Remedial Investigation Report

Report Version: 3

Site Name:	Cascade Autovon Co. Facility
Site Address:	12727 412th Ave SE North Bend, Washington
Alternate Location Info:	King County Assessor's Parcel# 0923089060; Section 9, Township 23N, and Range 8E; Latitude 47.48527, Longitude 121.79173; Cleanup Site ID# 8879.

Ecology Facility Site ID No.:	36296841
Voluntary Cleanup Program Project No.:	NW3098
Order No.:	N/A
Consent Decree No.:	N/A

Prepared By:
David Parkinson, Ph.D., L.G.
Geosyntec Consultants
520 Pike Street, Suite 1375
Seattle, WA 98101

Prepared For:
CenturyLink
600 New Century Parkway
New Century, KS 66031

Signature:

Date: January, 2018

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES

ACRONYMS AND ABBREVIATIONS

bgs	below ground surface
COC	Contaminant/Chemical of Concern
CSM	Conceptual Site Model
CUL	clean-up levels
Ecology	Washington State Department of Ecology
FSID	Facility Site identification number
MTCA	Model Toxics Control Act
PID	Photoionization detector
TEE	Terrestrial Ecological Evaluation
TPH	total petroleum hydrocarbon
VCP	Voluntary Cleanup Program
UST	Underground Storage Tank
WAC	Washington State Administrative Code

EXECUTIVE SUMMARY

A CenturyLink owned property at 12727 412th Avenue SE, North Bend, Washington, also known as the Cascade Autovon Site, had two sets of underground storage tanks installed and removed. The first set consisted of two 10,000 gallon diesel tanks installed in 1973 and removed in 1991. A second 5,000 gallon diesel tank was installed in 1992 and removed in 2007.

Upon excavation to remove the first two 10,000 gallon tanks, an environmental release of diesel range hydrocarbons to soil and groundwater was discovered. A remedial program of over-excavation of soil combined with groundwater removal and treatment from the tank excavation occurred in 1991-1992. All contaminated soil was removed and remediated on-site, with the exception of the northeast and southwest walls of the excavation where diesel range hydrocarbons remained at a depth of approximately 12 feet because of proximity to site structures. Subsequently, three groundwater monitoring wells were installed and sampled over several years between 1992 and 1995. All groundwater results from five quarterly monitoring events were non-detect for petroleum hydrocarbons, with the exception of a single toluene concentration that was well below regulatory limits.

The new double-walled 5,000 gallon tank was installed in the cleaned excavation in 1992. During removal of this tank in 2007, sidewall, soil stockpile, and groundwater were analyzed for petroleum hydrocarbons. All soil samples were non-detect for all analyzed petroleum constituents. Groundwater was non-detect for all analyzed petroleum constituents, with the exception of a low concentration result (69 μ/L) for diesel range hydrocarbons, which was well below the regulatory limit for diesel.

In 2013 Ecology performed a site hazards assessment, and based on the soil contaminant concentration from the 1991-1992 remedial excavation, a hazard rank of 3 was calculated resulting in the site being listed on the State's hazardous site list.

The purpose of this investigation was to determine the present environmental site conditions. Three Geoprobe boreholes were drilled in August 2016 and three in November 2017 to collect and analyze soil and groundwater in the area noted by the Site Hazards Assessment report as where diesel contaminated soil remained after the 1991-1992 excavation. All soil and groundwater analytical results were below MTCA A regulatory limits, indicating that over time the previous contaminant release had declined through natural attenuation.

1. INTRODUCTION

Geosyntec Consultants (Geosyntec) has performed a direct-push investigation at the Cascade Autovon property (the Site; Figure 1) for CenturyLink Corporation (Centurylink) to investigate subsurface soil and groundwater that may have been contaminated with petroleum hydrocarbons. The purpose of the investigation was to identify present-day impacts remaining from petroleum-impacted soil that could not be removed during an underground storage tank (UST) excavation in 1991.

1.1. GENERAL SITE INFORMATION

The Site is located at 12727 412th Avenue SE in North Bend, Washington (Figures 1 and 2). The Facility Site Identification number (FSID) is 36296841. In 2013, Ecology performed a Site Hazard Assessment for the Site, resulting in the facility being placed on Ecology's list of Hazardous Sites List with a ranking of 3. The Site is currently listed on the Hazardous Sites List with a "Cleanup Started" status.

1.1.1 Contact Information

Contact information for Geosyntec (the project consultant) and Centurylink (the property owner, facility operator, and the entity that contracted the work performed) is provided below.

Consultant – Geosyntec Consultants	
Contact Person:	David Parkinson, Ph.D., L.G.
Address:	520 Pike Street, Suite 1375, Seattle, WA 98101
Phone Number:	206-496-1446
Email:	dparkinson@geosyntec.com

Property Owner/Facility Operator – CenturyLink Corporation	
Contact Person:	Edward Clement, Jr., PE, CSP
Address:	600 New Century Parkway, New Century, KS 66031
Phone Number:	913-353-7290
Email:	edward.b.clement@centurylink.com

1.1.2 Location Information

The Site is found in Section 9, Township 23N, and Range 8E (Latitude 47.48527, Longitude -121.79173). The King County Assessor's parcel number is 0923089060 and the designated property use is light industrial.

1.2. SITE HISTORY

Based on historical aerial photographs, the property was undeveloped until the 1960s prior to construction of the single existing building. King County Assessor's records indicate the Site building was constructed in 1968. Cascade Autovon has occupied the facility since that time. The site was developed as a telecommunications facility and has been used solely for that purpose. The building has been vacant, and the property unused for the past five years.

As part of regulatory requirements for telecommunications systems, emergency power for specific durations was required. In order to meet these requirements, the facility had diesel fueled generators for emergency power. The diesel for the generators was stored, initially, in two 10,000 gallon underground storage tanks (USTs) at the rear of the facility (Figure 2).

In June 1991, B&C Equipment Co. (B&C) removed two 10,000 gallon diesel USTs from the Site and a report was subsequently submitted to the Washington Department of Ecology (Ecology) describing the tank removal (Figure 3 and Figure 4; B&C, 1991; Appendix A).

Following this UST removal and identification of an environmental release, apparently three groundwater monitoring wells were installed and monitored for a total of at least seven quarters in 1992-1995 (Figure 5; B&C, 1993; Roy Jensen and Associates [Jensen], 1994; Jensen, 1995; Appendix A).

After removal of the UST and remediation of the soils in 1991-1992, a new 5,000 gallon diesel UST was installed at the same location. This UST was removed in January 2007. All excavation related soil and groundwater samples indicated no petroleum hydrocarbons were present in the subsurface (Figure 3 and Figure 4). The excavation was backfilled with clean soil and gravel (Environmental Partners Inc. [EPI], 2007; Appendix A). Presently there are no known USTs at the property.

The above remedial activities are summarized in the following reports:

B&C Equipment Co. (B&C), 1991. Cascade Autovon Company, 12727 412th Avenue SE, North Bend, Washington, 98045, Environmental Site Assessment. 12 September.

B&C, 1992. Letter to Ecology regarding Cascade Autovon surface water discharge, 6 January.

B&C, 1993. Monitoring Well 4th Quarterly Sampling Event Summary Report to Ecology, 25 January.

Environmental Partners, Inc. (EPI), 2007. UST Site Assessment Report for UST Site ID 97430, 19 February.

Roy Jensen and Associates (Jensen), 1994. Ground Water Sampling and Analysis Results summary report to Cascade Autovon, 14 March.

Jensen, 1995. Ground Water Sampling and Analysis Results, summary report to Cascade Autovon, 24 April.

In August 2013, Ecology performed a Site Hazards Assessment and based on the 1991 soil data ranked the site a "3", and listed the site on the State Hazardous Site List.

CenturyLink acquired the property in 1997-1998 through a telecommunications acquisition, and has owned and continued to operate the site as a telecommunications facility until 2012. Since 2012 the facility has been unoccupied.

The purpose of this site investigation and report is to document the present soil and groundwater conditions at the site in order to have Ecology revisit the site hazards assessment.

1.3. SITE USE

The Site is currently owned by CenturyLink, and has been unused and unoccupied for the past five years. The Site is zoned as Interchange Mixed Use (IMU) within the City of North Bend, Washington.

2. FIELD INVESTIGATIONS

2.1. PREVIOUS ENVIRONMENTAL INVESTIGATIONS

Following removal of two USTs in 1991, B&C tested soil to determine the extent of contamination and subsequent soil removal and remediation (B&C, 1991; Appendix A). During removal of the USTs, diesel contaminated soil was encountered. The report documented the removal remediation of most of the contaminated soil, with the exception of the northeast corner of the excavation, which had petroleum contaminated soil at a concentration of 2,900 ppm and the southwest sidewall at a concentration of 2,000 ppm for diesel range organics at a depth of 10 to 11 feet (Table 1; Figure 4). The soil on the east could not be completely excavated because of a security fence adjacent to the excavation. The excavated contaminated soil was remediated on-site. One groundwater recharge sample from the excavation was also collected and contained 8,500 mg/L of diesel-range hydrocarbons, above the applicable cleanup level of 1,000 mg/L (Figure 4; Table 2).

Based on the 1993 B&C report, the property owner at the time installed three groundwater monitoring wells in 1992. These monitoring wells were sampled over at least seven quarters between 1992-1995 (B&C, 1993; Jensen, 1994; Jensen, 1995). The results for contaminants of concern were below detection limits, with the exception of one TPH-G, one xylene and one toluene result, all of which were well below MTCA Method A regulatory limits (Table 2). Copies of well logs are not available.

Removal of the 5,000 gallon UST occurred in 2007. The 2007 UST removal was from the same footprint as the 1991 UST removal (EPI, 2007; Appendix A). Five soil samples from the excavation and three soil samples from the excavated soil pile were analyzed for diesel and motor oil range petroleum hydrocarbons and the results were non-detect for BTEX, and diesel and motor oil range hydrocarbons (Figure 3; Table 1). Groundwater from the excavation was sampled as well, and detected diesel range hydrocarbon concentrations (69 µ/L) were significantly below the MTCA A regulatory limit of 500 µg/L (Figure 4; Table 2).

2.2. SITE CHARACTERIZATION

On August 22, 2016 and November 13, 2017 Geosyntec retained a drilling contractor (ESN Northwest, Inc. [ESN]) and performed a direct-push investigation at the Site. Six boreholes (GB-1 through GB-6) were advanced using a Geoprobe direct-push drilling rig to the Site for the collection of soil and groundwater samples (Figure 2).

The purpose of the site investigation was to confirm subsurface concentrations of

petroleum hydrocarbons that may remain in place from the 1991 UST removal, as indicated by the Ecology Site Hazards Assessment report.

Both public and private utility locate services were contacted prior to drilling to clear the location of underground utilities. Borehole locations were chosen based on data from the UST removal report prepared by B&C Equipment Co. to investigate if petroleum-impacted soil or groundwater remained in the area surrounding the UST excavation area (Figures 3-5).

Following sampling, each borehole was filled with bentonite and restored to original grade.

2.2.1. SAMPLING AND MONITORING

The soil samples were field screened at approximately 5-foot intervals from ground surface to the total borehole depth or the groundwater table. The soil was visually logged and no unusual staining was recorded. The soil was also assessed using an organic vapor analyzer (OVA) equipped with a photoionization detector (PID).

One soil sample was collected from each borehole at a depth between 12 and 14 feet below ground surface (bgs), just above the depth at which groundwater was first encountered, and the approximate depth that residual soil contamination had been noted during the 1991 USTs removal (Appendix A).

Groundwater samples were collected from each borehole location using a five foot temporary screen placed within the Geoprobe casing, which was then retracted (Figure 4). Low flow procedures were used for sampling groundwater. Water levels for the six boreholes were consistent at fourteen feet below ground surface. Duplicate groundwater samples were collected from borehole GB-1 and GB-4 for quality assurance purposes.

Soil PID measurements are listed in the borehole logs in Appendix B. PID readings were non-detect (0 parts per million [ppm]) for the soil in all boreholes except GB-2. In borehole GB-2, a low level result of 8.1 ppm was observed in soil collected from a depth of 9-10 foot bgs. Due to the gravel rich nature of the subsurface, not enough material remained from the 9-10 foot interval to sample for a laboratory analysis. The next consistently sandy-silty horizon encountered was sampled at 13-14 feet depth.

Following collection, the samples were preserved as directed by the analytical laboratory and transported to TestAmerica in Tacoma, Washington or ARI Laboratory in Tukwila for analysis. All soil and groundwater samples were analyzed for diesel- and motor oil-range petroleum hydrocarbons by the Northwest Total Petroleum Hydrocarbons Diesel Range (NWTPH-Dx) method, gasoline-range hydrocarbons by the Northwest Total Petroleum Hydrocarbons Gasoline Range (NWTPH-Gx) method, and benzene, toluene, ethylbenzene and xylene (BTEX) by EPA Method 8260C. The chain of custody and full laboratory reports are provided in Appendix C.

2.2.2. SITE GEOLOGY

The three boreholes all had similar subsurface conditions. Cobble to pea size gravel was encountered in all three boreholes throughout the 20 feet drilled, with minor sand and very little finer grained material. This is consistent with the geologic maps of the site indicating surficial geology is alluvial deposits on the Snoqualmie River flood plain (Dragovich, et al., 2009).

2.2.3. SITE HYDROGEOLOGY

Groundwater was encountered at a depth of 14 feet bgs within the three boreholes during August 2016 field work, and at a depth of ~9.5 feet bgs in the three boreholes drilled in November 2017. The surficial formation at the site is alluvial gravel (Figure 6). There are insufficient groundwater elevation data to either prepare a groundwater elevation map or to interpret groundwater gradients or flow directions, and therefore no groundwater elevation map has been prepared. Given the floodplain setting of the site, with increasing elevation to the west and the South Fork Snoqualmie River 1,300 feet to the east, it is expected that general groundwater flow direction is east toward the river (Figure 1) but depending on time of year and flood stage for the river, shallow groundwater flow direction may vary.

2.3. SAMPLING/ANALYTICAL RESULTS

2.3.1. QUALITY ANALYSES

All samples were preserved as directed by the analytical laboratory and transported to TestAmerica in Tacoma, Washington for analysis. All soil and groundwater samples were analyzed for diesel- and motor oil-range petroleum hydrocarbons by the Northwest Total Petroleum Hydrocarbons Diesel Range (NWTPH-Dx) method, gasoline-range hydrocarbons by the Northwest Total Petroleum Hydrocarbons Gasoline Range (NWTPH-Gx) method, and benzene, toluene, ethylbenzene and xylene (BTEX) by EPA Method 8260C. The chain of custody and full laboratory report are provided in Appendix C.

Soil and groundwater samples were below the diesel and motor-oil range MTCA cleanup levels (Tables 3 and 4).

The relative percent difference (RPD) results for the duplicate analysis could not be calculated because the constituents were either below reporting limits, or were below the detection limits (Table 5).

Gasoline, diesel-range, and motor oil-range hydrocarbons were all detected in the laboratory method blanks for the August 2016 sample batch at concentrations above the detection limit but less than half the reporting limit. All corresponding results reported in this report are consequently flagged with a “B” indicating method blank issues.

2.3.2. RESULTS

2.3.2.1 Summary of Soil Results

Soil analytical results are summarized in Table 3, with the full laboratory report in Appendix C. As shown in Table 3, analyte concentrations in all soil samples were below the corresponding MTCA Method A Cleanup levels. Gasoline-range hydrocarbon analyses by Ecology approved method (NWTPH-Gx) were above the laboratory detection limit, but below the laboratory reporting limit (varying from 0.95-1.7 mg/Kg) in all samples. However, the laboratory noted that the compound was also found in the laboratory blank, therefore all gasoline-range results have been flagged as estimated. The estimated gasoline-range concentrations for all soil samples were well below the MTCA cleanup level of 100 mg/Kg for all samples.

Diesel- and motor oil-range analyses by Ecology approved method (NWTPH-Dx) in soil samples from GB-1 and GB-3 were detected above the method detection limit but below the reporting limit, and are therefore flagged as estimated. In boreholes

GB2, GB4, and GB6 diesel-range and motor oil-range hydrocarbons were detected in soil at concentrations below MTCA A regulatory cleanup levels of 2,000 mg/Kg. Diesel-range and motor oil-range concentrations were well below the MTCA cleanup level of 2,000 mg/Kg in all samples.

BTEX constituents were not detected soil samples from GB1 through GB5. Borehole GB6 had a reported concentration for benzene of 1.98 µg/Kg, which is well below the MTCA A regulatory cleanup level of 30 µg/Kg Borehole GB5 had a reported result for toluene that was below laboratory reporting limits, and well below the MTCA A regulatory limit of 7,000 µg/Kg.

2.3.2.2 Summary of Groundwater Results

Groundwater analytical results are summarized in Table 4, with the full laboratory report in Appendix C. Analyte concentrations for all groundwater samples were below the corresponding MTCA Method A Cleanup levels.

Gasoline-range hydrocarbons by NWTPH-Gx method were not detected in any of the samples. BTEX constituents were not detected in groundwater samples from GB1, GB2 and GB3. A benzene result was reported below laboratory reporting limits for GB6, and toluene results were reported below laboratory reporting limits for GB4, GB5 and GB6.

Diesel-range hydrocarbons by NWTPH-Dx method were detected at concentrations above the method detection limit but below the reporting limit in samples GB1, and GB2, and are therefore estimated (ranging from 44-65 µg/L). Diesel-range hydrocarbons were detected in GB3 (260 µg/L), GB5 (166 µg/L), and GB6 (131 µg/L). The laboratory noted that diesel-range hydrocarbons were also found in the laboratory method blank for samples GB1, GB2, and GB3.

Motor-oil range hydrocarbons were not detected in samples GB3, GB4, GB6 or GB6. Motor oil concentrations were detected in samples GB1 and GB2 but were below the reporting limit, and were estimated to be between 35 and 91 µg/L. However, the laboratory flagged the results for GB1 and noted that the compound was also found in the laboratory method blank. All samples were below the diesel and motor-oil range MTCA cleanup levels of 500 µg/L.

2.4. MONITORING WELL DECOMMISSIONING

As part of the present investigation, these three monitoring wells were decommissioned on January 3, 2018. Because construction well logs were not available, the surface monuments were removed, and the monitoring wells were over-drilled with the entire casing string and screen interval removed (Appendix D). The resulting hole was filled with bentonite.

3. CONCEPTUAL SITE MODEL

Based on a review of previous reports, and Site Hazards Assessment report by Ecology, a release of diesel range hydrocarbons from a leaking 10,000 gallon underground storage tank occurred between installation in 1973 and removal in 1991. The release was restricted to diesel fuel, and discovered at the time of UST removal.

During excavation the sidewalls were over-excavated until clean soil had been confirmed, with the exception of the northeast and southwest corners of the excavation, due to proximity of structures at the site. The confirmation of clean soil on three sides of the excavation indicates

that lateral migration of the release was limited.

Following on-site remediation of excavated soils, and treatment and disposal of groundwater from the excavation, three monitoring wells were installed and monitored over several years, from 1992 to 1995 (Figure 5). All groundwater samples had non-detect results for contaminants of concern, with the exception of a one toluene, one xylene and one gasoline hydrocarbon result that were slightly above laboratory reporting limits but well below MTCA regulatory limits (Table 2).

The groundwater results indicate that either the release did not impact groundwater, or that contaminants of concern were rapidly degraded after entering groundwater. The result being that there was no indication that the release migrated from the immediate surroundings of the UST.

The site investigations undertaken in August 2016 and November 2017 were aimed at determining the extent of contaminants of concern remaining in the un-excavated portions of the 1991 excavation, as described in the Site Hazards Assessment report. The results of these recent site investigations indicate that both soil and groundwater concentrations of contaminants are well below MTCA A regulatory limits for diesel range hydrocarbons. These results are interpreted to indicate that contamination concentration left in the subsurface from the 1991 excavation has declined through natural attenuation and degradation.

With soil and groundwater concentrations of contaminants at the site below regulatory limits, there are presently no exposure pathways at the site.

4. PROPOSED CLEANUP STANDARDS

MTCA A regulatory limits for diesel range petroleum hydrocarbons in soil and groundwater are listed in Tables 3 and 4.

A Simplified Terrestrial Ecological Evaluation (TEE) was performed for the site, and no further evaluation was necessary (Appendix E).

4.1. SOIL CLEANUP STANDARDS

Analytical soil data from the direct-push investigation were compared to MTCA Method A Soil Cleanup Levels for Unrestricted Land Use for gasoline-range, diesel-range, and motor oil-range hydrocarbons and BTEX constituents. The Cleanup Levels are provided in Table 3.

The conditional point of compliance for soil was set at 6 feet bgs, which is below the biologically active zone. This point of compliance was selected because the Site contains an institutional control (fence) that limits access to the Site and exposure to the contamination.

4.2. GROUNDWATER CLEANUP STANDARDS

Analytical groundwater data from the direct-push investigation were compared to MTCA Method A Soil Cleanup Levels for Unrestricted Land Use for gasoline-range, diesel-range, and motor oil-range hydrocarbons and BTEX constituents. The Cleanup Levels are provided in Table 4.

The point of compliance for groundwater was selected to be throughout the Site, from the uppermost level of the saturated zone vertically to the lowermost depth affected by the

Site contaminants.

5. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1. SUMMARY AND CONCLUSIONS

Geosyntec's soil and groundwater investigations were focused on the area surrounding the former UST excavation pit with the intention of identifying present-day impacts remaining from petroleum-impacted soil that could not be removed in 1991. All soil and groundwater results from this investigation were below MTCA A regulatory cleanup levels.

Groundwater sampling of the three monitoring wells at the site between 1992 and 1995 indicate that no contaminant impacts had migrated from the localized are of the former UST location in the four years following removal of the UST.

In 1991, the northeastern sidewall soil sample from the UST excavation contained diesel-range concentrations of 2,900 mg/Kg, and the southwest sidewall had a concentration of 2,000 mg/Kg. The results of soil and groundwater analyses at these locations in 2016 and 2017 were below MTCA A cleanup levels. The highest observed diesel-range hydrocarbon soil result was observed in borehole GB2 with a concentration of 44 mg/Kg for diesel range hydrocarbons, and 110 mg/Kg for motor oil range hydrocarbons. Gasoline-range hydrocarbons were not detected in any soil samples above the laboratory reporting limits.

Compared with the historic soil concentration from 1991, the soil diesel- and gasoline-range hydrocarbon concentrations have decreased by approximately two orders of magnitude.

BTEX soil results in 1991 were non-detect for benzene and toluene in the northeastern sidewall sample, 0.016 mg/Kg for ethylbenzene and 0.120 mg/Kg for xylene. Present-day BTEX results were non-detect in the soil from four of six boreholes, with the two remaining results being less than 0.002 mg/Kg (Figure 3, Table 1).

During the UST removal, a groundwater sample was collected from the recharged water during dewatering. The sample was analyzed for gasoline-range and diesel-range hydrocarbons, and BTEX. The results were below detection limits for all analytes except diesel hydrocarbons, which were detected at a concentration of 8,500 µg/L (Figure 4, Table 2).

During Geosyntec's investigation, gasoline-range hydrocarbons were not detected in any groundwater samples. BTEX results were detected in GB4-GB6 at concentrations below the laboratory reporting limit of 0.2 µg/L (Figure 4, Table 4). Three of the six diesel-range hydrocarbon results were either below laboratory detection or reporting limits. The highest diesel results were in the GB3 groundwater sample, with a diesel-range hydrocarbon concentration of 260 µg/L. Compared to the 1991 diesel concentration observed in the excavation groundwater (8,500 µg/L), the present-day diesel-range results are lower by at least one order of magnitude.

In conclusion, no present-day petroleum hydrocarbon impacts above the corresponding MTCA Method A cleanup levels were identified in soil or groundwater in the area to the surrounding the 1991 UST excavation area.

The interpretation is that aerobic degradation of hydrocarbons likely has caused natural attenuation of contaminated soil and groundwater since the elevated soil sample results collected in 1991.

5.2. RECOMMENDATIONS

Further site investigation is unlikely to provide additional understanding of soil and groundwater contamination. The results of this investigation are interpreted to indicate that natural attenuation, possibly through aerobic degradation, has lowered previously existing diesel range hydrocarbon concentrations in contaminated soil to levels below MTCA A regulatory limits.

The site is considered to meet the minimum requirements outlined in WAC 173-340-360(2), and a permanent solution has been reached where further action is not required.

6. REFERENCES

- B&C Equipment Co., 1991 (B&C 1991), Cascade Autovon Company, 12727 412th Avenue SE, North Bend, Washington, 98045, Environmental Site Assessment. 12 September.
- B&C Equipment Co., 1992. Letter to Ecology regarding Cascade Autovon surface water discharge, 6 January.
- B&C Equipment Co., 1993. Monitoring Well 4th Quarterly Sampling Event Summary Report to Ecology, 25 January.
- Dragovich, J.D., T.J. Walsh, M.L. Anderson, R. Hartog, S.A. DuFrane, J. Vervoot, S.A. Williams, R. Cakir, K.D. Stanton, F.E. Wolff, D.K. Normand, and J.L. Czajkowski, 2009. Geologic Map of the North Bend 7.5-minute Quadrangle, King County, Washington, with a discussion of Major Faults, Folds, and Basins in the Map Area. Washington Division of Geology and Earth Resources, Geologic Map GM-73.
- Environmental Partners Inc (EPI), 2007. UST Site Assessment Report, CenturyTel Building, 12727 412th Avenue SE, North Bend, Washington; February 19.
- Roy Jensen and Associates, 1994. Ground Water Sampling and Analysis Results summary report to Cascade Autovon, 14 March.
- Roy Jensen and Associates, 1995. Ground Water Sampling and Analysis Results, summary report to Cascade Autovon, 24 April.

TABLES

TABLE 1
Historical Soil Sampling Results
CenturyLink - Cascade Autovon Facility
North Bend, Washington

ANALYTE			Benzene	Toluene	Ethylbenzene	Xylene	Diesel Range TPH	Diesel Range TPH	Gasoline Range TPH
Date	Sample Name	Description	EPA 8020	EPA 8020	EPA 8020	EPA 8020	Mod EPA 8015	WTPH-HCID	WTPH-HCID
		MTCA Method A Cleanup Levels	0.03	7	6	9	2,000	2,000	100
6/4/1991	#1*	N tank - N sidewall - 9 ft bgs					10 U		
	#2*	N tank - bottom center - 11 ft bgs					10 U		
	#3*	S tank - bottom center - 11 ft bgs					**1,000**		
	#4	S tank - S sidewall - 9 ft bgs					10 U		
6/13/1991	#1*	N tank - N sidewall - 9 ft bgs					**710**		
	#2*	N tank - bottom center - 11 ft bgs					**12,000**		
10/16/1991	#1**	Soil stockpile	0.004 U	**0.120**	**0.091**	**0.570**		**8,700**	**62**
	#2**	Soil stockpile	0.005 U	0.005 U	0.005 U	**0.0079**		**1,100**	20 U
	#3**	Soil stockpile	0.004 U	0.004 U	0.004 U	**0.018**		**1,100**	**32**
10/18/1991	#4	Northeast sidewall - 10.5 ft bgs	0.004 U	0.004 U	**0.016**	**0.120**		**2,900**	**100**
	#5	North sidewall - 10.5 ft bgs	0.005 U	0.005 U	0.005 U	**0.0078**		**110**	20 U
	#6	Bottom center - south end - 13.5 ft bgs	0.006 U	0.006 U	0.006 U	0.006 U		50 U	20 U
	#8	Bottom center - north end - 13.5 ft bgs	0.005 U	0.005 U	0.005 U	0.005 U		50 U	20 U
	#9	Northwest sidewall - 10.5 ft bgs	0.005 U	0.005 U	0.005 U	0.005 U		**550**	20 U
	#10	Southwest sidewall - 10.5 ft bgs	0.004 U	0.004 U	0.004 U	**0.015**		**2,000**	**24**
	#11	South sidewall - 10.5 ft bgs	0.006 U	0.006 U	0.006 U	0.006 U		50 U	20 U

ANALYTE			Benzene	Toluene	Ethylbenzene	Xylene	Diesel Range TPH	Motor Oil Range TPH	
Date	Sample Name	Description	EPA 8021B	EPA 8021B	EPA 8021B	EPA 8021B	NWTPH-Dx	NWTPH-Dx	
		MTCA Method A Cleanup Levels	0.03	7	6	9	2,000	2,000	
1/4/2007	Pipe-1	2 ft bgs	0.02 U	0.02 U	0.02 U	0.06 U	50 U	250 U	
	Pipe-2	1 ft bgs	0.02 U	0.02 U	0.02 U	0.06 U	50 U	250 U	
	SW-1	4 ft bgs	0.02 U	0.02 U	0.02 U	0.06 U	50 U	250 U	
	SW-2	4 ft bgs	0.02 U	0.02 U	0.02 U	0.06 U	50 U	250 U	
	SW-3	3 ft bgs	0.02 U	0.02 U	0.02 U	0.06 U	50 U	250 U	
	SP-1**	Soil stockpile	0.02 U	0.02 U	0.02 U	0.06 U	50 U	250 U	
	SP-2**	Soil stockpile	0.02 U	0.02 U	0.02 U	0.06 U	50 U	250 U	
	SP-3**	Soil stockpile	0.02 U	0.02 U	0.02 U	0.06 U	50 U	250 U	

Notes:

All concentrations are in mg/kg.

Bold values represent analyte concetrations detected above the laboratory reporting limit.

Highlighted values represent concentration levels above the MTCA Cleanup Level.

U - Analyte not detected above the laboratory reporting limit.

* Sample Locations subsequently excavated

** Stockpile subsequently removed from site

Abbreviations:

MTCA - Model Toxics Control Act

TPH - Total petroleum hydrocarbons

mg/kg - milligrams per kilogram

TABLE 2
Historical Groundwater Sampling Results
CenturyLink - Cascade Autovon Facility
North Bend, Washington

ANALYTE		Benzene	Toluene	Ethylbenzene	Xylene	Diesel Range TPH	Gasoline Range TPH			
Location	Analytical Method	EPA 8020	EPA 8020	EPA 8020	EPA 8020	WTPH-HCID	WTPH-HCID			
MTCA Method A Cleanup Levels		0.005	1	0.7	1	0.5	1			
#7[1]	10/18/1991	0.001 U	0.001 U	0.001 U	0.001 U	**8.5**	0.005 U			
ANALYTE		**Benzene**	**Toluene**	**Ethylbenzene**	**Xylene**	**Gasoline Range TPH**	**TPH**	**TPH as Gasoline**	**TPH as Diesel**	**TPH as Heavy Oil**
Location	Analytical Method	EPA 8020	EPA 8020	EPA 8020	EPA 8020	WTPH-G	Mod EPA 8015	Mod EPA 8015	Mod EPA 8015	Mod EPA 8015
MTCA Method A Cleanup Levels		0.005	1	0.7	1	1	0.5	1	0.5	0.5
MW-1	3/11/1992	0.001 U	0.001 U	0.001 U	0.001 U	1.0 U	1.0 U			
	6/12/1992	0.001 U	0.001 U	0.001 U	0.001 U	0.75 U	0.75 U			
	9/4/1992	0.001 U	0.001 U	0.001 U	0.001 U	0.75 U	0.75 U			
	12/17/1992	0.001 U	0.001 U	0.001 U	**0.001**	**0.27**	0.75 U			
	11/19/1993	0.001 U	0.001 U	0.001 U	0.001 U	0.1 U	1.0 U			
	2/10/1994	0.001 U	0.001 U	0.001 U	0.001 U	0.1 U	1.0 U			
	3/21/1995	0.001 U	0.001 U	0.001 U	0.001 U			1.0 U	1.0 U	10 U
MW-2	3/11/1992	0.001 U	0.001 U	0.001 U	0.001 U	1.0 U	1.0 U			
	6/12/1992	0.001 U	0.001 U	0.001 U	0.001 U	0.75 U	0.75 U			
	9/4/1992	0.001 U	0.001 U	0.001 U	0.001 U	0.75 U	0.75 U			
	12/17/1992	0.001 U	0.001 U	0.001 U	0.001 U	0.1 U	0.75 U			
	11/19/1993	0.001 U	0.001 U	0.001 U	0.001 U	0.1 U	1.0 U			
	2/10/1994	0.001 U	0.001 U	0.001 U	0.001 U	0.1 U	1.0 U			
	3/21/1995	0.001 U	**0.0014**	0.001 U	0.001 U			1.0 U	1.0 U	10 U
MW-3	3/11/1992	0.001 U	0.001 U	0.001 U	0.001 U	1.0 U	1.0 U			
	6/12/1992	0.001 U	0.001 U	0.001 U	0.001 U	0.75 U	0.75 U			
	9/4/1992	0.001 U	0.001 U	0.001 U	0.001 U	0.75 U	0.75 U			
	12/17/1992	0.001 U	0.001 U	0.001 U	0.001 U	0.1 U	0.75 U			
	11/19/1993	0.001 U	0.001 U	0.001 U	0.001 U	0.1 U	1.0 U			
	2/10/1994	0.001 U	0.001 U	0.001 U	0.001 U	0.1 U	1.0 U			
	3/21/1995	0.001 U	0.001 U	0.001 U	0.001 U	0.1 U	1.0 U	1.0 U	1.0 U	10 U
ANALYTE		**Benzene**	**Toluene**	**Ethylbenzene**	**Xylene**	**Motor Oil Range TPH**	**Diesel Range TPH**			
Location	Analytical Method	EPA 8021B	EPA 8021B	EPA 8021B	EPA 8021B	NWTPH-Dx	NWTPH-Dx			
MTCA Method A Cleanup Levels		0.005	1	0.7	1	0.5	0.5			
GW-Pit[1]	1/4/2007	0.001 U	0.001 U	0.001 U	0.003 U	0.25 U	**0.069**			

Notes:

Bold values represent analyte concetrations detected above the laboratory reporting limit.
All concentrations are in mg/L.
1 - Groundwater recharge sample collected from UST removal excavation.
U - Analyte not detected above the laboratory reporting limit.

Abbreviations:

MTCA - Model Toxics Control Act
TPH - Total petroleum hydrocarbons
mg/L - micrograms per liter

TABLE 3
Soil Sampling Analytical Results
CenturyLink North Bend Facility
North Bend, Washington

ANALYTE	MTCA Method A Cleanup Levels for Soil	Units	GB1 *GB1-13.5-082216*	GB2 *GB2-13.5-082216*	GB3 *GB3-12.5-082216*	GB4 *Soil-111317-(13-14)-GB4*	GB5 *Soil-111317-(9-10)-GB5*	GB6 *Soil-111317-(12-13)-GB6*
	Sampling depth (ft bgs)		13 - 14	13 - 14	12 - 13	13 - 14	9 - 10	12 - 13
NWTPH-Gx								
Gasoline (C6-C12) [1]	100	mg/kg	**1.7 JB**	**1.4 JB**	**0.95 JB**	10.6 U	6.31 U	11.1 U
NWTPH-Dx								
#2 Diesel (C10-C24)	2,000	mg/kg	**16 J**	**44**	**19 J**	**6.65**	5.62 U	**14.1**
Motor Oil (>C24-C36)		mg/kg	**15 J**	**110**	**17 J**	**16.1**	11.2 U	**18.1**
BTEX by EPA Method 8260C								
Benzene	30	µg/kg	4.3 U	4.0 U	3.9 U	0.41 U	0.28 U	**1.98**
Toluene	7,000	µg/kg	14 U	13 U	13 U	**0.89 J**	0.14 U	0.24 U
Ethylbenzene	6,000	µg/kg	14 U	13 U	12 U	0.28 U	0.19 U	0.33 U
m-Xylene & p-Xylene	--	µg/kg	78 U	73 U	71 U	0.54 U	0.37 U	0.64 U
o-Xylene	--	µg/kg	6.1 U	5.7 U	5.6 U	0.31 U	0.21 U	0.36 U
Total Xylenes	9,000	µg/kg	84.1 U	78.7 U	76.6 U	0.85 U	0.58 U	1.00 U
General Chemistry								
Percent Solids	--	%	91.9	85.2	88.9	76.65	88.92	67.37
Percent Moisture	--	%	8.1	14.8	11.1	23.35	11.08	32.63

Notes:

Bold values represent concentration levels above the laboratory detection limit.

1 - The gasoline cleanup level applies for gasoline mixtures without benzene and for which the total of ethylbenzene, toluene and xylenes are less than 1% of the gasoline mixture. All other gasoline mixtures have a cleanup level of 30 mg/kg.

U - Analyte was not detected at the method detection limit.

J - Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

B - Compound was found in blank.

< MDL - Analyte concentration was below the method detection limit (MDL).

Abbreviations:

MTCA - Model Toxics Control Act

NWTPH-Gx - Northwest Total Petroleum Hydrocarbons - Gasoline Range

NWTPH-Dx - Northwest Total Petroleum Hydrocarbons - Diesel Range

BTEX - Benzene, toluene, ethylbenzene and xylenes

mg/kg - milligrams per kilogram

µg/kg - micrograms per kilogram

ft bgs - feet below ground surface

TABLE 4
Groundwater Sampling Analytical Results
CenturyLink North Bend Facility
North Bend, Washington

ANALYTE		MTCA Method A Cleanup Levels for Groundwater	GB1	GB2	GB3	GB4	GB5	GB6
			GB1-082216	*GB2-082216*	*GB3-082216*	*GW-111317-GB4*	*GW-111317-GB5*	*GW-111317-GB6*
NWTPH-Gx								
	Gasoline (C6-C12) [1]	1,000	27 U	27 U	27 U	100 U	100 U	100 U
NWTPH-Dx								
	#2 Diesel (C10-C24)	500	**58 JB**	**65 JB**	**260 B**	100 U	**166**	**131**
	Motor Oil (>C24-C36)		**91 JB**	**35 J**	29 U	200 U	200 U	200 U
BTEX by EPA Method 8260C								
	Benzene	5	0.42 U	0.42 U	0.42 U	0.03 U	0.03 U	**0.03 J**
	Toluene	1,000	0.18 U	0.18 U	0.18 U	**0.05 J**	**0.06 J**	**0.05 J**
	Ethylbenzene	700	0.21 U	0.21 U	0.21 U	0.04 U	0.04 U	0.04 U
	m-Xylene & p-Xylene	--	0.30 U	0.30 U	0.30 U	0.05 U	0.05 U	0.05 U
	o-Xylene	--	0.49 U	0.49 U	0.49 U	0.03 U	0.03 U	0.03 U
	Total Xylenes	1,000	0.79 U	0.79 U	0.79 U	0.08 U	0.08 U	0.08 U

Notes:

Bold values represent concentration levels above the laboratory detection limit.

All concentrations are in µg/L.

1 - The gasoline cleanup level applies for gasoline mixtures without benzene and for which the total of ethylbenzene, toluene and xylenes are less than 1% of the gasoline mixture. All other gasoline mixtures have a cleanup level of 30 mg/kg.

U - Analyte was not detected at the method detection limit.

J - Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

B - Compound was found in blank.

< MDL - Analyte concentration was below the method detection limit (MDL).

Abbreviations:

MTCA - Model Toxics Control Act

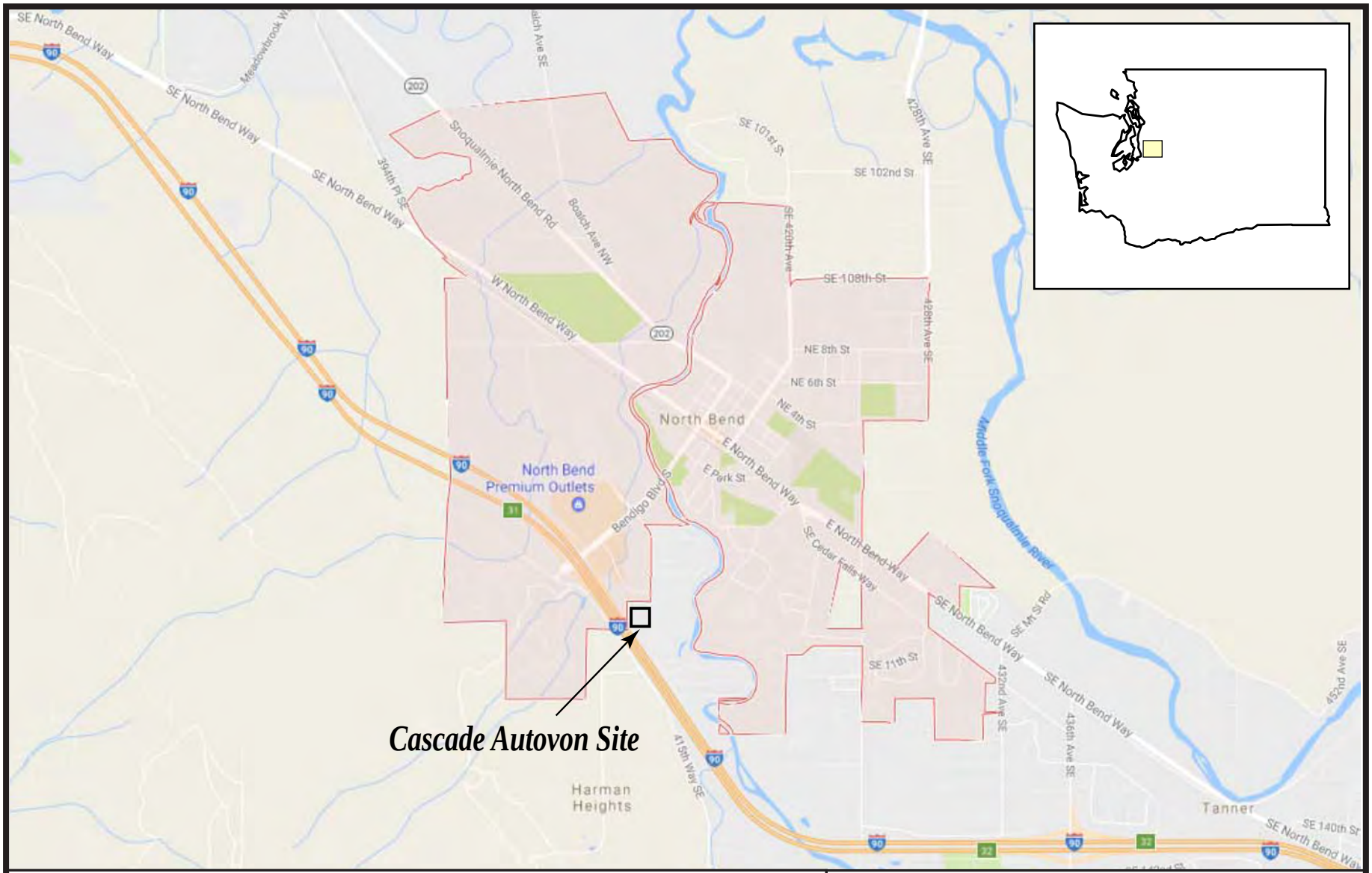
NWTPH-Gx - Northwest Total Petroleum Hydrocarbons - Gasoline Range

NWTPH-Dx - Northwest Total Petroleum Hydrocarbons - Diesel Range

BTEX - Benzene, toluene, ethylbenzene and xylenes

µg/L - micrograms per liter

FIGURES



Legend

N

Scale in Miles

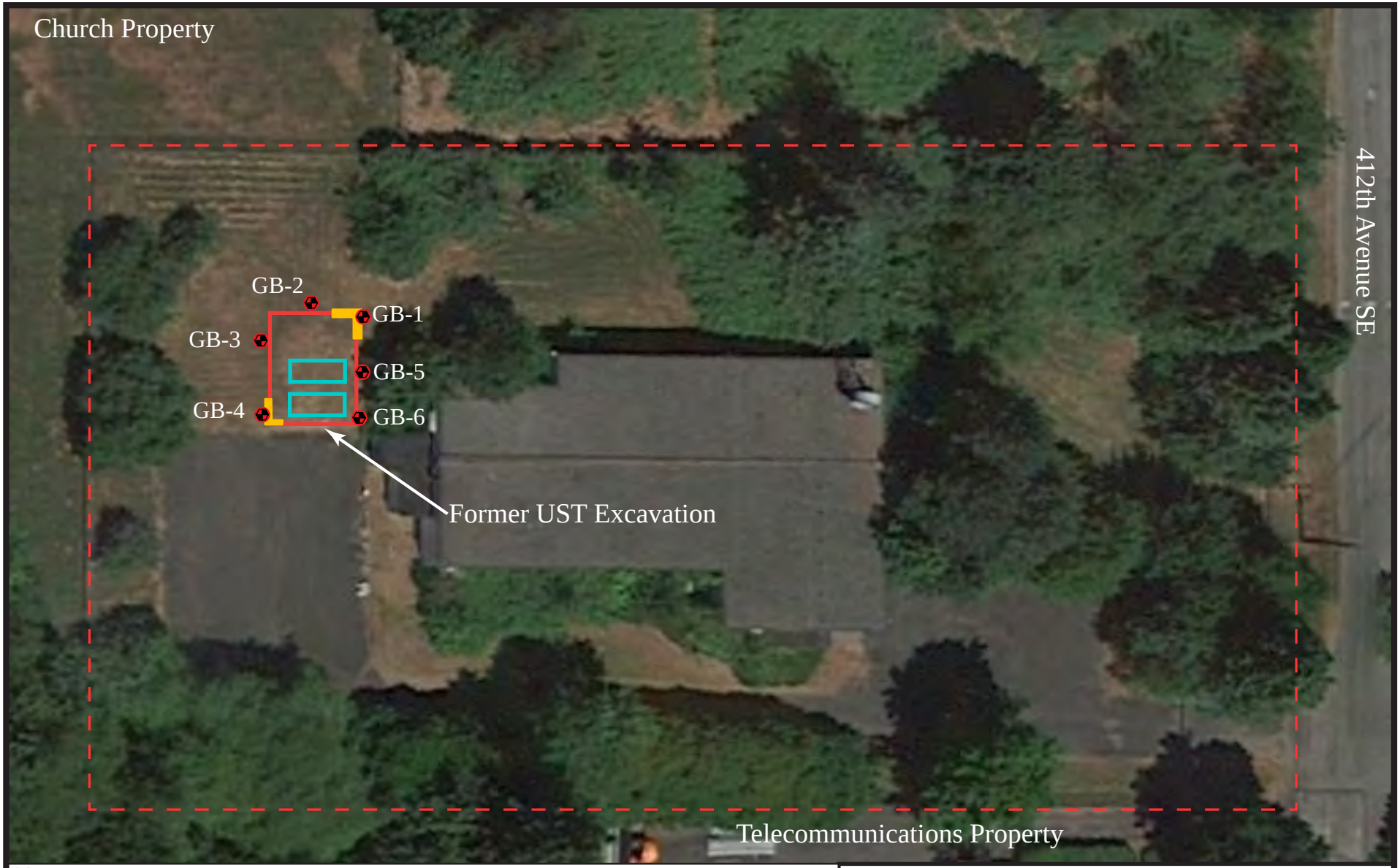
0 0.5 1

Locations approximate

Cascade Autovon
12727 412th Avenue SE, North Bend, WA

Geosyntec consultants | CenturyLink™ | Figure 1

Seattle, WA | January 2018



N

Legend

Property Boundary

Former UST Excavation with approximate locations of former USTs.

Geosyntec Borehole Location

Expected Locaton of Possible Soil Contamination

Scale in Feet

0 75 150

Locations approximate

Cascade Autovon
12727 412th Avenue SE, North Bend, WA

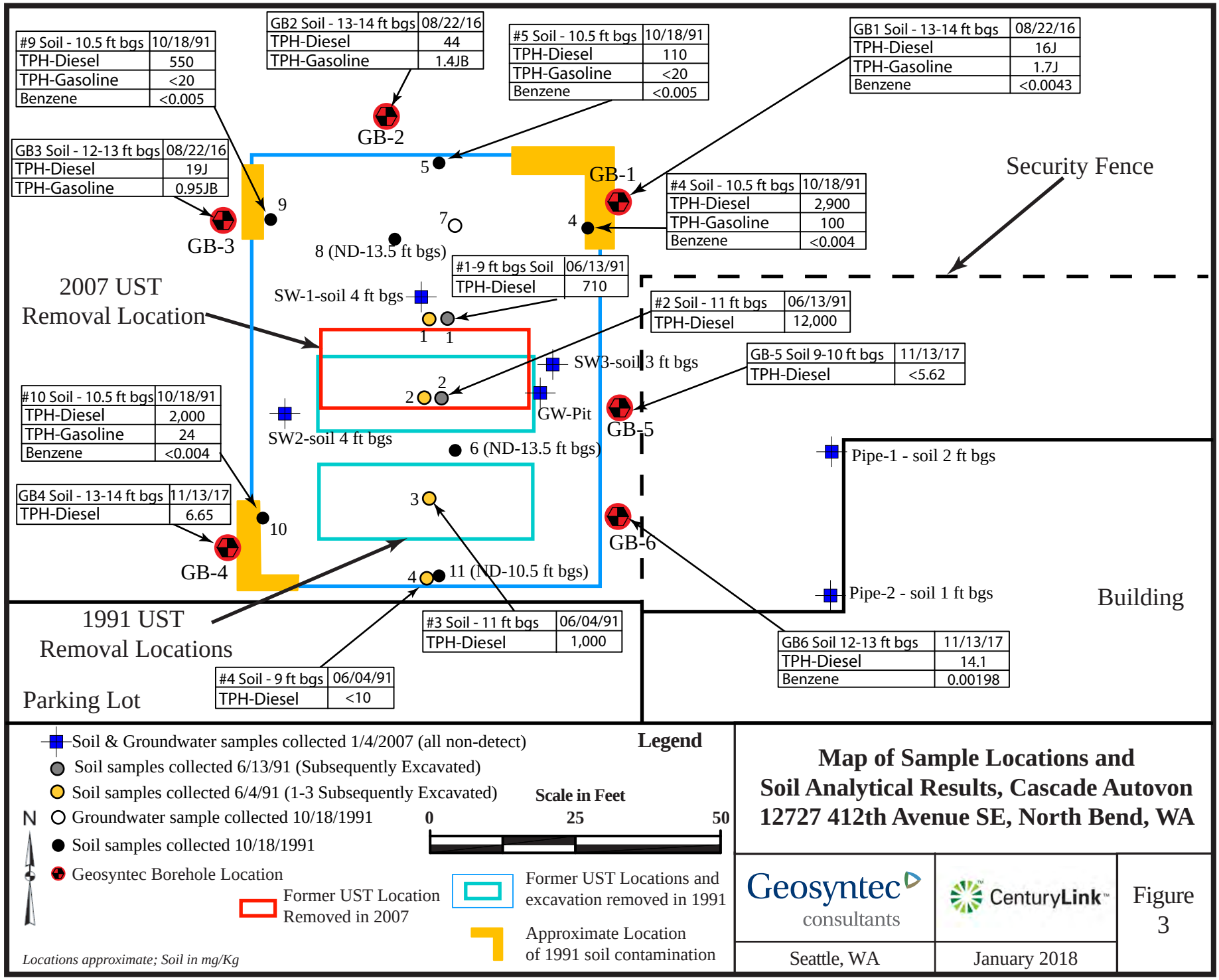
Geosyntec consultants

CenturyLink™

Figure 2

Seattle, WA

January 2018



Map of Sample Locations and Soil Analytical Results, Cascade Autovon 12727 412th Avenue SE, North Bend, WA

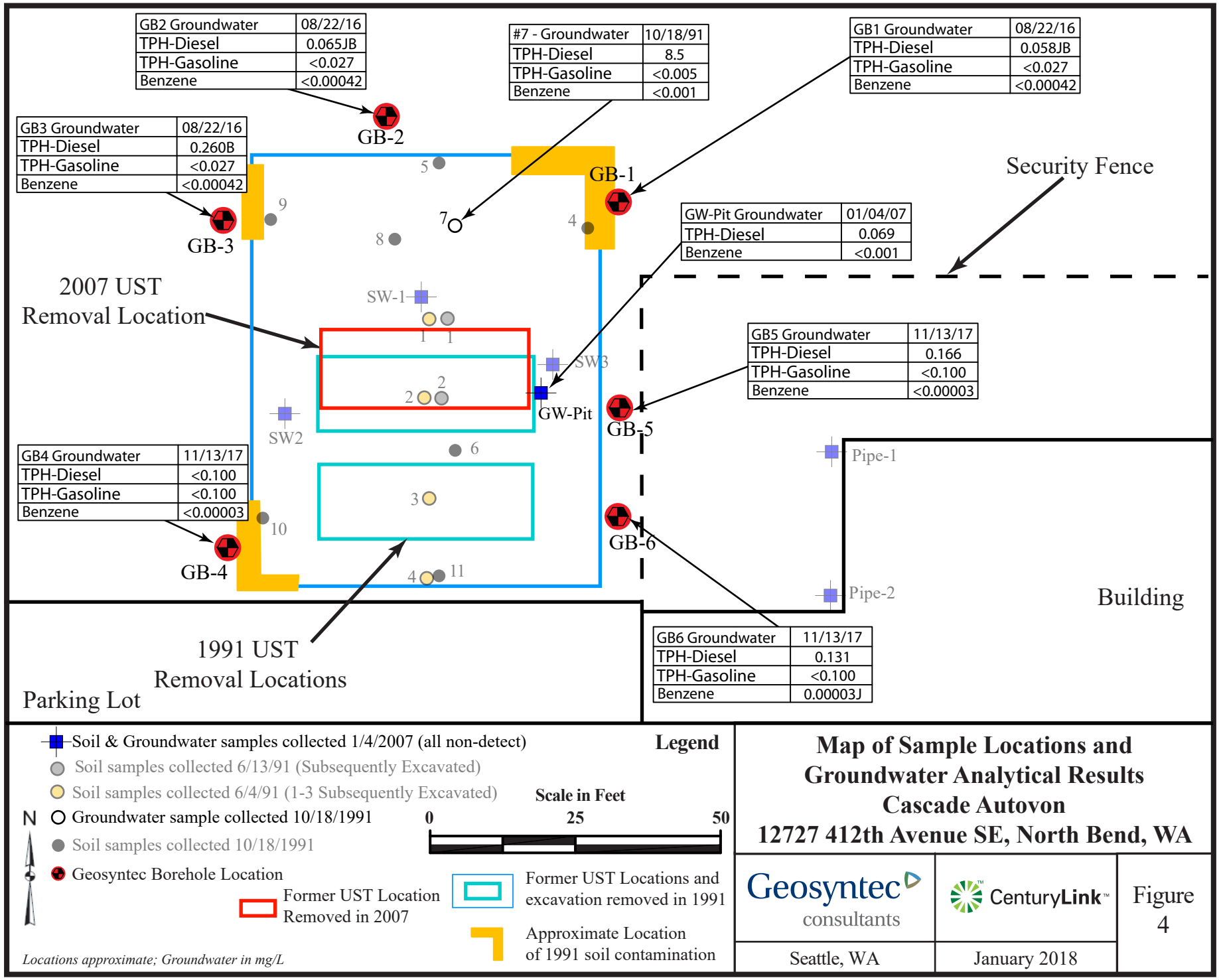
Geosyntec consultants

CenturyLink™

Seattle, WA

January 2018

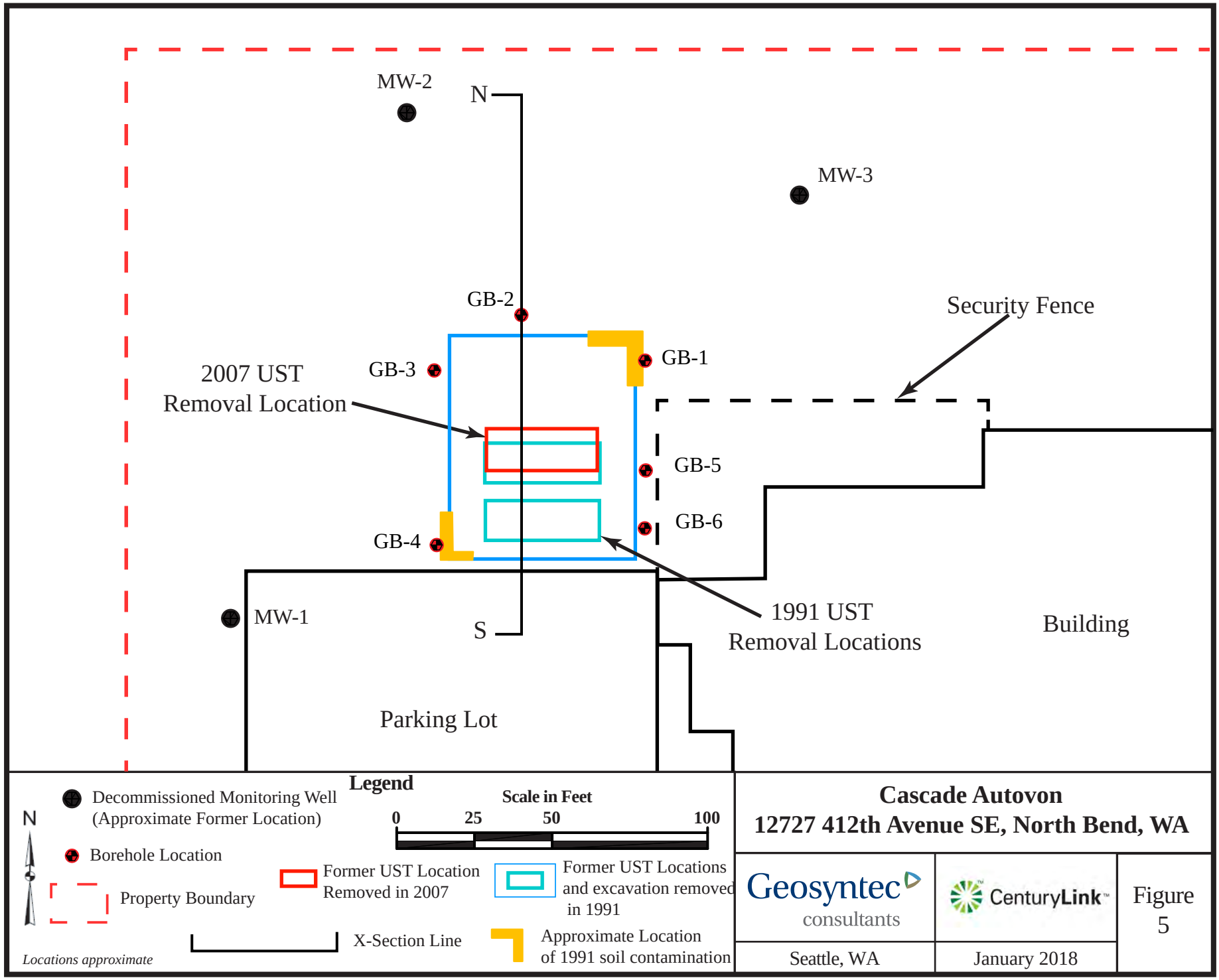
Figure 3



Map of Sample Locations and Groundwater Analytical Results
Cascade Autovon
12727 412th Avenue SE, North Bend, WA

Geosyntec consultants | CenturyLink™ | Figure 4

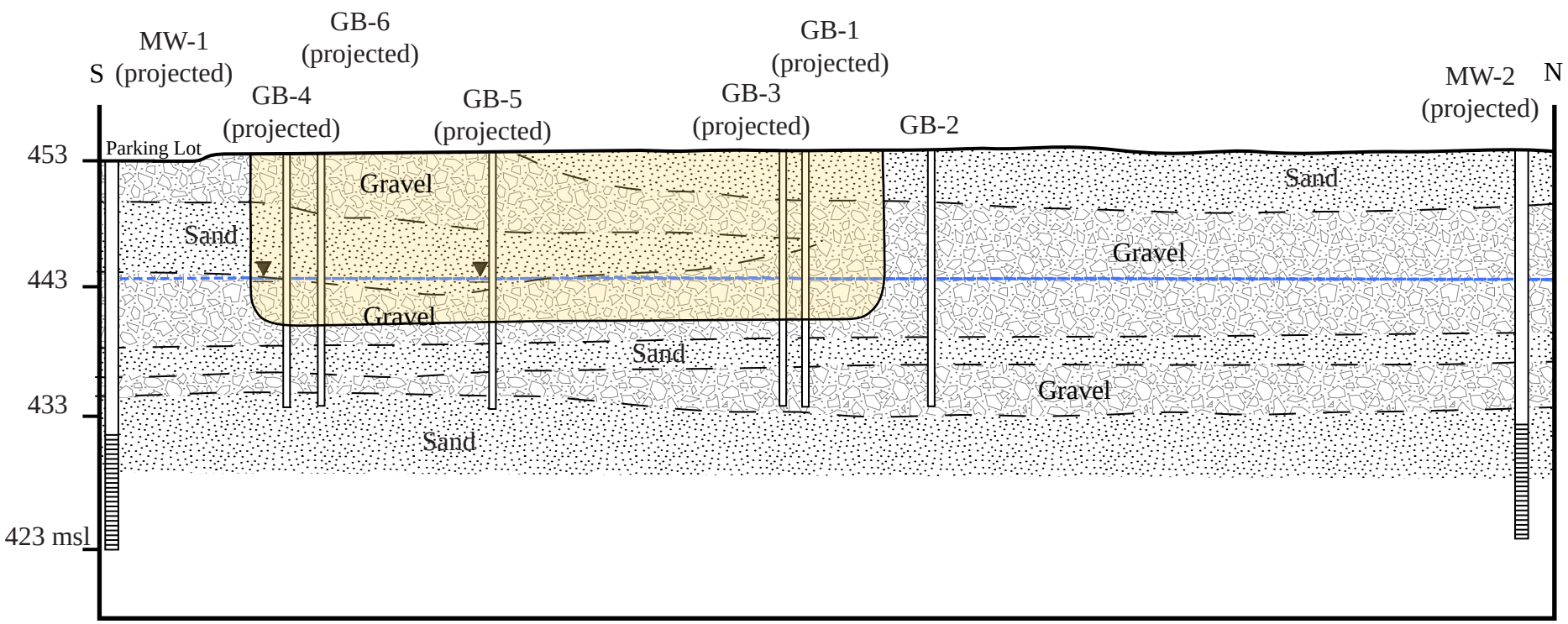
Seattle, WA | January 2018



Cascade Autovon
12727 412th Avenue SE, North Bend, WA

Geosyntec consultants | CenturyLink™ | Figure 5

Seattle, WA | January 2018



Sandy Gravel

Sand

Area of 1991 UST Excavation

Groundwater Elevation (measured 11/13/17)

0 50 Feet

20 Feet 10 0

Schematic Cross Section
Cascade Autovon Site, North Bend, Washington

Geosyntec consultants | CenturyLink™ | Figure 6

Seattle, WA | January 2018

APPENDIX A

Rec 12-2-91

ATTACHMENT A

B & C

20320 80th Ave. S. Kent, WA 98032
(206) 872-8890

ENVIRONMENTAL SITE ASSESSMENT

For the property located at
12727 412th Ave. S.E.
North Bend, WA 98045

Prepared for:
Cascade Autovon

B & C EQUIPMENT CO.
A Divison of PEECO

20320 80th Ave. S.
Kent, Washington 98032
Office (206) 872-8890
FAX (206) 872-8987
1-800-822-0084

November 12, 1991

Washington Department of Ecology
3190 160th Avenue SE
Bellevue, Washington 98008-5452

Attn: Joseph M. Hickey

Re: Cascade Autovon Company
12727 412th Avenue SE
North Bend, Washington 98045

Dear Mr. Hickey:

This report presents the scope of environmental work performed by B & C Equipment Co. in regard to the removal of (2) 10,000 gallon underground diesel tanks at Cascade Autovon.

BACKGROUND:

On June 4, 1991, B & C Equipment removed the two diesel USTs from Cascade Autovon and collected (4) soil samples from the excavation, (2) beneath each tank at a depth of 11 feet and (2) samples from the north and south sidewalls at a depth of 9 feet. Figure 1 delineates the actual location of the sample collection.

The results of this initial sample collection revealed a Total Petroleum Hydrocarbon (TPH) concentration of 1,000 parts per million (ppm) from beneath the southern tank. The remaining (3) soil samples revealed non-detectable levels for the TPH analysis. Due to the high concentration level beneath the south tank, it was presumed that samples collected from the north side of the excavation were not taken at a sufficient depth to reveal contamination.

On June 13th, B & C collected (2) additional soil samples from the north sidewall and bottom center of the north tank at a depth of 9 feet and 11 feet respectively (refer to Figure 1). The results of these samples revealed a TPH concentration of 710 ppm from the north sidewall and 12,000 ppm from the bottom center sample. Additionally, the bottom center sample revealed contamination from an aged gas/diesel source.

On October 16th and 18th, B & C performed a subsequent excavation in an attempt to remove the remaining contamination from the excavation. At the time of this ensuing excavation, groundwater was encountered at a depth of approximately 10 1/2 feet. To diminish the effect of recharging groundwater contaminating native

soil as the excavation proceeded, B & C pumped approximately 10,000 gallons of recharging water into an on-site 20,000 gallon Baker Tank for later disposal at the ChemPro treatment facility. As the excavation progressed it was evident that the contamination had migrated through the groundwater table/capillary fringe interface. B & C removed and segregated the upper 10 feet of clean soil from the contaminated soil below the water table interface. Approximately 200 cubic yards of contaminated soil was removed from the excavation and stockpiled on-site. The contaminated soil was placed on visquine plastic, bermed and covered to prevent run-off in the event of rain.

Five soil samples were collected at a depth of 10 1/2 feet from the sidewalls of the excavation; two bottom center samples from the north and south portions of the excavation at a depth of 13 1/2 and 12 feet respectively; and one groundwater recharge sample from the north side of the excavation. No southeast sidewall sample could be collected as further excavation in this direction would serve to undermine the foundation of the security fence area where the facility transformer is located. Refer to Figure 2 for the sample locations of the October 18th excavation. In addition to the excavation samples, (3) samples were collected from the contaminated soil stockpile on October 16th to profile the soil for later treatment or disposal.

Due to the existence of two concrete tank hold-down pads at the southern end of the excavation, sample #6 was collected between these two existing concrete pads. The groundwater sample (sample #7) was collected by extending a clean PVC bailer over the trackhoe arm and lowering the bailer into the recharged water at the north end of the excavation. Prior to sampling, the bailer was cleansed with a thorough tapwater rinse, alconox detergent wash, and final tapwater rinse.

All samples were collected using disposable vinyl gloves with EPA approved glass containers. The samples were packed for minimal headspace, labeled, and placed on ice for transport to the laboratory accompanied by chain of custody documentation.

RESULTS:

Subsurface Conditions: Soil immediately surrounding the USTs consisted of a medium grained sandy fill material. Soil beneath the two USTs and on top of the two concrete hold-down pads consisted of a coarse-grained grayish sandy material. It was this coarser grained sand that exhibited the most visual and olfactory contamination.

The native soil of the excavation consisted of a silty sand to a depth of approximately 7-8 feet but tapers slightly to varying depths around the perimeter of the excavation. Below the 8 foot depth, the soil consisted mainly of pebbles and cobbles mixed with silty sand from previous alluvial depositions. Soil beneath the water table (10 1/2 feet) at the north end of the excavation

consisted mainly of larger cobbles and rocks from alluvial depositions with silty sand in the interstices.

Chemical Results: Due to the June 13, 1991 analyses revealing contamination from an aged gas/diesel source, all subsequent samples collected on October 16th and 18th were analyzed for TPH as well as benzene, toluene, ethyl benzene, and xylene (BTEX).

The current Department of Ecology (DOE) soil cleanup standards for the parameters analyzed are:

TPH (gasoline)	100 parts per million (ppm)
TPH (diesel)	200 ppm
Benzene	0.5 ppm
Toluene	40.0 ppm
Ethyl benzene	20.0 ppm
Xylene	20.0 ppm

The current Department of Ecology (DOE) water cleanup standards for the parameters analyzed are:

TPH (gasoline & diesel)	1000 parts per billion (ppb)
Benzene	0.5 ppb
Toluene	40.0 ppb
Ethyl benzene	30.0 ppb
Xylene	20.0 ppb

Samples #1-3 were collected October 16th from the contaminated soil stockpile and revealed a diesel range TPH concentration of 8,700 ppm from sample #1 and 1100 ppm from samples #2 and #3. The gasoline range TPH concentration for the stockpile samples were all within DOE cleanup goals.

The analyses results of the October 18th excavation samples revealed a diesel range TPH concentration of 2,900 ppm, 550 ppm, and 2,000 ppm from the northeast, northwest and southwest sidewall samples respectively. The groundwater recharge sample revealed a diesel range TPH concentration of 8.5 ppm.

Results within the DOE cleanup standard for diesel contaminated soil were obtained from the north sidewall with a TPH concentration at 110 ppm. The south sidewall (sample #11) and the two bottom samples (samples #6 and #8) revealed non-detectable levels in the diesel range.

All excavation soil samples and the groundwater recharge sample revealed either non-detectable levels or levels under the current DOE cleanup goals for both the BTEX and gasoline range TPH analyses.

The following tables summarize the analytical results from all four sampling events conducted by B & C Equipment Co. All concentration units are presented in parts per million:

TABLE 1
June 4, 1991

Sample #	Location	TPH Concentration
1	N tank - N sidewall	< 10
2	N tank - bottom center	< 10
3	S tank - bottom center	1,000
4	S tank - S sidewall	< 10

TABLE 2
June 13, 1991

Sample #	Location	TPH Concentration
1	N tank - N sidewall	710
2	N tank - bottom center	12,000

TABLE 3
October 16, 1991

Sample #	TPH gas/diesel	Benzene	Toluene	Ethyl benzene	Xylene
1	62 / 8,700	< 0.004	0.120	0.091	0.570
2	< 20 / 1,100	< 0.005	< 0.005	< 0.005	0.008
3	32 / 1,100	< 0.004	< 0.004	< 0.004	0.018

TABLE 3
October 18, 1991

Sample #	TPH gas/diesel	Benzene	Toluene	Ethyl benzene	Xylene
4	100 / 2,900	< 0.004	< 0.004	0.016	0.120
5	< 20 / 110	< 0.005	< 0.005	< 0.005	0.008
6	< 20 / < 50	< 0.006	< 0.006	< 0.006	< 0.006
*7	< 0.005 / 8.5	< 0.001	< 0.001	< 0.001	< 0.001
8	< 20 / < 50	< 0.005	< 0.005	< 0.005	< 0.005
9	< 20 / 550	< 0.005	< 0.005	< 0.005	< 0.005
10	24 / 2,000	< 0.004	< 0.004	< 0.004	0.015
11	< 20 / < 50	< 0.006	< 0.006	< 0.006	< 0.006

*Sample #7 - Groundwater recharge sample.

Complete analytical methods and results for all sampling conducted between June 4, 1991 and October 18, 1991 are summarized in the attached certified analytical reports.

CONCLUSIONS & RECOMMENDATIONS:

As the October 16th an 18th laboratory results document, gasoline range analyses were within Department of Ecology cleanup goals for all samples including the contaminated soil stockpile samples for both TPH and BTEX parameters.

Due to the facility's main transformer on the west side of Cascade Autovon's property, access for further excavation in this area was limited to the extent depicted in Figure 2. Also as Figure 2 illustrates, no additional soil removal was possible along the east sidewall of the excavation without undermining the foundation of the security area and the equipment that is stored in this locale such as Cascade's transformer pad.

Based on analytical documentation and observations of its October 18th excavation, B & C feels these results corroborate its theory that:

1) The analyses results from sample #5 collected Oct. 18th confirm contamination migration was limited to this extent in the northward direction.

2) The south sidewall sample collected June 4th (sample #4) and the confirmation sample collected October 18th (sample #11) corroborates B & C's claim that contamination has not migrated in this direction.

3) Contamination is limited in depth to 10-11 feet as substantiated by the analyses results from the two bottom samples (#6 and #8) collected October 18th and the fact that this subsequent excavation proceeded at a time of year that allowed the lowest possible water table for soil removal.

Although the analytical results from the northeast, northwest, and southwest sidewall samples revealed TPH contamination above DOE cleanup goals in the diesel range, the limited access to the west and structural concerns to the east make it impractical to achieve DOE cleanup goals in these directions through additional excavation. Because the remaining contaminant in the soil is limited to diesel in nature and to 2,900 ppm TPH and less, B & C feels that any environmental threat to health and public at the site is minimal. A monitoring program should be implemented, however, to insure that the remaining contaminated soil does not impact the groundwater down-gradient of the excavation.

B & C recommends the installation of (3) 4-inch monitoring wells at the locations depicted in Figure 2. The southwest monitoring well would serve to observe conditions in this area of the site and the northeast and northwest wells would serve to monitor conditions at the opposite side of the excavation. All monitoring wells will be installed to a total depth of 25 feet and surveyed upon completion to determine the local gradient. B & C further recommends to develop the wells by purging three casing volumes and sampling the wells on a quarterly basis for a period of (1) year. All wells will be analyzed for BTEX and TPH by method 8015 to insure the integrity of the groundwater. If the wells reveal conditions

within the DOE's cleanup standards for that period, B & C will recommend a subsequent monitoring plan to follow-up on the existing conditions.

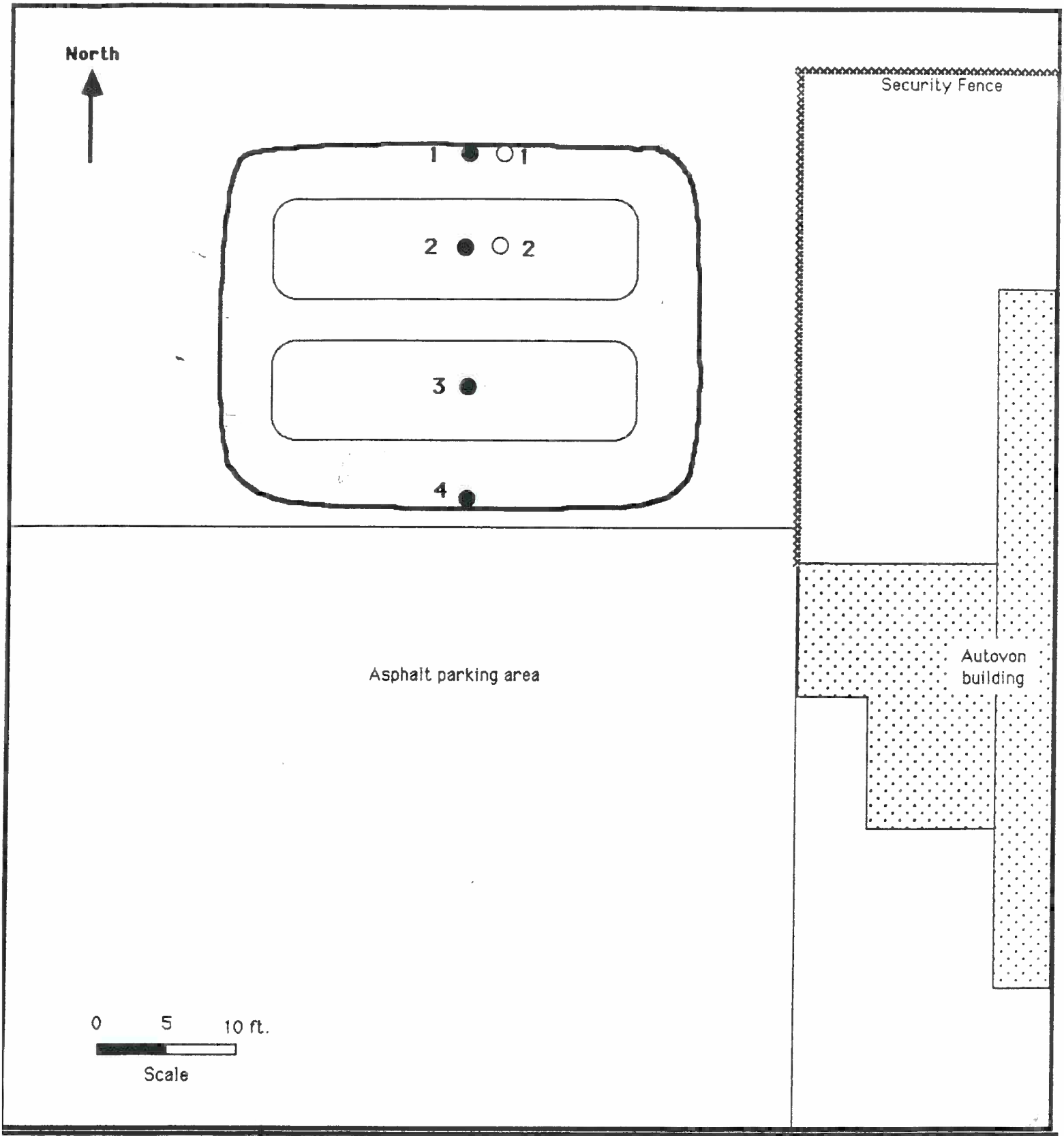
Cascade presently plans to install a new double-walled steel UST in the excavation. Due to the size of the excavation and the inclement weather in the near future, the rising water table is certain to present an installation obstacle and incur excessive de-watering costs to Cascade Autovon should the installation not proceed as soon as possible.

Therefore, B & C requests an expeditious approval in regard to this proposal. A written confirmation would be greatly appreciated in order for the installation of the new tank to proceed. If you have any questions, please contact me.

Sincerely,
B & C EQUIPMENT CO.

Barry D. DePan

Barry D. DePan
Environmental Specialist



Cascade Autovon Company
12727 412th Ave. SE
North Bend, WA 98045

Figure 1

KEY

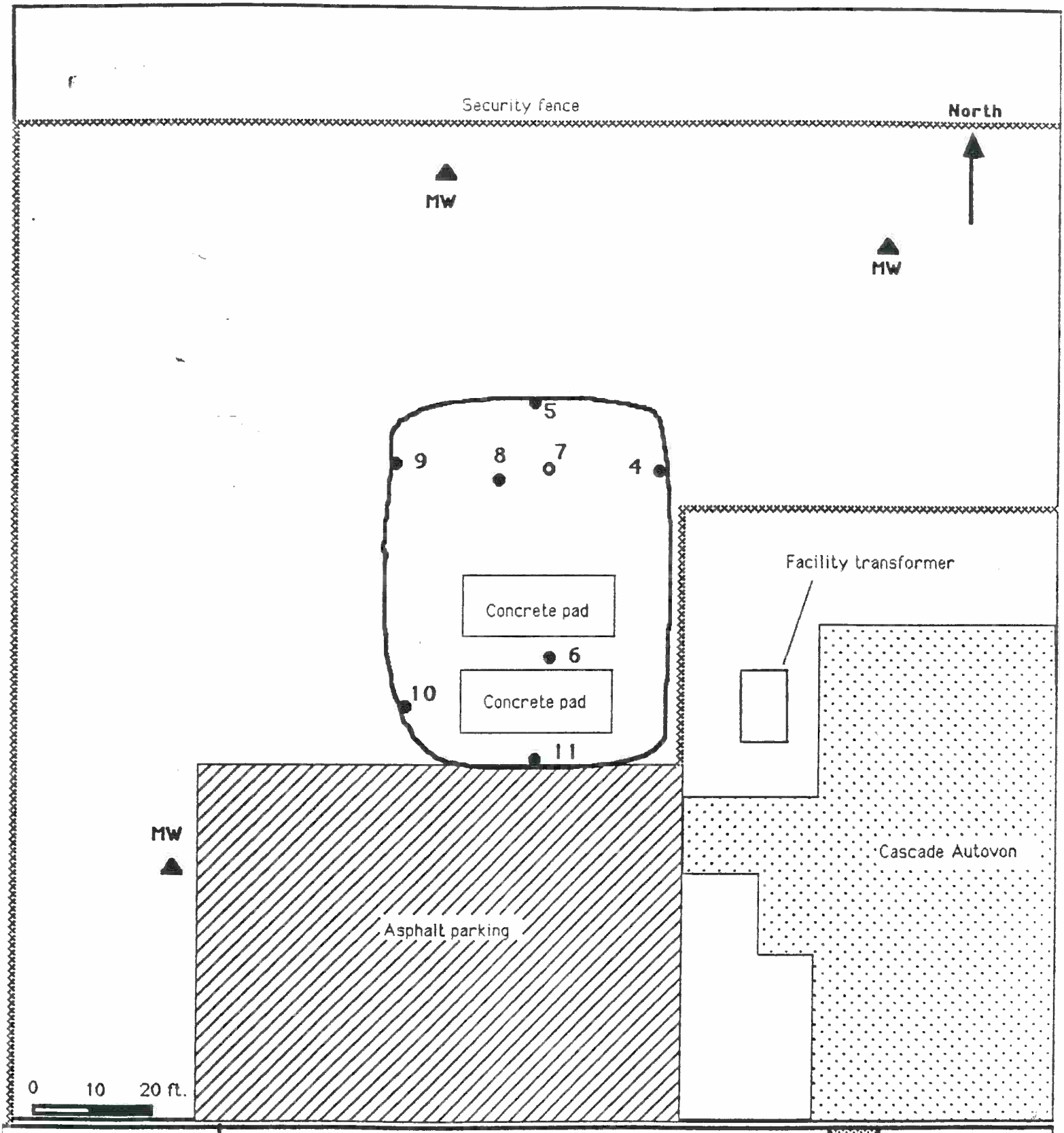
- ● Sample location and number; samples collected 6/4/91.
- ○ Sample location and number; samples collected 6/13/91.

B & C

Job # 1341

Date: 6/18/91

Barry DePan



Cascade Autovon Co.
12727 412th Ave.S.E.
North Bend, WA 98045

Figure 1

KEY

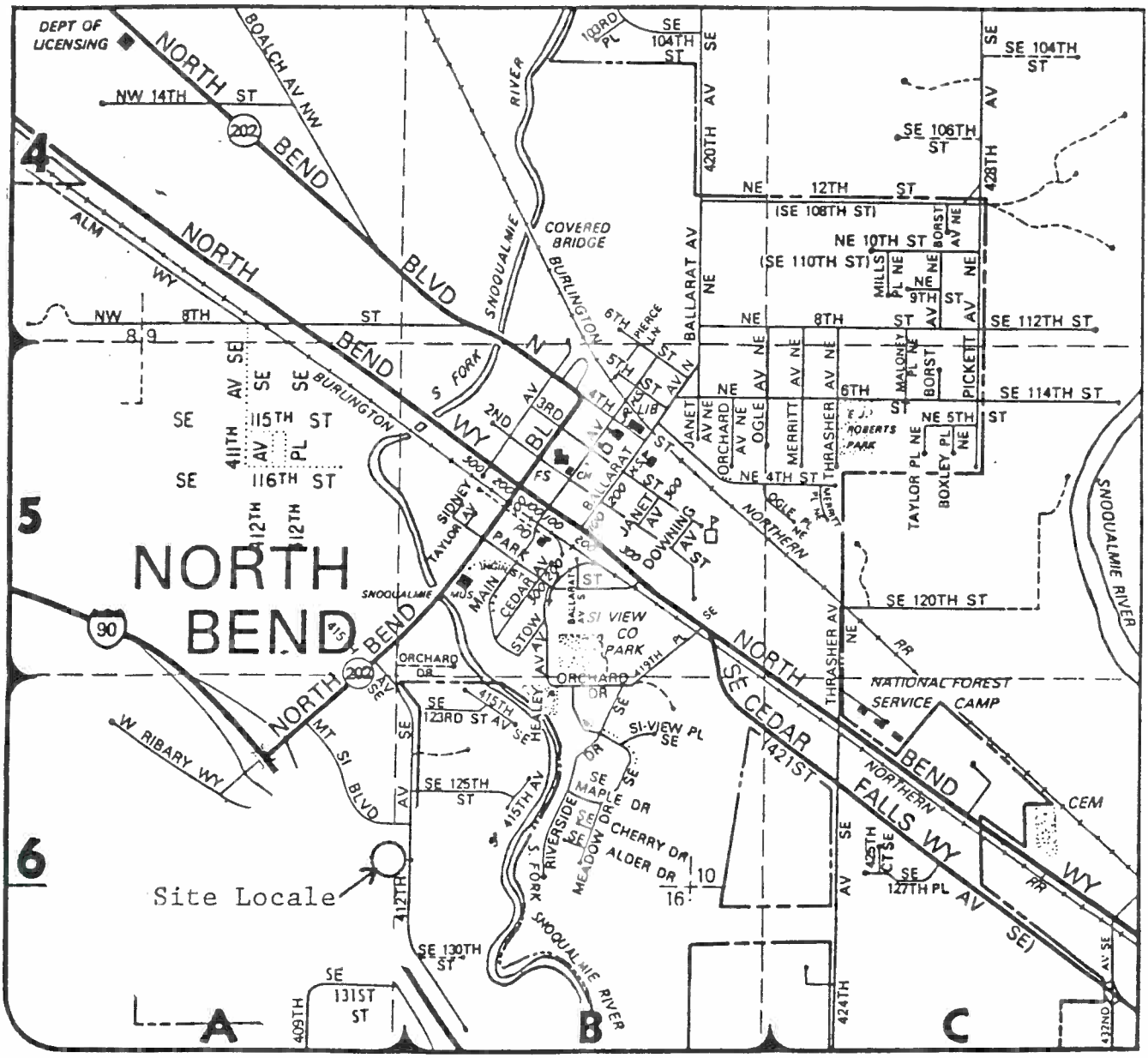
B & C

Job • 1342

Date: 11/9/91

Barry DePan

- Soil samples collected 10/18/91
- Groundwater recharge sample collected 10/18/91
- Asphalt
- Proposed monitor well locations (MW)



Vicinity Map

Figure 3

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

PROJ NO	PROJECT NAME	SAMPLER
1341	Cascade Autovon	Barry De Pan
	ADDRESS 12727 412th Ave. SE, North Bend, WA 98045	

SAMPLE NUMBER	DATE	TIME	WATER	SOIL	ICED	SOURCE OF SAMPLE	TANK SIZE: DIRECTION: DEPTH:	BTEX 602/8020	% Gasoline	TPH 8015 Modified	TPH (IR) 418.1	Total Pb	TCLP Cd,Cr,Pb	TCLP Metals (8)	PCB's 608/8080	Chlor. Solv. 601/8010	Flashpoint 1010	Total Halogenated Compounds
								ANALYSIS TYPE REQUESTED										
1	6/4/91	12:30		✓	✓	N tank - N sidewall	9'			✓								
2	6/4/91	12:35		✓	✓	N tank - bottom center	11'			✓								
3	6/4/91	2:15		✓	✓	S tank - bottom center	11'			✓								
4	6/4/91	2:20		✓	✓	S tank - S sidewall	9'			✓								

Relinquished by:	Date	Time	Received by:
Barry D. DePan	6/4/91	4:15	
Relinquished by:	Date	Time	Received by:
Relinquished by	Date	Time	Received by laboratory
	6/4/91	4:15	Mary Cudas

RUSH YES (NO)

Please FAX results!

B & C EQUIPMENT CO,
20320 80th Ave. S.
Kent, WA 98032
(206) 872-8890
(800) 822-0084
FAX (206) 872-8987

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: B & C Equipment Date: June 7, 1991

Report On: Analysis of Soil Lab No.: 17980

IDENTIFICATION:
Samples Received on 06-05-91
Project: 1341 Cascade Autovon

ANALYSIS:

Lab Sample No.	Client ID	Total Petroleum Fuel Hydrocarbons, mg/kg
1	1	< 10.0
2	2	< 10.0
3	3	1,000 Diesel
4	4	< 10.0

*TPH by EPA SW-846 Modified Method 8015

Note - Results reported on an as received basis.

SURROGATE RECOVERY

Lab Sample No.	1	2	3	4
TPH by Mod 8015				
1-Chlorooctane	93	97	95	94
Perylene	75	79	83	77

SOUND ANALYTICAL SERVICES

C. LARRY ZURAW

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

PROJ NO	PROJECT NAME	SAMPLER
1341	Cascade Autoavon ADDRESS 12727 412th Ave. SE North Bend, WA 98045	Barry DePan

SAMPLE NUMBER	DATE	TIME	WATER	SOIL	ICED	SOURCE OF SAMPLE	TANK SIZE: DIRECTION: DEPTH:	BTEX 602/8020	% Gasoline	TPH 8015 Modified	TPH (IR) 418.1	Total Pb	TCLP Cd,Cr,Pb	TCLP Metals (8)	PCB's 608/8080	Chlor. Solv. 601/8010	Flashpoint 1010	Total Halogenated Compounds
1	6/13/91	11:00		✓	✓	N tank - N sidewall	9'			✓								
2	6/13	11:10		✓	✓	N tank - bottom center	11'			✓								

ANALYSIS TYPE REQUESTED

Relinquished by:	Date	Time	Received by:
Barry D. DePan	6/13/91		
Relinquished by:	Date	Time	Received by:
Relinquished by	Date	Time	Received by Laboratory
	6/13/91	4:45	Mary Cuker

RUSH YES NO

Please FAX results!

B & C EQUIPMENT CO,
20320 80th Ave. S.
Kent, WA 98032
(206) 872-8890
(800) 822-0084
FAX (206) 872-8987

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: B & C Equipment Co. Date: June 18, 1991

Report On: Analysis of Soil Lab No.: 18147

IDENTIFICATION:
Samples Received on 06-14-91
Project: 134 Cascade Autovon

ANALYSIS:

Lab Sample No.	Client ID	Total Petroleum Fuel Hydrocarbons, mg/kg
RUSH 1	N. Tank - N. Sidewall	710 as Diesel
RUSH 2	N. Tank - Bottom Center	12,000 as Aged Gas/Diesel

*TPH by EPA SW-846 Modified Method 8015

Note - Results reported on an as received basis.

	SURROGATE RECOVERY, %	
Lab Sample No.	1	2
TPH by Mod 8015		
1-Chlorooctane	96	163*
Perylene	78	80

*Surrogate recovery invalid due to matrix interferenc.

SOUND ANALYTICAL SERVICES

G. LARRY ZURAW

B & C EQUIPMENT CO.

20320 80th Ave. S.
Kent, Washington 98032
Office (206) 872-8890
FAX (206) 872-8987
1-800-822-0084

CHAIN OF CUSTODY

REQUEST FOR LABORATORY ANALYSIS

PROJ. NO. 1341-903

PROJECT NAME: Cascade Autovon

ADDRESS: 12727 412th Ave SE North Bend, WA

SAMPLER: Barry De Pan

SAMPLE NUMBER	DATE	TIME	WATER	SOIL	ICED	SAMPLE LOCATION TANK SIZE TANK PRODUCT	DEPTH	WTPH-HCID	WTPH-G	WTPH-D	WTPH-418.1 Mod.	TPH 418.1	TPH 8015 Mod.	BTEX
9	10/18/91	2:15		✓	✓	NW sidewall	10.5'	✓						✓
10	10/18	3:00		✓	✓	SW sidewall	10.5'	✓						✓
11	10/18	3:15		✓	✓	S sidewall	10.5'	✓						✓

Relinquished by:	Date	Time	Received by:
Barry D. De Pan	10/21/91	2:40	
Relinquished by:			MEGAN GLEASON
Relinquished by:			

RUSH: YES (NO)

B & C EQUIPMENT CO.

20320 80th Ave. S.
Kent, Washington 98032
Office (206) 872-8890
FAX (206) 872-8967
1-800-822-0064

CHAIN OF CUSTODY

REQUEST FOR LABORATORY ANALYSIS

PROJ. NO. 1341-903

PROJECT NAME: Cascade Autovon

ADDRESS: 12727 412th Ave SE North Bend, WA 98045

SAMPLER: Barry De Pan

SAMPLE NUMBER	DATE	TIME	WATER	SOIL	ICED	SAMPLE LOCATION TANK SIZE TANK PRODUCT	DEPTH	WTPH-HCID	WTPH-G	WTPH-D	WTPH-418.1 Mod.	TPH 418.1	TPH 8015 Mod.	BTEX						
1	10/16/91	2:30		✓	✓	Excavate soil pile * Composite	6"	✓						✓						
2	10/16	3:00		✓	✓	Excavated soil pile * Composite	6"	✓						✓						
3	10/16	3:30		✓	✓	Excavated soil pile * Composite	6"	✓						✓						
4	10/18/91	11:00		✓	✓	NE sidewall	10.5'	✓						✓						
5	10/18	11:30		✓	✓	N sidewall	10.5'	✓						✓						
6	10/18	1:30		✓	✓	Bottom center (S end) Between tank pads	12'	✓						✓						
7	10/18	1:40	✓		✓	Ground water recharge N end - center	10.5'	✓						✓						
8	10/18	1:45		✓	✓	Bottom center (N end)	13.5'	✓						✓						

Relinquished by:	Date	Time	Received by:
Barry D. De Pan	10/21/91	2:40	[signature]
Relinquished by:			MEGAN GLEASON
Relinquished by:			

RUSH: YES (NO)

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063
Chemistry Microbiology and Technical Services

CLIENT: B&C Equipment Co.
20320 80th Ave. S.
Kent, WA 98032

ATTN :

Certificate of Analysis
Work Order# : 91-10-A08
DATE RECEIVED : 10/21/91
DATE OF REPORT: 11/05/91
CLIENT JOB ID : Project No. 1341-903

Work ID : Cascade Autovan
Taken By : Client
Transported by: Hand Delivered
Type : Soil/Water

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date
01	#1 Excavator Soil Pile	10/16/91 02:30
02	#2 Exavated Soil Pile	10/16/91 03:00
03	#3 Excavated Soil Pile	10/16/91 03:30
04	#4 NE Sidewall	10/18/91 11:00
05	#5 N Sidewall	10/18/91 11:30
06	#6 Bottom Center (S end)	10/18/91 01:30
07	#7 Ground Water Recharge	10/18/91 01:40
08	#8 Bottom Center (N End)	10/18/91 01:45
09	#9 NW Sidewall	10/18/91 02:15
10	#10 SW Sidewall	10/18/91 03:00
11	#11 S Sidewall	10/18/91 03:15
12	Method Blank	N/A
13	Method Blank	N/A

FLAGGING:

The flag "U" indicates the analyte of interest was not detected, to the limit of detection indicated.

COMMENTS ON PURGEABLE AROMATICS (BTEX):

Samples 9110A08-04, -05, -06, and -11 had one (Trichlorobenzene) of two surrogates outside the control limits due to matrix intereference. This did not affect the results.

Sample 9110A08-01 had one (Bromofluorobenzene) of two surrogates outside the control limits due to matrix intereference. This did not affect the results.

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

Lab Sample ID : 9110A08-01 Date Collected: 10/16/91
Client Sample ID: #1 Excavator Soil Pile Date Received : 10/21/91

Total Solids: 92 %

WTPH-HCID Results:

Prep Date: 10/22/91
Analysis Date: 10/22/91

	Result	SDL
Gasoline Range.....	62	20 mg/kg DB
Diesel Range.....	8700	50 mg/kg DB

Surrogate recoveries	% Rec	LCL	UCL
Bromofluorobenzene.....	575	50	150
2-Fluorobiphenyl.....	22.8	50	150
p-Terphenyl.....	95.0	50	150

Comments: Although the sample gave a result in the gasoline range, there was no pattern recognition for gasoline. There was some pattern recognition when compared to the diesel standard. This may be due to "weathering" of the sample. Two surrogates were out of control due to matrix interference.

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

REPORT ON SAMPLE: 9110A08-01B
Client Sample ID: #1 Excavator Soil Pile

Date Received	: 10/21/91	Collection Date	: 10/16/91
Date Extracted	: N/A	Date Analyzed	: 10/23/91
Test Code	: BTEX_S	Test Method	: SW8020

Report Units : ug/kg DB

Compound	Result	SDL	Analysis Date	Confirmation Date
Benzene.....	4.0 U	4	10/23/91	10/23/91
Toluene.....	120	4	10/23/91	10/23/91
Ethylbenzene.....	91	4	10/23/91	10/23/91
Total xylenes.....	570	4	10/23/91	10/23/91

Surrogate recovery report for sample 9110A08-01B

Surrogate	Percent Recovery	Limits: Min.	Max.
1,2,3-Trichlorobenzene ...	157	20	160
p-Bromofluorobenzene	197.3 *	62	117

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

Lab Sample ID : 9110A08-02 Date Collected: 10/16/91
Client Sample ID: #2 Exavated Soil Pile Date Received : 10/21/91

Total Solids: 88 %

WTPH-HCID Results:

Prep Date: 10/22/91
Analysis Date: 10/22/91

	Result	SDL
Gasoline Range.....	20 U	20 mg/kg DB
Diesel Range.....	1100	50 mg/kg DB

Surrogate recoveries	% Rec	LCL	UCL
Bromofluorobenzene.....	55.0	50	150
2-Fluorobiphenyl.....	280	50	150
p-Terphenyl.....	105	50	150

Comments: There was some pattern recognition when compared to the diesel standard, this may be due to "weathering" effects of the sample. One of the surrogates was out of control due to matrix interference from the sample.

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology and Technical Services

REPORT ON SAMPLE: 9110A08-02B
Client Sample ID: #2 Exavated Soil Pile

Date Received	: 10/21/91	Collection Date	: 10/16/91
Date Extracted	: N/A	Date Analyzed	: 10/23/91
Test Code	: BTEX_S	Test Method	: SW8020

Report Units : ug/kg DB

Compound	Result	SDL	Analysis Date	Confirmation Date
Benzene.....	5.0 U	5	10/23/91	10/23/91
Toluene.....	5.0 U	5	10/23/91	10/23/91
Ethylbenzene.....	5.0 U	5	10/23/91	10/23/91
Total xylenes.....	7.9	5	10/23/91	10/23/91

Surrogate recovery report for sample 9110A08-02B

Surrogate	Percent Recovery	Limits: Min.	Max.
1,2,3-Trichlorobenzene ...	149	20	160
p-Bromofluorobenzene	83.3	62	117

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

Lab Sample ID : 9110A08-03 Date Collected: 10/16/91
Client Sample ID: #3 Excavated Soil Pile Date Received : 10/21/91

Total Solids: 89 %

WTPH-HCID Results:

Prep Date: 10/22/91
Analysis Date: 10/22/91

	Result	SDL
Gasoline Range.....	32	20 mg/kg DB
Diesel Range.....	1100	50 mg/kg DB

Surrogate recoveries	% Rec	LCL	UCL
Bromofluorobenzene.....	90.0	50	150
2-Fluorobiphenyl.....	225	50	150
p-Terphenyl.....	110	50	150

Comments: Although the sample gave a result in the gasoline range, there was no pattern recognition for gasoline. There was some pattern recognition when compared to the diesel standard. This may be due to "weathering" of the sample. One surrogate was out of control due to matrix interference.

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

REPORT ON SAMPLE: 9110A08-03B
Client Sample ID: #3 Excavated Soil Pile

Date Received	: 10/21/91	Collection Date	: 10/16/91
Date Extracted	: N/A	Date Analyzed	: 10/23/91
Test Code	: BTEX_S	Test Method	: SW8020

Report Units : ug/kg DB

Compound	Result	SDL	Analysis Date	Confirmation Date
Benzene.....	4.0 U	4	10/23/91	10/23/91
Toluene.....	4.0 U	4	10/23/91	10/23/91
Ethylbenzene.....	4.0 U	4	10/23/91	10/23/91
Total xylenes.....	18	4	10/23/91	10/23/91

Surrogate recovery report for sample 9110A08-03B

Surrogate	Percent Recovery	Limits: Min.	Max.
1,2,3-Trichlorobenzene ...	147	20	160
p-Bromofluorobenzene	83.3	62	117

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

REPORT ON SAMPLE: 9110A08-04B
Client Sample ID: #4 NE Sidewall

Date Received	: 10/21/91	Collection Date	: 10/18/91
Date Extracted	: N/A	Date Analyzed	: 10/23/91
Test Code	: BTEX_S	Test Method	: SW8020

Report Units : ug/kg DB

Compound	Result	SDL	Analysis Date	Confirmation Date
Benzene.....	4.0 U	4	10/23/91	10/23/91
Toluene.....	4.0 U	4	10/23/91	10/23/91
Ethylbenzene.....	16	4	10/23/91	10/23/91
Total xylenes.....	120	4	10/23/91	10/23/91

Surrogate recovery report for sample 9110A08-04B

Surrogate	Percent Recovery	Limits: Min.	Max.
1,2,3-Trichlorobenzene ...	185 *	20	160
p-Bromofluorobenzene	94.0	62	117

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

Lab Sample ID : 9110A08-05
Client Sample ID: #5 N Sidewall

Date Collected: 10/18/91
Date Received : 10/21/91

Total Solids: 88 %

WTPH-HCID Results:

Prep Date: 10/22/91
Analysis Date: 10/22/91

	Result	SDL
Gasoline Range.....	20 U	20 mg/kg DB
Diesel Range.....	110	50 mg/kg DB

Surrogate recoveries	% Rec	LCL	UCL
Bromofluorobenzene.....	55.0	50	150
2-Fluorobiphenyl.....	105	50	150
p-Terphenyl.....	100	50	150

Comments: There was some pattern recognition when compared to diesel standard. This may be due to "weathering" of the sample.

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

REPORT ON SAMPLE: 9110A08-05B
Client Sample ID: #5 N Sidewall

Date Received	: 10/21/91	Collection Date	: 10/18/91
Date Extracted	: N/A	Date Analyzed	: 10/23/91
Test Code	: BTEX_S	Test Method	: SW8020

Report Units : ug/kg DB

Compound	Result	SDL	Analysis Date	Confirmation Date
Benzene.....	5.0 U	5	10/23/91	10/23/91
Toluene.....	5.0 U	5	10/23/91	10/23/91
Ethylbenzene.....	5.0 U	5	10/23/91	10/23/91
Total xylenes.....	7.8	5	10/23/91	10/23/91

Surrogate recovery report for sample 9110A08-05B

Surrogate	Percent Recovery	Limits: Min.	Max.
1,2,3-Trichlorobenzene ...	220 *	20	160
p-Bromofluorobenzene	84.3	62	117

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

Lab Sample ID : 9110A08-06 Date Collected: 10/18/91
Client Sample ID: #6 Bottom Center (S end) Date Received : 10/21/91

Total Solids: 73 %

WTPH-HCID Results:

Prep Date: 10/22/91
Analysis Date: 10/22/91

	Result	SDL
Gasoline Range.....	20 U	20 mg/kg DB
Diesel Range.....	50 U	50 mg/kg DB

Surrogate recoveries	% Rec	LCL	UCL
Bromofluorobenzene.....	30.0	50	150
2-Fluorobiphenyl.....	60.0	50	150
p-Terphenyl.....	70.0	50	150

Comments: One of three surrogates was out of control. This did not effect the results.

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

REPORT ON SAMPLE: 9110A08-06B
Client Sample ID: #6 Bottom Center (S end)

Date Received	: 10/21/91	Collection Date	: 10/18/91
Date Extracted	: N/A	Date Analyzed	: 10/23/91
Test Code	: BTEX_S	Test Method	: SW8020

Report Units : ug/kg DB

Compound	Result	SDL	Analysis Date	Confirmation Date
Benzene.....	6.0 U	6	10/23/91	10/23/91
Toluene.....	6.0 U	6	10/23/91	10/23/91
Ethylbenzene.....	6.0 U	6	10/23/91	10/23/91
Total xylenes.....	6.0 U	6	10/23/91	10/23/91

Surrogate recovery report for sample 9110A08-06B

Surrogate	Percent Recovery	Limits: Min.	Max.
1,2,3-Trichlorobenzene ...	168 *	20	160
p-Bromofluorobenzene	83.8	62	117

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063
Chemistry, Microbiology, and Technical Services

Lab Sample ID : 9110A08-07 Date Collected: 10/18/91
Client Sample ID: #7 Ground Water Recharge Date Received : 10/21/91

WTPH-HCID Results:

Prep Date: 10/22/91
Analysis Date: 10/22/91

	Result	SDL
Gasoline Range.....	500 U	500 ug/L
Diesel Range.....	8500	1200 ug/L

Surrogate recoveries	% Rec	LCL	UCL
Bromofluorobenzene.....	90.0	50	150
2-Fluorobiphenyl.....	115	50	150
p-Terphenyl.....	100	50	150

Comments: There was some pattern recognition when compared to the diesel standard, this may be due to "weathering" effects on the sample.

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063
Chemistry, Microbiology, and Technical Services

REPORT ON SAMPLE: 9110A08-07B
Client Sample ID: #7 Ground Water Recharge

Date Received : 10/21/91
Date Extracted : N/A
Test Code : BTEX_W

Collection Date : 10/18/91
Date Analyzed : 11/23/91
Test Method : SW 8020/EP602

Report Units : ug/L

Compound	Result	SDL	Analysis Date	Confirmation Date
Benzene.....	1.0 U	1	11/23/91	11/23/91
Toluene.....	1.0 U	1	11/23/91	11/23/91
Ethylbenzene.....	1.0 U	1	11/23/91	11/23/91
Total xylenes.....	1.0 U	1	11/23/91	11/23/91

Surrogate recovery report for sample 9110A08-07B

Surrogate	Percent Recovery	Limits: Min.	Max.
Bromofluorobenzene	89	78	119
1,2,3-Trichlorobenzene ...	126	61	145

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

Lab Sample ID : 9110A08-08 Date Collected: 10/18/91
Client Sample ID: #8 Bottom Center (N End) Date Received : 10/21/91

Total Solids: 88 %

WTPH-HCID Results:

Prep Date: 10/22/91
Analysis Date: 10/22/91

	Result	SDL
Gasoline Range.....	20 U	20 mg/kg DB
Diesel Range.....	50 U	50 mg/kg DB

Surrogate recoveries	% Rec	LCL	UCL
Bromofluorobenzene.....	75.0	50	150
2-Fluorobiphenyl.....	100	50	150
p-Terphenyl.....	105	50	150

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

REPORT ON SAMPLE: 9110A08-08B
Client Sample ID: #8 Bottom Center (N End)

Date Received	: 10/21/91	Collection Date	: 10/18/91
Date Extracted	: N/A	Date Analyzed	: 11/24/91
Test Code	: BTEX_S	Test Method	: SW8020

Report Units : ug/kg DB

Compound	Result	SDL	Analysis Date	Confirmation Date
Benzene.....	5.0 U	5	11/24/91	11/24/91
Toluene.....	5.0 U	5	11/24/91	11/24/91
Ethylbenzene.....	5.0 U	5	11/24/91	11/24/91
Total xylenes.....	5.0 U	5	11/24/91	11/24/91

Surrogate recovery report for sample 9110A08-08B

Surrogate	Percent Recovery	Limits: Min.	Max.
1,2,3-Trichlorobenzene ...	116	20	160
p-Bromofluorobenzene	102.0	62	117

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

Lab Sample ID : 9110A08-09
Client Sample ID: #9 NW Sidewall

Date Collected: 10/18/91
Date Received : 10/21/91

Total Solids: 70 %

WTPH-HCID Results:

Prep Date: 10/22/91
Analysis Date: 10/22/91

	Result	SDL
Gasoline Range.....	20 U	20 mg/kg DB
Diesel Range.....	550	50 mg/kg DB

Surrogate recoveries	% Rec	LCL	UCL
Bromofluorobenzene.....	55.0	50	150
2-Fluorobiphenyl.....	145	50	150
p-Terphenyl.....	95.0	50	150

Comments: There was some pattern recognition when compared to the diesel standard. This may be due to "weathering" of the sample.

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

REPORT ON SAMPLE: 9110A08-09B
Client Sample ID: #9 NW Sidewall

Date Received	: 10/21/91	Collection Date	: 10/18/91
Date Extracted	: N/A	Date Analyzed	: 11/24/91
Test Code	: BTEX_S	Test Method	: SW8020

Report Units : ug/kg DB

Compound	Result	SDL	Analysis Date	Confirmation Date
Benzene.....	5.0 U	5	11/24/91	11/24/91
Toluene.....	5.0 U	5	11/24/91	11/24/91
Ethylbenzene.....	5.0 U	5	11/24/91	11/24/91
Total xylenes.....	5.0 U	5	11/24/91	11/24/91

Surrogate recovery report for sample 9110A08-09B

Surrogate	Percent Recovery	Limits: Min.	Max.
1,2,3-Trichlorobenzene ...	124	20	160
p-Bromofluorobenzene	78.5	62	117

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

Lab Sample ID : 9110A08-10
Client Sample ID: #10 SW Sidewall

Date Collected: 10/18/91
Date Received : 10/21/91

Total Solids: 92 %

WTPH-HCID Results:

Prep Date: 10/22/91
Analysis Date: 10/22/91

	Result	SDL
Gasoline Range.....	24	20 mg/kg DB
Diesel Range.....	2000	50 mg/kg DB

Surrogate recoveries	% Rec	LCL	UCL
Bromofluorobenzene.....	90.0	50	150
2-Fluorobiphenyl.....	395	50	150
p-Terphenyl.....	110	50	150

Comments: Although the sample gave a result in the gasoline range, there was no pattern recognition for gasoline. There was some pattern recognition when compared to the diesel standard. This may be due to "weathering" of the sample. One surrogate was out of control due to matrix interference.

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

REPORT ON SAMPLE: 9110A08-10B
Client Sample ID: #10 SW Sidewall

Date Received	: 10/21/91	Collection Date	: 10/18/91
Date Extracted	: N/A	Date Analyzed	: 11/24/91
Test Code	: BTEX_S	Test Method	: SW8020

Report Units : ug/kg DB

Compound	Result	SDL	Analysis Date	Confirmation Date
Benzene.....	4.0 U	4	11/24/91	11/24/91
Toluene.....	4.0 U	4	11/24/91	11/24/91
Ethylbenzene.....	4.0 U	4	11/24/91	11/24/91
Total xylenes.....	15	4	11/24/91	11/24/91

Surrogate recovery report for sample 9110A08-10B

Surrogate	Percent Recovery	Limits: Min.	Max.
1,2,3-Trichlorobenzene ...	150	20	160
p-Bromofluorobenzene	82.5	62	117

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

Lab Sample ID : 9110A08-11 Date Collected: 10/18/91
Client Sample ID: #11 S Sidewall Date Received : 10/21/91

Total Solids: 71 %

WTPH-HCID Results:

Prep Date: 10/22/91
Analysis Date: 10/22/91

	Result	SDL
Gasoline Range.....	20 U	20 mg/kg DB
Diesel Range.....	50 U	50 mg/kg DB

Surrogate recoveries	% Rec	LCL	UCL
Bromofluorobenzene.....	80.0	50	150
2-Fluorobiphenyl.....	100	50	150
p-Terphenyl.....	100	50	150

Laucks 84 years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

REPORT ON SAMPLE: 9110A08-11B
Client Sample ID: #11 S Sidewall

Date Received	: 10/21/91	Collection Date	: 10/18/91
Date Extracted	: N/A	Date Analyzed	: 11/24/91
Test Code	: BTEX_S	Test Method	: SW8020

Report Units : ug/kg DB

Compound	Result	SDL	Analysis Date	Confirmation Date
Benzene.....	6.0 U	6	11/24/91	11/24/91
Toluene.....	6.0 U	6	11/24/91	11/24/91
Ethylbenzene.....	6.0 U	6	11/24/91	11/24/91
Total xylenes.....	6.0 U	6	11/24/91	11/24/91

Surrogate recovery report for sample 9110A08-11B

Surrogate	Percent Recovery	Limits: Min.	Max.
1,2,3-Trichlorobenzene ...	171 *	20	160
p-Bromofluorobenzene	83.5	62	117

B & C EQUIPMENT CO.
A Divison of PEECO

20320 80th Ave. S.
Kent, Washington 98032
Office (206) 872-8890
FAX (206) 872-8987
1-800-822-0084

RECEIVED
JAN 07 1992
DEPT. OF ECOLOGY

January 6, 1992

Joseph M. Hickey
Washington Department of Ecology
3190 160th Avenue SE
Bellevue, Washington 98008-5452

Re: Cascade Autovon Co., 12727 412th Avenue SE, North Bend, WA, surface water discharge.

Dear Mr. Hickey:

This letter is to outline the procedures that will be followed by B & C Equipment in regard to the discharge of water from the UST excavation at Cascade Autovon.

As you are aware, Cascade's intention is to install it's new underground storage tank in the existing excavation. Due to the high volume of water present in the excavation, approximately 90,000 gallons, it has become infeasible to pump this volume of water into a Baker Tank taking into consideration recharge into the excavation. As per your verbal approval of December 23, 1991, B & C will pump the water from the bottom of the excavation following the guidelines and criteria set forth for water discharge by the King County Department of Land Development, Department of Surface Water Management, Department of Erosion Control, and the North Bend Public Works Department.

B & C will submerge a basin into the bottom of the excavation and place the suction end of the pumps into this basin insuring as little sediment as possible is being withdrawn from the tank hole. The water will be discharged into Cascade's drainage culvert to prevent the possibility of eroding the soil in the drainage line and to dissipate the energy of discharge from the pump. Furthermore, should the volume of water be beyond the capacity of the drainage line, a Baker Tank already on-site will be utilized to temporarily hold some of the water being pumped from the excavation.

When the water table has been lowered to a level where pumping could possibly be drawing contaminated water, B & C will pump the remainder of the standing water and any recharging water into the Baker Tank. B & C will then implement a WSU (Water Scrub Unit) carbon absorption system to treat the contaminated water in the Baker Tank with an independent pump that can regulate the flow through the treatment system.

Please contact me if you have any questions in regard to this procedure.

Sincerely,
B & C EQUIPMENT CO.

Barry D. DePan

Barry D. DePan
Environmental Specialist

cc: John Reeves

B & C EQUIPMENT CO.
A Divison of PEECO

20320 80th Ave. S.
Kent, Washington 98032
Office (206) 872-8890
FAX (206) 872-8987
1-800-822-0084

January 25, 1993

Washington Department of Ecology
3190 160th Avenue SE
Bellevue, Washington 98008-5452

#2342

Attn: Joseph M. Hickey
Ben Amoah-Forson

Re: Cascade Autovon Co., 12727 412th Avenue SE, North Bend, WA.
Monitoring Well 4th Quarterly Sampling Event.

Dear Mr. Hickey:

Enclosed are the analytical results of B & C Equipment's 4th quarterly sampling event at Cascade Autovon.

On December 17, 1992, Cascade Autovon's 3 monitoring wells were sampled and analyzed for total petroleum hydrocarbons (TPH) by EPA Modified Method 8015 and benzene, toluene, ethyl benzene, and xylene (BTEX) by Method WTPH-G with BTEX. The analytical results revealed concentrations well below DOE cleanup standards for all 3 wells.

Prior to sampling, depth to water measurements were taken to determine the volume in each well using the monitor well monuments as the fixed referenced point. The enclosed illustration conveys the groundwater gradient for December 17th in addition to the relative groundwater elevations using 100.00' as the monument elevation of MW-1 (highest monument elevation).

All three wells were developed prior to sampling by purging at least (3) casing volumes of water from each source. Previous to purging the wells, a submersible extension hand pump was thoroughly rinsed with water, washed with alconox detergent, and once again rinsed with water to remove any possible contaminants that may have remained on the pump. The sample was collected at each location with a stainless steel bailer using the same cleansing procedure as was used for the pump. This procedure was followed for each sampling station.

The current Department of Ecology (DOE) **groundwater** cleanup standards for the parameters analyzed are:

Total Petroleum Hydrocarbons (TPH)	1000 ppb* = 1.0 ppm
Benzene	5.0 ppb = 0.005 ppm
Toluene	40.0 ppb = 0.04 ppm
Ethyl benzene	30.0 ppb = 0.03 ppm
Xylene	20.0 ppb = 0.02 ppm

*ppb - parts per billion.

Summarized in the following tables are the analytical results from all 4 quarterly sampling events at Cascade Autovon.

TABLE 1
March 11, 1992

Sample #	TPH	Benzene	Toluene	Ethyl benzene	Xylene
MW-1	ND	ND	ND	ND	ND
MW-2	ND	ND	ND	ND	ND
MW-3	ND	ND	ND	ND	ND

TABLE 2
June 12, 1992

Sample #	TPH	Benzene	Toluene	Ethyl benzene	Xylene
MW-1	ND	ND	ND	ND	ND
MW-2	ND	ND	ND	ND	ND
MW-3	ND	ND	ND	ND	ND

TABLE 3
September 4, 1992

Sample #	TPH	Benzene	Toluene	Ethyl benzene	Xylene
MW-1	ND	ND	ND	ND	ND
MW-2	ND	ND	ND	ND	ND
MW-3	ND	ND	ND	ND	ND

Note: "ND" denotes non-detected.
TPH detection limit ..... 1.0 ppm (1st quarter)
TPH detection limit ..... 0.75 ppm (2nd, 3rd quarter)
Benzene detection limit ..... 0.001 ppm
Toluene detection limit ..... 0.001 ppm
Ethyl benzene detection limit .. 0.001 ppm
Xylene detection limit ..... 0.001 ppm

TABLE 4
December 17, 1992

Sample #	TPH (8015)	TPH-G	Benzene	Toluene	Ethyl benzene	Xylene
MW-1	ND	0.27	ND	ND	ND	0.001
MW-2	ND	ND	ND	ND	ND	ND
MW-3	ND	ND	ND	ND	ND	ND

Note: TPH (8015) detection limit ..... 0.75 ppm
TPH-G detection limit ..... 0.1 ppm
Benzene detection limit ..... 0.001 ppm
Toluene detection limit ..... 0.001 ppm
Ethyl benzene detection limit .. 0.001 ppm
Xylene detection limit ..... 0.001 ppm

CONCLUSIONS:

The results from all 4 quarterly sampling events revealed concentrations below DOE cleanup goals for all TPH and BTEX parameters. Based on these results, B & C Equipment feels no further quarterly groundwater monitoring is warranted.

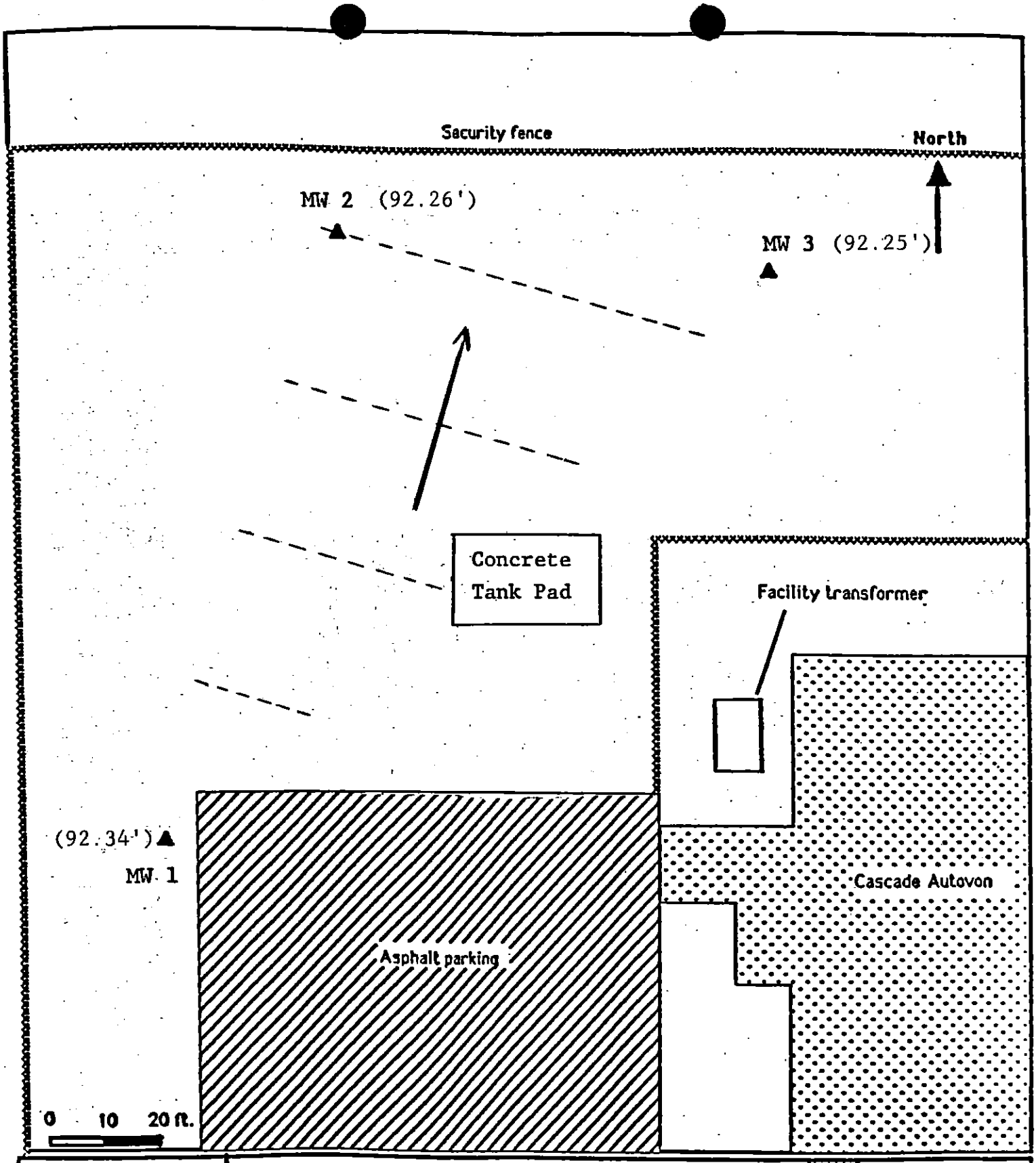
In reference to Mr. Ben Amoah-Forson's letter dated 2/14/92, there is no requirement to implement a long term groundwater monitoring program. However, B & C recommends continuing the monitoring program on an annual basis. This would provide documentation as to the on-site groundwater conditions over a long period of time. Should the question arise regarding the possibility of off-site migration of petroleum contamination, the analytical documentation from a continued monitoring program would chronicle the groundwater conditions at Cascade Autovon.

If you have any questions regarding the results or B & C's recommendations, please don't hesitate to contact me.

Sincerely,
B & C EQUIPMENT CO.

Barry D. DePan
Staff Geologist

cc: John Reeves, Cascade Autovon Co.
Bill Knutson, PEMCO



Cascade Autovon Co.
12727 412th Ave.S.E.
North Bend, WA 98045

KEY

▲ Monitor Well # and location.

⟶ Groundwater gradient

-----Contour Interval = 0.02'

B & C

Job # 1342

Date: 12/17/92

Barry DePan

PEMCO

20320 80th Ave. S.
Kent, Washington 98032
Office (206) 872-8990
FAX (206) 872-8987

CHAIN OF CUSTODY

REQUEST FOR LABORATORY ANALYSIS

PROJECT NAME: Cascade Artesian

PROJ. NO. 1341-905

ADDRESS: 12727 412th Ave SE, North Bend, WA 98045

SAMPLER: Barry DePan

SAMPLE NUMBER	DATE	TIME	Soil	Water	SAMPLE LOCATION TANK SIZE & PRODUCT	Depth	WTPH-HCID	WTPH-G w/BTEX	WTPH-D	WTPH-418.1 Mod.	TPH 418.1	TPH 8015 Mod.	Chlorinated Solvents 601/8010	PCB 608/8080	TCLP (8 metals)	TCLP (As, Cd, Cr, Pb)	PAH 625/8270	Total Pb
MW-1	12/17/92	11:00		✓	Monitor Well MW-1	7.5'		✓				✓						
MW-2	12/17	11:50		✓	" " MW-2	7.5'		✓				✓						
MW-3	12/17	1:30		✓	" " MW-3	7.5'		✓				✓						

Relinquished by:	Date	Time	Received by:
Barry D. DePan	12/17/92	3:00	Mary Cutler
Relinquished by:			Received by:
Relinquished by:			Received by:

RUSH: YES (NO)

COMMENTS:

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: PEMCO - WA

Date: December 29, 1992

Report On: Analysis of Water

Lab No.: 29129

IDENTIFICATION:
Samples received on 12-17-92
Project: 1341-905 Cascade Autovon

ANALYSIS:

Lab No. 29129-1

Client ID: MW-1

WTPH-G with BTEX by Method 8020
Date Analyzed: 12-22-92

Gasoline, mg/l (C7 - C12)	0.27
Benzene, mg/l	< 0.001
Toluene, mg/l	< 0.001
Ethyl Benzene, mg/l	< 0.001
Xylenes, mg/l	0.001

SURROGATE RECOVERY, %

Trifluorotoluene	84

TPH Per EPA SW-846 Modified Method 8015
Date Extracted: 12-28-92
Date Analyzed: 12-28-92

Total Petroleum Fuel Hydrocarbons, mg/l	< 0.75

SURROGATE RECOVERY, %

1-Chlorooctane	115
o-terphenyl	115

Continued . . . . .

SOUND ANALYTICAL SERVICES, INC.

PEMCO - WA
Project: 1341-905

Lab No. 29129
December 29, 1992

Lab No. 29129-2 Client ID: MW-2

WTPH-G with BTEX by Method 8020
Date Analyzed: 12-22-92

Gasoline, mg/l (C7 - C12)	< 0.1
Benzene, mg/l	< 0.001
Toluene, mg/l	< 0.001
Ethyl Benzene, mg/l	< 0.001
Xylenes, mg/l	< 0.001

SURROGATE RECOVERY, %

Trifluorotoluene	86

TPH Per EPA SW-846 Modified Method 8015
Date Extracted: 12-28-92
Date Analyzed: 12-28-92

Total Petroleum Fuel Hydrocarbons, mg/l	< 0.75

SURROGATE RECOVERY, %

1-Chlorooctane	69
o-terphenyl	78

Continued . . . . .

SOUND ANALYTICAL SERVICES, INC.

PEMCO - WA
Project: 1341-905

Lab No. 29129
December 29, 1992

Lab No. 29129-3 Client ID: MW-3

WTPH-G with BTEX by Method 8020
Date Analyzed: 12-22-92

Gasoline, mg/l (C7 - C12)	< 0.1
Benzene, mg/l	< 0.001
Toluene, mg/l	< 0.001
Ethyl Benzene, mg/l	< 0.001
Xylenes, mg/l	< 0.001

SURROGATE RECOVERY, %

Trifluorotoluene	80

TPH Per EPA SW-846 Modified Method 8015
Date Extracted: 12-28-92
Date Analyzed: 12-28-92

Total Petroleum Fuel Hydrocarbons, mg/l	< 0.75

SURROGATE RECOVERY, %

1-Chlorooctane	123
o-terphenyl	117

SOUND ANALYTICAL SERVICES

DEAN A. STROM

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

Total Petroleum Fuel Hydrocarbons
by Method 8015

Client: PEMCO - WA
Lab No: 29129qc2
Units: mg/l
Date: December 29, 1992

METHOD BLANK

Blank No. 003R0101.D

Parameter	Blank Value
Total Petroleum Fuel Hydrocarbons	< 0.75
SURROGATE RECOVERY%	
1-chlorooctane	120
o-terphenyl	113

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

WTPH-G with BTEX by EPA SW-846 Method 8020

Client: PEMCO - WA
Lab No: 29129qc1
Units: mg/l
Date: December 29, 1992

METHOD BLANK

Blank No. 92122149

Parameter	Blank Value
Gasoline (C_7-C_{12})	< 0.1
Benzene	< 0.001
Toluene	< 0.001
Ethyl Benzene	< 0.001
Xylenes	< 0.001
SURROGATE RECOVERY, %	
Trifluorotoluene	79

Roy Jensen and Associates
Consulting Environmental Geologists and Hydrogeologists

8805 NE 186th Place
Bothell, Washington 98011
(206) 485-9155

March 14, 1994

Cascade-Autovon
DBA - PTI Communications
12727 - 412th Ave. S.E.
North Bend, Washington 98045

Attention: Mr. John Reeves

Ground Water Sampling
and Analysis Results
Cascade Autovon, Co.
North Bend, Washington

INTRODUCTION

This letter presents the results of February 1994 ground water sampling and laboratory analysis at the Cascade Autovon Co. located at 12727 412th Ave. S.E. in North Bend, Washington.

PURPOSE AND SCOPE

The purpose of our services was to sample and analyze ground water samples from the site for petroleum hydrocarbons. The scope of services completed for this project included the following:

1. Measure the depth to ground water in the three monitoring wells (MW-1 through MW-3).
2. Purge a minimum of three well volumes from each well prior to sampling.
3. Collect a ground water sample from each of the three monitoring wells.
4. Submit the ground water samples for laboratory analysis of fuel hydrocarbons by modified EPA Method 8015, gasoline-range hydrocarbons (gasoline) by WTPH-G and benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8020.
5. Prepare a letter for submittal to the Washington State Department of Ecology (Ecology) summarizing the results of ground water sampling and analysis.

GROUND WATER CLEANUP CRITERIA

Ecology has adopted ground water cleanup levels under the Model Toxics Control Act (MTCA). A summary of the MTCA Method A ground water cleanup levels for petroleum-related contaminants is:

Compound	MTCA Method A Ground Water Cleanup Levels
Benzene	0.005 mg/l
Toluene	0.04 mg/l
Ethylbenzene	0.03 mg/l
Xylenes	0.02 mg/l
Total Petroleum Hydrocarbons (TPH)	1 mg/l

GROUND WATER ELEVATION

The depth to ground water table relative to the monitoring well casing rim was measured on February 10, 1994 using a weighted fiberglass measuring tape and water-sensitive paste. The depth to ground water at the time of our measurements ranged from 8.43 to 8.82 feet.

GROUND WATER SAMPLING AND ANALYSIS

We obtained ground water samples from MW-1 through MW-3 on February 10, 1994. The ground water samples were obtained with a disposable polyethylene bailer after at least three well volumes were removed from each well casing. A new bailer and cord was used to sample each monitoring well to minimize the possibility of cross-contamination. The water samples were transferred to clean glass sampling bottles. The samples were kept cool during transport to the analytical laboratory. Chain-of-custody procedures were followed during transport of the samples to the analytical laboratory.

The ground water samples were sent to Sound Analytical Services, Inc. of Tacoma, Washington for chemical analysis. The samples were analyzed for fuel hydrocarbons. gasoline and BTEX. The results of laboratory testing of ground water samples are shown in Table 1 The laboratory report is attached.

Fuel hydrocarbons, gasoline and BTEX were not detected in any of the ground water samples.

LIMITATIONS

This letter has been prepared for use by Cascade Autovon/PTI Communications in its evaluation of subsurface conditions at site. This letter may be made available to Ecology. Within the limitations of the scope, schedule and budget, our services have been executed in accordance with generally accepted practices in this area at the time this report was prepared. No other conditions, express or implied, should be understood.

We appreciate the opportunity to be of service to Cascade Autovon/PTI Communications. Please contact me if you have any questions regarding the results of our water sampling and testing.

Respectfully submitted,

Roy E. Jensen
Consulting Hydrogeologist

Attachments

TABLE 1
SUMMARY OF GROUND WATER ANALYTICAL DATA
CASCADE AUTOVON, NORTH BEND, WASHINGTON

Monitoring Well Number	Date Sampled	BETX (EPA Method 8020) (mg/l)				Fuel Hydrocarbons (Mod EPA Method 8015) (mg/kg)	Gasoline (1) (mg/kg)
		B	T	E	X		
MW-1	11/19/93	<0.001	<0.001	<0.001	<0.001	<1.0	<0.1
MW-2	11/19/93	<0.001	<0.001	<0.001	<0.001	<1.0	<0.1
MW-3	11/19/93	<0.001	<0.001	<0.001	<0.001	<1.0	<0.1
MTCA Method A Cleanup Levels		0.005	0.04	0.03	0.02	1	1

Notes:

(1) Gasoline - gasoline-range hydrocarbons by Ecology Method WTPH-G

mg/l = milligrams per liter

< = less than

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: March 3, 1994

TO: Roy Jensen

PROJECT NAME: PTI-North Bend

LABORATORY NUMBER: 38026

Enclosed are one original and one copy of the Tier I data deliverables package for Laboratory Work Order Number 38026. Three samples were received for analysis at Sound Analytical Services, Inc., on February 10, 1994.

If there are any questions regarding this data package, please do not hesitate to call me at (206) 922-2310.

Sincerely,

Tracy D. Yerian
Project Manager

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Roy Jensen Date: March 3, 1994

Report On: Analysis of Water Lab No.: 38026

IDENTIFICATION:
Samples received on 02-10-94
Project: PTI-North Bend

ANALYSIS:

Lab Sample No. 38026-1 Client ID: MW-1

WTPH-G with BTEX by EPA Method 8020
Date Analyzed: 2-15-94

Parameter	Result, mg/L	PQL	Flag
Gasoline (C7 - C12)	ND	0.1	
Benzene	ND	0.001	
Toluene	ND	0.001	
Ethyl Benzene	ND	0.001	
Xylenes	ND	0.001	

SURROGATE RECOVERY, %

Trifluorotoluene	109

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Roy Jensen
Project: PTI-North Bend
Lab No. 38026
March 3, 1994

Lab Sample No. 38026-1 Client ID: MW-1

TPH Per EPA SW-846 Modified Method 8015
Date Extracted: 2-25-94
Date Analyzed: 3-2-94

Parameter	Result	PQL	Flag
Total Petroleum Fuel Hydrocarbons, mg/L	ND	1.0	
SURROGATE RECOVERY, %			
1-Chlorooctane	112		
o-terphenyl	112		

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Roy Jensen
Project: PTI-North Bend
Lab No. 38026
March 3, 1994

Lab Sample No. 38026-2 Client ID: MW-2

WTPH-G with BTEX by EPA Method 8020
Date Analyzed: 2-15-94

Parameter	Result, mg/L	PQL	Flag
Gasoline (C7 - C12)	ND	0.1	
Benzene	ND	0.001	
Toluene	ND	0.001	
Ethyl Benzene	ND	0.001	
Xylenes	ND	0.001	
SURROGATE RECOVERY, %			
Trifluorotoluene	120		

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Roy Jensen
Project: PTI-North Bend
Lab No. 38026
March 3, 1994

Lab Sample No. 38026-2 Client ID: MW-2

TPH Per EPA SW-846 Modified Method 8015
Date Extracted: 2-25-94
Date Analyzed: 3-2-94

Parameter	Result	PQL	Flag
Total Petroleum Fuel Hydrocarbons, mg/L	ND	1.0	
SURROGATE RECOVERY, %			
1-Chlorooctane	112		
o-terphenyl	114		

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Roy Jensen
Project: PTI-North Bend
Lab No. 38026
March 3, 1994

Lab Sample No. 38026-3 Client ID: MW-3

WTPH-G with BTEX by EPA Method 8020
Date Analyzed: 2-15-94

Parameter	Result, mg/L	PQL	Flag
Gasoline (C7 - C12)	ND	0.1	
Benzene	ND	0.001	
Toluene	ND	0.001	
Ethyl Benzene	ND	0.001	
Xylenes	ND	0.001	
SURROGATE RECOVERY, %			
Trifluorotoluene	108		

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Roy Jensen
Project: PTI-North Bend
Lab No. 38026
March 3, 1994

Lab Sample No. 38026-3 Client ID: MW-3

TPH Per EPA SW-846 Modified Method 8015
Date Extracted: 2-25-94
Date Analyzed: 3-2-94

Parameter	Result	PQL	Flag
Total Petroleum Fuel Hydrocarbons, mg/L	ND	1.0	
SURROGATE RECOVERY, %			
1-Chlorooctane	118		
o-terphenyl	121		

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

WTPH-G with BTEX by EPA SW-846 Method 8020

Client: Roy Jensen
Lab No: 38026qc1
Units: mg/L

Date Analyzed: 2-14-94

METHOD BLANK

Blank No. 94021413

Parameter	Result	PQL
Gasoline (C_7-C_{12})	ND	0.1
Benzene	ND	0.001
Toluene	ND	0.001
Ethyl Benzene	ND	0.001
Xylenes	ND	0.001
SURROGATE RECOVERY, %		
Trifluorotoluene	111	

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

Total Petroleum Fuel Hydrocarbons
by Method 8015

Client: Roy Jensen
Lab No: 38026qc2
Units: mg/L

Date Extracted: 2-25-94
Date Analyzed: 3-2-94

METHOD BLANK

Blank No. 004R0101.D

Parameter	Result	PQL
Total Petroleum Fuel Hydrocarbons	ND	1.0
SURROGATE RECOVERY%		
1-chlorooctane	99	
o-terphenyl	98	

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.
ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 Pacific Hwy. East
Tacoma, Washington 98424
(206) 922-2310 • FAX (206) 922-5047

UST PARAMETERS
CHAIN OF CUSTODY / REQUEST FOR LABORATORY ANALYSIS

CLIENT: CASCADE AUTOYON
PROJECT NAME: PTI - NORTH BEND
CONTACT: ROY JENSEN
PHONE NO: (206) 485-9155

ANALYSIS REQUESTED: Specify State _____

LAB #	SAMPLE I.D.	DATE	TIME	MATRIX	# of Containers	HCID	TPH-G	TPH-D	TPH 418.1	BTEX	TPH-G / BTEX	TPH 8015M	Total Lead	TCLP Lead	PCB's	PAH's	Phenols	Halogenated Volatiles EPA 601/8010	Aromatic Volatiles EPA 602/8020	Volatile Organics EPA 624/8240 GC/MS	Semi-volatiles EPA 625/8270 GC/MS	Metals	Total Halogens				CLOSURE DELIVERABLES
	MW-1	2/10/94	1010	WATER							X	X															
	MW-2	↓	1120	↓							X	X															
	MW-3	↓	1230	↓							X	X															

	Signature	Printed Name	Firm	Time / Date
Relinquished By	Wayne R. Lindell	WAYNE R. LINDELL	JENSEN & ASSOC.	1455 2/10/94
Received By	Mary Curtiss	Mary Curtiss	SAS	3pm 2/10/94
Relinquished By				
Received By				
Relinquished By				
Received By				

SPECIAL INSTRUCTIONS/COMMENTS:
BILLING: USE GLACIER ENVIROMENTAL RATES, AND BILL TO:

ROY JENSEN
N.E. 8805 N.E. 186TH
BOTHEL, WA 98011

ROUTINE TURNAROUND

Roy Jensen and Associates
Consulting Environmental Geologists and Hydrogeologists

8805 NE 186th Place
Bothell, Washington 98011
(206) 485-9155

April 24, 1995

Cascade-Autovon
DBA - PTI Communications
12727 - 412th Ave. S.E.
North Bend, Washington 98045

Attention: Mr. John Reeves

Ground Water Sampling
and Analysis Results
Cascade Autovon, Co.
North Bend, Washington

INTRODUCTION

This letter presents the results of March 1995 ground water sampling and laboratory analysis at the Cascade Autovon Co. located at 12727 412th Ave. S.E. in North Bend, Washington.

PURPOSE AND SCOPE

The purpose of our services was to sample and analyze ground water samples from the site for petroleum hydrocarbons. The scope of services completed for this project included the following:

1. Measure the depth to ground water in the three monitoring wells (MW-1 through MW-3).
2. Purge a minimum of three well volumes from each well prior to sampling.
3. Collect a ground water sample from each of the three monitoring wells.
4. Submit the ground water samples for laboratory analysis of fuel hydrocarbons by modified EPA Method 8015, gasoline-range hydrocarbons (gasoline) by WTPH-G and benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8020.
5. Prepare a letter for submittal to the Washington State Department of Ecology (Ecology) summarizing the results of ground water sampling and analysis.

GROUND WATER CLEANUP CRITERIA

Ecology has adopted ground water cleanup levels under the Model Toxics Control Act (MTCA). A summary of the MTCA Method A ground water cleanup levels for petroleum-related contaminants is:

Compound	MTCA Method A Ground Water Cleanup Levels
Benzene	0.005 mg/l
Toluene	0.04 mg/l
Ethylbenzene	0.03 mg/l
Xylenes	0.02 mg/l
Total Petroleum Hydrocarbons (TPH)	1 mg/l

GROUND WATER ELEVATION

The depth to ground water table relative to the monitoring well casing rim was measured on March 21, 1995 using an electronic water level indicator. The depth to ground water at the time of our measurements ranged from 6.83 to 17.41 feet.

GROUND WATER SAMPLING AND ANALYSIS

We obtained ground water samples from MW-1 through MW-3 on March 21, 1995. The ground water samples were obtained with a disposable polyethylene bailer after at least three well volumes were removed from each well casing. A new bailer and cord was used to sample each monitoring well to minimize the possibility of cross-contamination. The water samples were transferred to clean glass sampling bottles. The samples were kept cool during transport to the analytical laboratory. Chain-of-custody procedures were followed during transport of the samples to the analytical laboratory.

The ground water samples were sent to Sound Analytical Services, Inc. of Tacoma, Washington for chemical analysis. The samples were analyzed for fuel hydrocarbons, gasoline and BTEX. The results of laboratory testing of ground water samples are shown in Table 1. The laboratory report is attached.

Fuel hydrocarbons, gasoline, benzene, ethylbenzene and xylenes were not detected in any of the ground water samples. Toluene was not detected in the water samples from MW-1 and MW-3. Toluene was detected (0.0014 mg/L) in MW-2 at concentrations below the MTCA Method A cleanup levels.

LIMITATIONS

This letter has been prepared for use by Cascade Autovon/PTI Communications in its evaluation of subsurface conditions at site. This letter may be made available to Ecology. Within the limitations of the scope, schedule and budget, our services have been executed in accordance with generally accepted practices in this area at the time this report was prepared. No other conditions, express or implied, should be understood.

We appreciate the opportunity to be of service to Cascade Autovon/PTI Communications. Please contact me if you have any questions regarding the results of our water sampling and testing.

Respectfully submitted,
Roy Jensen and Associates

Roy E. Jensen
Consulting Hydrogeologist

Attachments

TABLE 1
SUMMARY OF GROUND WATER ANALYTICAL DATA
CASCADE AUTOVON, NORTH BEND, WASHINGTON

Monitoring Well Number	Date Sampled	BETX (EPA 8020) (mg/L)				Fuel Hydrocarbons (EPA 8015 Mod) (mg/L)	Gasoline (1) (mg/L)
		B	T	E	X		
MW-1	03/03/94	<0.001	<0.001	<0.001	<0.001	<1.0	<0.1
	03/21/95	<0.001	<0.001	<0.001	<0.001	<1.0	<0.1
MW-2	03/03/94	<0.001	<0.001	<0.001	<0.001	<1.0	<0.1
	03/21/95	<0.001	0.0014	<0.001	<0.001	<1.0	<0.1
MW-3	03/03/94	<0.001	<0.001	<0.001	<0.001	<1.0	<0.1
	03/21/95	<0.001	<0.001	<0.001	<0.001	<1.0	<0.1
MTCA Method A Cleanup Levels		0.005	0.04	0.03	0.02	1	1

Notes:

(1) Gasoline - gasoline-range hydrocarbons by Ecology Method WTPH-G

mg/l = milligrams per liter

< = less than

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: March 30, 1995

TO: Roy Jensen
Roy Jensen & Assoc.

PROJECT: Cascade Autovon

LABORATORY NUMBER: 47290

Enclosed are the original and one copy of the Tier II data deliverables package for Laboratory Work Order Number 47290. Three samples were received for analysis at Sound Analytical Services, Inc., on March 21, 1995.

Should there be any questions regarding this data package, please do not hesitate to call me at (206) 922-2310.

Sincerely,

Katie Downie

Katie Downie
Project Manager

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 · TELEPHONE (206)922-2310 · FAX (206)922-5047

Report To: Roy Jensen & Assoc. Date: March 31, 1995

Report On: Analysis of Water Lab No.: 47290

IDENTIFICATION:
Samples received on 03-21-95
Project: Cascade Autovon

ANALYSIS:

Lab Sample No. 47290-1 Client ID: MW-1

TPH Per EPA Method 8015 Modified
Date Extracted: 3-28-95
Date Analyzed: 3-29-95
Units: mg/L

Parameter	Result	PQL	Flag
Total Petroleum Fuel Hydrocarbons as:			
Gasoline	ND	1.0	
Diesel	ND	1.0	
Heavy Oil	ND	10	
SURROGATE RECOVERY, %			
1-Chlorooctane	66		
o-terphenyl	91		

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Roy Jensen & Assoc.
Project: Cascade Autovon
Lab No. 47290
March 31, 1995

Lab Sample No. 47290-2 Client ID: MW-2

TPH Per EPA Method 8015 Modified
Date Extracted: 3-28-95
Date Analyzed: 3-29-95
Units: mg/L

Parameter	Result	PQL	Flag
Total Petroleum Fuel Hydrocarbons as:			
Gasoline	ND	1.0	
Diesel	ND	1.0	
Heavy Oil	ND	10	
SURROGATE RECOVERY, %			
1-Chlorooctane	63		
o-terphenyl	84		

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Roy Jensen & Assoc.
Project: Cascade Autovon
Lab No. 47290
March 31, 1995

Lab Sample No. 47290-3 Client ID: MW-3

TPH Per EPA Method 8015 Modified
Date Extracted: 3-28-95
Date Analyzed: 3-29-95
Units: mg/L

Parameter	Result	PQL	Flag
Total Petroleum Fuel Hydrocarbons as:			
Gasoline	ND	1.0	
Diesel	ND	1.0	
Heavy Oil	ND	10	
SURROGATE RECOVERY, %			
1-Chlorooctane	53		
o-terphenyl	88		

ND - Not Detected
PQL - Practical Quantitation Limit

4

SOUND ANALYTICAL SERVICES, INC.

Client Name	Roy Jensen and Associates
Client ID:	MW-1
Lab ID:	47290-01
Date Received:	3/21/95
Date Prepared:	3/24/95
Date Analyzed:	3/24/95
% Solids	-

BTEX by USEPA Method 8020

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
Trifluorotoluene	82		50	150

Analyte	**Result (mg/L)**	**PQL**	**Flags**
Benzene	ND	0.001	
Toluene	ND	0.001	
Ethylbenzene	ND	0.001	
Total Xylenes	ND	0.001	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Roy Jensen and Associates
Client ID:	MW-1
Lab ID:	47290-01
Date Received:	3/21/95
Date Prepared:	3/24/95
Date Analyzed:	3/24/95
% Solids	-

Gasoline by WTPH-G

Surrogate	% Recovery	Flags	Recovery Limits Low	Recovery Limits High
Trifluorotoluene	82		50	150

Analyte	Result (mg/L)	PQL	Flags
Gasoline (Toluene-nC12)	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Roy Jensen and Associates
Client ID:	MW-2
Lab ID:	47290-02
Date Received:	3/21/95
Date Prepared:	3/24/95
Date Analyzed:	3/25/95
% Solids	-

BTEX by USEPA Method 8020

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Trifluorotoluene	61		50	150

Analyte	Result (mg/L)	PQL	Flags
Benzene	ND	0.001	
Toluene	0.0014	0.001	
Ethylbenzene	ND	0.001	
Total Xylenes	ND	0.001	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Roy Jensen and Associates
Client ID:	MW-2
Lab ID:	47290-02
Date Received:	3/21/95
Date Prepared:	3/24/95
Date Analyzed:	3/25/95
% Solids	-

Gasoline by WTPH-G

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
Trifluorotoluene	61		50	150

Analyte	**Result (mg/L)**	**PQL**	**Flags**
Gasoline (Toluene-nC12)	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Roy Jensen and Associates
Client ID:	MW-3
Lab ID:	47290-03
Date Received:	3/21/95
Date Prepared:	3/24/95
Date Analyzed:	3/25/95
% Solids	-

BTEX by USEPA Method 8020

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
Trifluorotoluene	74		50	150

Analyte	**Result (mg/L)**	**PQL**	**Flags**
Benzene	ND	0.001	
Toluene	ND	0.001	
Ethylbenzene	ND	0.001	
Total Xylenes	ND	0.001	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Roy Jensen and Associates
Client ID:	MW-3
Lab ID:	47290-03
Date Received:	3/21/95
Date Prepared:	3/24/95
Date Analyzed:	3/25/95
% Solids	-

Gasoline by WTPH-G

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Trifluorotoluene	74		50	150

Analyte	Result (mg/L)	PQL	Flags
Gasoline (Toluene-nC12)	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

Total Petroleum Fuel Hydrocarbons
by EPA Modified Method 8015

Client: Roy Jensen & Assoc.
Lab No: 47290qc
Units: mg/L

Date Extracted: 3-28-95
Date Analyzed: 3-29-95

METHOD BLANK

Blank No. 005R0101.D

Parameter	Result	PQL
Total Petroleum Fuel Hydrocarbons as		
Gasoline	ND	1.0
Diesel	ND	1.0
Heavy Oil	ND	10
SURROGATE RECOVERY%		
1-chlorooctane	50	
o-terphenyl		

ND = Not Detected
PQL = Practical Quantitation Limit

DUPLICATE

Dup. No. 47290-1

Parameter	Sample (S)	Duplicate (D)	RPD	Flags
Total Petroleum Fuel Hydrocarbons	ND	ND	NC	

RPD = relative percent difference
NC = Not Calculated

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

Total Petroleum Fuel Hydrocarbons
by EPA Modified Method 8015

Client: Roy Jensen & Assoc.
Lab No: 47290qc
Units: mg/L

Date Extracted: 3-28-95
Date Analyzed: 3-29-95

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

MS/MSD No. 47348-1 Batch QC

Parameter	Sample Result	MS Amount	MS Result	MS %R	MSD Amount	MSD Result	MSD %R	RPD
TPFH	ND	44.7	48.0	107.4	44.7	49.2	110.2	2.6

%R = Percent Recovery
MS = Matrix Spike
RPD = Relative Percent Difference
MSD = Matrix Spike Duplicate

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - GB275
Date Received:	-
Date Prepared:	3/24/95
Date Analyzed:	3/24/95
% Solids	-

BTEX by USEPA Method 8020

Surrogate	% Recovery	Flags	Recovery Limits Low	Recovery Limits High
Trifluorotoluene	98		50	150

Analyte	Result (mg/L)	PQL	Flags
Benzene	ND	0.001	
Toluene	ND	0.001	
Ethylbenzene	ND	0.001	
Total Xylenes	ND	0.001	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - GB275
Date Received:	-
Date Prepared:	3/24/95
Date Analyzed:	3/24/95
% Solids	-

Gasoline by WTPH-G

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Trifluorotoluene	98		50	150

Analyte	Result (mg/L)	PQL	Flags
Gasoline (Toluene-nC12)	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID:	GB275
Date Prepared:	3/24/95
Date Analyzed:	3/24/95
QC Batch ID:	GB275

BTEX by USEPA Method 8020

Compound Name	Blank Result (mg/L)	Spike Amount (mg/L)	BS Result (mg/L)	BS % Rec.	BSD Result (mg/L)	BSD % Rec.	RPD	Flag
Benzene	0	0.023	0.021	91	0.02	89	1.8	
Toluene	0	0.023	0.021	94	0.021	92	2.0	
Ethylbenzene	0	0.023	0.023	102	0.023	102	0.0	
Total Xylenes	0	0.068	0.07	103	0.07	102	1.0	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID:	GB275
Date Prepared:	3/24/95
Date Analyzed:	3/24/95
QC Batch ID:	GB275

Gasoline by WTPH-G

Compound Name	Blank Result (mg/L)	Spike Amount (mg/L)	BS Result (mg/L)	BS % Rec.	BSD Result (mg/L)	BSD % Rec.	RPD	Flag
Gasoline (Toluene-nC12)	0	0.27	0.28	103	0.26	98	4.6	

SOUND ANALYTICAL SERVICES, INC.

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 • TELEPHONE 206-922-2310 • FAX 206-922-5047

DATA QUALIFIERS AND ABBREVIATIONS

J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.

B1: This analyte was also detected in the associated method blank. The reported sample results have been adjusted for moisture, final exract volume, and/or dilutions performed during extract preparation. The analyte concentration was evaluated prior to sample preparation adjustments, and was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).

B2: This analyte was also detected in the associated method blank. However, the analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).

E: The concentration of this analyte exceeded the instrument calibration range.

D: The reported result for this analyte is calculated based on a secondary dilution factor.

X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____ .

X2: Contaminant does not appear to be "typical" product. Further testing is suggested for identification.

X3: Identification and quantification of peaks was complicated by matrix interference; GC/MS confirmation is recommended.

X4: RPD for duplicates outside advisory QC limits. Sample was re-analyzed with similar results.

X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.

X5: Matrix spike was diluted out during analysis.

X6: Recovery of matrix spike outside advisory QC limits. Sample was re-analyzed with similar results.

X7: Recovery of matrix spike outside advisory QC limits. Matrix interference is indicated by blank spike recovery data.

X7a: Recovery and/or RPD values for MS/MSD outside advisory QC limits due to high contaminant levels.

X8: Surrogate was diluted out during analysis.

X9: Surrogate recovery outside advisory QC limits due to matrix composition.

N: See analytical narrative.

