# REVISED REMEDIAL INVESTIGATION/FEASIBILITY STUDY AND REMEDIAL ACTION REPORT

BMC ISSAQUAH FACILITY 5210 EAST LAKE SAMMAMISH PARKWAY SOUTHEAST ISSAQUAH, KING COUNTY, WASHINGTON Facility Site ID #8428648 Cleanup Site ID #7791

> Project No. 1099.25 February 26, 2018

Prepared for: BMC West Corporation







February 26, 2018

BMC West Corporation 720 Park Boulevard, #200 Boise, Idaho 83712

Attn: Mr. Paul S. Street

RE: Revised RI/FS and Remedial Action Report BMC Issaquah Facility 5210 East Lake Sammamish Parkway Southeast Issaquah, King County, Washington ZGA Project No. 1099.25 Facility Site ID #8428648 Cleanup Site ID #7791

Dear Mr. Street:

Zipper Geo Associates, LLC (ZGA) appreciates the opportunity to submit this combined Remedial Investigation/Feasibility Study and Remedial Action Report related to a historical release of gasoline at the BMC facility in Issaquah, