
	09/28/11	101.38	4.74	96.64
	09/12/12	101.38	5.61	95.77
	09/10/13	101.38	5.62	95.76
	09/10/14	101.38	6.88	94.50
	12/15/14	101.38	5.30	96.08
	03/18/15	101.38	2.76	98.62
	06/10/15	101.38	4.68	96.70
	09/02/15	101.38	6.77	94.61

All measurements in feet (ft).

TABLE 1 Continued (Page 3 of 5 Pages)

Groundwater Elevation Data

North Central Petroleum, Inc., Gasoline Spill, Bridgeport, WA

Monitor Point	Sample Date	Top of Casing Elevation	Depth to Groundwater	Groundwater Elevation
MP2				
	09/10/96	101.25	2.87	98.38
	09/17/97	101.25	2.22	99.03
	03/24/98	101.25	1.36	99.89
	10/11/98	101.25	1.23	100.02
	03/28/99	101.25	0.90	100.35
	09/28/99	101.25	2.50	98.75
	03/10/00	101.25	2.24	99.01
	09/20/00	101.25	2.63	98.62
	03/14/01	101.25	2.19	99.06
	08/28/01	101.25	5.05	96.20
	03/21/02	101.25	2.34	98.91
	09/10/02	101.25	5.42	95.83
	09/03/03	101.25	5.42	95.83
	09/02/04	101.25	3.75	97.50
	09/06/05	101.25	5.39	95.86
	09/13/06	101.25	4.87	96.38
	09/24/07	101.25	5.13	96.12
	09/03/08	101.25	5.49	95.76
	09/02/09	101.25	5.78	95.47
	09/07/10	101.25	5.56	95.69
	09/28/11	101.25	5.07	96.18
	09/12/12	101.25	5.87	95.38
	09/10/13	101.25	5.91	95.34
	09/10/14	101.25	6.53	94.72
	12/15/14	101.25	6.01	95.24
	03/18/15	101.25	3.71	97.54
	06/10/15	101.25	5.17	96.08
	09/02/15	101.25	6.97	94.28

All measurements in feet (ft).

TABLE 1 Continued (Page 4 of 5 Pages)

Groundwater Elevation Data

North Central Petroleum, Inc., Gasoline Spill, Bridgeport, WA

Monitor Point	Sample Date	Top of Casing Elevation	Depth to Groundwater	Groundwater Elevation
MP3				
	09/10/96	99.20	1.95	97.25
	09/17/97	99.20	1.09	98.11
	03/24/98	99.20	0.90	98.30
	10/11/98	99.20	1.28	97.92
	03/28/99	99.20	0.38	98.82
	09/28/99	99.20	1.90	97.30
	03/10/00	99.20	1.80	97.40
	09/20/00	99.20	2.11	97.09
	03/14/01	99.20	1.93	97.27
	08/28/01	99.20	5.04	94.16
	09/10/02	99.20	5.41	93.79
	09/03/03	99.20	5.52	93.68
	09/02/04	99.20	3.40	95.80
	09/06/05	99.20	5.33	93.87
	09/13/06	99.20	4.70	94.50
	09/24/07	99.20	4.96	94.24
	09/03/08	99.20	5.57	93.63
	09/02/09	99.20	5.90	93.30
	09/07/10	99.20	5.55	93.65
	09/28/11	99.20	4.80	94.40
	09/12/12	99.20	5.94	93.26
	09/10/13	99.20	5.89	93.31
	09/10/14	99.20	-	-
	12/15/14	99.20	5.02	94.18
	03/18/15	99.20	2.91	96.29
	06/10/15	99.20	5.03	94.17
	09/02/15	99.20	7.27	91.93

All measurements in feet (ft). 99-2946-90

(-) Well was dry.

TABLE 1 Continued (Page 5 of 5 Pages)

Groundwater Elevation Data

North Central Petroleum, Inc., Gasoline Spill, Bridgeport, WA

Monitor Point	Sample Date	Top of Casing Elevation	Depth to Groundwater	Groundwater Elevation
MP4				
	09/10/96	98.10	1.79	96.31
	09/17/97	98.10	0.98	97.12
	03/24/98	98.10	0.77	97.33
	10/11/98	98.10	1.35	96.75
	03/28/99	98.10	0.65	97.45
	09/28/99	98.10	1.67	96.43
	03/10/00	98.10	1.86	96.24
	09/20/00	98.10	1.97	96.13
	03/14/01	98.10	1.92	96.18
	08/28/01	98.10	4.23	93.87
	03/21/02	98.10	1.50	96.60
	09/10/02	98.10	4.70	93.40
	09/03/03	98.10	4.95	93.15
	09/02/04	98.10	5.55	92.55
	09/06/05	98.10	4.98	93.12
	09/13/06	98.10	3.76	94.34
	09/24/07	98.10	5.04	93.06
	09/03/08	98.10	4.56	93.54
	09/02/09	98.10	5.29	92.81
	09/07/10	98.10	4.15	93.95
	09/28/11	98.10	3.08	95.02
	09/12/12	98.10	4.60	93.50
	09/10/13	98.10	4.79	93.31
	09/10/14	98.10	6.40	91.70
	12/15/14	98.10	2.64	95.46
	03/18/15	98.10	1.04	97.06
	06/10/15	98.10	3.43	94.67
	09/02/15	98.10	6.05	92.05

All measurements in feet (ft).

TABLE 2

Groundwater Analytical Results - WTPH-Gas, BTEX, MTBE
North Central Petroleum, Inc., Gasoline Spill, Bridgeport, WA

Monitor Point	Sample Date	WTPH-Gas (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW1							
	07/12/23	<100	<1	3	<1	<3	<1
	09/26/23	<100	<1	<1	<1	<3	<1
MW2							
	07/12/23	<100	<1	6.4	<1	<3	<1
	09/26/23	<100	<1	<1	<1	<3	<1
MW3							
	07/12/23	**3,550**	**79.8**	10.4	128	263	<1
	09/26/23	**3,720**	**27.2**	1.3	216	1.3	<1
MW4							
	07/12/23	<100	<1	10.2	<1	<3	<1
	09/26/23	<100	<1	<1	<1	<3	<1
North Sump							
	12/10/94	**191,000**	**42,500**	**48,000**	**4,700**	**28,000**	-
	03/28/95	**98,000**	**16,000**	**21,000**	**1,300**	**8,300**	-
	08/14/95	**240,000**	**25,000**	**43,000**	**2,800**	**24,000**	-
	06/02/21	**2,470**	**198**	226	10.4	49.9	<2
Clean Up Level		800	5	1,000	700	1,000	20

Bold indicates that the constituent exceeds the MTCA Method A cleanup level. 99-2946-90

(-) Sample not analyzed for constituent.

TABLE 2 Continued (Page 2 of 5 Pages)

Groundwater Analytical Results - WTPH-Gas, BTEX, MTBE
North Central Petroleum, Inc., Gasoline Spill, Bridgeport, WA

Monitor Point	Sample Date	WTPH-Gas (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MP1							
	09/10/96	<50	<0.5	<0.5	<0.5	<1	-
	09/17/97	<50	<0.5	<0.5	<0.5	<1	-
	03/24/98	<50	<0.5	<0.5	<0.5	<1	-
	10/11/98	<50	<0.5	<0.5	<0.5	<1	-
	03/28/99	<50	<0.5	<0.5	<0.5	<1	-
	09/28/99	<50	<0.5	<0.5	<0.5	<1	-
	03/10/00	<50	<0.5	<0.5	<0.5	<1	-
	09/20/00	**4,470**	**3,390**	<100	146	418	-
	03/14/01	<50	0.613	<0.5	<0.5	<1	-
	03/21/02	<100	<0.5	<2	<1	<1.5	-
	09/10/02	<100	<0.5	<2	<1	<1.5	-
	09/03/03	<100	<0.5	<2	<1	<1.5	<5
	09/02/04	<100	<0.5	<2	<1	<1.5	<5
	09/06/05	<100	<0.5	<2	<1	<1.5	<5
	09/13/06	<100	<0.5	<2	<1	<1.5	<5
	09/24/07	<100	<0.5	<2	<1	<1.5	<5
	09/03/08	<100	<0.5	<2	<1	<1.5	<5
	09/02/09	<100	<0.2	<1	<1	<1	<1
	09/07/10	<100	<0.2	<1	<1	<3	<1
	09/28/11	159	<1	<1	<1	<3	<1
	09/12/12	<50	<1	<1	<1	<3	<1
	09/10/13	<100	<1	<1	<1	<3	<1
	09/10/14	<100	<1	<1	<1	<3	<1
	12/15/14	<100	<1	<1	<1	<3	<1
	03/18/15	<100	<1	<1	<1	<3	<1
	06/10/15	<100	<1	<1	<1	<3	<1
	09/02/15	<100	<1	<1	<1	<3	<1
Clean Up Level		800	5	1,000	700	1,000	20

Bold indicates that the constituent exceeds the MTCA Method A cleanup level. 99-2946-90

(-) Sample not analyzed for constituent.

TABLE 2 Continued (Page 3 of 5 Pages)

Groundwater Analytical Results - WTPH-Gas, BTEX, MTBE

North Central Petroleum, Inc., Gasoline Spill, Bridgeport, WA

Monitor Point	Sample Date	WTPH-Gas (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MP2							
	09/10/96	**1,800**	**8.52**	147	49.4	283	-
	09/17/97	**1,990**	**47**	106	33.7	332	-
	03/24/98	757	**5.24**	31.1	27.8	94.2	-
	10/11/98	**1,080**	**30.6**	43.3	29.2	115	-
	03/28/99	**4,270**	**38**	77.9	185	539	-
	09/28/99	**11,200**	**3,540**	78.2	397	**1,120**	-
	03/10/00	**7,890**	**<68**	65.8	299	900	-
	09/20/00	**9,120**	**3,780**	<53	178	520	-
	03/14/01	**6,760**	**<19.8**	8.18	188	539	-
	08/28/01	**5,450**	**1,620**	19.8	18	36.9	-
	03/21/02	**2,840**	**71.5**	<2	41	90.5	-
	09/10/02	**10,700**	**4,140**	58.1	289	763	-
	09/03/03	**7,160**	**3,060**	33.5	196	389	**67**
	09/02/04	**5,200**	**2,100**	20.3	227	94.2	**45.5**
	09/06/05	**1,670**	**354**	7.94	10.3	58	17.2
	09/13/06	**3,370**	**1,030**	<20	283	90.9	**61.7**
	09/24/07	**1,960**	**484**	8.99	348	11.6	**41.2**
	09/03/08	**<1,000**	**205**	<20	220	<15	<10
	09/02/09	597	**38.7**	<10	99.4	<10	<10
	09/07/10	<100	**11.4**	<1	5.95	<3	<1
	09/28/11	<50	**17.3**	<1	4.1	<3	<1
	09/12/12	54.2	**11.8**	<1	3.9	<3	<1
	09/10/13	<100	1.6	<1	<1	<3	<1
	09/10/14	*	*	*	*	*	*
	12/15/14	<100	<1	<1	<1	<3	<1
	03/18/15	<100	<1	<1	<1	<3	<1
	06/10/15	<100	<1	<1	<1	<3	<1
	09/02/15	*	*	*	*	*	*
Clean Up Level		800	5	1,000	700	1,000	20

Bold indicates that the constituent exceeds the MTCA Method A cleanup level. 99-2946-90

(*) Insufficient water for sample collection.

(-) Sample not analyzed for constituent.

TABLE 2 Continued (Page 4 of 5 Pages)

Groundwater Analytical Results - WTPH-Gas, BTEX, MTBE

North Central Petroleum, Inc., Gasoline Spill, Bridgeport, WA

Monitor Point	Sample Date	WTPH-Gas (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MP3							
	09/10/96	<50	**31.4**	0.586	<0.5	<1	-
	09/17/97	<50	<0.5	<0.5	<0.5	<1	-
	03/24/98	<50	<0.5	<0.5	<0.5	<1	-
	10/11/98	<50	<0.5	<0.5	<0.5	<1	-
	03/28/99	<50	<0.5	<0.5	<0.5	<1	-
	09/28/99	<50	<0.5	<0.5	<0.5	<1	-
	03/10/00	<50	<0.5	<0.5	<0.5	<1	-
	09/20/00	<50	<0.5	0.561	<0.5	1.17	-
	03/14/01	50.8	<0.5	<0.5	<0.5	<0.5	-
	08/28/01	<50	<0.5	<0.5	<0.5	<1	-
	09/10/02	<100	2.71	<2	<1	<1.5	-
	09/03/03	106	<0.5	<2	<1	<1.5	<5
	09/02/04	<100	<0.5	<2	<1	<1.5	<5
	09/06/05	<100	1.16	<2	<1	<1.5	<5
	09/13/06	<100	0.872	<2	<1	<1.5	<5
	09/24/07	<100	<0.5	<2	<1	<1.5	<5
	09/03/08	<100	<0.5	<2	<1	<1.5	<5
	09/02/09	<100	<0.2	<1	<1	<1	<1
	09/07/10	<100	<0.2	<1	<1	<3	<1
	09/28/11	<50	<1	<1	<1	<3	<1
	09/12/12	<50	<1	<1	<1	<3	<1
	09/10/13	<100	<1	<1	<1	<3	<1
	09/10/14	*	*	*	*	*	*
	12/15/14	<100	<1	<1	<1	<3	<1
	03/18/15	<100	<1	<1	<1	<3	<1
	06/10/15	<100	<1	<1	<1	<3	<1
	09/02/15	<100	<1	<1	<1	<3	<1
Clean Up Level		800	5	1,000	700	1,000	20

Bold indicates that the constituent exceeds the MTCA Method A cleanup level. 99-2946-90

(*) Insufficient water for sample collection.

(-) Sample not analyzed for constituent.

TABLE 2 Continued (Page 5 of 5 Pages)

Groundwater Analytical Results - WTPH-Gas, BTEX, MTBE

North Central Petroleum, Inc., Gasoline Spill, Bridgeport, WA

Monitor Point	Sample Date	WTPH-Gas (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MP4							
	09/10/96	<50	<0.5	<0.5	<0.5	<1	-
	09/17/97	<50	<0.5	<0.5	<0.5	<1	-
	03/24/98	<50	<0.5	<0.5	<0.5	<1	-
	10/11/98	<50	<0.5	<0.5	<0.5	<1	-
	03/28/99	<50	<0.5	<0.5	<0.5	<1	-
	09/28/99	<50	<0.5	<0.5	<0.5	<1	-
	03/10/00	<50	<0.5	<0.5	<0.5	<1	-
	09/20/00	<50	<0.5	<0.5	<0.5	<1	-
	03/14/01	<50	<0.5	<0.5	<0.5	<1	-
	08/28/01	<50	<0.5	<0.5	<0.5	<1	-
	03/21/02	<100	<0.5	<2	<1	<1.5	-
	09/10/02	<100	0.855	<2	<1	<1.5	-
	09/03/03	<100	<0.5	<2	<1	<1.5	<5
	09/02/04	<100	<0.5	<2	<1	<0.5	**29.7**
	09/06/05	<100	<0.5	<2	<1	<1.5	**39.4**
	09/13/06	<100	<0.5	<2	<1	<1.5	**36**
	09/24/07	<100	<0.5	<2	<1	<1.5	**24.6**
	09/03/08	<100	<0.5	<2	<1	<1.5	10.2
	09/02/09	<100	<0.2	<1	<1	<1	14.2
	09/07/10	<100	<0.2	<1	<1	<3	10.8
	09/28/11	<50	<1	<1	<1	<3	6.3
	09/12/12	<50	<1	<1	<1	<3	4.7
	09/10/13	<100	<1	<1	<1	<3	3.1
	09/10/14	<100	<1	<1	<1	<3	3.9
	12/15/14	<100	<1	<1	<1	<3	<1
	03/18/15	<100	<1	<1	<1	<3	<1
	06/10/15	<100	<1	<1	<1	<3	1.2
	09/02/15	<100	<1	<1	<1	<3	2.4
Clean Up Level		800	5	1,000	700	1,000	20

Bold indicates that the constituent exceeds the MTCA Method A cleanup level. 99-2946-90

(-) Sample not analyzed for constituent.

TABLE 3

Groundwater Analytical Results - Natural Attenuation Parameters
North Central Petroleum, Inc., Gasoline Spill, Bridgeport, WA

Monitor Point	Sample Date	Lab Analysis		Field Parameters	
		Sulfate (mg/L)	Nitrate/Nitrite (mg/L)	Dissolved Oxygen (mg/L)	ORP (mV)
MW1					
	07/12/23	104	0.35	4.46	51.4
	09/26/23	-	-	-	-
MW2					
	07/12/23	118	<0.1	2.94	-88.6
	09/26/23	84	<0.1	1.44	-124.3
MW3					
	07/12/23	135	<0.1	1.26	-102.3
	09/26/23	64.7	<0.1	1.03	-127.5
MW4					
	07/12/23	96.3	<0.1	3.12	-75.9
	09/26/23	101	<0.1	0.97	-111.3

(-) Sample not analyzed for constituent.

99-2946-90

TABLE 3 Continued (Page 2 of 5 Pages)

Groundwater Analytical Results - Natural Attenuation Parameters
North Central Petroleum, Inc., Gasoline Spill, Bridgeport, WA

Monitor Point	Sample Date	Lab Analysis		Field Parameters	
		Sulfate (mg/L)	Nitrate/Nitrite (mg/L)	Dissolved Oxygen (mg/L)	pH
MP1					
	09/17/97	-	<0.01	1.20	7.28
	03/24/98	-	<0.1	1.19	7.35
	10/11/98	-	0.283	9.55	7.84
	03/28/99	-	0.278	10.90	8.55
	09/28/99	-	0.246	11.80	8.68
	03/10/00	70.1	<0.01	0.76	7.10
	09/20/00	2.67	<0.01	0.26	7.22
	03/14/01	75.5	<0.01	4.11	6.98
	03/21/02	97.6	<0.01	0.57	7.55
	09/10/02	101	<0.02	0.25	7.68
	09/03/03	103	0.012	4.10	6.90
	09/02/04	112	4.47	1.82	7.76
	09/06/05	-	-	2.14	7.83
	09/13/06	-	-	0.95	7.52
	09/24/07	-	-	1.45	7.96
	09/03/08	-	-	3.10	7.78
	09/02/09	-	-	1.44	9.44
	09/07/10	-	-	3.50	7.81
	09/28/11	-	-	1.62	7.88
	09/12/12	-	-	-	-
	09/10/13	-	-	0.75	6.90
	09/10/14	-	-	1.63	7.31
	12/15/14	-	-	0.59	7.59
	03/18/15	-	-	1.18	6.90
	06/10/15	-	-	0.97	7.15
	09/02/15	-	-	0.40	7.44

(-) Sample not analyzed for constituent.

TABLE 3 Continued (Page 3 of 5 Pages)

Groundwater Analytical Results - Natural Attenuation Parameters
North Central Petroleum, Inc., Gasoline Spill, Bridgeport, WA

Monitor Point	Sample Date	Lab Analysis		Field Parameters	
		Sulfate (mg/L)	Nitrate/Nitrite (mg/L)	Dissolved Oxygen (mg/L)	pH
MP2					
	09/17/97	-	1.73	1.31	7.38
	03/24/98	-	<0.1	2.58	7.39
	10/11/98	-	0.342	5.15	7.51
	03/28/99	-	<0.01	1.45	7.50
	09/28/99	-	0.252	<1.00	7.46
	03/10/00	70.2	0.0439	0.60	6.98
	09/20/00	3.39	0.0108	0.16	6.51
	03/14/01	143	<0.01	4.03	6.93
	08/28/01	6.08	35.5	1.27	7.28
	03/21/02	71.5	<0.01	0.57	7.53
	09/10/02	31.1	<0.02	0.11	7.40
	09/03/03	7.07	0.193	9.95	6.97
	09/02/04	9.03	4.5	1.55	7.32
	09/06/05	-	-	1.33	7.91
	09/13/06	-	-	1.38	7.53
	09/24/07	-	-	0.54	8.12
	09/03/08	-	-	1.98	8.18
	09/02/09	-	-	0.61	9.52
	09/07/10	-	-	0.96	7.19
	09/28/11	-	-	1.38	7.75
	09/12/12	-	-	-	-
	09/10/13	-	-	0.37	3.60
	09/10/14	-	-	-	-
	12/15/14	-	-	2.06	8.07
	03/18/15	-	-	3.18	7.31
	06/10/15	-	-	0.80	7.02
	09/02/15	-	-	-	-

(-) Sample not analyzed for constituent.

99-2946-90

TABLE 3 Continued (Page 4 of 5 Pages)

Groundwater Analytical Results - Natural Attenuation Parameters
North Central Petroleum, Inc., Gasoline Spill, Bridgeport, WA

Monitor Point	Sample Date	Lab Analysis		Field Parameters	
		Sulfate (mg/L)	Nitrate/Nitrite (mg/L)	Dissolved Oxygen (mg/L)	pH
MP3					
	09/17/97	-	<0.01	1.85	7.39
	03/24/98	-	<0.1	3.99	7.76
	10/11/98	-	<0.1	5.10	7.63
	03/28/99	-	<0.01	1.40	7.46
	09/28/99	-	0.0546	<1.00	7.39
	03/10/00	69.7	0.0284	0.72	7.43
	09/20/00	80.1	<0.01	0.25	7.22
	03/14/01	61.8	13.1	4.65	7.09
	08/28/01	68.6	12.3	1.12	7.34
	09/10/02	70	<0.02	1.08	7.61
	09/03/03	49.1	0.0182	5.98	6.71
	09/02/04	86.5	4.43	1.24	7.89
	09/06/05	-	-	1.61	7.58
	09/13/06	-	-	2.96	7.39
	09/24/07	-	-	7.31	8.00
	09/03/08	-	-	3.64	7.47
	09/02/09	-	-	7.99	9.45
	09/07/10	-	-	6.93	7.18
	09/28/11	-	-	11.30	6.61
	09/12/12	-	-	-	-
	09/10/13	-	-	0.55	5.30
	09/10/14	-	-	-	-
	12/15/14	-	-	1.81	7.37
	03/18/15	-	-	1.81	6.49
	06/10/15	-	-	1.10	6.42
	09/02/15	-	-	-	-

(-) Sample not analyzed for constituent.

TABLE 3 Continued (Page 5 of 5 Pages)

Groundwater Analytical Results - Natural Attenuation Parameters
North Central Petroleum, Inc., Gasoline Spill, Bridgeport, WA

Monitor Point	Sample Date	Lab Analysis		Field Parameters	
		Sulfate (mg/L)	Nitrate/Nitrite (mg/L)	Dissolved Oxygen (mg/L)	pH
MP4					
	09/17/97	-	<0.01	1.55	6.92
	03/24/98	-	0.1	3.54	7.41
	10/11/98	-	<0.1	9.63	7.20
	03/28/99	-	0.594	1.05	7.33
	09/28/99	-	0.01	1.53	7.25
	03/10/00	71.8	0.0266	0.79	7.48
	09/20/00	113	<0.01	0.37	7.25
	03/14/01	129	25.3	4.47	7.11
	08/28/01	143	51.8	0.37	7.02
	03/21/02	140	<0.01	0.58	7.39
	09/10/02	132	<0.02	1.23	7.40
	09/03/03	134	0.446	6.71	6.40
	09/02/04	79.5	4.5	1.37	7.63
	09/06/05	-	-	1.56	7.43
	09/13/06	-	-	1.75	7.21
	09/24/07	-	-	7.85	7.91
	09/03/08	-	-	6.32	7.72
	09/02/09	-	-	2.73	10.35
	09/07/10	-	-	1.65	6.97
	09/28/11	-	-	1.01	7.76
	09/12/12	-	-	2.58	6.92
	09/10/13	-	-	0.41	3.60
	09/10/14	-	-	2.99	6.62
	12/15/14	-	-	1.79	7.22
	03/18/15	-	-	1.02	6.57
	06/10/15	-	-	1.25	7.03
	09/02/15	-	-	0.56	6.48

(-) Sample not analyzed for constituent.