ND: Not Detected

PQL: Practical Quantitation Limit

MCL: Maximum Contaminant Level

SOUND ANALYTICAL SERVICES, INC.
ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 Pacific Hwy. East
Tacoma, Washington 98424
(206) 922-2310 • FAX (206) 922-5047

UST PARAMETERS
CHAIN OF CUSTODY / REQUEST FOR LABORATORY ANALYSIS

CLIENT: Roy Jensen & Associates
PROJECT NAME: Cascade Autovon
CONTACT: Roy Jensen
PHONE NO:

ANALYSIS REQUESTED: Specify State _____

LAB #	SAMPLE I.D.	DATE	TIME	MATRIX	# of Containers	HCID	TPH-G	TPH-D	TPH 418.1	BTEX - Gasoline	TPH-G / BTEX	TPH 8015M	Total Lead	TCLP Lead	PCB's	PAH's	Phenols	Halogenated Volatiles EPA 601/8010	Aromatic Volatiles EPA 602/8020	Volatile Organics EPA 624/8240 GC/MS	Semi-volatiles EPA 625/8270 GC/MS	Metals	Total Halogens	8015 Modified			CLOSURE DELIVERABLES
	MW-1	3/21/95	0935	H_2O						X														X			
	MW-2	↓	1020	↓						X														X			
	MW-3	↓	1105	↓						X														X			

	Signature	Printed Name	Firm	Time / Date
Relinquished By	Wayne R. Lindell	Wayne R. Lindell	Jensen Assoc.	1341 3/21/95
Received By	Dan Degnan	Dan Degnan	SAS	1341 3/21/95
Relinquished By				
Received By				
Relinquished By				
Received By				

SPECIAL INSTRUCTIONS/COMMENTS:

-2310

CENTURYTEL

personal touch ■ advanced communications

FILE COPY

February 22, 2007

Ms. Christina Zerby
Washington Department of Ecology
Central Region Office
15 West Yakima Avenue-Suite 200
Yakima, Washington 98902-3452

VIA: US Mail-Certified/Return Receipt Requested

RE: UST Removal - Site Assessment Report
CenturyTel Building
12727 412th Avenue SE
North Bend, Washington 98045
UST Site ID: 97430

Dear Ms. Zerby,

Enclosed is the UST Removal – Site Assessment Report for our North Bend, WA facility. According to the conclusions stated in this report prepared by Environmental Partners, Inc:

- There were no observable holes or pits in, or corrosion of the subject UST,
- There are no impacts to soil or ground water in area of the subject UST at a concentration exceeding an applicable cleanup level,
- There do not appear to be any reportable conditions associated with the subject UST and no additional actions are warranted.

Based on these facts, CenturyTel is requesting a final closure or no further action status for this site. I understand CenturyTel will not receive written confirmation from the Department but that closure status is documented in the states' UST database accessible on the World Wide Web. Thank you for assistance and if you have any questions please don't hesitate to contact me.

Sincerely,
CenturyTel

Gordon Bernice,
Operations
Manager, Corporate Safety and Environmental

Cc: Jack Ryan

318-340-5137 VOICE gordon.bernice@centurytel.com 318-388-9054 FAX

ENVIRONMENTAL PARTNERS INC

Letter of Transmittal

295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027
Phone (425) 395-0010 • Fax (425) 395-0011

To: Mr. Gordon Bernice
CenturyTel
100 CenturyTel Drive
Monroe, LA 71203-4065

From: Mr. Eric Koltes

Date: February 20, 2007

Job No. 44902.0

Re:

We are sending the following items:

Date	# of Copies	Description
02/19/07	2	UST Site Assessment Report

_____ For your information X For action specified below _____ For review and comment

_____ For your use _____ As requested

Remarks:

Mr. Bernice,

Please sign the form where indicated and forward the report to the following:

Ms. Christina Zerby
Department of Ecology-Central Regional Office
15 West Yakima Avenue, Suite 200
Yakima, WA 98902-3452

I have included a copy of the report for you to retain in your records.

Again, It has been a pleasure to work with you on this project. If you need any further assistance, please do not hesitate to contact me.

cc: Jay Wilcox, Clearcreek Contractors, Inc.

ENVIRONMENTAL PARTNERS INC

COPY

UST Site Assessment Report

CenturyTel Building
12727 412th Avenue SE
North Bend, Washington

UST Site ID: 97430

Prepared For:

CenturyTel
100 CenturyTel Drive
Monroe, LA 71203-4065

February 19, 2007

Prepared By:

Environmental Partners, Inc.
295 NE Gilman Blvd., Ste. 201
Issaquah, Washington 98027
(425) 395-0010

Eric Koltes, L.G.
Senior Geologist

Eric Caddey, L.G.
UST Site Assessor #1073547-U7

State of Washington
2516
Licensed Geologist

Project Number: 44902.0

TABLE OF CONTENTS

1.0 INTRODUCTION

EPI was retained by ClearCreek Contractors, Inc. (Clearcreek) to function as the on-site UST site assessor for the removal of one 5,000-gallon diesel fuel underground storage tank (subject UST) and associated piping at the property located at the 12727 412th Avenue SE in North Bend, Washington (subject property). The subject property contains a commercial structure and is bordered to the north and south by commercial structures, to the east by residential structures, and to the west by Interstate 90. The general location of the subject property is indicated on Figure 1. The general location of the subject UST is indicated on Figure 2. The subject UST orientation and piping configuration are depicted on Figure 3.

Mr. Eric Caddey (UST Site Assessor # 1073547-U7) of EPI performed oversight of site assessment activities. UST removal activities were performed by Clearcreek.

1.1 Background

Information obtained from the King County Fire Marshall's Office indicated the subject UST was installed on the subject property on July 1, 1992 and was utilized to store fuel for generators and heating. Fire Marshall records also indicated that two 10,000-gallon diesel UST's were removed from the subject property on March 2, 1992. This UST assessment is for the subject UST only.

2.0 UST REMOVAL

Prior to UST removal, Clearcreek submitted the necessary *Underground Storage Tank 30 Day Notice* to the Washington Department of Ecology (Ecology). A copy of this notice is included in Attachment A. In addition, Clearcreek also obtained the necessary Construction Permit #B06F0649 from the King County Department of Environmental Services. A copy of this permit is also included in Attachment A.

Completed Ecology *Underground Storage Tank Closure* and *Site Assessment Notice and Site Check/Site Assessment Checklist* forms are included in Attachment B.

The subject UST was removed by Clearcreek with oversight from EPI on January 4, 2007. The subject UST was double-wall steel construction and did not appear to contain visible holes or pitting and very little evidence of rust or corrosion was observed. Approximately 300 gallons of diesel/water mixture were pumped from the subject UST by Clearcreek on January 4, 2007. Upon completion of liquid removal, the subject UST was decommissioned (i.e., rinsed, inerted, and excavated) and transported from the subject property. Copies of the UST Cleaning and Destruction Certificates are also included in Attachment A.

One observation well was located within the footprint of the original subject UST excavation area. The observation well was excavated and removed during the UST decommissioning activities.

The piping from the subject UST to the interior equipment was cut, and capped with a concrete mixture at the wall of the building.

Subsurface conditions beneath the subject UST consisted of Sandy Silt to a depth of approximately 4 feet below grade. Pea gravel was encountered from 4 feet to at least 8 feet below grade. Ground water was encountered at a depth of approximately 7 feet below grade. No petroleum-impacts were observed in the UST removal excavation.

2.1 Soil Sampling

EPI collected a total of eight soil samples during the course of the assessment. Three were collected from the sidewalls of the UST excavation at depths ranging from 3 to 4 feet below grade. Two soil samples were collected from beneath the elbows of the product piping and three soil samples were collected from stockpiled material. The locations of all soil samples are depicted on Figure 3.

All soil samples were submitted to Freidman & Bruya, Inc. (Seattle, WA) for analysis of diesel-range petroleum hydrocarbons (DRPH) and higher-range petroleum hydrocarbons (HRPH) using the Northwest Total Petroleum Hydrocarbons as Diesel-Extended (NWTPH-Dx) Method and benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B. Soil samples submitted for BTEX analysis were collected utilizing EPA Method 5035A. Soil samples were immediately placed in an iced cooler and transported to the analytical laboratory under standard chain-of-custody protocols.

2.2 Soil Analyical Results

As mentioned above, a total of eight soil samples were collected and submitted for analysis during the UST assessment activities. A summary of soil sample analytical results is included in Table 1 and a copy of the final analytical laboratory report is presented in Attachment C.

No DRPH, HRPH or BTEX constituents were detected above the compound-specific detection limit of the method used in any of the eight soil samples submitted for analysis at concentrations.

2.3 Excavation Water Sampling

Ground water was encountered in the UST excavation at a depth of approximately 7 feet below grade. EPI collected an excavation water sample using a dedicated bailer and appropriate laboratory-supplied sample containers. The sample was collected from a 4-inch diameter PVC tank observation well situated immediately east of the UST and within the boundary of the UST excavation. The location of this water sample is depicted on Figure 3.

The excavation water sample was submitted to Freidman & Bruya, Inc. for analysis of DRPH and HRPH using Method NWTPH-Dx and BTEX using EPA Method 8021B. The excavation water sample was immediately placed in an iced cooler and transported to the analytical laboratory under standard chain-of-custody protocols.

2.4 Excavation Water Analytical Results

One excavation water sample was collected and submitted for analysis during the UST assessment activities. A summary of analytical results for this excavation water sample is included in Table 2 and a copy of the final analytical laboratory report is presented in Attachment C.

DRPH was detected in water within the excavation at a concentration of 69 micrograms/liter (µg/L). This concentration is significantly below the Ecology Model Toxics Control Act (MTCA) Method A Ground Water Cleanup Level for DRPH of 500 µg/L. No HRPH or BTEX constituents were detected in excavation water at concentrations above the compound-specific detection limit of the method used.

3.0 CONCLUSIONS

The conclusions supported by the findings of this UST Site Assessment are:

- There were no observable holes or pits in, or corrosion of the subject UST.
- There are no impacts to soil or ground water in area of the subject UST at a concentration exceeding an applicable cleanup level.
- There do not appear to be any reportable conditions associated with the subject UST and no additional actions are warranted. EPI recommends that the client retain a copy of this report as a confirmation of the absence of impacts from the removed UST.

4.0 LIMITATIONS

This document has been prepared solely for the use of ClearCreek Contractors, Inc. and CenturyTel. This document may not be relied upon by any other party without the express written consent of EPI.

To the extent that this UST Site Assessment Report may include or require the application of judgment to scientific principles or best professional judgment; certain results of this work may be based on subjective interpretation. WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED INCLUDING WITHOUT LIMITATION, WARRANTIES AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. The information to be provided under this report is not to be construed as legal advice.

Table 1
Summary of Soil Sample Petroleum Hydrocarbon Analytical Results (milligrams/kilogram)
UST Site Assessment Report
12727 412th Avenue SE, North Bend, WA

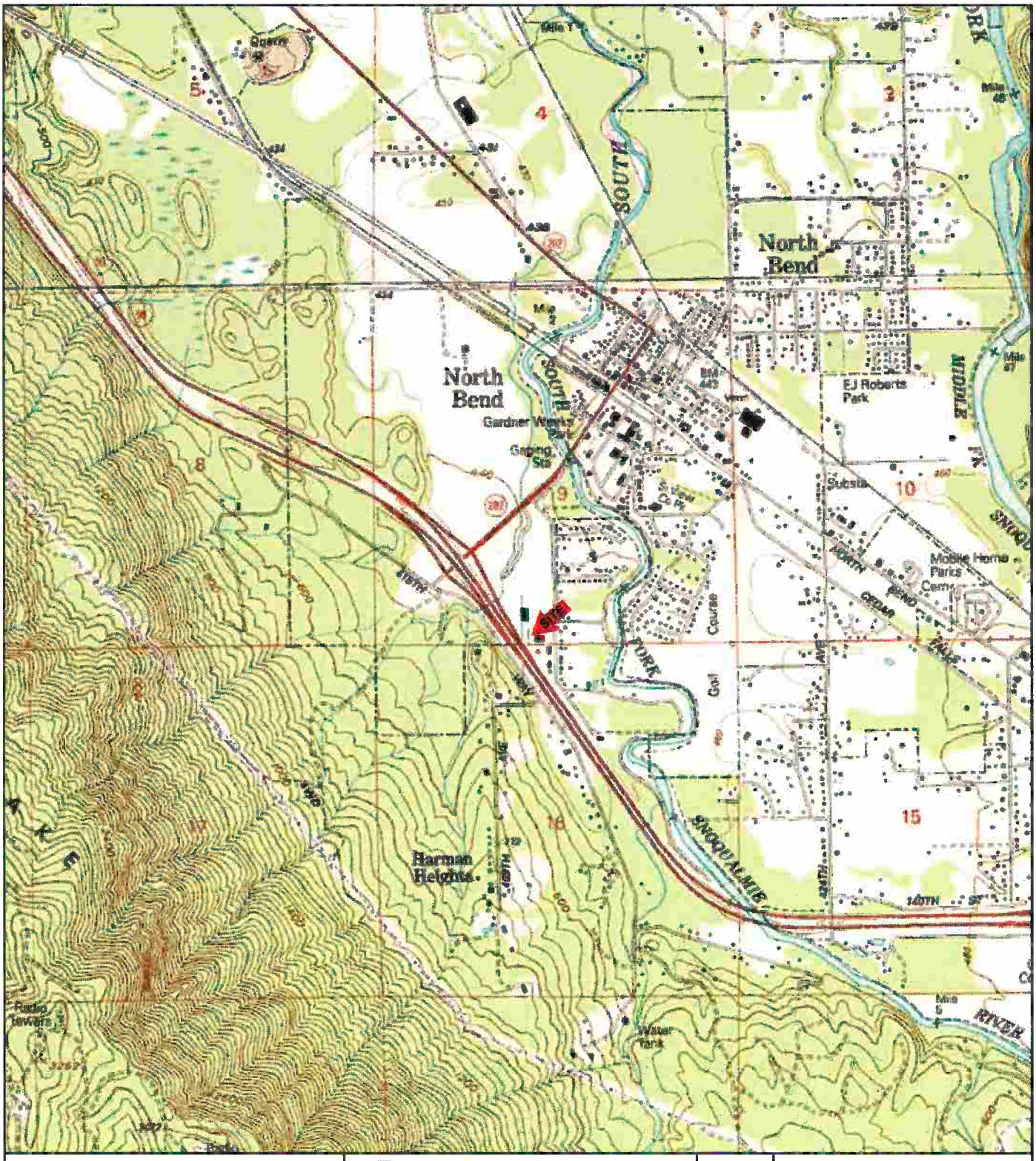
Sample ID	Sample depth (feet bgs)	DRPH[a]	HRPH[a]	Benzene[b]	Toluene[b]	Ethylbenzene[b]	Total Xylenes[b]
Pipe-1	2	<50	<250	<0.02	<0.02	<0.02	<0.06
Pipe-2	1	<50	<250	<0.02	<0.02	<0.02	<0.06
SW-1	4	<50	<250	<0.02	<0.02	<0.02	<0.06
SW-2	4	<50	<250	<0.02	<0.02	<0.02	<0.06
SW-3	3	<50	<250	<0.02	<0.02	<0.02	<0.06
SP-1*	NA	<50	<250	<0.02	<0.02	<0.02	<0.06
SP-2*	NA	<50	<250	<0.02	<0.02	<0.02	<0.06
SP-3*	NA	<50	<250	<0.02	<0.02	<0.02	<0.06
MTCA Method A Soil Cleanup Level		**2,000**	**2,000**	**0.03**	**7**	**6**	**9**

(a) Analyzed for diesel-range and higher-range petroleum hydrocarbons (DRPH & HRPH) using Ecology Method NWTPH-Dx
(b) Analyzed using EPA Method 8021B
* - Indicates sample was collected from stockpiled soil
bgs - Below ground surface
All soil sample analysis performed Friedman & Bruya Laboratory

Table 2
Summary of Excavation Water Petroleum Hydrocarbon Analytical Results (micrograms/liter)
UST Site Assessment Report
12727 412th Avenue SE, North Bend, WA

Sample ID	Depth to Ground Water (feet bgs)	DRPH[a]	HRPH[a]	Benzene[b]	Toluene[b]	Ethylbenzene[b]	Total Xylenes[b]
GW-Pit	7.2	69	<250	<1	<1	<1	<3
MTCA Method A Ground Water Cleanup Level		**500**	**500**	**5**	**700**	**1,000**	**1,000[e]**

(a) Analyzed for diesel-range and higher-range petroleum hydrocarbons (DRPH & HRPH) using Ecology Method NWTPH-Dx
(b) Analyzed using EPA Method 8021B
* - Indicates sample was collected from stockpiled soil for disposal purposes
bgs - Below ground surface
Excavation water sample analysis performed by Friedman & Bruya Analytical Laboratory



KEY:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

NORTH BEND, WA
1952

REVISED 1993

SCALE = 1:24,000

EPI ENVIRONMENTAL PARTNERS INC
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 1

GENERAL VICINITY MAP

PROJECT	44902.0		
PREPARED FOR	CLEARCREEK CONTRACTORS, INC.		
LOCATION	12727 412TH AVE SE NORTH BEND, WASHINGTON		
SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	JS	EK	1/12/07

2004 AERIAL PHOTOGRAPH OBTAINED FROM THE CITY OF NORTH BEND

APPROXIMATE SUBJECT PROPERTY BOUNDARY

0 25 50 100

SCALE: 1" = 100'

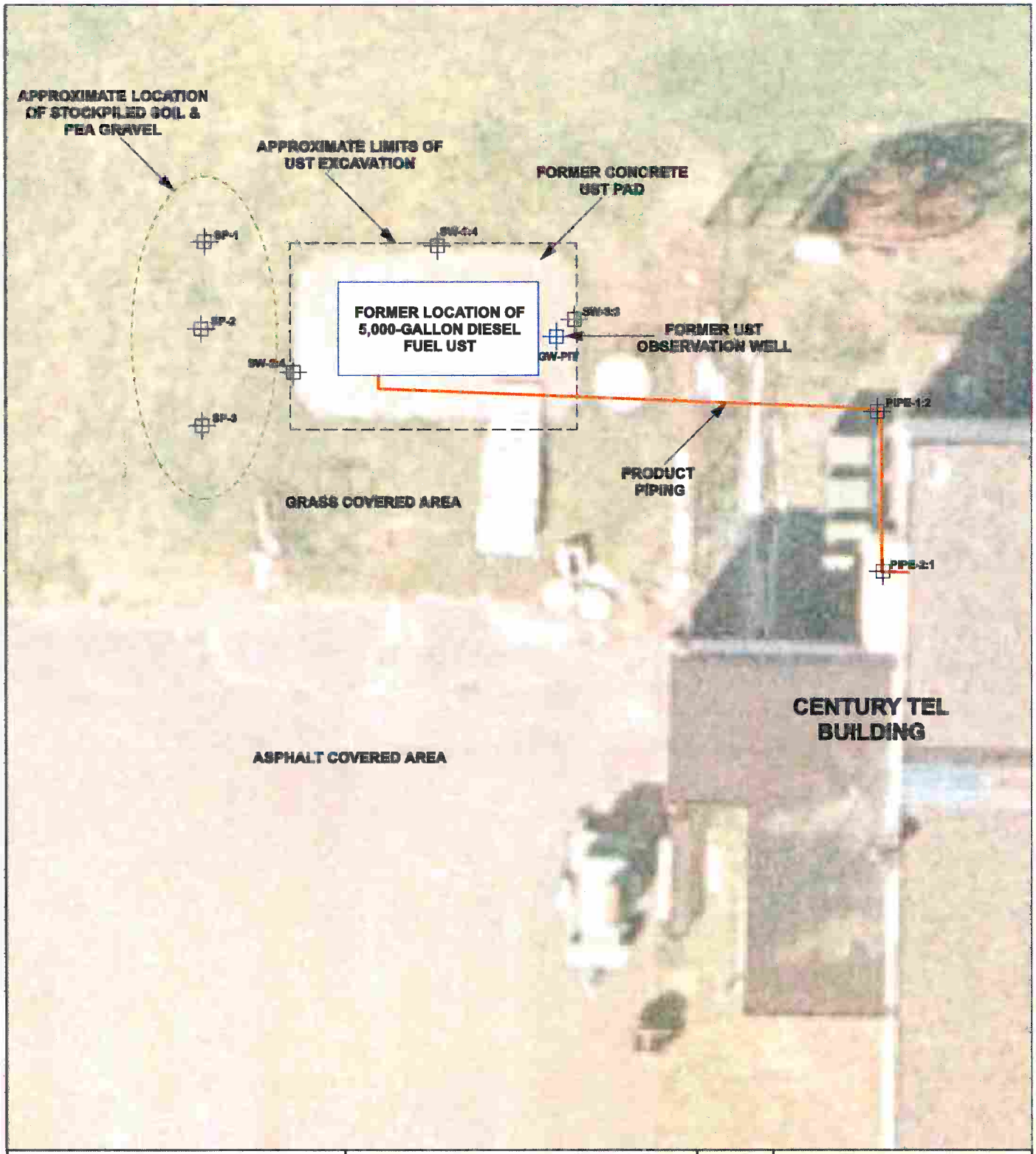
ENVIRONMENTAL PARTNERS INC

295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 2

SITE REPRESENTATION MAP

PROJECT	44902.0		
PREPARED FOR	CLEARCREEK CONTRACTORS, INC.		
LOCATION	12727 412TH AVENUE SE NORTH BEND, WASHINGTON		
SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	JS	EMK	01/12/07



2004 AERIAL PHOTOGRAPH OBTAINED FROM THE CITY OF NORTH BEND

EPI SOIL SAMPLE LOCATION

EPI EXCAVATION WATER SAMPLE LOCATION

0 2.5 5 10

SCALE: 1" = 10'

ENVIRONMENTAL PARTNERS INC

295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 3

UST SITE ASSESSMENT AREA WITH SOIL AND EXCAVATION WATER SAMPLE LOCATIONS

PROJECT	44902.0		
PREPARED FOR	CLEARCREEK CONTRACTORS, INC.		
LOCATION	12727 412TH AVENUE SE NORTH BEND, WASHINGTON		
SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	JS	EMK	01/12/07

Attachment A

META Certificate of Weight

513350

Issued under authority of City of Seattle Ord. 7.04.580

SEATTLE IRON & METALS CORP.

601 South Myrtle Street Seattle, WA 98108 206-682-0040

.3350

Date		Ticket #		Total
Weighed for:	Clear Creek			209.00
Commodity	01 08 07 7:45 AM	Price	Driver: On Off	209.00
	HMS	50	Gross lbs. 448357	
			Tare lbs.	
			Net lbs. 48520 lb	
			~~40160 lb~~	
	12045		8360 lb	

PAID JAN 0 8 2007 SEATTLE IRON & METALS CORP.

, the undersigned, certify that the weights indicated hereon are rue and correct and do hereby impress the seal of the above icensed city weighmaster in authentication thereof.

Weighed by _____
Licensed City Weigher

S100 (7/99)

ORIGINAL

2183

Clearcreek CONTRACTORS Environmental/Civil
3203 15th Street
Everett, WA 98201
Ph. (425) 252-5800
Fx. (425) 252-1093
Clearcreek CONTRACTORS Environmental/Civil

JOB #	JOB NAME	SITE ADDRESS
206111	CENTURY TEL	NORTH BEND
GENERATOR NAME	**GENERATOR MAILING ADDRESS**	**GENERATOR CONTACT INFORMATION**
SAME		

PUMP & RINSE / CLEANING CERTIFICATE

DATE	SIZE & DIMENSIONS OF TANK OR STRUCTURE	DESCRIBE CONTENTS	PUMP/RINSE YES NO / CLEANED YES NO	LIQUID QTY	SOLIDS QTY
DATE	SIZE & DIMENSIONS OF TANK OR STRUCTURE	DESCRIBE CONTENTS	PUMP/RINSE YES NO / CLEANED YES NO	LIQUID QTY	SOLIDS QTY
DATE	SIZE & DIMENSIONS OF TANK OR STRUCTURE	DESCRIBE CONTENTS	PUMP/RINSE YES NO / CLEANED YES NO	LIQUID QTY	SOLIDS QTY

NOTES	WORK PERFORMED BY
	WORKER SIGNATURE

LIQUID / SOLIDS BILL OF LADING

DATE	TRUCK #	DRIVER	LIQUID DESCRIPTION AND QUANTITY	SOLID DESCRIPTION AND QUANTITY
	TRLR #	DISPOSAL/RECYCLING FACILITY	LIQUID PROFILE #	SOLIDS PROFILE #

NOTES	GENERATOR'S SIGNATURE CONFIRMS THIS MATERIAL IS NOT REGULATED UNDER WAC-173-303 OR 40CFR PART 261 & 40CFR PART 760 GENERATOR SIGNATURE
	DRIVER SIGNATURE
	FACILITY SIGNATURE

UST CORRECTIVE ACTION CERTIFICATION

I certify that the petroleum contaminated debris and media that fail the test for Toxicity Characteristic Waste codes D018-D043 is exempt under 40CFR 261.4 and is subject to the corrective action regulation under 40 CFR 280.

GENERATOR NAME _____ GENERATOR SIGNATURE _____ DATE _____

DISPOSAL CERTIFICATE

DATE	TRUCK #	DRIVER	ITEM(S) DESCRIPTION
	40	TONY SMITH	1-5,000 GAL DIESEL
	TRLR #	DISPOSAL/RECYCLING FACILITY	
1/8/07	52	SEATTLE IRON	

NOTES	DRIVER SIGNATURE
	FACILITY SIGNATURE SEE ATTACHED

2153

Clearcreek CONTRACTORS Environmental/Civil

3203 15th Street
Everett, WA 98201

Ph. (425) 252-5800
Fx. (425) 252-1093

Clearcreek CONTRACTORS Environmental/Civil

JOB #	JOB NAME	SITE ADDRESS
206111	Century Tel	2727 412th Ave S.E. North Bend WA,

GENERATOR NAME	GENERATOR MAILING ADDRESS	GENERATOR CONTACT INFORMATION
Same		Frank Eckert 425-888-1250

PUMP & RINSE / CLEANING CERTIFICATE

DATE	SIZE & DIMENSIONS OF TANK OR STRUCTURE	DESCRIBE CONTENTS	PUMP/RINSE YES NO / CLEANED YES NO	LIQUID QTY	SOLIDS QTY
1-3-07	1 5,000 gal U.S.T.	Fuel Oil	YES NO / YES NO	175 gal	
DATE	SIZE & DIMENSIONS OF TANK OR STRUCTURE	DESCRIBE CONTENTS	PUMP/RINSE YES NO / CLEANED YES NO	LIQUID QTY	SOLIDS QTY
DATE	SIZE & DIMENSIONS OF TANK OR STRUCTURE	DESCRIBE CONTENTS	PUMP/RINSE YES NO / CLEANED YES NO	LIQUID QTY	SOLIDS QTY

NOTES	WORK PERFORMED BY	WORKER SIGNATURE
	Jansen Jacobs	

LIQUID / SOLIDS BILL OF LADING

DATE	TRUCK #	DRIVER	LIQUID DESCRIPTION AND QUANTITY	SOLID DESCRIPTION AND QUANTITY
1/3/07	34	LOUIS	OIL/H2O 175 gal	
	TRLR #	DISPOSAL/RECYCLING FACILITY	LIQUID PROFILE #	SOLIDS PROFILE #
	80	EMERALD	G00521	

NOTES

GENERATOR'S SIGNATURE CONFIRMS THIS MATERIAL IS NOT REGULATED UNDER WAC-173-303 OR 40CFR PART 261 & 40CFR PART 760

GENERATOR SIGNATURE

DRIVER SIGNATURE: John A. Wilson for

FACILITY SIGNATURE

UST CORRECTIVE ACTION CERTIFICATION

I certify that the petroleum contaminated debris and media that fail the test for Toxicity Characteristic Waste codes D018-D043 is exempt under 40CFR 261.4 and is subject to the corrective action regulation under 40 CFR 280.

GENERATOR NAME | GENERATOR SIGNATURE | DATE

DISPOSAL CERTIFICATE

DATE	TRUCK #	DRIVER	ITEM(S) DESCRIPTION
	TRLR #	DISPOSAL/RECYCLING FACILITY	

NOTES	DRIVER SIGNATURE
	FACILITY SIGNATURE

2155

Clearcreek CONTRACTORS Environmental/Civil

3203 15th Street
Everett, WA 98201

Ph. (425) 252-5800
Fx. (425) 252-1093

Clearcreek CONTRACTORS Environmental/Civil

JOB #	JOB NAME	SITE ADDRESS
20611	Century Tel	North Bend

GENERATOR NAME	GENERATOR MAILING ADDRESS	GENERATOR CONTACT INFORMATION

PUMP & RINSE / CLEANING CERTIFICATE

DATE	SIZE & DIMENSIONS OF TANK OR STRUCTURE	DESCRIBE CONTENTS	PUMP/RINSE YES NO	CLEANED YES NO	LIQUID QTY	SOLIDS QTY
5-07	1-5000 gal U.S.T.	Oil & sludge	YES NO	YES NO	300 gals	
DATE	SIZE & DIMENSIONS OF TANK OR STRUCTURE	DESCRIBE CONTENTS	PUMP/RINSE YES NO	CLEANED YES NO	LIQUID QTY	SOLIDS QTY
			YES NO	YES NO		
DATE	SIZE & DIMENSIONS OF TANK OR STRUCTURE	DESCRIBE CONTENTS	PUMP/RINSE YES NO	CLEANED YES NO	LIQUID QTY	SOLIDS QTY
			YES NO	YES NO		

NOTES	WORK PERFORMED BY: Jansen
	WORKER SIGNATURE: Jan Jansen

LIQUID / SOLIDS BILL OF LADING

DATE	TRUCK #	DRIVER	LIQUID DESCRIPTION AND QUANTITY	SOLID DESCRIPTION AND QUANTITY
	TRLR #	DISPOSAL/RECYCLING FACILITY	LIQUID PROFILE #	SOLIDS PROFILE #

NOTES	GENERATOR'S SIGNATURE CONFIRMS THIS MATERIAL IS NOT REGULATED UNDER WAC-173-303 OR 40CFR PART 261 & 40CFR PART 760 GENERATOR SIGNATURE
	DRIVER SIGNATURE
	FACILITY SIGNATURE

UST CORRECTIVE ACTION CERTIFICATION

I certify that the petroleum contaminated debris and media that fail the test for Toxicity Characteristic Waste codes D018-D043 is exempt under 40CFR 261.4 and is subject to the corrective action regulation under 40 CFR 280.

GENERATOR NAME	GENERATOR SIGNATURE	DATE

DISPOSAL CERTIFICATE

DATE	TRUCK #	DRIVER	ITEM(S) DESCRIPTION
	TRLR #	DISPOSAL/RECYCLING FACILITY	

NOTES	DRIVER SIGNATURE
	FACILITY SIGNATURE

200111.122
P 5500.3

№ 81300

SERVICES FACILITIES
1500 AIRPORT WAY
SEATTLE, WA 98134

BILL OF LADING AND GALLONAGE REPORT

CUSTOMER CLEAR CREEK DATE 1/9/07

JOB LOCATION

DRIVER JANSEN EQUIP

JOB NO DOCUMENT NO

PRODUCT OILY WATER EST. GALS 300

PRODUCT EST GALS

PRODUCT EST GALS

DRUMS NO

DRUMS NO

OTHER EST SOLIDS

WASH OUT: YES ☐ NO ☐ TIME IN TIME OUT

WATER 300 GAL LOCATION Tar Hill CODE 1090

SOLIDS GAL LOCATION CODE

% SUSPENDED SOLIDS BY CENTRIFUGE + GALS. SEDIMENT

OIL/DIESEL GAL LOCATION CODE

HOC'S PCB'S B.S.& W API. LAB: YES ☐ NO ☐

GAS GAL LOCATION

BUNKER FUEL GAL LOCATION

OTHER

THIS MATERIAL IS NOT REGULATED UNDER WAC-173-303 OR 40CFR PART 261 AND 40CFR PART 761

FACILITY REPRESENTATIVE

DRIVER SIGNATURE

WHITE – JOB FOLDER YELLOW - DISPOSAL FACILITY PINK – ACCOUNTING GOLDENROD- CUSTOMER

2152

Clearcreek CONTRACTORS Environmental/Civil

3203 15th Street
Everett, WA 98201

Ph. (425) 252-5800
Fx. (425) 252-1093

Clearcreek CONTRACTORS Environmental/Civil

JOB #	JOB NAME	SITE ADDRESS
20611	Century Tel	North Bend

GENERATOR NAME	GENERATOR MAILING ADDRESS	GENERATOR CONTACT INFORMATION
Steve		

PUMP & RINSE / CLEANING CERTIFICATE

DATE	SIZE & DIMENSIONS OF TANK OR STRUCTURE	DESCRIBE CONTENTS	PUMP/RINSE YES NO / CLEANED YES NO	LIQUID QTY	SOLIDS QTY
5.06					
DATE	SIZE & DIMENSIONS OF TANK OR STRUCTURE	DESCRIBE CONTENTS	PUMP/RINSE YES NO / CLEANED YES NO	LIQUID QTY	SOLIDS QTY
DATE	SIZE & DIMENSIONS OF TANK OR STRUCTURE	DESCRIBE CONTENTS	PUMP/RINSE YES NO / CLEANED YES NO	LIQUID QTY	SOLIDS QTY

NOTES	WORK PERFORMED BY
	WORKER SIGNATURE

LIQUID / SOLIDS BILL OF LADING

DATE	TRUCK #	DRIVER	LIQUID DESCRIPTION AND QUANTITY	SOLID DESCRIPTION AND QUANTITY
5.07	11	Jensen	Oil/H2O 300 gals	
	TRLR #	DISPOSAL/RECYCLING FACILITY	LIQUID PROFILE #	SOLIDS PROFILE #
	80		600501	

NOTES	GENERATOR'S SIGNATURE CONFIRMS THIS MATERIAL IS NOT REGULATED UNDER WAC-173-303 OR 40CFR PART 261 & 40CFR PART 760
	GENERATOR SIGNATURE
	DRIVER SIGNATURE
	FACILITY SIGNATURE

UST CORRECTIVE ACTION CERTIFICATION

I certify that the petroleum contaminated debris and media that fail the test for Toxicity Characteristic Waste codes D018-D043 is exempt under 40CFR 261.4 and is subject to the corrective action regulation under 40 CFR 280.

GENERATOR NAME	GENERATOR SIGNATURE	DATE

DISPOSAL CERTIFICATE

DATE	TRUCK #	DRIVER	ITEM(S) DESCRIPTION
	TRLR #	DISPOSAL/RECYCLING FACILITY	

NOTES	DRIVER SIGNATURE
	FACILITY SIGNATURE

King County

Department of Development
and Environmental Services
900 Oakesdale Avenue Southwest
Renton, Washington 98055-1219

Permit Number: B06F0649
Date Issued: 12/18/2006
Expiration Date: 12/18/2007
Permit Status: ISSUED

Construction Permit

Permit Type, Subtype: FIREPERM, TANK
Title:
Description: 5,000 GALLON OIL TANK
Location:
List of Parcels: 092308-9060
Site Address: 12727 412TH AVE SE KC
Valuation: $0.00
Applicant Name: CLEARCREEK CONTRACTORS INC

Comments and Conditions

1. Work Subject to Approved Plans and Conditions. Work authorized by this permit is subject to the approved plans and corrections shown thereon and the attached conditions of permit approval. Failure to comply with all conditions once construction is begun may necessitate an immediate work stoppage until such time as compliance with the stipulated conditions is attained.

2. Posting on the job site. This permit must be posted on the job site at all times in a visible and readily accessible location.

3. Scheduling Inspections. Inspection requests for residential, commercial/multifamily, and new construction fire permits may be scheduled by calling the DDES Voice Inspection Line at **1-888-546-7728.** This request line is available 24 hours a day, 7 days a week for your convenience. Inspection requests must be called in prior to 3:00 pm, M-F to appear on the schedule for the following business day. Inspectors are available by phone M-F, 7:30 am to 8:30 am only at **206-296-6630.** Scheduling and inspector availablility is subject to approved holidays. You may obtain inspection results by calling the DDES Voice Inspection Line, reviewing the inspection information left on site, or contacting the inspector of record. You may obtain general inspection information M-F, 7:30 am to 4:30 pm at **206-296-6630**.

4. Expiration. Please note the expiration date on this permit located in the upper right corner. A permit may be extended or renewed in accordance with the King County Code only if a request to do so is received at least 30 days prior to the expiration date.

5. Compliance with State and Federal laws and the Endangered Species Act. The applicant is responsible for making a diligent inquiry regarding the need for concurrent state or federal permits to engage in the work requested under this permit, and to obtain the required permits prior to issuance of this permit. It is understood that the granting of this permit shall not be construed as satisfying the requirements of other applicable Federal, State or Local laws or regulations. In addition this permit does not authorize the violation of regulations. In addition, the granting of this permit does not authorize the violation of the Endangered Species Act as set forth at 16 U.S.C. § 1531-1543, including the prohibition on the "take" of threatened or endangered species. "Take" is defined at 16 U.S.C. § 1532(19). It is the applicants sole responsibility to determine whether such "take" restrictions would be violated by work done pursuant to this permit, and is precluded by Federal Law from undertaking work authorized by this permit if that work would violate the "take" restrictions set forth at 16 U.S.C. §1538, 50 C.F.R. §17.21, 50 C.F.R. §17.31, 50 C.F.R. §223 and 50 C.F.R. §224.

6. Fees due: Enforcement. The King County Code states that fees associated with the review and inspection of projects requiring permit applications are due at the time of application for service, or within fifteen days of receipt of an invoice from King County's Department of Development and Environmental Services (DDES) stating that currently hourly rates are due. DDES may require a deposit of between twenty to eighty percent of the total cost of the review and inspection of a permit application at the time of application. Failure to pay fees in a timely manner is a civil violation. It is King County's policy to take enforcement action including, but not limited to, the issuance of a Notice and Order and/or Stop Work Order, when an applicant has violated the King County Code by failing to pay fees when due. By accepting issuance of this permit, the applicant acknowledges that if he/she fails to pay fees when due, DDES may bring a code enforcement action to recover unpaid fees.

King County

Department of Development
and Environmental Services
900 Oakesdale Avenue Southwest
Renton, Washington 98055-1219

Permit Number: **B06F0649**

Inspection Record Card

	24-Hour Request Line	
Commercial & Fire Inspection	1-888-546-7728	**Note: Approved plans and this Inspection**
Residential Inspection	1-888-546-7728	**Record Card must be on the job site**
General Inspection Information	(206) 296-6630	**for all requested inspections.**

EROSION CONTROL DEVICES SHALL BE IN PLACE PRIOR TO AND DURING CONSTRUCTION

APPROVALS: (followed by inspection codes for use with the DDES Voice Inspection Line)

1. Foundation	2. Under Floor (300)	3. Exterior Shear (200)	4. OK to Enclose Framing (090)
____Footings (086) ____Walls (089)			
By:_____	By:_____	By:_____	By:_____
5. HVAC (282)	**6. Fire Inspection** (266)	**7.**_____	**8. Final *** (075)
By:_____	By: 1-4-07	By:_____	By:_____

Notes:

11/4/07 Talk Arnold From Ground + Site Excavation Backfilled. [signature]

ALL PERMITS:
a) Responsibility for the building's compliance with the provisions of the applicable King County Codes and for maintenance of the building rests exclusively with the permit applicants and their agents and the property owners.
b) King County's inspection of the building and real property are spot checks designed to foster and encourage compliance with the applicable codes. Neither the approvals above nor the issuance of a Certificate of Occupancy guarantees or assures compliance with all applicable codes.
c) The owner's copy of any applicable manufacturer's installation instructions shall be available to the inspector at the time of inspection.