TABLE 4

Soil Borehole Analytical Results - WTPH-Gas, BTEX, MTBE
North Central Petroleum, Inc., Gasoline Spill, Bridgeport, WA

Sample Location	Sample Depth (ft)	Sample Date	WTPH-Gas (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)
SB1								
	3	06/02/21	<9.3	<0.0373	<0.0932	<0.0932	<0.279	<0.0932
	6	06/02/21	<12	<0.0435	<0.109	<0.109	<0.326	<0.109
SB2								
	3	06/02/21	<8.7	**0.053**	<0.0809	<0.0809	<0.243	<0.0809
	6	06/02/21	<14.4	<0.061	<0.153	<0.153	<0.458	<0.153
SB3 (MW3)								
	4	06/02/21	**878**	**0.218**	1.27	**10.5**	**65**	<0.0743
	6	06/02/21	**2,030**	**0.956**	**22.2**	**89.6**	**597**	<0.0794
SB4								
	3	06/02/21	<8.3	<0.0308	<0.0771	<0.0771	<0.231	<0.0771
	6	06/02/21	<12.1	<0.0365	<0.0912	<0.0912	<0.274	<0.0912
SB5 (MW2)								
	3	06/02/21	<7	<0.0243	<0.0608	<0.0608	<0.182	<0.0608
	7	06/02/21	**193**	<0.0487	<0.122	<0.122	<0.365	<0.122
SB6								
	3	06/02/21	<6.2	<0.0265	<0.0663	<0.0663	<0.199	<0.0663
	6	06/02/21	<7.1	<0.0281	<0.0702	<0.0702	<0.210	<0.0702
SB7								
	3	07/11/23	<4.5	<0.0221	<0.0552	<0.0552	<0.166	<0.0552
SB8								
	4	07/11/23	<7.6	<0.0208	<0.052	<0.052	<0.156	<0.052
	7	07/11/23	10.5	<0.0159	<0.0397	<0.0397	<0.119	<0.0397
SB9								
	4	07/11/23	<4.7	<0.0184	<0.046	<0.046	<0.138	<0.046
SB10								
	4	07/11/23	<4.8	<0.0171	<0.0428	<0.0428	<0.128	<0.0428
SB11								
	4	07/11/23	<5.5	<0.0201	<0.0504	<0.0504	<0.151	<0.0504
SB12								
	8	07/11/23	<5.2	<0.0209	<0.0521	<0.0521	<0.156	<0.0521
MW1								
	5	07/11/23	<5.9	<0.0226	<0.0565	<0.0565	<0.169	<0.0565
	8	07/11/23	<4.5	<0.0184	<0.046	<0.046	<0.138	<0.046
MW4								
	5	07/11/23	<4.7	<0.020	<0.0499	<0.0499	<0.150	<0.0499
Clean Up Level			30	0.03	7	6	9	0.1

Bold indicates that the constituent exceeds the MTCA Method A cleanup level.

TABLE 5

Soil Borehole Groundwater Analytical Results - WTPH-Gas, BTEX, MTBE
North Central Petroleum, Inc., Gasoline Spill, Bridgeport, WA

Sample Location	Sample Date	WTPH-Gas (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
SB2							
	06/02/21	<100	**49.1**	<1	<1	<3	<1
SB3							
	06/02/21	**12,300**	**77.5**	254	**766**	**3,530**	<1
SB5							
	06/02/21	**6,230**	<1	<1	<1	<3	<1
Clean Up Level		800	5	1,000	700	1,000	20

Bold indicates that the constituent exceeds the MTCA Method A cleanup level.

99-2946-90

Appendix A

Laboratory Analytical Report

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

October 11, 2023

Myles Morris
WCEC (Montana)
1030 South Ave. W
Missoula, MT 59801

RE: Project: 2946 Bridgeport
Pace Project No.: 10670452

Dear Myles Morris:

Enclosed are the analytical results for sample(s) received by the laboratory on September 28, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(612)607-1700
Project Manager

Enclosures

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 2946 Bridgeport
Pace Project No.: 10670452

Pace Analytical Services, LLC - Minneapolis MN
1700 Elm Street SE, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
GMP+ Certification #: GMP050884
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification (A2LA) #: R-036
North Dakota Certification (MN) #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 2946 Bridgeport
Pace Project No.: 10670452

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10670452001	**MW1**	Water	09/26/23 14:00	09/28/23 08:50
10670452002	**MW2**	Water	09/26/23 14:40	09/28/23 08:50
10670452003	**MW3**	Water	09/26/23 16:35	09/28/23 08:50
10670452004	**MW4**	Water	09/26/23 17:30	09/28/23 08:50
10670452005	**Trip Blank**	Water	09/26/23 00:00	09/28/23 08:50

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 2946 Bridgeport
Pace Project No.: 10670452

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10670452001	**MW1**	NWTPH-Gx	TM2	2	PASI-M
		EPA 8260D	PAB	8	PASI-M
10670452002	**MW2**	NWTPH-Gx	TM2	2	PASI-M
		EPA 8260D	PAB	8	PASI-M
		EPA 300.0	AR3	1	PASI-M
		EPA 353.2	JFP	1	PASI-M
10670452003	**MW3**	NWTPH-Gx	TM2	2	PASI-M
		EPA 8260D	JEM, PAB	8	PASI-M
		EPA 300.0	AR3	1	PASI-M
		EPA 353.2	JFP	1	PASI-M
10670452004	**MW4**	NWTPH-Gx	TM2	2	PASI-M
		EPA 8260D	PAB	8	PASI-M
		EPA 300.0	AR3	1	PASI-M
		EPA 353.2	JFP	1	PASI-M
10670452005	**Trip Blank**	NWTPH-Gx	TM2	2	PASI-M
		EPA 8260D	PAB	8	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 2946 Bridgeport
Pace Project No.: 10670452

Sample: MW1 **Lab ID: 10670452001** Collected: 09/26/23 14:00 Received: 09/28/23 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
	Pace Analytical Services - Minneapolis							
TPH as Gas	ND	ug/L	100	1		10/06/23 05:21		CL,P2
Surrogates								
a,a,a-Trifluorotoluene (S)	94	%.	50-150	1		10/06/23 05:21	98-08-8	
8260D MSV UST	Analytical Method: EPA 8260D							
	Pace Analytical Services - Minneapolis							
Benzene	ND	ug/L	1.0	1		10/03/23 05:19	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/03/23 05:19	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/03/23 05:19	1634-04-4	
Toluene	ND	ug/L	1.0	1		10/03/23 05:19	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/03/23 05:19	1330-20-7	
Surrogates								
1,2-Dichlorobenzene-d4 (S)	98	%.	75-125	1		10/03/23 05:19	2199-69-1	
4-Bromofluorobenzene (S)	97	%.	75-125	1		10/03/23 05:19	460-00-4	
Toluene-d8 (S)	98	%.	75-125	1		10/03/23 05:19	2037-26-5	

Sample: MW2 **Lab ID: 10670452002** Collected: 09/26/23 14:40 Received: 09/28/23 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx							
	Pace Analytical Services - Minneapolis							
TPH as Gas	ND	ug/L	100	1		10/10/23 01:44		
Surrogates								
a,a,a-Trifluorotoluene (S)	104	%.	50-150	1		10/10/23 01:44	98-08-8	
8260D MSV UST	Analytical Method: EPA 8260D							
	Pace Analytical Services - Minneapolis							
Benzene	ND	ug/L	1.0	1		10/03/23 05:35	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/03/23 05:35	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/03/23 05:35	1634-04-4	
Toluene	ND	ug/L	1.0	1		10/03/23 05:35	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/03/23 05:35	1330-20-7	
Surrogates								
1,2-Dichlorobenzene-d4 (S)	98	%.	75-125	1		10/03/23 05:35	2199-69-1	
4-Bromofluorobenzene (S)	95	%.	75-125	1		10/03/23 05:35	460-00-4	
Toluene-d8 (S)	98	%.	75-125	1		10/03/23 05:35	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0							
	Pace Analytical Services - Minneapolis							
Sulfate	**84.0**	mg/L	1.2	1		09/28/23 22:29	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2							
	Pace Analytical Services - Minneapolis							
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	1		10/05/23 11:49		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 2946 Bridgeport
Pace Project No.: 10670452

Sample: MW3 **Lab ID: 10670452003** Collected: 09/26/23 16:35 Received: 09/28/23 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Pace Analytical Services - Minneapolis							
TPH as Gas	**3720**	ug/L	100	1		10/06/23 05:58		CL,P2
Surrogates								
a,a,a-Trifluorotoluene (S)	96	%.	50-150	1		10/06/23 05:58	98-08-8	
8260D MSV UST	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis							
Benzene	**27.2**	ug/L	1.0	1		10/03/23 14:23	71-43-2	
Ethylbenzene	**216**	ug/L	5.0	5		10/04/23 21:14	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/03/23 14:23	1634-04-4	
Toluene	**1.3**	ug/L	1.0	1		10/03/23 14:23	108-88-3	
Xylene (Total)	**297**	ug/L	3.0	1		10/03/23 14:23	1330-20-7	
Surrogates								
1,2-Dichlorobenzene-d4 (S)	100	%.	75-125	1		10/03/23 14:23	2199-69-1	
4-Bromofluorobenzene (S)	98	%.	75-125	1		10/03/23 14:23	460-00-4	
Toluene-d8 (S)	99	%.	75-125	1		10/03/23 14:23	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Sulfate	**64.7**	mg/L	1.2	1		09/28/23 22:43	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2 Pace Analytical Services - Minneapolis							
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	1		10/05/23 11:50		

Sample: MW4 **Lab ID: 10670452004** Collected: 09/26/23 17:30 Received: 09/28/23 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Pace Analytical Services - Minneapolis							
TPH as Gas	ND	ug/L	100	1		10/10/23 02:16		
Surrogates								
a,a,a-Trifluorotoluene (S)	100	%.	50-150	1		10/10/23 02:16	98-08-8	
8260D MSV UST	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis							
Benzene	ND	ug/L	1.0	1		10/03/23 14:39	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/03/23 14:39	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/03/23 14:39	1634-04-4	
Toluene	ND	ug/L	1.0	1		10/03/23 14:39	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/03/23 14:39	1330-20-7	
Surrogates								
1,2-Dichlorobenzene-d4 (S)	98	%.	75-125	1		10/03/23 14:39	2199-69-1	
4-Bromofluorobenzene (S)	98	%.	75-125	1		10/03/23 14:39	460-00-4	
Toluene-d8 (S)	100	%.	75-125	1		10/03/23 14:39	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 2946 Bridgeport
Pace Project No.: 10670452

Sample: MW4 **Lab ID: 10670452004** Collected: 09/26/23 17:30 Received: 09/28/23 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Sulfate	**101**	mg/L	2.4	2		09/28/23 23:41	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2 Pace Analytical Services - Minneapolis							
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	1		10/05/23 11:51		

Sample: Trip Blank **Lab ID: 10670452005** Collected: 09/26/23 00:00 Received: 09/28/23 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx Pace Analytical Services - Minneapolis							
TPH as Gas	ND	ug/L	100	1		10/06/23 06:54		CL,P2
Surrogates								
a,a,a-Trifluorotoluene (S)	94	%.	50-150	1		10/06/23 06:54	98-08-8	
8260D MSV UST	Analytical Method: EPA 8260D Pace Analytical Services - Minneapolis							
Benzene	ND	ug/L	1.0	1		10/03/23 13:51	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/03/23 13:51	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/03/23 13:51	1634-04-4	
Toluene	ND	ug/L	1.0	1		10/03/23 13:51	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/03/23 13:51	1330-20-7	
Surrogates								
1,2-Dichlorobenzene-d4 (S)	99	%.	75-125	1		10/03/23 13:51	2199-69-1	
4-Bromofluorobenzene (S)	97	%.	75-125	1		10/03/23 13:51	460-00-4	
Toluene-d8 (S)	100	%.	75-125	1		10/03/23 13:51	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 2946 Bridgeport
Pace Project No.: 10670452

QC Batch: 910176
QC Batch Method: NWTPH-Gx
Analysis Method: NWTPH-Gx
Analysis Description: NWTPH-Gx Water
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10670452002, 10670452004

METHOD BLANK: 4791084 Matrix: Water
Associated Lab Samples: 10670452002, 10670452004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	ND	100	10/09/23 20:52	
a,a,a-Trifluorotoluene (S)	%.	113	50-150	10/09/23 20:52	

LABORATORY CONTROL SAMPLE & LCSD: 4791086 4791087

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1000	891	807	89	81	68-125	10	20	
a,a,a-Trifluorotoluene (S)	%.				121	99	50-150			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4791090 4791091

Parameter	Units	10671226003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH as Gas	ug/L	158	1000	1000	1080	1060	92	90	57-132	2	30	
a,a,a-Trifluorotoluene (S)	%.						106	104	50-150			

SAMPLE DUPLICATE: 4791088

Parameter	Units	10671226003 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	158	172	8	30	
a,a,a-Trifluorotoluene (S)	%.	109	107			

SAMPLE DUPLICATE: 4791089

Parameter	Units	10670452002 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	ND	ND		30	
a,a,a-Trifluorotoluene (S)	%.	104	103			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 2946 Bridgeport
Pace Project No.: 10670452

QC Batch: 910985
QC Batch Method: NWTPH-Gx
Analysis Method: NWTPH-Gx
Analysis Description: NWTPH-Gx Water
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10670452001, 10670452003, 10670452005

METHOD BLANK: 4795059 Matrix: Water
Associated Lab Samples: 10670452001, 10670452003, 10670452005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	ND	100	10/05/23 23:30	CL
a,a,a-Trifluorotoluene (S)	%.	94	50-150	10/05/23 23:30	

LABORATORY CONTROL SAMPLE & LCSD: 4795061 4795062

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1000	826	779	83	78	68-125	6	20	CL
a,a,a-Trifluorotoluene (S)	%.				95	95	50-150			

SAMPLE DUPLICATE: 4795063

Parameter	Units	10670452003 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	3720	3690	1	30	CL
a,a,a-Trifluorotoluene (S)	%.	96	96			

SAMPLE DUPLICATE: 4795064

Parameter	Units	10671586001 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	695	272	87	30	CL,D6
a,a,a-Trifluorotoluene (S)	%.	96	95			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 2946 Bridgeport
Pace Project No.: 10670452

QC Batch: 909336
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV UST-WATER
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10670452001, 10670452002

METHOD BLANK: 4787466 Matrix: Water
Associated Lab Samples: 10670452001, 10670452002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	10/03/23 01:02	
Ethylbenzene	ug/L	ND	1.0	10/03/23 01:02	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/03/23 01:02	
Toluene	ug/L	ND	1.0	10/03/23 01:02	
Xylene (Total)	ug/L	ND	3.0	10/03/23 01:02	
1,2-Dichlorobenzene-d4 (S)	%.	99	75-125	10/03/23 01:02	
4-Bromofluorobenzene (S)	%.	96	75-125	10/03/23 01:02	
Toluene-d8 (S)	%.	99	75-125	10/03/23 01:02	

LABORATORY CONTROL SAMPLE: 4787467

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	18.8	94	75-125	
Ethylbenzene	ug/L	20	19.2	96	75-125	
Methyl-tert-butyl ether	ug/L	20	19.4	97	75-125	
Toluene	ug/L	20	18.9	94	74-125	
Xylene (Total)	ug/L	60	57.9	96	75-125	
1,2-Dichlorobenzene-d4 (S)	%.			97	75-125	
4-Bromofluorobenzene (S)	%.			95	75-125	
Toluene-d8 (S)	%.			98	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4787468 4787469