***SINGLE FAMILY PERMITS:**
Permission to occupy structures for residential use is authorized upon approval of inspection number 8 (Final).

COMMERCIAL/MULTI-FAMILY PERMITS:
No occupancy of commercial or multi-family structures is permited until a separate **"Certificate of Occupancy"** has been issued.

SITE COPY

THESE ARE THE REQUIRED CONDITIONS/CORRECTIONS FOR THIS PERMIT

DO NOT SEPARATE FROM PLANS

Fire Systems Review
Tracking Number: **B06F0649**

THIS PERMIT IS FOR THE REMOVAL OF ONE 5000 UNDERGROUND HEATING OIL COMMERCIAL COMBUSTIBLE TANK.

LOCATION: 12727 412TH AVE SE NORTH BEND

The following conditions apply to the above referenced permit:

AA05 OSSEWAARDE
Any questions regarding the fire review of theses plans should be directed to:
Mark Ossewaarde, Fire Engineer.
Telephone [206] 296-6784.
Email: mark.ossewaarde@metrokc.gov

AB01 CONDITION INFORMATION

1. CONDITION SHEETS: The listing of permit conditions applied to this permit are requirements for or construction installation.
2. FIELD CHANGES TO APPROVED PLANS: After plans are issued and approved, only minor changes, modifications or field revisions may be made to these plans. THE FIELD INSPECTOR HAS THE LATITUDE OF ALLOWING MINOR CHANGES, BUT NOT MAJOR CHANGES.
3. INSPECTION REQUIRED: An *inspection* is required during the removal of th tank. To arrange for an inspection call the Fire Marshal's Office, DDES Voice Inspection Line at: 1-888 546-4724.

The King County Fire Marshal's Office and DDES has installed an Interactive Voice Response System [IVR]. This system allows customers to schedule inspections 24 hours per day, 7 days per week.

The DDES Voice Inspection System Line allows customers to:

YOUR THREE DIGIT FIRE INSPECTION CODE IS 291

AB02 CONDITIONAL APPROVAL OF PLANS
The approval of these plans and issuance of a permit is based on a review of the documents submitted by the applicant and those documents being representative of actual *configuration, use,* anticipated construction/existing *construction and/or* installation of equipment and/or devices. Errors or omissions in submitted documents does not constitute approval of any condition relating to those errors or omissions. APPROVAL OF PLANS DOES NOT CONDONE OR AUTHORIZE ANY VIOLATION OF ANY KING COUNTY CODE/ORDINANCE/REGULATION.

AB03 COPYING OF APPROVED PLANS
If approved plans are copied for use as JOB SITE COPIES, such plans ARE NOT ACCEPTABLE WITHOUT ALL CONDITION SHEETS (PLAN REVIEW REQUIREMENTS) BEING ATTACHED TO THE COPIED PLANS. ATTACHED REQUIREMENTS (CONDITION SHEETS) ARE PART OF THE APPROVED SET OF PLANS.

TR01 ON SITE INSPECTOR REQUIRED FOR TANK REMOVAL
NO TANK(S) SHALL BE REMOVED WITHOUT HAVING A FIRE INSPECTOR FROM THE KING COUNTY FIRE MARSHAL'S OFFICE ON SITE. Preliminary tank removal operations may be conducted, but no tank shall be removed from the ground without specific approval of the on site fire inspector. To arrange for an inspector, see Condition Item AB01 (3)

TR05 REMOVAL OF UNDERGROUND TANKS
The removal of underground tanks shall be in accordance with all requirements listed in the **"REMOVAL OF UNDERGROUND TANKS CODE EXCERPT SHEET"** attached to approved plans.

NOTE 1: Vapor concentration testing is required on ALL tanks INCLUDING residential-type oil tanks.

NOTE 2: A marine chemist will provide the Fire Inspector with written confirmation the tank(s) are inert and ready for removal.

NOTE 3: THE TANKS SHALL NOT BE CUT OPEN.

NOTE 4: THE TANKS SHALL BE REMOVED FROM THE SITE WITHIN 24 HOURS OF THE MARINE CHEMISTS REPORT, OR SHALL BE RE-INERTED AND APPROVED BY THE MARINE CHEMIST.

NOTE 5: CONTRACTOR TO PROVIDE ALL TESTING EQUIPMENT, INCLUDING GAS ANALYZER.

SPECIFIC CONDITIONS

F400.1 A KING COUNTY DEPUTY FIRE MARSHAL SHALL BE ON SITE AT ALL TIMES DURING REMOVAL.

F400.2 INERT WITH C0-2 AND THEN ADD DRY ICE AS DETAILED:

EXAMPLE: A 10,000 GALLON TANK WILL REQUIRE 150 POUNDS OF DRY ICE.

THE TANK SHALL BE SEALED AND LABELED "INERT" AND THE DATE AND TIME SPRAY PAINTED ON BOTH SIDES AND THE REAR OF THE TANK.

F400.3 THE TANK SHALL BE **REMOVED** FROM UNINCORPORATED KING COUNTY AND SHALL **NOT BE CUT** ON SITE.

SITE COPY

King County
Department of Development
and Environmental Services
900 Oakesdale Avenue Southwest
Renton, Washington 98055-1219

Application Number:B06F0649

Application Date: 11/22/2006

Applicant:CLEARCREEK CONTRACTORS INC

Permit Conditions

The conditions attached to this cover sheet apply to the permit referenced here. All conditions must be complied with by the contractor and verified by a Building Inspector or this permit will become null and void.

Location:
Permit Type:FIREPERM, TANK
Title:
Description:5,000 GALLON OIL TANK

Valuation: $0.00
Site Address:12727 412TH AVE SE KC

Reviewed By:

Structure: _____

Ordinance: _____

Fire: _____

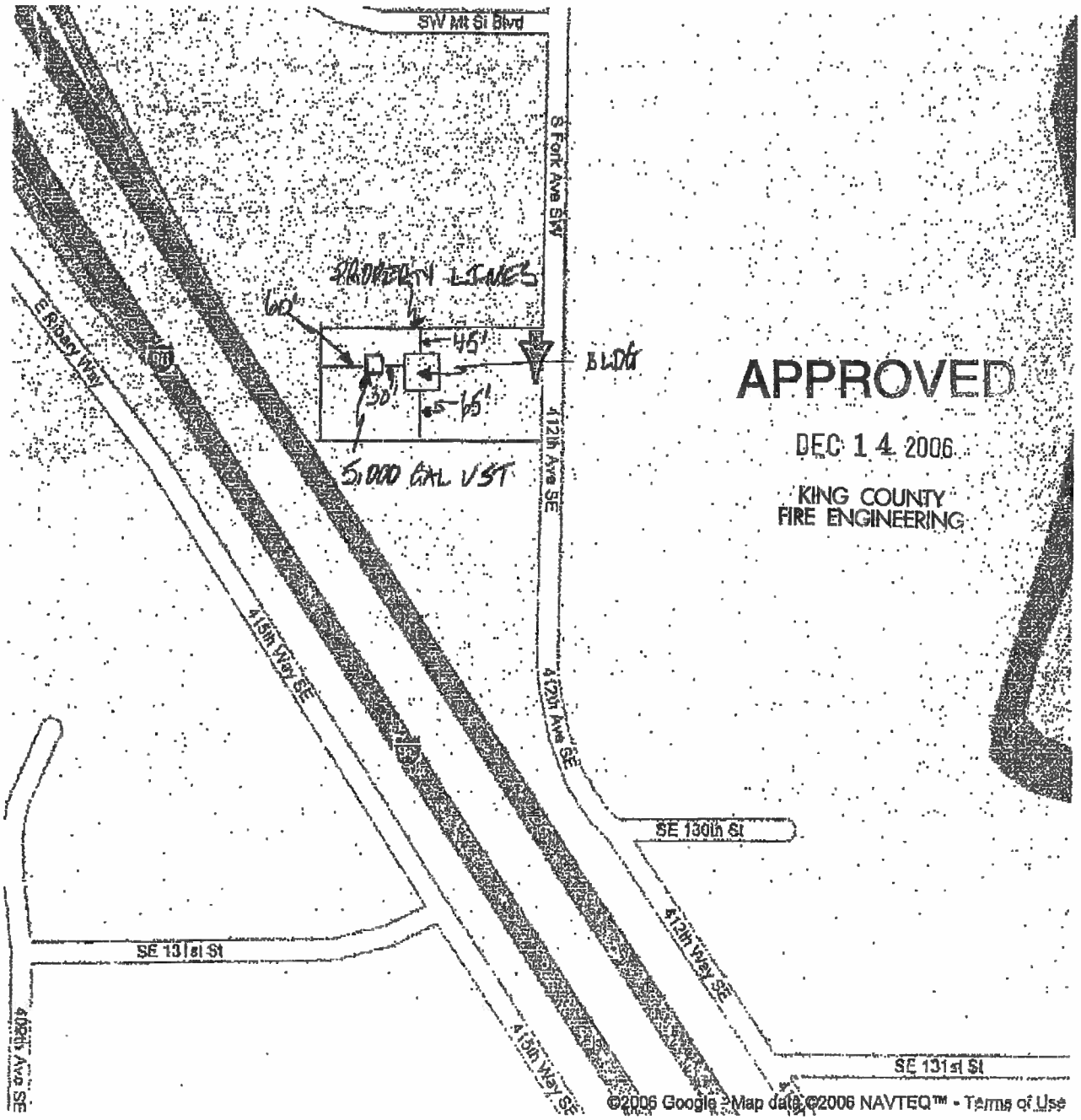
Mechanical: _____

Other: _____

Google Maps

Address 12727 412th Ave SE
North Bend, WA 98045

B06F0649



APPROVED

DEC 14 2006

KING COUNTY
FIRE ENGINEERING

425 252 5800

King County
Department of Development
and Environmental Services
900 Oakesdale Ave SW
Renton, Washington 98055-1219

December 18, 2006

Summary of Charges and Payments

Applicant:	CLEARCREEK CONTRACTORS INC	**Activity Number:**	B06F0649
	3203 15TH ST	**Project Number:**	B06F0649
	EVERETT WA 98201	**Development Number:**	
		Permit Type:	FIREPERM
	425 252 5800	**Status:**	ISSUED

Charges

Description	Amount
Bldg FireSystem Insp	$257.25
Bldg FireSystem Review	$259.61
Counter Service Fees	$102.64
Issuance Counter Fee	$102.64
SUB TOTAL CHARGES:	**$722.14**

Payments

Description	Check #	Checklogid	Payee	Date Entered	Amount
Suspense Account	12931	101264	CLEARCREEK CONTRACTORS	12/11/2006	($722.14)
SUB TOTAL PAYMENTS:					**($722.14)**

BALANCE: **$0.00**

The fees shown above represent current charges as of this date and are an estimate based on the information provided to DDES at the time of application.

For services that are rendered on an hourly basis, the cost of those services will be based on the actual hours worked. Hourly fees are charged at the rate in effect at the time of service, and will be billed monthly, along with any other outstanding fees.

Fees that have been posted prior to permit issuance will be collected at that time. Fees subsequently posted will be billed to the applicant. All fees must be paid in full before DDES issues Final Approval, T.C.O. or C.O.

WASHINGTON STATE DEPARTMENT OF ECOLOGY

UNDERGROUND STORAGE TANK
30 DAY NOTICE

See back of form for instructions

Please ✓ the appropriate box: ☐ Intent to Install ☒ Intent to Close ☐ Both

FOR OFFICE USE ONLY
Site ID # 97430
FS ID # 36296841

Wanted per C. Zerby 12-11-06

DEPT OF ECOLOGY Received DEC 11 2006 CENTRAL REGIONAL OFFICE

Site Information

UBI Number 36296841

Site/Business Name CENTURYTEL

Site Address 12727 41ST AVE SE (Street)

City/State NORTH BEND, WA

Zip Code 98045 Telephone (___) _____

Owner Information
(This form will be returned to this address)

UST Owner/Operator CENTURYTEL

Mailing Address 8102 SKANSIE AVE (Street)

_____ (P.O Box)

City/State GIG HARBOR, WA

Zip Code 98332-8415 Telephone (253) 851-1310

Tank Installation Company (If known). Fill out this section ONLY if tanks are being installed.

Service Company _____ Contact Name _____

Address _____ (Street) _____ (P O Box)

_____ (City) _____ (State) _____ (Zip Code) Telephone (___) _____

Tank Permanent Closure Company (If known). Fill out this section ONLY if tanks are being closed.

Service Company CLEARWATER CONTRACTORS Contact Name JAY WILCOX

Address 3203 15TH ST (Street)

EVERETT (City) WA (State) 98201 (Zip Code) (P.O. Box) Telephone (425) 252-5800

Tank Closure Information
Fill out this section ONLY if tanks are being closed.

Tank ID	Projected Closure Date	Tank Capacity	Substance Stored	Date Tank Last Used	Is There Product in the Tank (Yes/No)	If No, Date Tank Was Pumped
36296841/97430	DEC 06	5,000	DIESEL	UNK	NO	UNK

Tank Installation Information
Fill out this section ONLY if tanks are being installed

Tank ID	Approx. Install Date

To receive this document in an alternate format, contact the TOXICS CLEANUP PROGRAM at 360-407-7170 (VOICE) or 1-800-833-6388 or 711 (TTY)
ECY 020-95 (Rev 01-06)

Inspection Request / Corrections

King County
Department of
Development and Environmental Services
900 Oakesdale Avenue Southwest
Renton, WA 98057-5212
206-296-6630

Date of Request: ___/___/___
Permit No.: B06F0649
Address: 12727 412 Ave SE C
Project Name: Century 21 Tank Removal
Date of Insp.: 1/4/07
Type of Inspection: Tank Removal
Contact Name:
Phone #: 206 423 7364
Comments: Jay - Clearwater Const.

CORRECTIONS AND COMMENTS:

Tank removal of a 5000 gallon underground heating oil tank at Century 21 warehouse

Removed 5000 gallon tank - Tank appeared to be reactivated [illegible] 1551. 175 gallons heating oil in the tank [illegible] - [illegible]:

Unable to get soil samples - due to excessive amount of pea gravel around the tank - 15' west - [illegible] lots of pea gravel.

Tank was strapped in place - approx 18" - 24" of bottom of tank was in water

No sheen on water - no odor present during excavation/[illegible]

It is thought that the previous tank installed in 1568 + possibly removed in 1551 - had leaked + there was significant soil contamination - which was excavated + the area backfilled with pea gravel, soil fabric + top soil [illegible].

No visible signs of rust or leaks

Associated piping removed from site.

Tank removed from site at time of excavation

Inspector: ML Thompson
Inspected Date: 1/4/07

0353 (Rev. 9/06)

Attachment B

WASHINGTON STATE DEPARTMENT OF ECOLOGY

UNDERGROUND STORAGE TANK
Closure and Site Assessment Notice

See back of form for instructions

FOR OFFICE USE ONLY
Site ID #: _____
Facility Site ID #: _____

Please ✓ the appropriate box(es)
☐ Temporary Tank Closure ☐ Change-In-Service ☒ Permanent Tank Closure ☒ Site Check/Site Assessment

Site Information

Site ID Number 97430
(Available from Ecology if the tanks are registered)
Site/Business Name CenturyTel
Street
Site Address 12727 412th Avenue SE
City/State North Bend, WA
Zip Code 98045 Telephone (___) _____

Owner Information

UST Owner/Operator CenturyTel (Gordon Bernice)
Mailing Address 100 CenturyTel Drive
Street
P.O. Box
City/State Monroe, LA
Zip Code 71203 Telephone (318) 340-5173

Owners Signature _____

Tank Closure/Change-In-Service Company

Service Company Clearcreek Contractos, Inc.
Certified Supervisor Jansen Jacobs Decommissioning Certification No. 5267649-U2
Supervisor's Signature _____ Date 2-16-07
Address 3203 15th Street
Street P.O. Box
Everett WA 98201 Telephone (425) 252-5800
City State Zip Code

Site Check/Site Assessor

Certified Site Assessor Eric Caddey (UST Site Assessor # 1073547-U7) - Environmental Partners, Inc.
Address 295 NE Gilman Blvd Suite 201
Street P.O. Box
Issaquah WA 98201 Telephone (425) 395-0010
City State Zip Code

Tank Information

Tank ID	Closure Date	Closure Method	Tank Capacity	Substance Stored
1	1-4-07	Removal	5,000-gallons	Diesel Fuel

Contamination Present at the Time of Closure

☐ Yes ☒ No ☐ Unknown
Check unknown if no obvious contamination was observed and sample results have not yet been received from analytical lab.

☐ Yes ☐ No
If contamination is present, has the release been reported to the appropriate regional office?

To receive this document in an alternative format, contact the Toxics Cleanup Program at 360-407-7170 (voice) or 1-800-833-6388 OR 711 (TTY)

ECY 020-94 (Rev. 2-06)

WASHINGTON STATE DEPARTMENT OF ECOLOGY

UNDERGROUND STORAGE TANK
Site Check/Site Assessment Checklist

FOR OFFICE USE ONLY
Site #:_____
Facility Site ID #:_____

INSTRUCTIONS

When a release has not been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person certified by ICC or a Washington registered professional engineer who is competent, by means of examination, experience, or education, to perform site assessments. **The results of the site check or site assessment must be included with this checklist.** This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

SITE INFORMATION: Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

TANK INFORMATION: Please list all tanks for which the site check or site assessment is being conducted. Use the owner's tank ID numbers if available, and indicate tank capacity and substance stored.

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT: Please check the appropriate item.

CHECKLIST: Please initial each item in the appropriate box.

SITE ASSESSOR INFORMATION: This information must be signed by the registered site assessor who is responsible for conducting the site check/site assessment.

Underground Storage Tank Section
Department of Ecology
PO Box 47655
Olympia WA 98504-7655

SITE INFORMATION

Site ID Number (Available from Ecology if the tanks are registered): 97430

Site/Business Name: CenturyTel

Site Address: 12727 412th Avenue SE (Street) Telephone: (___)_____

North Bend (City) WA (State) 98045 (Zip Code)

TANK INFORMATION

Tank ID No.	Tank Capacity	Substance Stored
1	5,000 Gallons	Diesel Fuel

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT

Check one:

_____ Investigate suspected release due to on-site environmental contamination.
_____ Investigate suspected release due to off-site environmental contamination.
_____ Extend temporary closure of UST system for more than 12 months.
_____ UST system undergoing change-in-service.
__X__ UST system permanently closed with tank removed.
_____ Abandoned tank containing product.
_____ Required by Ecology or delegated agency for UST system closed before 12/22/88.
_____ Other (describe): _____

CHECKLIST

Each item of the following checklist shall be initialed by the person registered with the Department of Ecology whose signature appears below.	YES	NO
1. The location of the UST site is shown on a vicinity map.	X	
2. A brief summary of information obtained during the site inspection is provided. (see Section 3.2 in site assessment guidance)	X	
3. A summary of UST system data is provided. (see Section 3.1.)	X	
4. The soils characteristics at the UST site are described. (see Section 5.2)	X	
5. Is there any apparent groundwater in the tank excavation?	X	
6. A brief description of the surrounding land use is provided. (see Section 3.1)	X	
7. Information has been provided indicating the number and types of samples collected, methods used to collect and analyze the samples, and the name and address of the laboratory used to perform the analyses.	X	
8. A sketch or sketches showing the following items is provided:		
- location and ID number for all field samples collected	X	
- groundwater samples distinguished from soil samples (if applicable)	X	
- samples collected from stockpiled excavated soil	X	
- tank and piping locations and limits of excavation pit	X	
- adjacent structures and streets	X	
- approximate locations of any on-site and nearby utilities	X	
9. If sampling procedures different from those specified in the guidance were used, has justification for using these alternative sampling procedures been provided? (see Section 3.4)	N/A	
10. A table is provided showing laboratory results for each sample collected including; sample ID number, constituents analyzed for and corresponding concentration, analytical method and detection limit for that method.	X	
11. Any factors that may have compromised the quality of the data or validity of the results are described.	N/A	

12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred.		X

SITE ASSESSOR INFORMATION

Eric Caddey
Person registered with Ecology

Environmental Partners, Inc.
Firm Affiliated with

Business Address: 295 NE Gilman Blvd, Suite 201
Street

Telephone: (425) 395-0010

Issaquah
City

WA
State

98027
Zip Code

I hereby certify that I have been in responsible charge of performing the site check/site assessment described above. Persons submitting false information are subject to penalties under Chapter 173.360 WAC.

2/19/07
Date

Eric Caddey
Signature of Person Registered with Ecology

If you need this publication in an alternate format, please contact Toxics Cleanup Program at (360) 407-7170. For persons with a speech or hearing impairment call 711 for relay service or 800-833-6388 for TTY.

Attachment C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

January 12, 2007

Eric Koltes, Project Manager
Environmental Partners, Inc.
295 NE Gilman Blvd., Suite 201
Issaquah, WA 98027

Dear Mr. Koltes:

Included are the results from the testing of material submitted on January 4, 2007 from the North Bend, PO#44902.0, F&BI 701031 project. There are 8 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
EPI0112R

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/12/07
Date Received: 01/04/07
Project: North Bend, PO#44902.0, F&BI 701031
Date Extracted: 01/05/07
Date Analyzed: 01/05/07

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE AND XYLENES USING EPA METHOD 8021B

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Surrogate (% Recovery) Limit (52-124)
GW-Pit 701031-01	<1	<1	<1	<3	100
Method Blank	<1	<1	<1	<3	100

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/12/07
Date Received: 01/04/07
Project: North Bend, PO#44902.0, F&BI 701031
Date Extracted: 01/05/07
Date Analyzed: 01/05/07

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE AND XYLENES USING EPA METHOD 8021B

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Surrogate (% Recovery) (Limit 50-132)
Pipe-1:2 701031-02	<0.02	<0.02	<0.02	<0.06	103
Pipe-2:1 701031-03	<0.02	<0.02	<0.02	<0.06	103
SW-1:4 701031-04	<0.02	<0.02	<0.02	<0.06	101
SW-2:4 701031-05	<0.02	<0.02	<0.02	<0.06	102
SW-3:3 701031-06	<0.02	<0.02	<0.02	<0.06	101
SP-1 701031-07	<0.02	<0.02	<0.02	<0.06	102
SP-2 701031-08	<0.02	<0.02	<0.02	<0.06	101
SP-3 701031-09	<0.02	<0.02	<0.02	<0.06	101
Method Blank	<0.02	<0.02	<0.02	<0.06	92

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/12/07
Date Received: 01/04/07
Project: North Bend, PO#44902.0, F&BI 701031
Date Extracted: 01/05/07
Date Analyzed: 01/05/07

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESELAND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-132)
GW-Pit 701031-01	69	<250	116
Method Blank	<50	<250	95

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/12/07
Date Received: 01/04/07
Project: North Bend, PO#44902.0, F&BI 701031
Date Extracted: 01/05/07
Date Analyzed: 01/05/07

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 67-127)
Pipe-1:2 701031-02	<50	<250	105
Pipe-2:1 701031-03	<50	<250	118
SW-1:4 701031-04	<50	<250	106
SW-2:4 701031-05	<50	<250	106
SW-3:3 701031-06	<50	<250	106
SP-1 701031-07	<50	<250	109
SP-2 701031-08	<50	<250	107
SP-3 701031-09	<50	<250	110
Method Blank	<50	<250	107

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/12/07
Date Received: 01/04/07
Project: North Bend, PO#44902.0, F&BI 701031

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES USING EPA METHOD 8021B

Laboratory Code: 612267-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	µg/L (ppb)	<1	<1	nm
Toluene	µg/L (ppb)	<1	<1	nm
Ethylbenzene	µg/L (ppb)	<1	<1	nm
Xylenes	µg/L (ppb)	<3	<3	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	µg/L (ppb)	50	112	69-119
Toluene	µg/L (ppb)	50	107	70-123
Ethylbenzene	µg/L (ppb)	50	103	78-112
Xylenes	µg/L (ppb)	150	103	74-112

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

Date of Report: 01/12/07
Date Received: 01/04/07
Project: North Bend, PO#44902.0, F&BI 701031

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES USING EPA METHOD 8021B

Laboratory Code: 701016-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	103	53-123
Toluene	mg/kg (ppm)	0.5	100	62-124
Ethylbenzene	mg/kg (ppm)	0.5	111	59-124
Xylenes	mg/kg (ppm)	1.5	109	58-123

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

Date of Report: 01/12/07
Date Received: 01/04/07
Project: North Bend, PO#44902.0, F&BI 701031

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 701008-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Diesel Extended	mg/L (ppb)	250	<250	nm	0-20

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/L (ppb)	2,500	103	112	70-129	8

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/12/07
Date Received: 01/04/07
Project: North Bend, PO#44902.0, F&BI 701031

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 701031-09 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	91	93	71-137	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	95	70-129

701031

SAMPLE CHAIN OF CUSTODY

ME 01/04/07

A03/V5,1/V1

Page # 1 of 1

Send Report To Eric Kolles

Company Environmental Partners, Inc.

Address 295 NE Gilman Blvd.

City, State, ZIP Issaquah, WA 98027

Phone # (425) 395-0010 Fax # (425) 395-0011

SAMPLERS (signature)

PROJECT NAME/ADDRESS: North Bend

JOB #: 44902.0

REMARKS

TURNAROUND TIME
- ☐ Standard (2 weeks)
- ☒ RUSH 24 hr
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Notes
GW-P:T	01 A-C	1/04/07	17:16	water	3	X		X				
Pipe-1:2	02 A-B	1/04/07	12:30	soil	2	X		X				
Pipe-2:1	03 A-B	1/04/07	12:36	soil	2	X		X				
SW-1:4	04 A-B	1/04/07	13:33	soil	2	X		X				
SW-2:4	05 A-B	1/04/07	13:46	soil	2	X		X				
SW-3:3	06 A-B	1/04/07	13:52	soil	2	X		X				
SP-1	07 A-B	1/04/07	14:00	soil	2	X		X				
SP-2	08 A-B	1/04/07	14:05	soil	2	X		X				
SP-3	09 A-B	1/04/07	14:11	soil	2	X		X				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Eric L. Cadden	EPI	1/4/07	
Received by:	Champion EE	P. Wong	champion	1-4	3:20
Relinquished by:					
Received by:		Khan Phan	FEBI	1/4/07	16:55

APPENDIX B

Geosyntec consultants

BOREHOLE LOG

BORING NO. GB-1
SHEET 1 OF 1

DRILLING CO.: ESN Northwest	Status:	SITE: Cascade Autovon	Borehole Location Sketch Map
METHOD & TOOLS: Geoprobe	☐ Well Installed	PROJECT NO.: PNR0614	
RIG:	☒ Plugged & Abdnd.	N: E:	
BIT DIAMETER: 2" DRILLER: Brian	☐	SUPERVISOR:	
GROUND ELEV.: ☐ Surveyed ☐ Estimated		DATE: August 22, 2016	

Top (Depth)	☒ Feet ☐ Meters Lithology Log	Graphic Log	PID	Well	SPT Blows/6"	Run (No.)	Rec. (%)	Drilling Log
1	0-2 feet: Soil, brown; dry.							
	2-4 feet: Bronw Sand with occasional clasts; dry.							
	4-5 Feet: Brown Sand with Gravel - dry							
5	5-9 Feet: Pea GRAVEL grading to cobble gravel at depth.							
	9-10 Feet: GRAVEL - Dry.							
10	10-13 Feet: Brown Sandy Gravel with increasing quantity and size of clasts. Moist.		0 ppm				SAMPLE: GB1-13.5-08222016	
	13-15 Feet: GRAVEL - moist to wet; water at 14'							
15	15-16 Feet: Sand Horizon							
	16-18 Feet: Pea to cobble size Brown GRAVEL - wet.							
	18-20 Feet: Grading from Sandy GRAVEL to GRAVEL with Sand - Brown.							
20	20 Feet: Bottom of Borehole.							

Geosyntec consultants

BOREHOLE LOG

BORING NO. GB-2
SHEET 1 OF 1

DRILLING CO.: ESN Northwest	Status:	SITE: Cascade Autovon	Borehole Location Sketch Map
METHOD & TOOLS: Geoprobe	☐ Well Installed	PROJECT NO.: PNR0614	
RIG:	☒ Plugged & Abdnd.	N: E:	
BIT DIAMETER: 2" DRILLER: Brian	☐	SUPERVISOR:	
GROUND ELEV.: ☐ Surveyed ☐ Estimated		DATE: August 22, 2016	

Top (Depth)	☒ Feet ☐ Meters Lithology Log	Graphic Log	PID	Well	SPT Blows/6*	Run (No.)	Rec. (%)	Drilling Log
1	0-2 feet: Soil, brown; dry							
	2-4 feet: Dry Bronw Sand with occasional clasts; dry							
	4-5 Feet: Brown Sand with Gravel - dry							
5	5-10 Feet: GRAVEL with some Brown Sand grading to cobble gravel at depth							
10	10-13 Feet: Sandy Grey to Brown GRAVEL - Dry.		8.1 ppm					
	13-15 Feet: Sandy GRAVEL - moist to wet; water at 14'						SAMPLE: GB2-13.5-08222016	
15	15-16 Feet: Sand Horizon							Difficult to get good soil sample due to abundant Clasts
	16-18 Feet: Sandy Grey GRAVEL - wet.							
	18-19 Feet: Brown - Rust - Silty/Sandy GRAVEL layer							
	19-20 Feet: Grey GRAVEL							
20	20 Feet: Bottom of Borehole.							

Geosyntec consultants

BOREHOLE LOG

BORING NO. GB-3
SHEET 1 OF 1

DRILLING CO.: ESN Northwest	Status:	SITE: Cascade Autovon	Borehole Location Sketch Map
METHOD & TOOLS: Geoprobe	☐ Well Installed	PROJECT NO.: PNR0614	
RIG:	☒ Plugged & Abdnd.	N: E:	
BIT DIAMETER: 2” DRILLER: Brian	☐	SUPERVISOR:	
GROUND ELEV.: ☐ Surveyed ☐ Estimated		DATE: August 22, 2016	

Top (Depth)	☒ Feet ☐ Meters Lithology Log	Graphic Log	PID	Well	SPT Blows/6*	Run (No.)	Rec. (%)	Drilling Log
1	0-2 feet: Soil, brown; dry.							
	2-4 feet: Bronw Sand with clasts; dry.							
	4-5 Feet: Brown Gravel - dry							
5	5-9 Feet: Brown, medium well graded, with some banding/layering, SAND; dry to moist.							
	9-10 Feet: Fine grained silty SAND with wood fragments							
10			0 ppm					
	10-13 Feet: Sandy Gravel with increasing quantity and size of clasts.							
			0 ppm				SAMPLE:	
	13-15 Feet: GRAVEL - moist to wet; water at 14’						GB3-12.5-08222016	
15								
	15-18 Feet: Pea to cobble size Brown GRAVEL							
	18-20 Feet: Grading from Sandy GRAVEL to GRAVEL with Sand - Brown.							
20								
	20 Feet: Bottom of Borehole.							

Geosyntec consultants

520 Pike Street, Suite 1375
Seattle, Washington 98101
Phone: 206.496.1450

GS FORM: BORE 1/99

BOREHOLE RECORD

BORING GB-4 **SHEET** 1 OF 1
START DATE 11/13/2017 **ELEVATION**
FINISH DATE 11/13/2017
PROJECT Century Link
LOCATION North Bend Cascade Autovon Co.
PROJECT NUMBER PNR0614

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOLIC LOG	ELEVATION (ft)	SAMPLES: SAMPLE NAME	SAMPLES: TYPE	SAMPLES: BLOW COUNTS	% RECOVERY	PID READING (ppm)	USCS Classification	COMMENTS
	SOIL; organics and roots								TOPSOIL	
	Brown, GRAVEL with silt and sand; downward fining								GW-GM	
5	Brown SAND						25		SP	
	Brown, silty, fine SAND								SM	
10	Brown, wet, fine sandy SILT						20	0	ML	DTW = 9.6 ft bgs; GB-4 GW sample
	Brown, wet, GRAVEL							1.3	GW-GM	
	Gray to brown, wet, sandy GRAVEL; rounded cobbles			GB-4 Soil Sample 13-14'					GPS	
15	Gray, wet, SAND; well sorted and rounded, grades into sandy GRAVEL						50		SP	
	Gray, wet, sandy GRAVEL; pea-size, angular gravel with occasional larger clasts; sand is gray and gravel is brown								GPS	
	Gray, wet, SAND; wtih well preserved wood layer at 20 ft						75		SP	
20	Total depth = 20 ft bgs									

CONTRACTOR ESN
EQUIPMENT Geoprobe
DRILL MTHD
DIAMETER
LOGGER D.Parkinson **REVIEWER** D.Parkinson

NORTHING
EASTING
ANGLE Vertical
BEARING ------
PRINTED 01/17/18

REMARKS:

COORDINATE SYSTEM:
SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

BORING LOG NO WELL (SEATTLE) PNR0614.GPJ EED DEFAULT GINT LIBRARY.GLB 1/17/18

Geosyntec consultants

520 Pike Street, Suite 1375
Seattle, Washington 98101
Phone: 206.496.1450

GS FORM: BORE 1/99

BOREHOLE RECORD

BORING GB-5 **SHEET** 1 OF 1
START DATE 11/13/2017 **ELEVATION**
FINISH DATE 11/13/2017
PROJECT Century Link
LOCATION North Bend Cascade Autovon Co.
PROJECT NUMBER PNR0614

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOLIC LOG	ELEVATION (ft)	SAMPLES: SAMPLE NAME	SAMPLES: TYPE	SAMPLES: BLOW COUNTS	% RECOVERY	PID READING (ppm)	USCS Classification	COMMENTS
	SOIL; organics and roots								TOPSOIL	
	GRAVEL								GPS	
	Fine (pea-size) GRAVEL to sandy GRAVEL								GPS	
							20			
5										
	Gravel is both larger and angular, or pea-size and rounded									
	Brown, wet, SAND; becoming coarser with depth and grading into sandy GRAVEL			GB-5 Soil Sample 9-10'					SW	DTW = 9.2 ft bgs; GB-5 GW sample
							30			
10										
								0		
	Brown, wet, sandy GRAVEL								GPS	
							30			
15	Wet, SAND grading to fine (pea-size) GRAVEL								SW	
	Gray, wet, sandy GRAVEL								GPS	
	Gray, wet, SAND; with wood layer just above the sand at 20 ft						90		SP	
20	Total depth = 20 ft bgs									

CONTRACTOR ESN
EQUIPMENT Geoprobe
DRILL MTHD
DIAMETER
LOGGER D.Parkinson **REVIEWER** D.Parkinson

NORTHING
EASTING
ANGLE Vertical
BEARING ------
PRINTED 01/17/18

REMARKS:

COORDINATE SYSTEM:
SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

BORING LOG NO WELL (SEATTLE) PNR0614.GPJ EED DEFAULT GINT LIBRARY.GLB 1/17/18

Geosyntec consultants

520 Pike Street, Suite 1375
Seattle, Washington 98101
Phone: 206.496.1450

GS FORM: BORE 1/99

BOREHOLE RECORD

BORING GB-6 **SHEET** 1 OF 1
START DATE 11/13/2017 **ELEVATION**
FINISH DATE 11/13/2017
PROJECT Century Link
LOCATION North Bend Cascade Autovon Co.
PROJECT NUMBER PNR0614

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOLIC LOG	ELEVATION (ft)	SAMPLES: SAMPLE NAME	SAMPLES: TYPE	SAMPLES: BLOW COUNTS	% RECOVERY	PID READING (ppm)	USCS Classification	COMMENTS
	SOIL; organics								TOPSOIL	
	Coarse GRAVEL								GW-GM	
	Brown SAND						20		SP	
5	GRAVEL grading into SAND								GPS	
	Brown, moist, well-sorted, medium SAND							0	SP	
							25			
10	Wet, coarse GRAVEL; cobbles								GPS	DTW = 10 ft bgs; GB-6 GW Sample
	Gray, wet, silty GRAVEL								GW-GM	
				GB-6 Soil Sample 12-13'				0		
	Rusty brown, wet, silty GRAVEL								GW-GM	
	Brown, wet, sandy GRAVEL								GPS	
							30			
15	Gray, wet, medium SAND grading into coarse sandy GRAVEL								SWG	
	becoming sandy, fine (pea) GRAVEL									
	becoming coarse GRAVEL									
	becoming coarse SAND and GRAVEL						80			
20	Total depth = 20 ft bgs									

CONTRACTOR ESN
EQUIPMENT Geoprobe
DRILL MTHD
DIAMETER
LOGGER D.Parkinson **REVIEWER** D.Parkinson

NORTHING
EASTING
ANGLE Vertical
BEARING ------
PRINTED 01/17/18

REMARKS:

COORDINATE SYSTEM:
SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

BORING LOG NO WELL (SEATTLE) PNR0614.GPJ EED DEFAULT GINT LIBRARY.GLB 1/17/18

APPENDIX C

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-61973-1
Client Project/Site: Centurylink North Bend (WA)

For:
Geosyntec Consultants, Inc.
520 Pike Street
Suite 1375
Seattle, Washington 98101

Attn: Adrianna Jarosz

Authorized for release by:
9/6/2016 1:34:14 PM
Robert Greer, Project Manager II
(253)922-2310
robert.greer@testamericainc.com

Designee for

Christabel Escarez, Project Manager I
(253)922-2310
christabel.escarez@testamericainc.com

Table of Contents

Job ID: 580-61973-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative
580-61973-1

Comments
No additional comments.

Receipt
The samples were received on 8/22/2016 12:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.0º C and 1.9º C.

Receipt Exceptions

The tare weight information was received dissolved on the Soil Trip Blank-082216 (580-61973-9).

GC/MS VOA
Method(s) NWTPH-Gx: The method blank for analytical batch 580-225993 contained Gasoline above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) NWTPH-Gx: The method blank for preparation batch 580-226069 and analytical batch 580-226071 contained above the method detection limit. This target analyte concentration was less than the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples was not performed.