Parameter	Units	10670444027 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	1.6	20	20	18.8	19.5	86	90	66-127	4	30	
Ethylbenzene	ug/L	1.7	20	20	19.9	20.2	91	92	74-128	1	30	
Methyl-tert-butyl ether	ug/L	ND	20	20	18.1	18.9	91	95	65-132	4	30	
Toluene	ug/L	ND	20	20	17.3	17.8	86	89	66-125	3	30	
Xylene (Total)	ug/L	ND	60	60	55.5	55.2	93	92	75-126	1	30	
1,2-Dichlorobenzene-d4 (S)	%.						99	100	75-125			
4-Bromofluorobenzene (S)	%.						97	97	75-125			
Toluene-d8 (S)	%.						98	99	75-125			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 2946 Bridgeport
Pace Project No.: 10670452

QC Batch: 909563
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV UST-WATER
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10670452003, 10670452004, 10670452005

METHOD BLANK: 4788337 Matrix: Water
Associated Lab Samples: 10670452003, 10670452004, 10670452005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	10/03/23 13:10	
Ethylbenzene	ug/L	ND	1.0	10/03/23 13:10	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/03/23 13:10	
Toluene	ug/L	ND	1.0	10/03/23 13:10	
Xylene (Total)	ug/L	ND	3.0	10/03/23 13:10	
1,2-Dichlorobenzene-d4 (S)	%.	98	75-125	10/03/23 13:10	
4-Bromofluorobenzene (S)	%.	98	75-125	10/03/23 13:10	
Toluene-d8 (S)	%.	100	75-125	10/03/23 13:10	

LABORATORY CONTROL SAMPLE & LCSD: 4788338 4788339

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	ug/L	20	19.1	19.4	96	97	75-125	2	20	
Ethylbenzene	ug/L	20	20.1	20.3	100	101	75-125	1	20	
Methyl-tert-butyl ether	ug/L	20	20.0	20.0	100	100	75-125	0	20	
Toluene	ug/L	20	19.4	19.3	97	96	74-125	0	20	
Xylene (Total)	ug/L	60	59.5	60.2	99	100	75-125	1	20	
1,2-Dichlorobenzene-d4 (S)	%.				99	98	75-125			
4-Bromofluorobenzene (S)	%.				99	99	75-125			
Toluene-d8 (S)	%.				100	99	75-125			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 2946 Bridgeport
Pace Project No.: 10670452

QC Batch: 909894
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV UST-WATER
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10670452003

METHOD BLANK: 4789671 Matrix: Water
Associated Lab Samples: 10670452003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	ND	1.0	10/04/23 20:11	
1,2-Dichlorobenzene-d4 (S)	%.	96	75-125	10/04/23 20:11	
4-Bromofluorobenzene (S)	%.	102	75-125	10/04/23 20:11	
Toluene-d8 (S)	%.	97	75-125	10/04/23 20:11	

LABORATORY CONTROL SAMPLE & LCSD: 4789672 4789674

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethylbenzene	ug/L	20	19.4	20.4	97	102	75-125	5	20	
1,2-Dichlorobenzene-d4 (S)	%.				103	96	75-125			
4-Bromofluorobenzene (S)	%.				100	105	75-125			
Toluene-d8 (S)	%.				98	97	75-125			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 2946 Bridgeport
Pace Project No.: 10670452

QC Batch: 908579
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10670452002, 10670452003, 10670452004

METHOD BLANK: 4783286 Matrix: Water
Associated Lab Samples: 10670452002, 10670452003, 10670452004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.2	09/27/23 23:59	

LABORATORY CONTROL SAMPLE: 4783287

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	50	50.7	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4783288 4783289

Parameter	Units	10670120001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	6.7	50	50	54.6	54.6	96	96	80-120	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 2946 Bridgeport
Pace Project No.: 10670452

QC Batch: 910013
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10670452002, 10670452003, 10670452004

METHOD BLANK: 4790334 Matrix: Water
Associated Lab Samples: 10670452002, 10670452003, 10670452004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	10/05/23 11:10	

LABORATORY CONTROL SAMPLE: 4790335

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	1.0	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4790336 4790337

Parameter	Units	10670445003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	ND	1	1	1.1	1.1	106	107	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4790338 4790339

Parameter	Units	10670599001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	22.0	20	20	41.0	43.8	95	109	90-110	7	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 2946 Bridgeport
Pace Project No.: 10670452

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: 909563

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 909894

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 910985

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

CL	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
P2	Re-extraction or re-analysis could not be performed due to insufficient sample amount.

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2946 Bridgeport
Pace Project No.: 10670452

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10670452001	**MW1**	NWTPH-Gx	910985		
10670452002	**MW2**	NWTPH-Gx	910176		
10670452003	**MW3**	NWTPH-Gx	910985		
10670452004	**MW4**	NWTPH-Gx	910176		
10670452005	**Trip Blank**	NWTPH-Gx	910985		
10670452001	**MW1**	EPA 8260D	909336		
10670452002	**MW2**	EPA 8260D	909336		
10670452003	**MW3**	EPA 8260D	909563		
10670452003	**MW3**	EPA 8260D	909894		
10670452004	**MW4**	EPA 8260D	909563		
10670452005	**Trip Blank**	EPA 8260D	909563		
10670452002	**MW2**	EPA 300.0	908579		
10670452003	**MW3**	EPA 300.0	908579		
10670452004	**MW4**	EPA 300.0	908579		
10670452002	**MW2**	EPA 353.2	910013		
10670452003	**MW3**	EPA 353.2	910013		
10670452004	**MW4**	EPA 353.2	910013		

Pace® Location Requested (City/State):
Pace Analytical Minnesota
1700 Elm Street, Suite 200
Minneapolis, MN 55414

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

WO# : 10670452

10670452

Company Name:	WCEC	Contact/Report To:	Myles Morris
Street Address:	1030 South Ave. W, Missoula, MT 59801	Phone #:	
		E-Mail:	mmorris@wcec.com
		Cc E-Mail:	
Customer Project #:		Invoice To:	Jeri Anderson
Project Name:	2946 Bridgeport	Invoice E-Mail:	andersoj@wcec.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Washington

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other_____

Regulatory Program (DW, RCRA, etc.) as applicable:

Rush (Pre-approval required):
[ ] 2 Day [ ] 3 day [ ] 5 day [ ] Other_____
Date Results Requested:

DW PWSID # or WW Permit # as applicable:

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only
Proj. Mgr: Jennifer Gross
AcctNum / Client ID:
Table #:
Profile / Template: 31206
Prelog / Bottle Ord. ID: EZ 3002065

Preservation non-conformance identified for sample.

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Other (OT), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res. Cl2	Number & Type of Containers Plastic	Number & Type of Containers Glass	300.0 Sulfate	353.2 Nitrate + Nitrite	8260D BTEX+MTBE	NWTPH-Gx	Sample Comment
MW1	WT				9/26/23	14:00		0	3	[redacted]	[redacted]	X	X	001
MW2	WT					14:40		2	6	X	X	X	X	002
MW3	WT					16:35		2	6	X	X	X	X	003
MW4	WT					17:30		2	6	X	X	X	X	004
Trip Blank	WT											X	X	005

Customer Remarks / Special Conditions / Possible Hazards:

Collected By:
Printed Name: Myles Morris
Signature:

Additional Instructions from Pace®:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)
1	T3	+0.2	1.5	1.7

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Myles Morris/WCEC	9/27/23 - 15:30	Nick V/Pace	9/28/23 9:50	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 1

Page 1 Of 1

Sample Condition Upon Receipt **Client Name:** WCEC **Project #:** WO#: 10670452 PM: JMG Due Date: 10/12/23 CLIENT: WCEC WA

Courier: ☑ FedEx ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial

Tracking Number: 5923 7149 6492 ☐ See Exceptions ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other **Temp Blank?** ☑ Yes ☐ No

Thermometer: ☐ T1 (0461) ☐ T2 (0436) ☑ T3 (0459) ☐ T4 (0402) ☐ T5 (0178) ☐ T6 (0235) ☐ T7 (0042) ☐ T8 (0775) ☐ T9(0727) ☐ 01339252/1710 **Type of Ice:** ☑ Wet ☐ Blue ☐ Dry ☐ None ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☑ No **Were All Container Temps Taken?** ☐ Yes ☐ No ☐ N/A

Temp should be above freezing to 6 °C **Cooler temp Read w/Temp Blank:** 1.5 °C **Correction Factor:** +0.2 **Cooler Temp Corrected w/temp blank:** 1.7 °C

Average Corrected Temp (no temp blank only): ____ °C ☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container

USDA Regulated Soil: (☐ N/A, water sample/other: ____) **Date/Initials of Person Examining Contents:** NV 9/29/23

Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): ☐ Duluth ☑ Minneapolis ☐ Virginia				**COMMENTS**
Chain of Custody Present and Filled Out?	☑ Yes	☐ No		1.
Chain of Custody Relinquished?	☑ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☑ Yes	☐ No		4. If fecal: ☐ <8 hrs ☐ >8 hr, <24 ☐ No
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E.coli ☐ BOD/cBOD ☐ Hex Chrom ☐ Turbidity ☑ Nitrate ☑ Nitrite ☐ Orthophos ☐ Other ____
	PMM 9/29/23			
Rush Turn Around Time Requested?	☐ Yes	☑ No		6.
Sufficient Sample Volume?	☑ Yes	☐ No		7.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	8.
-Pace Containers Used?	☑ Yes	☐ No		
Containers Intact?	☑ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	☑ Yes	☐ No		11. **If no, write ID/Date/Time of container below:** ☐ See Exceptions ENV-FRM-MIN4-0142
Matrix: ☑ Water ☐ Soil ☐ Oil ☐ Other				
All containers needing acid/base preservation have been checked?	☑ Yes	☐ No	☐ N/A	12. Sample # 2-4: ☐ NaOH ☐ HNO3 1/1 ☑ H2SO4 ☐ Zinc Acetate
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☑ Yes	☐ No	☐ N/A	
Exceptions: VOA Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS (*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	☑ Yes	☐ No	☐ N/A	Positive for Residual Chlorine? ☐ Yes ☐ No ☐ See Exceptions ENV-FRM-MIN4-0142 **pH Paper Lot #** Residual Chlorine: 0-6 Roll 208412 / 0-6 Strip / 0-14 Strip
Headspace in Methyl Mercury Container?	☐ Yes	☐ No	☑ N/A	13.
Extra labels present on soil VOA or WIDRO containers?	☐ Yes	☐ No	☑ N/A	14. ☐ See Exceptions ENV-FRM-MIN4-0142
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☑ No	☐ N/A	
3 Trip Blanks Present?	☐ Yes	☑ No	☐ N/A	15. TB2
Trip Blank Custody Seals Present?	☑ Yes	☐ No	☐ N/A	Pace Trip Blank Lot # (if purchased): 436308

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: ____ Date/Time: ____

Comments/Resolution: ____

Project Manager Review: Jina Soltani **Date:** 9/29/23

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: NN **Line:** 2

Appendix B

Groundwater Sampling Field Data Sheets

Groundwater Sampling Field Data Sheet

WCEC
ENVIRONMENTAL CONSULTANTS

Project Number: 2946
Site Name: NCP Bridgeport
Address: Hwy 17

Well Identification: MW 1 Field Team: MM Date: 9/26/23

Well Information:

Well Diameter (in.) _____
Depth to Bottom (ft.) _____
Initial Depth to Water (ft.) 8.91
Length of Water Column (ft.) _____
1 Casing Volumes (L) _____
3 Casing Volumes (L) _____

Screen interval _____
Midsection saturated zone _____
Free Product? [ ] Yes [ ] No
Depth to FP (ft.) _____
Thickness (ft.) _____
Volume (L) _____

Purge Information:

Set depth of pump inlet: _____
Pumping Method: [ ] Bladder Pump [ ] Peristaltic Pump
[ ] Submersible Pump [ ] Other: _____
Historic well purge rate: _____ Volume Purged: _____
Bladder control-Discharge time: _____ Fill time: _____
Peristaltic control-pump setting: _____

Time	DTW	Liters	Conductivity	pH	Salinity	DO (mg/L)	DO%	Temperature	ORP	Turbidity

Parameters Immediately Prior to Sample Collection:

Sample Time	DTW	Total L	Conductivity	pH	Salinity	DO (mg/L)	DO%	Temperature	ORP	Turbidity
1410										

Well Condition:

Monument Condition : [ ] Good [ ] Moderate [ ] Poor [ ] Replacement Necessary* [ ] Bolts Missing (Number needed: _____)
Casing Condition : [ ] Good [ ] Moderate [ ] Poor [ ] Replacement Necessary* Photo taken: [ ] Yes [ ] No
**If replacement is recommended, add notes below and take picture for file.*

Comments / Exceptions:

insufficient water for parameters
only enough for 3 VOAs BTEX/MTBE/WTPH-Cx

Well Casing Volume per Foot of Depth

Diameter of Casing or Hole (in.)	Volume (L)	Volume (gal.)
1	0.155	0.041
2	0.617	0.163
4	2.472	0.653

Water Quality Indicator Parameter Stabilization Range

pH	± 0.1 units
Specific Conductance	± 3%
Dissolved Oxygen - ± 10% or 3 consecutive reading <0.5 mg/L	± 10%
Oxidation Reduction Potential (ORP)	± 10 millivolts
Turbidity - 3 reading <5 (NTU) or 10% if reading >5 (NTU)	± 10%

Measurements should be recorded every 3 to 5 minutes, and stabilization is considered achieved when three consecutive readings are within the ranges in table above.
Turbidity is considered stable when three consecutive readings are within 10% for values greater than 5 NTU and if three turbidity values are less than 5 NTU.
Dissolved oxygen (DO) is considered stable when three consecutive readings are within 10% for values greater than 0.5 mg/L or if three consecutive readings are less than 0.5 mg/L.

If parameters do not stabilize during pumping one of the following should be selected: (1) Purge the well for a minimum of four hours prior to sampling if the static water level was stable prior to pumping; (2) Purge three well volumes from the well prior to sampling; (3) Contact project manager and/ or DEQ case manager to determine if purging should be discontinued and sample should not be collected.

Groundwater Sampling Field Data Sheet

WCEC
ENVIRONMENTAL CONSULTANTS

Project Number: 2946
Site Name: NCP Bridgeport
Address: Hwy 17

Well Identification: MW2 Field Team: MM Date: 9/26/23

Well Information:

Well Diameter (in.): 2
Depth to Bottom (ft.):
Initial Depth to Water (ft.): 5.70
Length of Water Column (ft.):
1 Casing Volumes (L):
3 Casing Volumes (L):

Screen interval:
Midsection saturated zone:
Free Product? [ ] Yes [ ] No
Depth to FP (ft.):
Thickness (ft.):
Volume (L):

Purge Information:

Set depth of pump inlet:
Pumping Method: [ ] Bladder Pump [ ] Peristaltic Pump
[ ] Submersible Pump [ ] Other:
Historic well purge rate: Volume Purged:
Bladder control-Discharge time: Fill time:
Peristaltic control-pump setting:

Time	DTW	Liters	Conductivity	pH	Salinity	DO (mg/L)	DO%	Temperature	ORP	Turbidity
14:15										
14:20	7.80	1	1295	7.15	0.65	1.45	14.2	13.9	-104.9	29.28
14:25	7.84	2	1276	7.11	0.64	2.26	22.1	14.1	-112.9	17.34
14:30	7.91	2.5	1260	7.18	0.63	1.40	13.7	14.1	-122.7	13.83
14:35	7.95	3.	1235	7.21	0.62	1.43	14.0	14.0	-124.3	14.31

Parameters Immediately Prior to Sample Collection:

Sample Time	DTW	Total L	Conductivity	pH	Salinity	DO (mg/L)	DO%	Temperature	ORP	Turbidity
14:40	8.01	3.5	1235	7.21	0.62	1.44	14.0	14.0	-124.3	14.85

Well Condition:

Monument Condition : [ ] Good [ ] Moderate [ ] Poor [ ] Replacement Necessary* [ ] Bolts Missing (Number needed: _____)
Casing Condition : [ ] Good [ ] Moderate [ ] Poor [ ] Replacement Necessary* Photo taken: [ ] Yes [ ] No
If replacement is recommended, add notes below and take picture for file.