Method(s) NWTPH-Gx: For the following sample due to runing multiple analysis on the sample vial, there was not enough sample remaining to run at 1x, so the sample was run at a dilution using as much sample as possible: TRIP BLANK SOIL-082216 (580-61973-9).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method(s) NWTPH-Dx: The method blank for preparation batch 580-226383 and analytical batch 580-226527 contained #2 Diesel (C10-C24) and Motor Oil (>C24-C36) above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction or re-analysis of samples was not performed.

Method(s) NWTPH-Dx: The method blank for preparation batch 580-226496 and analytical batch 580-226537 contained #2 Diesel (C10-C24) above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction or re-analysis of samples was not performed.

Method(s) NWTPH-Dx: The following sample contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: GB2-13.5-082216 (580-61973-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Geosyntec Consultants, Inc.
Project/Site: Centurylink North Bend (WA)

TestAmerica Job ID: 580-61973-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: Centurylink North Bend (WA)

TestAmerica Job ID: 580-61973-1

Client Sample ID: GB1-13.5-082216
Date Collected: 08/22/16 09:05
Date Received: 08/22/16 12:40

Lab Sample ID: 580-61973-1
Matrix: Solid
Percent Solids: 91.9

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		32	4.3	ug/Kg	☼	08/26/16 11:16	08/26/16 19:10	1
Toluene	ND		81	14	ug/Kg	☼	08/26/16 11:16	08/26/16 19:10	1
Ethylbenzene	ND		81	14	ug/Kg	☼	08/26/16 11:16	08/26/16 19:10	1
m-Xylene & p-Xylene	ND		410	78	ug/Kg	☼	08/26/16 11:16	08/26/16 19:10	1
o-Xylene	ND		81	6.1	ug/Kg	☼	08/26/16 11:16	08/26/16 19:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*79 - 119*	*08/26/16 11:16*	*08/26/16 19:10*	*1*
Trifluorotoluene (Surr)	*103*		*52 - 152*	*08/26/16 11:16*	*08/26/16 19:10*	*1*
4-Bromofluorobenzene (Surr)	*100*		*79 - 120*	*08/26/16 11:16*	*08/26/16 19:10*	*1*
Dibromofluoromethane (Surr)	*97*		*78 - 118*	*08/26/16 11:16*	*08/26/16 19:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*81 - 121*	*08/26/16 11:16*	*08/26/16 19:10*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**1.7**	**J B**	8.1	1.0	mg/Kg	☼	08/27/16 10:46	08/27/16 19:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*50 - 150*	*08/27/16 10:46*	*08/27/16 19:02*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**16**	**J**	26	11	mg/Kg	☼	08/25/16 12:38	08/26/16 19:12	1
Motor Oil (>C24-C36)	**15**	**J**	51	9.3	mg/Kg	☼	08/25/16 12:38	08/26/16 19:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 150*	*08/25/16 12:38*	*08/26/16 19:12*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**91.9**		0.1	0.1	%			08/29/16 11:19	1
Percent Moisture	**8.1**		0.1	0.1	%			08/29/16 11:19	1

Client Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: Centurylink North Bend (WA)

TestAmerica Job ID: 580-61973-1

Client Sample ID: GB2-13.5-082216
Date Collected: 08/22/16 10:00
Date Received: 08/22/16 12:40

Lab Sample ID: 580-61973-2
Matrix: Solid
Percent Solids: 85.2

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		31	4.0	ug/Kg	☼	08/26/16 11:16	08/26/16 19:36	1
Toluene	ND		76	13	ug/Kg	☼	08/26/16 11:16	08/26/16 19:36	1
Ethylbenzene	ND		76	13	ug/Kg	☼	08/26/16 11:16	08/26/16 19:36	1
m-Xylene & p-Xylene	ND		380	73	ug/Kg	☼	08/26/16 11:16	08/26/16 19:36	1
o-Xylene	ND		76	5.7	ug/Kg	☼	08/26/16 11:16	08/26/16 19:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*79 - 119*	*08/26/16 11:16*	*08/26/16 19:36*	*1*
Trifluorotoluene (Surr)	*102*		*52 - 152*	*08/26/16 11:16*	*08/26/16 19:36*	*1*
4-Bromofluorobenzene (Surr)	*98*		*79 - 120*	*08/26/16 11:16*	*08/26/16 19:36*	*1*
Dibromofluoromethane (Surr)	*99*		*78 - 118*	*08/26/16 11:16*	*08/26/16 19:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 121*	*08/26/16 11:16*	*08/26/16 19:36*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**1.4**	**J B**	7.6	0.95	mg/Kg	☼	08/27/16 10:46	08/27/16 19:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*	*08/27/16 10:46*	*08/27/16 19:34*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**44**		28	12	mg/Kg	☼	08/25/16 12:38	08/26/16 19:33	1
Motor Oil (>C24-C36)	**110**		56	10	mg/Kg	☼	08/25/16 12:38	08/26/16 19:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*96*		*50 - 150*	*08/25/16 12:38*	*08/26/16 19:33*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**85.2**		0.1	0.1	%			08/29/16 11:19	1
Percent Moisture	**14.8**		0.1	0.1	%			08/29/16 11:19	1

Client Sample ID: GB3-12.5-082216

Date Collected: 08/22/16 10:45
Date Received: 08/22/16 12:40

Lab Sample ID: 580-61973-3

Matrix: Solid
Percent Solids: 88.9

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		30	3.9	ug/Kg	☼	08/26/16 11:16	08/26/16 20:03	1
Toluene	ND		74	13	ug/Kg	☼	08/26/16 11:16	08/26/16 20:03	1
Ethylbenzene	ND		74	12	ug/Kg	☼	08/26/16 11:16	08/26/16 20:03	1
m-Xylene & p-Xylene	ND		370	71	ug/Kg	☼	08/26/16 11:16	08/26/16 20:03	1
o-Xylene	ND		74	5.6	ug/Kg	☼	08/26/16 11:16	08/26/16 20:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*79 - 119*	*08/26/16 11:16*	*08/26/16 20:03*	*1*
Trifluorotoluene (Surr)	*103*		*52 - 152*	*08/26/16 11:16*	*08/26/16 20:03*	*1*
4-Bromofluorobenzene (Surr)	*98*		*79 - 120*	*08/26/16 11:16*	*08/26/16 20:03*	*1*
Dibromofluoromethane (Surr)	*101*		*78 - 118*	*08/26/16 11:16*	*08/26/16 20:03*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*81 - 121*	*08/26/16 11:16*	*08/26/16 20:03*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**0.95**	**J B**	7.4	0.93	mg/Kg	☼	08/27/16 10:46	08/27/16 20:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*	*08/27/16 10:46*	*08/27/16 20:06*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**19**	**J**	23	9.9	mg/Kg	☼	08/25/16 12:38	08/26/16 19:54	1
Motor Oil (>C24-C36)	**17**	**J**	45	8.2	mg/Kg	☼	08/25/16 12:38	08/26/16 19:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*99*		*50 - 150*	*08/25/16 12:38*	*08/26/16 19:54*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**88.9**		0.1	0.1	%			08/29/16 11:19	1
Percent Moisture	**11.1**		0.1	0.1	%			08/29/16 11:19	1

Client: Geosyntec Consultants, Inc.
Project/Site: Centurylink North Bend (WA)

TestAmerica Job ID: 580-61973-1

Client Sample ID: GB1-082216
Date Collected: 08/22/16 09:25
Date Received: 08/22/16 12:40

Lab Sample ID: 580-61973-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0	0.42	ug/L			09/02/16 07:56	1
Toluene	ND		2.0	0.18	ug/L			09/02/16 07:56	1
Ethylbenzene	ND		3.0	0.21	ug/L			09/02/16 07:56	1
m-Xylene & p-Xylene	ND		3.0	0.30	ug/L			09/02/16 07:56	1
o-Xylene	ND		2.0	0.49	ug/L			09/02/16 07:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*82 - 122*		*09/02/16 07:56*	*1*
Trifluorotoluene (Surr)	*103*		*80 - 141*		*09/02/16 07:56*	*1*
4-Bromofluorobenzene (Surr)	*102*		*75 - 125*		*09/02/16 07:56*	*1*
Dibromofluoromethane (Surr)	*107*		*77 - 118*		*09/02/16 07:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*65 - 143*		*09/02/16 07:56*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050	0.027	mg/L			08/27/16 08:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*		*08/27/16 08:28*	*1*
Trifluorotoluene (Surr)	*96*		*50 - 150*		*08/27/16 08:28*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.058**	**J B**	0.11	0.019	mg/L		08/31/16 14:30	09/02/16 04:39	1
Motor Oil (>C24-C36)	**0.091**	**J B**	0.25	0.029	mg/L		08/31/16 14:30	09/02/16 04:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*83*		*50 - 150*	*08/31/16 14:30*	*09/02/16 04:39*	*1*

Client Sample ID: GB1-082216-DUP

Date Collected: 08/22/16 09:30
Date Received: 08/22/16 12:40

Lab Sample ID: 580-61973-5

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0	0.42	ug/L			09/02/16 08:25	1
Toluene	ND		2.0	0.18	ug/L			09/02/16 08:25	1
Ethylbenzene	ND		3.0	0.21	ug/L			09/02/16 08:25	1
m-Xylene & p-Xylene	ND		3.0	0.30	ug/L			09/02/16 08:25	1
o-Xylene	ND		2.0	0.49	ug/L			09/02/16 08:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*82 - 122*		*09/02/16 08:25*	*1*
Trifluorotoluene (Surr)	*102*		*80 - 141*		*09/02/16 08:25*	*1*
4-Bromofluorobenzene (Surr)	*101*		*75 - 125*		*09/02/16 08:25*	*1*
Dibromofluoromethane (Surr)	*102*		*77 - 118*		*09/02/16 08:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*65 - 143*		*09/02/16 08:25*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050	0.027	mg/L			08/27/16 09:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*		*08/27/16 09:00*	*1*
Trifluorotoluene (Surr)	*96*		*50 - 150*		*08/27/16 09:00*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.044**	**J B**	0.11	0.019	mg/L		08/31/16 14:30	09/02/16 05:23	1
Motor Oil (>C24-C36)	ND		0.25	0.029	mg/L		08/31/16 14:30	09/02/16 05:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*66*		*50 - 150*	*08/31/16 14:30*	*09/02/16 05:23*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: Centurylink North Bend (WA)

TestAmerica Job ID: 580-61973-1

Client Sample ID: GB2-082216
Date Collected: 08/22/16 10:20
Date Received: 08/22/16 12:40

Lab Sample ID: 580-61973-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0	0.42	ug/L			09/02/16 08:53	1
Toluene	ND		2.0	0.18	ug/L			09/02/16 08:53	1
Ethylbenzene	ND		3.0	0.21	ug/L			09/02/16 08:53	1
m-Xylene & p-Xylene	ND		3.0	0.30	ug/L			09/02/16 08:53	1
o-Xylene	ND		2.0	0.49	ug/L			09/02/16 08:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*82 - 122*		*09/02/16 08:53*	*1*
Trifluorotoluene (Surr)	*102*		*80 - 141*		*09/02/16 08:53*	*1*
4-Bromofluorobenzene (Surr)	*100*		*75 - 125*		*09/02/16 08:53*	*1*
Dibromofluoromethane (Surr)	*103*		*77 - 118*		*09/02/16 08:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*65 - 143*		*09/02/16 08:53*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050	0.027	mg/L			08/27/16 09:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*		*08/27/16 09:32*	*1*
Trifluorotoluene (Surr)	*96*		*50 - 150*		*08/27/16 09:32*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.065**	**J B**	0.11	0.019	mg/L		09/01/16 14:29	09/01/16 22:16	1
Motor Oil (>C24-C36)	**0.035**	**J**	0.25	0.029	mg/L		09/01/16 14:29	09/01/16 22:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*78*		*50 - 150*	*09/01/16 14:29*	*09/01/16 22:16*	*1*

Client Sample ID: GB3-082216

Date Collected: 08/22/16 11:00
Date Received: 08/22/16 12:40

Lab Sample ID: 580-61973-7

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0	0.42	ug/L			09/02/16 09:21	1
Toluene	ND		2.0	0.18	ug/L			09/02/16 09:21	1
Ethylbenzene	ND		3.0	0.21	ug/L			09/02/16 09:21	1
m-Xylene & p-Xylene	ND		3.0	0.30	ug/L			09/02/16 09:21	1
o-Xylene	ND		2.0	0.49	ug/L			09/02/16 09:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*82 - 122*		*09/02/16 09:21*	*1*
Trifluorotoluene (Surr)	*102*		*80 - 141*		*09/02/16 09:21*	*1*
4-Bromofluorobenzene (Surr)	*98*		*75 - 125*		*09/02/16 09:21*	*1*
Dibromofluoromethane (Surr)	*102*		*77 - 118*		*09/02/16 09:21*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*65 - 143*		*09/02/16 09:21*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050	0.027	mg/L			08/27/16 10:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*		*08/27/16 10:04*	*1*
Trifluorotoluene (Surr)	*93*		*50 - 150*		*08/27/16 10:04*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.26**	**B**	0.11	0.019	mg/L		09/01/16 14:29	09/01/16 22:37	1
Motor Oil (>C24-C36)	ND		0.25	0.029	mg/L		09/01/16 14:29	09/01/16 22:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*81*		*50 - 150*	*09/01/16 14:29*	*09/01/16 22:37*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: Centurylink North Bend (WA)

TestAmerica Job ID: 580-61973-1

Client Sample ID: TRIP BLANK GW-082216
Date Collected: 08/22/16 00:01
Date Received: 08/22/16 12:40

Lab Sample ID: 580-61973-8
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0	0.42	ug/L			09/02/16 02:44	1
Toluene	ND		2.0	0.18	ug/L			09/02/16 02:44	1
Ethylbenzene	ND		3.0	0.21	ug/L			09/02/16 02:44	1
m-Xylene & p-Xylene	ND		3.0	0.30	ug/L			09/02/16 02:44	1
o-Xylene	ND		2.0	0.49	ug/L			09/02/16 02:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*82 - 122*		*09/02/16 02:44*	*1*
Trifluorotoluene (Surr)	*101*		*80 - 141*		*09/02/16 02:44*	*1*
4-Bromofluorobenzene (Surr)	*101*		*75 - 125*		*09/02/16 02:44*	*1*
Dibromofluoromethane (Surr)	*102*		*77 - 118*		*09/02/16 02:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*65 - 143*		*09/02/16 02:44*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050	0.027	mg/L			08/26/16 22:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*		*08/26/16 22:52*	*1*
Trifluorotoluene (Surr)	*98*		*50 - 150*		*08/26/16 22:52*	*1*

Client Sample ID: TRIP BLANK SOIL-082216

Lab Sample ID: 580-61973-9

Date Collected: 08/22/16 00:01

Matrix: Solid

Date Received: 08/22/16 12:40

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		16	2.1	ug/Kg		08/26/16 11:16	08/26/16 18:44	1
Toluene	ND		40	6.8	ug/Kg		08/26/16 11:16	08/26/16 18:44	1
Ethylbenzene	ND		40	6.7	ug/Kg		08/26/16 11:16	08/26/16 18:44	1
m-Xylene & p-Xylene	ND		200	38	ug/Kg		08/26/16 11:16	08/26/16 18:44	1
o-Xylene	ND		40	3.0	ug/Kg		08/26/16 11:16	08/26/16 18:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*79 - 119*	*08/26/16 11:16*	*08/26/16 18:44*	*1*
Trifluorotoluene (Surr)	*105*		*52 - 152*	*08/26/16 11:16*	*08/26/16 18:44*	*1*
4-Bromofluorobenzene (Surr)	*96*		*79 - 120*	*08/26/16 11:16*	*08/26/16 18:44*	*1*
Dibromofluoromethane (Surr)	*94*		*78 - 118*	*08/26/16 11:16*	*08/26/16 18:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 121*	*08/26/16 11:16*	*08/26/16 18:44*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**6.0**	**J B**	12	1.5	mg/Kg		08/27/16 10:46	08/27/16 17:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*	*08/27/16 10:46*	*08/27/16 17:58*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-225982/1-A
Matrix: Solid
Analysis Batch: 225991

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 225982

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		16	2.1	ug/Kg		08/26/16 11:16	08/26/16 13:54	1
Toluene	ND		40	6.8	ug/Kg		08/26/16 11:16	08/26/16 13:54	1
Ethylbenzene	ND		40	6.7	ug/Kg		08/26/16 11:16	08/26/16 13:54	1
m-Xylene & p-Xylene	ND		200	38	ug/Kg		08/26/16 11:16	08/26/16 13:54	1
o-Xylene	ND		40	3.0	ug/Kg		08/26/16 11:16	08/26/16 13:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*79 - 119*	*08/26/16 11:16*	*08/26/16 13:54*	*1*
Trifluorotoluene (Surr)	*105*		*52 - 152*	*08/26/16 11:16*	*08/26/16 13:54*	*1*
4-Bromofluorobenzene (Surr)	*99*		*79 - 120*	*08/26/16 11:16*	*08/26/16 13:54*	*1*
Dibromofluoromethane (Surr)	*102*		*78 - 118*	*08/26/16 11:16*	*08/26/16 13:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*81 - 121*	*08/26/16 11:16*	*08/26/16 13:54*	*1*

Lab Sample ID: LCS 580-225982/2-A
Matrix: Solid
Analysis Batch: 225991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 225982

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	803	777		ug/Kg		97	70 - 118
Toluene	801	794		ug/Kg		99	67 - 119
Ethylbenzene	803	800		ug/Kg		100	66 - 119
m-Xylene & p-Xylene	802	788		ug/Kg		98	69 - 126
o-Xylene	801	794		ug/Kg		99	66 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*79 - 119*
Trifluorotoluene (Surr)	*104*		*52 - 152*
4-Bromofluorobenzene (Surr)	*100*		*79 - 120*
Dibromofluoromethane (Surr)	*104*		*78 - 118*
1,2-Dichloroethane-d4 (Surr)	*110*		*81 - 121*

Lab Sample ID: LCSD 580-225982/3-A
Matrix: Solid
Analysis Batch: 225991

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 225982

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	803	791		ug/Kg		99	70 - 118	2	19
Toluene	801	784		ug/Kg		98	67 - 119	1	19
Ethylbenzene	803	794		ug/Kg		99	66 - 119	1	23
m-Xylene & p-Xylene	802	795		ug/Kg		99	69 - 126	1	23
o-Xylene	801	782		ug/Kg		98	66 - 127	2	22

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*94*		*79 - 119*
Trifluorotoluene (Surr)	*105*		*52 - 152*
4-Bromofluorobenzene (Surr)	*101*		*79 - 120*
Dibromofluoromethane (Surr)	*103*		*78 - 118*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-225982/3-A
Matrix: Solid
Analysis Batch: 225991

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 225982

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 121*

Lab Sample ID: MB 580-226549/4
Matrix: Water
Analysis Batch: 226549

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0	0.42	ug/L			09/02/16 01:19	1
Toluene	ND		2.0	0.18	ug/L			09/02/16 01:19	1
Ethylbenzene	ND		3.0	0.21	ug/L			09/02/16 01:19	1
m-Xylene & p-Xylene	ND		3.0	0.30	ug/L			09/02/16 01:19	1
o-Xylene	ND		2.0	0.49	ug/L			09/02/16 01:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*		*82 - 122*		*09/02/16 01:19*	*1*
Trifluorotoluene (Surr)	*102*		*80 - 141*		*09/02/16 01:19*	*1*
4-Bromofluorobenzene (Surr)	*99*		*75 - 125*		*09/02/16 01:19*	*1*
Dibromofluoromethane (Surr)	*100*		*77 - 118*		*09/02/16 01:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*65 - 143*		*09/02/16 01:19*	*1*

Lab Sample ID: LCS 580-226549/5
Matrix: Water
Analysis Batch: 226549

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	9.76		ug/L		97	80 - 120
Toluene	10.0	9.47		ug/L		95	75 - 120
Ethylbenzene	10.0	9.33		ug/L		93	75 - 119
m-Xylene & p-Xylene	10.0	9.48		ug/L		95	75 - 119
o-Xylene	10.0	9.82		ug/L		98	74 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*82 - 122*
Trifluorotoluene (Surr)	*99*		*80 - 141*
4-Bromofluorobenzene (Surr)	*103*		*75 - 125*
Dibromofluoromethane (Surr)	*101*		*77 - 118*
1,2-Dichloroethane-d4 (Surr)	*106*		*65 - 143*

Lab Sample ID: LCSD 580-226549/6
Matrix: Water
Analysis Batch: 226549

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	10.0	10.1		ug/L		101	80 - 120	4	14
Toluene	10.0	9.88		ug/L		99	75 - 120	4	19
Ethylbenzene	10.0	10.0		ug/L		100	75 - 119	7	14
m-Xylene & p-Xylene	10.0	10.0		ug/L		100	75 - 119	5	14

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-226549/6
Matrix: Water
Analysis Batch: 226549

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
o-Xylene			10.0	10.3		ug/L		103	74 - 120	5	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*82 - 122*
Trifluorotoluene (Surr)	*99*		*80 - 141*
4-Bromofluorobenzene (Surr)	*105*		*75 - 125*
Dibromofluoromethane (Surr)	*104*		*77 - 118*
1,2-Dichloroethane-d4 (Surr)	*108*		*65 - 143*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-225993/5
Matrix: Water
Analysis Batch: 225993

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	0.0279	J	0.050	0.027	mg/L			08/26/16 20:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*		*08/26/16 20:44*	*1*
Trifluorotoluene (Surr)	*98*		*50 - 150*		*08/26/16 20:44*	*1*

Lab Sample ID: LCS 580-225993/6
Matrix: Water
Analysis Batch: 225993

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline			1.16	1.09		mg/L		94	79 - 110		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*50 - 150*
Trifluorotoluene (Surr)	*103*		*50 - 150*

Lab Sample ID: LCSD 580-225993/7
Matrix: Water
Analysis Batch: 225993

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline			1.16	1.09		mg/L		93	79 - 110	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*50 - 150*
Trifluorotoluene (Surr)	*102*		*50 - 150*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 580-61939-E-7 MS
Matrix: Water
Analysis Batch: 225993

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	29	B	58.2	82.7		mg/L		93	50 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*50 - 150*
Trifluorotoluene (Surr)	*100*		*50 - 150*

Lab Sample ID: 580-61939-E-7 MSD
Matrix: Water
Analysis Batch: 225993

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline	29	B	58.2	83.6		mg/L		94	50 - 150	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*50 - 150*
Trifluorotoluene (Surr)	*98*		*50 - 150*

Lab Sample ID: MB 580-226069/1-A
Matrix: Solid
Analysis Batch: 226071

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226069

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	0.576	J	4.0	0.50	mg/Kg		08/27/16 10:46	08/27/16 16:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*50 - 150*	*08/27/16 10:46*	*08/27/16 16:22*	*1*

Lab Sample ID: LCS 580-226069/2-A
Matrix: Solid
Analysis Batch: 226071

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226069

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	40.1	36.2		mg/Kg		90	68 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*50 - 150*

Lab Sample ID: LCSD 580-226069/3-A
Matrix: Solid
Analysis Batch: 226071

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226069

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline	40.1	36.0		mg/Kg		90	68 - 120	0	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-225888/1-A
Matrix: Solid
Analysis Batch: 225990

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 225888

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		25	11	mg/Kg		08/25/16 12:38	08/26/16 15:17	1
Motor Oil (>C24-C36)	ND		50	9.1	mg/Kg		08/25/16 12:38	08/26/16 15:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*96*		*50 - 150*	*08/25/16 12:38*	*08/26/16 15:17*	*1*

Lab Sample ID: LCS 580-225888/2-A
Matrix: Solid
Analysis Batch: 225990

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 225888

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
#2 Diesel (C10-C24)			503	486		mg/Kg		97	70 - 125		
Motor Oil (>C24-C36)			503	436		mg/Kg		87	64 - 127		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*92*		*50 - 150*

Lab Sample ID: LCSD 580-225888/3-A
Matrix: Solid
Analysis Batch: 225990

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 225888

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			503	487		mg/Kg		97	70 - 125	0	16
Motor Oil (>C24-C36)			503	436		mg/Kg		87	64 - 127	0	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*93*		*50 - 150*

Lab Sample ID: 580-61971-A-2-B DU
Matrix: Solid
Analysis Batch: 225990

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 225888

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
#2 Diesel (C10-C24)	52			45.9		mg/Kg	☼			13	35
Motor Oil (>C24-C36)	34	J		25.5	J	mg/Kg	☼			29	35

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
o-Terphenyl	*98*		*50 - 150*

Lab Sample ID: MB 580-226383/1-A
Matrix: Water
Analysis Batch: 226527

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226383

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.0421	J	0.11	0.019	mg/L		08/31/16 14:30	09/01/16 21:15	1
Motor Oil (>C24-C36)	0.0322	J	0.25	0.029	mg/L		08/31/16 14:30	09/01/16 21:15	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: MB 580-226383/1-A
Matrix: Water
Analysis Batch: 226527

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226383

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150	08/31/16 14:30	09/01/16 21:15	1

Lab Sample ID: LCS 580-226383/2-A
Matrix: Water
Analysis Batch: 226527

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226383

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
#2 Diesel (C10-C24)			2.01	1.88		mg/L		94	59 - 120		
Motor Oil (>C24-C36)			2.01	2.05		mg/L		102	53 - 129		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	91		50 - 150

Lab Sample ID: MB 580-226496/1-A
Matrix: Water
Analysis Batch: 226537

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.0244	J	0.11	0.019	mg/L		09/01/16 14:29	09/01/16 21:14	1
Motor Oil (>C24-C36)	ND		0.25	0.029	mg/L		09/01/16 14:29	09/01/16 21:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	89		50 - 150	09/01/16 14:29	09/01/16 21:14	1

Lab Sample ID: LCS 580-226496/2-A
Matrix: Water
Analysis Batch: 226537

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226496

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
#2 Diesel (C10-C24)			2.01	1.73		mg/L		86	59 - 120		
Motor Oil (>C24-C36)			2.01	1.89		mg/L		94	53 - 129		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	84		50 - 150

Lab Sample ID: LCSD 580-226496/3-A
Matrix: Water
Analysis Batch: 226537

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226496

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			2.01	1.52		mg/L		76	59 - 120	13	27
Motor Oil (>C24-C36)			2.01	1.69		mg/L		84	53 - 129	11	19

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	74		50 - 150

Client: Geosyntec Consultants, Inc.
Project/Site: Centurylink North Bend (WA)

TestAmerica Job ID: 580-61973-1

Method: D 2216 - Percent Moisture

Lab Sample ID: 580-62020-A-1 DU
Matrix: Solid
Analysis Batch: 226129

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Solids	90.0			89.9		%				0.2	20
Percent Moisture	10			10.1		%				2	20

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Centurylink North Bend (WA)

TestAmerica Job ID: 580-61973-1

Client Sample ID: GB1-13.5-082216
Lab Sample ID: 580-61973-1
Date Collected: 08/22/16 09:05
Matrix: Solid
Date Received: 08/22/16 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	226129	08/29/16 11:19	CBS	TAL SEA

Client Sample ID: GB1-13.5-082216
Lab Sample ID: 580-61973-1
Date Collected: 08/22/16 09:05
Matrix: Solid
Date Received: 08/22/16 12:40
Percent Solids: 91.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			225982	08/26/16 11:16	JSM	TAL SEA
Total/NA	Analysis	8260C		1	225991	08/26/16 19:10	W1T	TAL SEA
Total/NA	Prep	5035			226069	08/27/16 10:46	JW1L	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	226071	08/27/16 19:02	W1T	TAL SEA
Total/NA	Prep	3546			225888	08/25/16 12:38	CBS	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	225990	08/26/16 19:12	D1R	TAL SEA

Client Sample ID: GB2-13.5-082216
Lab Sample ID: 580-61973-2
Date Collected: 08/22/16 10:00
Matrix: Solid
Date Received: 08/22/16 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	226129	08/29/16 11:19	CBS	TAL SEA

Client Sample ID: GB2-13.5-082216
Lab Sample ID: 580-61973-2
Date Collected: 08/22/16 10:00
Matrix: Solid
Date Received: 08/22/16 12:40
Percent Solids: 85.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			225982	08/26/16 11:16	JSM	TAL SEA
Total/NA	Analysis	8260C		1	225991	08/26/16 19:36	W1T	TAL SEA
Total/NA	Prep	5035			226069	08/27/16 10:46	JW1L	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	226071	08/27/16 19:34	W1T	TAL SEA
Total/NA	Prep	3546			225888	08/25/16 12:38	CBS	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	225990	08/26/16 19:33	D1R	TAL SEA

Client Sample ID: GB3-12.5-082216
Lab Sample ID: 580-61973-3
Date Collected: 08/22/16 10:45
Matrix: Solid
Date Received: 08/22/16 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	226129	08/29/16 11:19	CBS	TAL SEA

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Centurylink North Bend (WA)

TestAmerica Job ID: 580-61973-1

Client Sample ID: GB3-12.5-082216

Lab Sample ID: 580-61973-3

Date Collected: 08/22/16 10:45
Matrix: Solid
Date Received: 08/22/16 12:40
Percent Solids: 88.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			225982	08/26/16 11:16	JSM	TAL SEA
Total/NA	Analysis	8260C		1	225991	08/26/16 20:03	W1T	TAL SEA
Total/NA	Prep	5035			226069	08/27/16 10:46	JW1L	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	226071	08/27/16 20:06	W1T	TAL SEA
Total/NA	Prep	3546			225888	08/25/16 12:38	CBS	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	225990	08/26/16 19:54	D1R	TAL SEA

Client Sample ID: GB1-082216

Lab Sample ID: 580-61973-4

Date Collected: 08/22/16 09:25
Matrix: Water
Date Received: 08/22/16 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	226549	09/02/16 07:56	STA	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	225993	08/27/16 08:28	JW1L	TAL SEA
Total/NA	Prep	3510C			226383	08/31/16 14:30	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	226527	09/02/16 04:39	KZ1	TAL SEA

Client Sample ID: GB1-082216-DUP

Lab Sample ID: 580-61973-5

Date Collected: 08/22/16 09:30
Matrix: Water
Date Received: 08/22/16 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	226549	09/02/16 08:25	STA	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	225993	08/27/16 09:00	JW1L	TAL SEA
Total/NA	Prep	3510C			226383	08/31/16 14:30	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	226527	09/02/16 05:23	KZ1	TAL SEA

Client Sample ID: GB2-082216

Lab Sample ID: 580-61973-6

Date Collected: 08/22/16 10:20
Matrix: Water
Date Received: 08/22/16 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	226549	09/02/16 08:53	STA	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	225993	08/27/16 09:32	JW1L	TAL SEA
Total/NA	Prep	3510C			226496	09/01/16 14:29	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	226537	09/01/16 22:16	KZ1	TAL SEA

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Centurylink North Bend (WA)

TestAmerica Job ID: 580-61973-1

Client Sample ID: GB3-082216

Lab Sample ID: 580-61973-7

Date Collected: 08/22/16 11:00
Matrix: Water
Date Received: 08/22/16 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	226549	09/02/16 09:21	STA	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	225993	08/27/16 10:04	JW1L	TAL SEA
Total/NA	Prep	3510C			226496	09/01/16 14:29	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	226537	09/01/16 22:37	KZ1	TAL SEA

Client Sample ID: TRIP BLANK GW-082216

Lab Sample ID: 580-61973-8

Date Collected: 08/22/16 00:01
Matrix: Water
Date Received: 08/22/16 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	226549	09/02/16 02:44	STA	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	225993	08/26/16 22:52	JW1L	TAL SEA

Client Sample ID: TRIP BLANK SOIL-082216

Lab Sample ID: 580-61973-9

Date Collected: 08/22/16 00:01
Matrix: Solid
Date Received: 08/22/16 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			225982	08/26/16 11:16	JSM	TAL SEA
Total/NA	Analysis	8260C		1	225991	08/26/16 18:44	W1T	TAL SEA
Total/NA	Prep	5035			226069	08/27/16 10:46	JW1L	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	226071	08/27/16 17:58	W1T	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Certification Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Centurylink North Bend (WA)

TestAmerica Job ID: 580-61973-1

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
D 2216		Solid	Percent Moisture
D 2216		Solid	Percent Solids

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Centurylink North Bend (WA)

TestAmerica Job ID: 580-61973-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-61973-1	GB1-13.5-082216	Solid	08/22/16 09:05	08/22/16 12:40
580-61973-2	GB2-13.5-082216	Solid	08/22/16 10:00	08/22/16 12:40
580-61973-3	GB3-12.5-082216	Solid	08/22/16 10:45	08/22/16 12:40
580-61973-4	GB1-082216	Water	08/22/16 09:25	08/22/16 12:40
580-61973-5	GB1-082216-DUP	Water	08/22/16 09:30	08/22/16 12:40
580-61973-6	GB2-082216	Water	08/22/16 10:20	08/22/16 12:40
580-61973-7	GB3-082216	Water	08/22/16 11:00	08/22/16 12:40
580-61973-8	TRIP BLANK GW-082216	Water	08/22/16 00:01	08/22/16 12:40
580-61973-9	TRIP BLANK SOIL-082216	Solid	08/22/16 00:01	08/22/16 12:40

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Seattle
5755 8th Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.testamericainc.com

Loc: 580
61973

☐ Rush
☐ Short Hold

Chain of Custody Record

Client	Client Contact	Date	Chain of Custody Number
GEOSYNTEC	DAVE PARKINSON	8/22/16	29245
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
520 PIKE ST, STE 1375	206-496-1450	Tacoma	
City / State / Zip Code	**Sampler**	**Lab Contact**	
SEATTLE / WA / 98101	AJ	C. ESCAREZ	
Project Name and Location (State)	**Billing Contact**		
Centurylink North Bend (WA)	L. CURTIS		
Contract/Purchase Order/Quote No.			
PNR0614			

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Methanol	Analysis: NWTPH-DX	NWTPH-GX	BTEX (8260C)
GB1-13.5-OB2216	8/22/16	905		AJ		X	X						X	X	X	X
GB2-13.5-OB2216		1000				X	X						X	X	X	X
GB3-12.5-OB2216		1045				X	X						X	X	X	X
GB1-OB2216		925		X						X		AJ	X	X	X	X
GB1-OB2216-DUP		930		X						X			X	X	X	X
GB2-OB2216		1020		X						X			X	X	X	X
GB3-OB2216		1100		X						X			X	X	X	X
TripBlank GW-OB2216	—	—		X						X					X	X
TripBlank Soil-OB2216	—	—				X							X		X	X

Special Instructions/ Conditions of Receipt

580-61973 Chain of Custody

TB A2 Cooler Cor 1.0 w/o Unc 1.2
Cooler Dsc MedRed @Lab
Wet/Packs Packing bub
clidro

TB A2 Cooler Cor 1.9 w/o Unc 2.1
Cooler Dsc Lg Blu @Lab
Wet/Packs Packing bub

Cooler: ☐ Yes ☐ No Cooler Temp: _____

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B

Turn Around Time Required (business days): ☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☐ 10 Days ☐ 15 Days ☐ Other _____

QC Requirements (Specify)

	Sign/Print	Date	Time
1. Relinquished By	ADRIANNA JAROSZ	8/22/16	12:40
2. Relinquished By			
3. Relinquished By			
1. Received By	Tom Blankinship	8/22/16	1240
2. Received By			
3. Received By			

Comments

DISTRIBUTION: WHITE – Stays with the Samples; CANARY – Returned to Client with Report; PINK – Field Copy

TAL-8210 (0210260)

Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 580-61973-1

Login Number: 61973
List Number: 1
Creator: Gall, Brandon A

List Source: TestAmerica Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	Refer to Job Narrative for details.
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	False	The tare weight numbers have dissloved off the MeOH Trip Blank
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

29 November 2017

Adrianna Jarosz
Geosyntec Consultants
520 Pike Street, Suite 1375
Seattle, WA 98101

RE: Centurylink North Bend

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
17K0214	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the reqirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

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

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006

PJLA Testing
Accreditation # 66169

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 17K0214	Turn-around Requested: STANDARD	Page: 1 of 1	
ARI Client Company: GEOSYNTEC	Phone: 206-496-1450	Date: 11/13/17	Ice Present?
Client Contact: DAVE PARKINSON		No. of Coolers:	Cooler Temps:
Client Project Name: CENTURY LINK NORTH BEND			
Client Project #: PNR0614	Samplers: AJ		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: NWTPH-DX	NWTPH-GX	BTEX						Notes/Comments
GW-111317-GB4	11/13/17	1005	W	7	X	X	X						
GW-111317-GB5		1105											
GW-111317-GB6		1206											
GW-111317-GB4DUP		1010											
Soil-111317-(13-14)-GB4		935	S	6									
Soil-111317-(9-10)-GB5		1042											
Soil-111317-(12-13)-GB6		1140											
TripBlank-111317	—	—	W	2 4 AJ		X	X						

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: ADRIANNA JAROSZ	Printed Name: Brandon Fisk	Printed Name:	Printed Name:
	Company: GEOSYNTEC	Company: ARI	Company:	Company:
	Date & Time: 11/13/17 1343	Date & Time: 11/13/17 1343	Date & Time:	Date & Time:

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Geosyntec

COC No(s): _____ NA

Assigned ARI Job No: 17K0214

Project Name: Century Link North Bend

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO
Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)	3.0	
Time: _____		

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: D-02565

Cooler Accepted by: BF Date: 11/13/17 Time: 1343

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		(YES)	NO
What kind of packing material was used? ...	(Bubble Wrap) (Wet Ice) (Gel Packs) (Baggies) Foam Block Paper Other: _____		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		(YES)	NO
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	(NA)	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	(NO)
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	NA	11/9/17	
Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____		Split by: _____	

Samples Logged by: SF Date: 11/14/17 Time: 1132

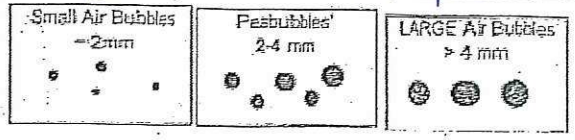
*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

2 Trip Blank vials had Peabubbles

By: NS Date: 11/14/17



Small → "sm" (< 2 mm)	08C 08D
Peabubbles → "pb" (2 to < 4 mm)	08B
Large → "lg" (4 to < 6 mm)	08A
Headspace → "hs" (> 6 mm)	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW-111317-GB4	17K0214-01	Water	13-Nov-2017 10:05	13-Nov-2017 13:43
GW-111317-GB5	17K0214-02	Water	13-Nov-2017 11:05	13-Nov-2017 13:43
GW-111317-GB6	17K0214-03	Water	13-Nov-2017 12:06	13-Nov-2017 13:43
GW-111317-GB4DUP	17K0214-04	Water	13-Nov-2017 10:10	13-Nov-2017 13:43
Soil-111317-(13-14)-GB4	17K0214-05	Solid	13-Nov-2017 09:35	13-Nov-2017 13:43
Soil-111317-(9-10)-GB5	17K0214-06	Solid	13-Nov-2017 10:42	13-Nov-2017 13:43
Soil-111317-(12-13)-GB6	17K0214-07	Solid	13-Nov-2017 11:40	13-Nov-2017 13:43
TripBlank-111317	17K0214-08	Water	13-Nov-2017 00:00	13-Nov-2017 13:43

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Case Narrative

Sample receipt

Samples as listed on the preceding page were received November 13, 2017 under ARI workorder 17K0214. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Volatiles - EPA Method SW8260C

The samples were run within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

Method blank BFK0414 has m,p-Xylene and o-Xylene detected below the reporting limits, but above the method detection limits. These analytes have been flagged with a "J" qualifier on the method blank.

The LCS/LCSD percent recoveries and RPD were within control limits.

Gasoline by NWTPH-g (GC/MS)

The samples were run within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limits.

The LCS/LCSD percent recoveries and RPD were within control limits.

Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The samples were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limits.

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

The LCS percent recoveries were within control limits.

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

GW-111317-GB4

17K0214-01 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT7

Sampled: 11/13/2017 10:05
Analyzed: 15-Nov-2017 14:36

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFK0414 Sample Size: 10 mL
Prepared: 15-Nov-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.03	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.04	0.20	**0.05**	ug/L	J
Ethylbenzene	100-41-4	1	0.04	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.05	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.03	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				*80-129 %*	*114*	*%*	
Surrogate: Toluene-d8				*80-120 %*	*98.2*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*93.7*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*101*	*%*	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

GW-111317-GB4

17K0214-01 (Water)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT7

Sampled: 11/13/2017 10:05
Analyzed: 15-Nov-2017 14:36

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFK0414 Sample Size: 10 mL
Prepared: 15-Nov-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*98.2*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*93.7*	*%*	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

GW-111317-GB4

17K0214-01 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx
Instrument: FID3

Sampled: 11/13/2017 10:05
Analyzed: 22-Nov-2017 16:37

Sample Preparation: Preparation Method: EPA 3510C SepF
Preparation Batch: BFK0418
Prepared: 20-Nov-2017
Sample Size: 500 mL
Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)		1	0.100	ND	mg/L	U
Motor Oil Range Organics (C24-C38)		1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*116*	*%*	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

GW-111317-GB5

17K0214-02 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT7

Sampled: 11/13/2017 11:05
Analyzed: 15-Nov-2017 15:04

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFK0414 Sample Size: 10 mL
Prepared: 15-Nov-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.03	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.04	0.20	**0.06**	ug/L	J
Ethylbenzene	100-41-4	1	0.04	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.05	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.03	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				*80-129 %*	*119*	*%*	
Surrogate: Toluene-d8				*80-120 %*	*97.5*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*92.9*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*98.0*	*%*	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

GW-111317-GB5

17K0214-02 (Water)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT7

Sampled: 11/13/2017 11:05
Analyzed: 15-Nov-2017 15:04

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFK0414 Sample Size: 10 mL
Prepared: 15-Nov-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*97.5*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*92.9*	*%*	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

GW-111317-GB5

17K0214-02 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx
Instrument: FID3

Sampled: 11/13/2017 11:05
Analyzed: 22-Nov-2017 16:54

Sample Preparation: Preparation Method: EPA 3510C SepF
Preparation Batch: BFK0418
Prepared: 20-Nov-2017
Sample Size: 500 mL
Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)		1	0.100	**0.166**	mg/L	
HC ID: DRO						
Motor Oil Range Organics (C24-C38)		1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*112*	*%*	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

GW-111317-GB6

17K0214-03 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT7

Sampled: 11/13/2017 12:06
Analyzed: 15-Nov-2017 15:32

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFK0414 Sample Size: 10 mL
Prepared: 15-Nov-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.03	0.20	**0.03**	ug/L	J
Toluene	108-88-3	1	0.04	0.20	**0.05**	ug/L	J
Ethylbenzene	100-41-4	1	0.04	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.05	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.03	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				*80-129 %*	*117*	*%*	
Surrogate: Toluene-d8				*80-120 %*	*98.6*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*93.0*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*101*	*%*	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

GW-111317-GB6

17K0214-03 (Water)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT7

Sampled: 11/13/2017 12:06
Analyzed: 15-Nov-2017 15:32

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFK0414 Sample Size: 10 mL
Prepared: 15-Nov-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*98.6*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*93.0*	*%*	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

GW-111317-GB6

17K0214-03 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx
Instrument: FID3

Sampled: 11/13/2017 12:06
Analyzed: 22-Nov-2017 17:10

Sample Preparation: Preparation Method: EPA 3510C SepF
Preparation Batch: BFK0418
Prepared: 20-Nov-2017
Sample Size: 500 mL
Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)		1	0.100	**0.131**	mg/L	
HC ID: DRO						
Motor Oil Range Organics (C24-C38)		1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*111*	*%*	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

GW-111317-GB4DUP

17K0214-04 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT7

Sampled: 11/13/2017 10:10
Analyzed: 15-Nov-2017 16:00

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFK0414 Sample Size: 10 mL
Prepared: 15-Nov-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.03	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.04	0.20	**0.05**	ug/L	J
Ethylbenzene	100-41-4	1	0.04	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.05	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.03	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				*80-129 %*	*118*	*%*	
Surrogate: Toluene-d8				*80-120 %*	*99.2*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*91.6*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*100*	*%*	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

GW-111317-GB4DUP

17K0214-04 (Water)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT7

Sampled: 11/13/2017 10:10
Analyzed: 15-Nov-2017 16:00

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFK0414 Sample Size: 10 mL
Prepared: 15-Nov-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*99.2*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*91.6*	*%*	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

GW-111317-GB4DUP

17K0214-04 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx
Instrument: FID3

Sampled: 11/13/2017 10:10
Analyzed: 22-Nov-2017 17:26

Sample Preparation: Preparation Method: EPA 3510C SepF
Preparation Batch: BFK0418
Prepared: 20-Nov-2017
Sample Size: 500 mL
Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)		1	0.100	ND	mg/L	U
Motor Oil Range Organics (C24-C38)		1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*116*	*%*	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Soil-111317-(13-14)-GB4

17K0214-05 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 11/13/2017 09:35
Analyzed: 14-Nov-2017 18:52

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate)
Preparation Batch: BFK0399 | Sample Size: 4.76 g (wet) | Dry Weight:3.65 g
Prepared: 14-Nov-2017 | Final Volume: 5 mL | % Solids: 76.65

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.41	1.37	ND	ug/kg	U
Toluene	108-88-3	1	0.21	1.37	**0.89**	ug/kg	J
Ethylbenzene	100-41-4	1	0.28	1.37	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	0.54	2.74	ND	ug/kg	U
o-Xylene	95-47-6	1	0.31	1.37	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4				*80-149 %*	*98.8*	*%*	
Surrogate: Toluene-d8				*77-120 %*	*99.6*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*108*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*100*	*%*	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Soil-111317-(13-14)-GB4

17K0214-05 (Solid)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT3

Sampled: 11/13/2017 09:35
Analyzed: 16-Nov-2017 18:25

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction)
Preparation Batch: BFK0477 Sample Size: 3.58 g (wet) Dry Weight:2.74 g
Prepared: 16-Nov-2017 Final Volume: 5 mL % Solids: 76.65

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		50	10600	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*98.6*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*98.4*	*%*	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Soil-111317-(13-14)-GB4

17K0214-05 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx
Instrument: FID3

Sampled: 11/13/2017 09:35
Analyzed: 21-Nov-2017 12:35

Sample Preparation: Preparation Method: EPA 3546 (Microwave)
Preparation Batch: BFK0456
Prepared: 17-Nov-2017
Sample Size: 10 g (wet)
Final Volume: 1 mL
Dry Weight:7.67 g
% Solids: 76.65

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)		1	6.52	**6.65**	mg/kg	
HC ID: DRO						
Motor Oil Range Organics (C24-C38)		1	13.0	**16.1**	mg/kg	
HC ID: RRO						
Surrogate: o-Terphenyl			*50-150 %*	*65.8*	*%*	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Soil-111317-(13-14)-GB4

17K0214-05 (Solid)

Extractions

Method: PSEP 1986
Instrument: N/A

Sampled: 11/13/2017 09:35
Analyzed: 14-Nov-2017 14:17

Sample Preparation: Preparation Method: No Prep-Organics
Preparation Batch: BFK0391
Prepared: 14-Nov-2017
Sample Size: 1 g (wet)
Final Volume: 1 g

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids		1	0.01	**76.65**	%	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Soil-111317-(9-10)-GB5

17K0214-06 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 11/13/2017 10:42
Analyzed: 14-Nov-2017 19:14

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate)
Preparation Batch: BFK0399 | Sample Size: 5.9 g (wet) | Dry Weight:5.25 g
Prepared: 14-Nov-2017 | Final Volume: 5 mL | % Solids: 88.92

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.28	0.95	ND	ug/kg	U
Toluene	108-88-3	1	0.14	0.95	ND	ug/kg	U
Ethylbenzene	100-41-4	1	0.19	0.95	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	0.37	1.91	ND	ug/kg	U
o-Xylene	95-47-6	1	0.21	0.95	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4				*80-149 %*	*97.8*	*%*	
Surrogate: Toluene-d8				*77-120 %*	*99.4*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*105*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*99.9*	*%*	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Soil-111317-(9-10)-GB5

17K0214-06 (Solid)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT3

Sampled: 11/13/2017 10:42
Analyzed: 16-Nov-2017 18:51

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction)
Preparation Batch: BFK0477 Sample Size: 4.94 g (wet) Dry Weight:4.39 g
Prepared: 16-Nov-2017 Final Volume: 5 mL % Solids: 88.92

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		50	6310	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*97.0*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*97.6*	*%*	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Soil-111317-(9-10)-GB5

17K0214-06 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx
Instrument: FID3

Sampled: 11/13/2017 10:42
Analyzed: 21-Nov-2017 12:52

Sample Preparation: Preparation Method: EPA 3546 (Microwave)
Preparation Batch: BFK0456
Prepared: 17-Nov-2017
Sample Size: 10 g (wet)
Final Volume: 1 mL
Dry Weight:8.89 g
% Solids: 88.92

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)		1	5.62	ND	mg/kg	U
Motor Oil Range Organics (C24-C38)		1	11.2	ND	mg/kg	U
Surrogate: o-Terphenyl			*50-150 %*	*78.0*	*%*	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Soil-111317-(9-10)-GB5

17K0214-06 (Solid)

Extractions

Method: PSEP 1986
Instrument: N/A

Sampled: 11/13/2017 10:42
Analyzed: 14-Nov-2017 14:17

Sample Preparation: Preparation Method: No Prep-Organics
Preparation Batch: BFK0391
Prepared: 14-Nov-2017
Sample Size: 1 g (wet)
Final Volume: 1 g

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids		1	0.01	**88.92**	%	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Soil-111317-(12-13)-GB6

17K0214-07 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 11/13/2017 11:40
Analyzed: 14-Nov-2017 19:36

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate)
Preparation Batch: BFK0399 | Sample Size: 4.58 g (wet) | Dry Weight:3.09 g
Prepared: 14-Nov-2017 | Final Volume: 5 mL | % Solids: 67.37

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.48	1.62	**1.98**	ug/kg	
Toluene	108-88-3	1	0.24	1.62	ND	ug/kg	U
Ethylbenzene	100-41-4	1	0.33	1.62	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	0.64	3.24	ND	ug/kg	U
o-Xylene	95-47-6	1	0.36	1.62	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4				*80-149 %*	*91.8*	*%*	
Surrogate: Toluene-d8				*77-120 %*	*94.7*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*99.5*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*103*	*%*	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Soil-111317-(12-13)-GB6

17K0214-07 (Solid)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT3

Sampled: 11/13/2017 11:40
Analyzed: 16-Nov-2017 19:16

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction)
Preparation Batch: BFK0477 | Sample Size: 4.262 g (wet) | Dry Weight:2.87 g
Prepared: 16-Nov-2017 | Final Volume: 5 mL | % Solids: 67.37

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		50	11100	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*98.5*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*101*	*%*	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Soil-111317-(12-13)-GB6

17K0214-07 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx
Instrument: FID3

Sampled: 11/13/2017 11:40
Analyzed: 21-Nov-2017 13:08

Sample Preparation: Preparation Method: EPA 3546 (Microwave)
Preparation Batch: BFK0456
Prepared: 17-Nov-2017
Sample Size: 10 g (wet)
Final Volume: 1 mL
Dry Weight:6.74 g
% Solids: 67.37

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)		1	7.42	**14.1**	mg/kg	
HC ID: DRO						
Motor Oil Range Organics (C24-C38)		1	14.8	**18.1**	mg/kg	
HC ID: RRO						
Surrogate: o-Terphenyl			*50-150 %*	*74.2*	*%*	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Soil-111317-(12-13)-GB6

17K0214-07 (Solid)

Extractions

Method: PSEP 1986
Instrument: N/A

Sampled: 11/13/2017 11:40
Analyzed: 14-Nov-2017 14:17

Sample Preparation: Preparation Method: No Prep-Organics
Preparation Batch: BFK0391
Prepared: 14-Nov-2017
Sample Size: 1 g (wet)
Final Volume: 1 g

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids		1	0.01	**67.37**	%	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

TripBlank-111317

17K0214-08 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT7

Sampled: 11/13/2017 00:00
Analyzed: 15-Nov-2017 12:09

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFK0414 Sample Size: 10 mL
Prepared: 15-Nov-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.03	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.04	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.04	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.05	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.03	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				*80-129 %*	*109*	*%*	
Surrogate: Toluene-d8				*80-120 %*	*99.5*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*95.1*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*100*	*%*	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

TripBlank-111317

17K0214-08 (Water)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT7

Sampled: 11/13/2017 00:00
Analyzed: 15-Nov-2017 12:09

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFK0414 Sample Size: 10 mL
Prepared: 15-Nov-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*99.5*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*95.1*	*%*	

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Volatile Organic Compounds - Quality Control

Batch BFK0399 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFK0399-BLK1)				Prepared: 14-Nov-2017 Analyzed: 14-Nov-2017 15:48							
Benzene	ND	0.30	1.00	ug/kg							U
Toluene	ND	0.15	1.00	ug/kg							U
Ethylbenzene	ND	0.20	1.00	ug/kg							U
m,p-Xylene	ND	0.39	2.00	ug/kg							U
o-Xylene	ND	0.22	1.00	ug/kg							U
Surrogate: 1,2-Dichloroethane-d4	41.4			ug/kg	*50.0*		*82.8*	*80-149*			
Surrogate: Toluene-d8	52.0			ug/kg	*50.0*		*104*	*77-120*			
Surrogate: 4-Bromofluorobenzene	50.1			ug/kg	*50.0*		*100*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	49.1			ug/kg	*50.0*		*98.2*	*80-120*			
LCS (BFK0399-BS1)				Prepared: 14-Nov-2017 Analyzed: 14-Nov-2017 14:40							
Benzene	53.5			ug/kg	50.0		107	80-120			
Toluene	53.9			ug/kg	50.0		108	75-120			
Ethylbenzene	53.3			ug/kg	50.0		107	80-125			
m,p-Xylene	109			ug/kg	100		109	76-121			
o-Xylene	54.5			ug/kg	50.0		109	67-132			
Surrogate: 1,2-Dichloroethane-d4	44.6			ug/kg	*50.0*		*89.2*	*80-149*			
Surrogate: Toluene-d8	47.0			ug/kg	*50.0*		*93.9*	*77-120*			
Surrogate: 4-Bromofluorobenzene	50.2			ug/kg	*50.0*		*100*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	49.7			ug/kg	*50.0*		*99.4*	*80-120*			
LCS Dup (BFK0399-BSD1)				Prepared: 14-Nov-2017 Analyzed: 14-Nov-2017 15:26							
Benzene	54.0			ug/kg	50.0		108	80-120	0.98	30	
Toluene	53.9			ug/kg	50.0		108	75-120	0.03	30	
Ethylbenzene	55.7			ug/kg	50.0		111	80-125	4.41	30	
m,p-Xylene	114			ug/kg	100		114	76-121	4.39	30	
o-Xylene	56.3			ug/kg	50.0		113	67-132	3.32	30	
Surrogate: 1,2-Dichloroethane-d4	46.1			ug/kg	*50.0*		*92.3*	*80-149*			
Surrogate: Toluene-d8	49.5			ug/kg	*50.0*		*99.0*	*77-120*			
Surrogate: 4-Bromofluorobenzene	50.3			ug/kg	*50.0*		*101*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	48.3			ug/kg	*50.0*		*96.5*	*80-120*			

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Volatile Organic Compounds - Quality Control

Batch BFK0414 - EPA 5030 (Purge and Trap)

Instrument: NT7 Analyst: PC

QC Sample/Analyte	Result		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFK0414-BLK1)				Prepared: 15-Nov-2017 Analyzed: 15-Nov-2017 10:50							
Gasoline Range Organics (Tol-Nap)	ND		100	ug/L							U
Surrogate: Toluene-d8	4.89			ug/L	*5.00*		*97.7*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.81			ug/L	*5.00*		*96.2*	*80-120*			
Blank (BFK0414-BLK2)				Prepared: 15-Nov-2017 Analyzed: 15-Nov-2017 10:50							
Benzene	ND	0.03	0.20	ug/L							U
Toluene	ND	0.04	0.20	ug/L							U
Ethylbenzene	ND	0.04	0.20	ug/L							U
m,p-Xylene	0.08	0.05	0.40	ug/L							J
o-Xylene	0.05	0.03	0.20	ug/L							J
Surrogate: 1,2-Dichloroethane-d4	5.25			ug/L	*5.00*		*105*	*80-129*			
Surrogate: Toluene-d8	4.89			ug/L	*5.00*		*97.7*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.81			ug/L	*5.00*		*96.2*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.90			ug/L	*5.00*		*97.9*	*80-120*			
LCS (BFK0414-BS1)				Prepared: 15-Nov-2017 Analyzed: 15-Nov-2017 08:30							
Gasoline Range Organics (Tol-Nap)	1090		100	ug/L	1000		109	72-128			
Surrogate: Toluene-d8	5.04			ug/L	*5.00*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.09			ug/L	*5.00*		*102*	*80-120*			
LCS (BFK0414-BS2)				Prepared: 15-Nov-2017 Analyzed: 15-Nov-2017 08:56							
Benzene	9.94	0.03	0.20	ug/L	10.0		99.4	80-120			
Toluene	10.1	0.04	0.20	ug/L	10.0		101	80-120			
Ethylbenzene	9.95	0.04	0.20	ug/L	10.0		99.5	80-120			
m,p-Xylene	20.4	0.05	0.40	ug/L	20.0		102	80-121			
o-Xylene	10.2	0.03	0.20	ug/L	10.0		102	80-121			
Surrogate: 1,2-Dichloroethane-d4	4.99			ug/L	*5.00*		*99.9*	*80-129*			
Surrogate: Toluene-d8	4.94			ug/L	*5.00*		*98.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.03			ug/L	*5.00*		*101*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.02			ug/L	*5.00*		*100*	*80-120*			
LCS Dup (BFK0414-BSD1)				Prepared: 15-Nov-2017 Analyzed: 15-Nov-2017 09:23							
Gasoline Range Organics (Tol-Nap)	1060		100	ug/L	1000		106	72-128	2.40	30	
Surrogate: Toluene-d8	5.07			ug/L	*5.00*		*101*	*80-120*			

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Volatile Organic Compounds - Quality Control

Batch BFK0414 - EPA 5030 (Purge and Trap)

Instrument: NT7 Analyst: PC

QC Sample/Analyte	Result		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFK0414-BSD1)					Prepared: 15-Nov-2017 Analyzed: 15-Nov-2017 09:23						
Surrogate: 4-Bromofluorobenzene	4.97			ug/L	*5.00*		*99.3*	*80-120*			
LCS Dup (BFK0414-BSD2)					Prepared: 15-Nov-2017 Analyzed: 15-Nov-2017 09:49						
Benzene	10.2	0.03	0.20	ug/L	10.0		102	80-120	2.54	30	
Toluene	10.3	0.04	0.20	ug/L	10.0		103	80-120	1.81	30	
Ethylbenzene	10.1	0.04	0.20	ug/L	10.0		101	80-120	1.88	30	
m,p-Xylene	20.8	0.05	0.40	ug/L	20.0		104	80-121	1.81	30	
o-Xylene	10.4	0.03	0.20	ug/L	10.0		104	80-121	1.59	30	
Surrogate: 1,2-Dichloroethane-d4	5.14			ug/L	*5.00*		*103*	*80-129*			
Surrogate: Toluene-d8	4.96			ug/L	*5.00*		*99.3*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.93			ug/L	*5.00*		*98.6*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.03			ug/L	*5.00*		*101*	*80-120*			

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Volatile Organic Compounds - Quality Control

Batch BFK0477 - EPA 5035 (Methanol Extraction)

Instrument: NT3 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFK0477-BLK1)				Prepared: 16-Nov-2017 Analyzed: 16-Nov-2017 11:33						
Gasoline Range Organics (Tol-Nap)	ND	5000	ug/kg							U
Surrogate: Toluene-d8	4.94		ug/kg	*5.00*		*98.7*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.95		ug/kg	*5.00*		*99.0*	*78-123*			
LCS (BFK0477-BS1)				Prepared: 16-Nov-2017 Analyzed: 16-Nov-2017 10:17						
Gasoline Range Organics (Tol-Nap)	46200	5000	ug/kg	50000		92.5	70-121			
Surrogate: Toluene-d8	4.97		ug/kg	*5.00*		*99.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.82		ug/kg	*5.00*		*96.5*	*78-123*			
LCS Dup (BFK0477-BSD1)				Prepared: 16-Nov-2017 Analyzed: 16-Nov-2017 10:43						
Gasoline Range Organics (Tol-Nap)	50100	5000	ug/kg	50000		100	70-121	7.99	30	
Surrogate: Toluene-d8	5.03		ug/kg	*5.00*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.99		ug/kg	*5.00*		*99.7*	*78-123*			

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Petroleum Hydrocarbons - Quality Control

Batch BFK0418 - EPA 3510C SepF

Instrument: FID3 Analyst: ML

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFK0418-BLK1)				Prepared: 20-Nov-2017 Analyzed: 22-Nov-2017 16:05						
Diesel Range Organics (C12-C24)	ND	0.100	mg/L							U
Motor Oil Range Organics (C24-C38)	ND	0.200	mg/L							U
Surrogate: o-Terphenyl	0.516		mg/L	*0.450*		*115*	*50-150*			
LCS (BFK0418-BS1)				Prepared: 20-Nov-2017 Analyzed: 22-Nov-2017 16:21						
Diesel Range Organics (C12-C24)	2.64	0.100	mg/L	3.00		88.0	56-120			
Surrogate: o-Terphenyl	0.515		mg/L	*0.450*		*114*	*50-150*			

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Petroleum Hydrocarbons - Quality Control

Batch BFK0456 - EPA 3546 (Microwave)

Instrument: FID3 Analyst: ML

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFK0456-BLK1)				Prepared: 17-Nov-2017 Analyzed: 21-Nov-2017 11:46						
Diesel Range Organics (C12-C24)	ND	5.00	mg/kg							U
Motor Oil Range Organics (C24-C38)	ND	10.0	mg/kg							U
Surrogate: o-Terphenyl	17.3		mg/kg	*22.5*		*76.7*	*50-150*			
LCS (BFK0456-BS1)				Prepared: 17-Nov-2017 Analyzed: 21-Nov-2017 12:03						
Diesel Range Organics (C12-C24)	123	5.00	mg/kg	150		82.0	63-120			
Surrogate: o-Terphenyl	18.4		mg/kg	*22.5*		*81.9*	*50-150*			

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Certified Analyses included in this Report

Analyte	Certifications
EPA 8260C in Solid	
Chloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Vinyl Chloride	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromomethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Chloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Trichlorofluoromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Acrolein	WADOE,DoD-ELAP,NELAP,CALAP
1,1,2-Trichloro-1,2,2-Trifluoroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Acetone	WADOE,DoD-ELAP,NELAP,CALAP
1,1-Dichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromoethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Iodomethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Methylene Chloride	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Acrylonitrile	WADOE,DoD-ELAP,NELAP,CALAP
Carbon Disulfide	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
trans-1,2-Dichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Vinyl Acetate	WADOE,DoD-ELAP,NELAP,CALAP
1,1-Dichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
2-Butanone	WADOE,DoD-ELAP,NELAP,CALAP
2,2-Dichloropropane	WADOE,DoD-ELAP,NELAP,CALAP
cis-1,2-Dichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Chloroform	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromochloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1,1-Trichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1-Dichloropropene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Carbon tetrachloride	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2-Dichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Benzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Trichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2-Dichloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromodichloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Dibromomethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
2-Chloroethyl vinyl ether	WADOE,DoD-ELAP,NELAP
4-Methyl-2-Pentanone	WADOE,DoD-ELAP,NELAP,CALAP
cis-1,3-Dichloropropene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Toluene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

trans-1,3-Dichloropropene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
2-Hexanone	WADOE,DoD-ELAP,NELAP,CALAP
1,1,2-Trichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,3-Dichloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Tetrachloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Dibromochloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2-Dibromoethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Chlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Ethylbenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1,1,2-Tetrachloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
m,p-Xylene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
o-Xylene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Xylenes, total	WADOE
Styrene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromoform	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1,2,2-Tetrachloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2,3-Trichloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
trans-1,4-Dichloro 2-Butene	WADOE,DoD-ELAP,NELAP
n-Propylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
Bromobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Isopropyl Benzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
2-Chlorotoluene	WADOE,DoD-ELAP,NELAP,CALAP
4-Chlorotoluene	WADOE,DoD-ELAP,NELAP,CALAP
t-Butylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,3,5-Trimethylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,2,4-Trimethylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
s-Butylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
4-Isopropyl Toluene	WADOE,DoD-ELAP,NELAP,CALAP
1,3-Dichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,4-Dichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP
n-Butylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,2-Dichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,2-Dibromo-3-chloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2,4-Trichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Hexachloro-1,3-Butadiene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Naphthalene	WADOE,DoD-ELAP,NELAP,CALAP
1,2,3-Trichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Dichlorodifluoromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Methyl tert-butyl Ether	WADOE,DoD-ELAP,NELAP,CALAP
n-Hexane	WADOE

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

2-Pentanone	WADOE
Dibromofluoromethane	WADOE
4-Bromofluorobenzene	WADOE

EPA 8260C in Water

Chloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acrolein	DoD-ELAP,NELAP,CALAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromoethane	DoD-ELAP,NELAP,CALAP,WADOE
Iodomethane	DoD-ELAP,NELAP,CALAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,CALAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,CALAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,CALAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Butanone	DoD-ELAP,NELAP,CALAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,CALAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,CALAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,CALAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Styrene	DoD-ELAP,NELAP,CALAP,WADOE
Bromoform	DoD-ELAP,NELAP,CALAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,CALAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,CALAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,CALAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
n-Hexane	WADOE
2-Pentanone	WADOE

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

NWTPH-Dx in Solid

Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE

NWTPH-Dx in Water

Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE

NWTPHg in Water

Gasoline Range Organics (Tol-Nap)	WADOE,DoD-ELAP
Gasoline Range Organics (2MP-TMB)	WADOE,DoD-ELAP
Gasoline Range Organics (Tol-C12)	WADOE,DoD-ELAP
Gasoline Range Organics (C6-C10)	WADOE,ADEC,DoD-ELAP
Gasoline Range Organics (C5-C12)	WADOE,DoD-ELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	UST-033	05/11/2018
CALAP	California Department of Public Health CAELAP	2748	02/28/2018
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/07/2019
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006	05/11/2018
WADOE	WA Dept of Ecology	C558	06/30/2018
WA-DW	Ecology - Drinking Water	C558	06/30/2018

Geosyntec Consultants	Project: Centurylink North Bend	
520 Pike Street, Suite 1375	Project Number: PNR0614	**Reported:**
Seattle WA, 98101	Project Manager: Adrianna Jarosz	29-Nov-2017 11:21

Notes and Definitions

U	This analyte is not detected above the applicable reporting or detection limit.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
J	Estimated concentration value detected below the reporting limit.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
D1	Surrogate was not detected due to sample extract dilution
D	The reported value is from a dilution
*	Flagged value is not within established control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

APPENDIX D

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE46790

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission

ORIGINAL INSTALLATION Notice of Intent Number:

Consulting Firm

Unique Ecology Well IDTag No. No Tag

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer Trainee

Name (Print Last, First Name) Newman, Casey

Driller/Engineer /Trainee Signature Casey Newman

Driller or Trainee License No. 3152

If trainee, licensed driller's Signature and License Number:

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Rash & Associates 47

Site Address 12727 412th Ave SE

City North Bend County King

Location SE1/4-1/4 SW1/4 Sec 09 Twn 23 R 08

EWM ☒ or WWM ☐

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Min ____ Sec ____

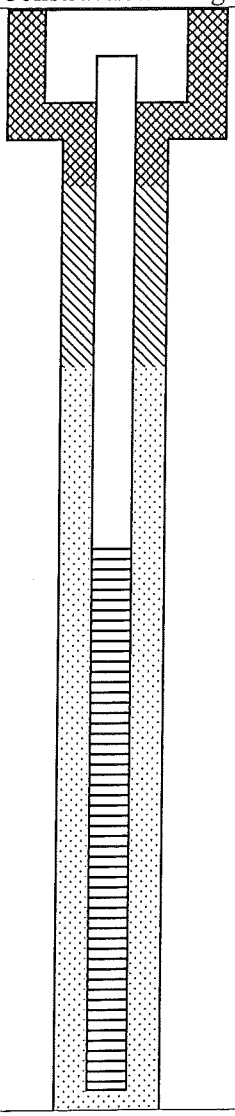
Long Deg ____ Min ____ Sec ____

Tax Parcel No. 0923089060

Cased or Uncased Diameter 4" Static Level ____

Work/Decommission Start Date 1/3/18

Work/Decommission Completed Date 1/3/18

Construction Design	Well Data	Formation Description
	MONUMENT TYPE: flush REMOVED MONUMENT: YES/NO PVC BLANK: SCREEN: WELL DEPTH: 30'	FORMATION NOT OBSERVED – WELL WAS DECOMMISSIONED REMOVED MONUMENT: YES / NO ☐ WELL WAS CHIPPED/GROUTED IN PLACE ☒ ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

SCALE: 1"= ____ PAGE 1 OF 3

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE46790

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission

ORIGINAL INSTALLATION Notice of Intent Number:

Consulting Firm

Unique Ecology Well IDTag No. No Tag

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer Trainee

Name (Print Last, First Name) Newman, Casey

Driller/Engineer /Trainee Signature Casey Newman

Driller or Trainee License No. 3152

If trainee, licensed driller's Signature and License Number:

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Rash & Associates 47

Site Address 12727 412th Ave SE

City North Bend County King

Location SE1/4-1/4 SW1/4 Sec 09 Twn 23 R 08

EWM ☒ or WWM ☐

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Min ____ Sec ____

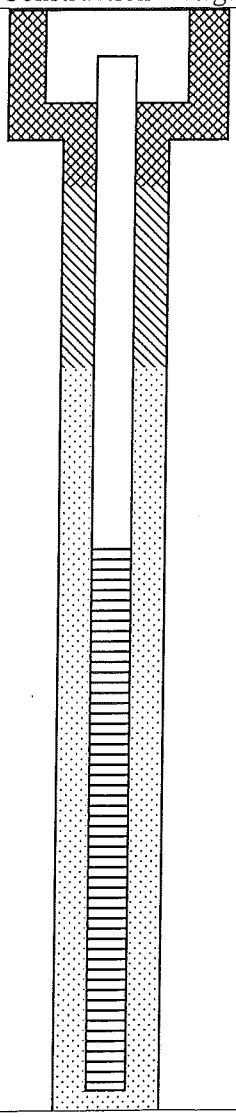
Long Deg ____ Min ____ Sec ____

Tax Parcel No. 0923089060

Cased or Uncased Diameter 4" Static Level ____

Work/Decommission Start Date 1/3/18

Work/Decommission Completed Date 1/3/18

Construction Design	Well Data	Formation Description
	MONUMENT TYPE: flush REMOVED MONUMENT: YES/NO PVC BLANK: SCREEN: WELL DEPTH: 30'	FORMATION NOT OBSERVED – WELL WAS DECOMMISSIONED REMOVED MONUMENT: YES / NO ☐ WELL WAS CHIPPED/GROUTED IN PLACE ☒ ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

SCALE: 1"= ____ PAGE 2 OF 3

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE46790

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission

ORIGINAL INSTALLATION Notice of Intent Number:

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Rash & Associates 47

Site Address 12727 412th Ave SE

City North Bend County King

Consulting Firm

Unique Ecology Well IDTag No. No Tag

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer Trainee

Name (Print Last, First Name) Newman, Casey

Driller/Engineer /Trainee Signature Casey Newman

Driller or Trainee License No. 3152

If trainee, licensed driller's Signature and License Number:

Location SE1/4-1/4 SW1/4 Sec 09 Twn 23 R 08

EWM ☒ or WWM ☐

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Min ____ Sec ____

Long Deg ____ Min ____ Sec ____

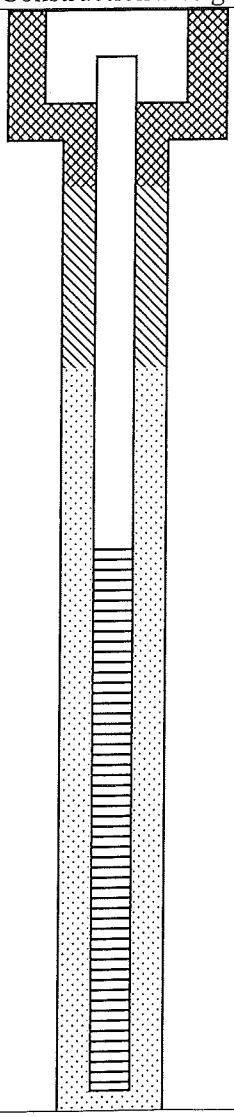
Tax Parcel No. 0923089060

Cased or Uncased Diameter 4" Static Level ____

Work/Decommission Start Date 1/3/18

Work/Decommission Completed Date 1/3/18

Construction Design



Well Data

MONUMENT TYPE: flush

REMOVED MONUMENT: (YES) NO

PVC BLANK: ____

SCREEN: ____

WELL DEPTH: 30'

Formation Description

FORMATION NOT OBSERVED – WELL WAS DECOMMISSIONED

REMOVED MONUMENT: (YES) / NO

☐ WELL WAS CHIPPED/GROUTED IN PLACE

☒ ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

SCALE: 1"= ____ PAGE 3 OF 3

APPENDIX E

Voluntary Cleanup Program

Washington State Department of Ecology
Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm.

Step 1: IDENTIFY HAZARDOUS WASTE SITE	
Please identify below the hazardous waste site for which you are documenting an evaluation.	
Facility/Site Name: Cascade Autovon Co	
Facility/Site Address: 12727 412th Ave SE	
Facility/Site No: 36296841	VCP Project No.: NW3098

Step 2: IDENTIFY EVALUATOR			
Please identify below the person who conducted the evaluation and their contact information.			
Name: Adrianna Jarosz		Title: Senior Staff Engineer	
Organization: Geosyntec Consultants			
Mailing address: 520 Pike Street, Suite 1375			
City: Seattle		State: WA	Zip code: 98101
Phone: 206-496-1450	Fax: N/A	E-mail: ajarosz@geosyntec.com	

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

A. Exclusion from further evaluation.

1. Does the Site qualify for an exclusion from further evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 2**.*

☒ No or Unknown *If you answered **"NO" or "UKNOWN,"** then skip to **Step 3B** of this form.*

2. What is the basis for the exclusion? *Check all that apply. Then skip to **Step 4** of this form.*

Point of Compliance: WAC 173-340-7491(1)(a)

☐ All soil contamination is, or will be,* at least 15 feet below the surface.

☐ All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

☐ All contaminated soil, is or will be,* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

☐ There is less than 0.25 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.

☐ For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

☐ Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

[±] "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

[#] "Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

B. Simplified evaluation.

1. Does the Site qualify for a simplified evaluation?

☒ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No or Unknown *If you answered **"NO"** or **"UNKNOWN,"** then skip to **Step 3C** of this form.*

2. Did you conduct a simplified evaluation?

☒ Yes *If you answered **"YES,"** then answer **Question 3** below.*

☐ No *If you answered **"NO,"** then skip to **Step 3C** of this form.*

3. Was further evaluation necessary?

☐ Yes *If you answered **"YES,"** then answer **Question 4** below.*

☒ No *If you answered **"NO,"** then answer **Question 5** below.*

4. If further evaluation was necessary, what did you do?

☐ Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*

☐ Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

5. If no further evaluation was necessary, what was the reason? *Check all that apply. Then skip to **Step 4** of this form.*

Exposure Analysis: WAC 173-340-7492(2)(a)

☒ Area of soil contamination at the Site is not more than 350 square feet.

☐ Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

Pathway Analysis: WAC 173-340-7492(2)(b)

☐ No potential exposure pathways from soil contamination to ecological receptors.

Contaminant Analysis: WAC 173-340-7492(2)(c)

☒ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

C. Site-specific evaluation. A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. *See* WAC 173-340-7493(1)(c).

1. Was there a problem? *See* WAC 173-340-7493(2).

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No *If you answered **"NO,"** then identify the reason here and then skip to **Question 5** below:*

- ☐ No issues were identified during the problem formulation step.
- ☐ While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

2. What did you do to resolve the problem? *See* WAC 173-340-7493(3).

☐ Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*

☐ Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

3. If you conducted further site-specific evaluations, what methods did you use?
Check all that apply. See WAC 173-340-7493(3).

- ☐ Literature surveys.
- ☐ Soil bioassays.
- ☐ Wildlife exposure model.
- ☐ Biomarkers.
- ☐ Site-specific field studies.
- ☐ Weight of evidence.
- ☐ Other methods approved by Ecology. If so, please specify:

4. What was the result of those evaluations?

- ☐ Confirmed there was no problem.
- ☐ Confirmed there was a problem and established site-specific cleanup levels.

5. Have you already obtained Ecology's approval of both your problem formulation and problem resolution steps?

☐ Yes If so, please identify the Ecology staff who approved those steps:

☐ No