Comments / Exceptions:

Well Casing Volume per Foot of Depth

Diameter of Casing or Hole (in.)	Volume (L)	Volume (gal.)
1	0.155	0.041
2	0.617	0.163
4	2.472	0.653

Water Quality Indicator Parameter Stabilization Range

pH	± 0.1 units
Specific Conductance	± 3%
Dissolved Oxygen - ± 10% or 3 consecutive reading <0.5 mg/L	± 10%
Oxidation Reduction Potential (ORP)	± 10 millivolts
Turbidity - 3 reading <5 (NTU) or 10% if reading >5 (NTU)	± 10%

Measurements should be recorded every 3 to 5 minutes, and stabilization is considered achieved when three consecutive readings are within the ranges in table above.
Turbidity is considered stable when three consecutive readings are within 10% for values greater than 5 NTU and if three turbidity values are less than 5 NTU.
Dissolved oxygen (DO) is considered stable when three consecutive readings are within 10% for values greater than 0.5 mg/L or if three consecutive readings are less than 0.5 mg/L.

If parameters do not stabilize during pumping one of the following should be selected: (1) Purge the well for a minimum of four hours prior to sampling if the static water level was stable prior to pumping; (2) Purge three well volumes from the well prior to sampling; (3) Contact project manager and/ or DEQ case manager to determine if purging should be discontinued and sample should not be collected.

Groundwater Sampling Field Data Sheet

WCEC
ENVIRONMENTAL CONSULTANTS

Project Number: ~~[illegible]~~ 7946
Site Name: NYP Bridgeport
Address: Hwy 17

Well Identification: MW3 Field Team: MM Date: 9/26/23

Well Information:

Well Diameter (in.): 2
Depth to Bottom (ft.):
Initial Depth to Water (ft.): 3.66
Length of Water Column (ft.):
1 Casing Volumes (L):
3 Casing Volumes (L):

Screen interval:
Midsection saturated zone:
Free Product? [ ] Yes [ ] No
Depth to FP (ft.):
Thickness (ft.):
Volume (L):

Purge Information:

Set depth of pump inlet:
Pumping Method: [ ] Bladder Pump [ ] Peristaltic Pump
[ ] Submersible Pump [ ] Other:
Historic well purge rate: Volume Purged:
Bladder control-Discharge time: Fill time:
Peristaltic control-pump setting:

Time	DTW	Liters	Conductivity	pH	Salinity	DO (mg/L)	DO%	Temperature	ORP	Turbidity
16:10										
16:15	4.47	0.5	1202	7.51	0.60	1.11	11.1	13.9	-104.1	12.76
16:20	4.60	1	1183	7.52	0.59	1.09	10.6	13.9	-116.8	12.46
16:25	4.65	1.5	1174	7.52	0.59	1.04	10.1	13.7	-122.3	13.58
16:30	4.68	2	1176	7.52	0.59	1.03	9.9	13.6	-126.6	16.40

Parameters Immediately Prior to Sample Collection:

Sample Time	DTW	Total L	Conductivity	pH	Salinity	DO (mg/L)	DO%	Temperature	ORP	Turbidity
16:35	4.72	2.5	1174	7.52	0.59	1.03	9.9	13.7	-127.5	16.55

Well Condition:

Monument Condition : [ ] Good [ ] Moderate [ ] Poor [ ] Replacement Necessary* [ ] Bolts Missing (Number needed: _____)
Casing Condition : [ ] Good [ ] Moderate [ ] Poor [ ] Replacement Necessary* Photo taken: [ ] Yes [ ] No
**If replacement is recommended, add notes below and take picture for file.*

Comments / Exceptions:

HC odor

Well Casing Volume per Foot of Depth

Diameter of Casing or Hole (in.)	Volume (L)	Volume (gal.)
1	0.155	0.041
2	0.617	0.163
4	2.472	0.653

Water Quality Indicator Parameter Stabilization Range

pH	± 0.1 units
Specific Conductance	± 3%
Dissolved Oxygen - ± 10% or 3 consecutive reading <0.5 mg/L	± 10%
Oxidation Reduction Potential (ORP)	± 10 millivolts
Turbidity - 3 reading <5 (NTU) or 10% if reading >5 (NTU)	± 10%

Measurements should be recorded every 3 to 5 minutes, and stabilization is considered achieved when three consecutive readings are within the ranges in table above.
Turbidity is considered stable when three consecutive readings are within 10% for values greater than 5 NTU and if three turbidity values are less than 5 NTU.
[illegible]ved oxygen (DO) is considered stable when three consecutive readings are within 10% for values greater than 0.5 mg/L or if three consecutive readings are less than 0.5 mg/L.

If parameters do not stabilize during pumping one of the following should be selected: (1) Purge the well for a minimum of four hours prior to sampling if the static water level was stable prior to pumping; (2) Purge three well volumes from the well prior to sampling; (3) Contact project manager and/ or DEQ case manager to determine if purging should be discontinued and sample should not be collected.

Groundwater Sampling Field Data Sheet

WCEC
ENVIRONMENTAL CONSULTANTS

Project Number: 2946
Site Name: NCP Bridgeport
Address: Hwy 17

Well Identification: MW4 Field Team: Nm Date: 9/26/23

Well Information:

Well Diameter (in.) 2
Depth to Bottom (ft.)
Initial Depth to Water (ft.) 3.68
Length of Water Column (ft.)
1 Casing Volumes (L)
3 Casing Volumes (L)

Screen interval
Midsection saturated zone
Free Product? [ ] Yes [ ] No
Depth to FP (ft.)
Thickness (ft.)
Volume (L)

Purge Information:

Set depth of pump inlet:
Pumping Method: [ ] Bladder Pump [ ] Peristaltic Pump
[ ] Submersible Pump [ ] Other:
Historic well purge rate: Volume Purged:
Bladder control-Discharge time: Fill time:
Peristaltic control-pump setting:

Time	DTW	Liters	Conductivity	pH	Salinity	DO (mg/L)	DO%	Temperature	ORP	Turbidity
17:00										
17:05	3.64	0.5	13.5	7.41	0.66	1.05	10.3	14.3	-113.2	14.33
17:10	3.95	1	13.5	7.41	0.66	1.05	10.3	14.3	-113.4	14.48
17:15	4.01	1.5	13.5	7.40	0.66	1.01	9.9	14.4	-114.5	13.85
17:20	4.02	2	13.14	7.39	0.66	0.99	9.7	14.5	-112.9	13.38
17:25	4.04	2.5	13.13	7.39	0.66	0.97	9.6	14.5	-111.6	13.89

Parameters Immediately Prior to Sample Collection:

Sample Time	DTW	Total L	Conductivity	pH	Salinity	DO (mg/L)	DO%	Temperature	ORP	Turbidity
17:30	4.06	3	13.13	7.39	0.66	0.97	9.6	14.5	-111.3	13.02

Well Condition:

Monument Condition : [ ] Good [ ] Moderate [ ] Poor [ ] Replacement Necessary* [ ] Bolts Missing (Number needed: _____)
Casing Condition : [ ] Good [ ] Moderate [ ] Poor [ ] Replacement Necessary* Photo taken: [ ] Yes [ ] No
**If replacement is recommended, add notes below and take picture for file.*

Comments / Exceptions:

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Dissolved oxygen (DO) is considered stable when three consecutive readings are within 10% for values greater than 0.5 mg/L or if three consecutive readings are less than 0.5 mg/L.

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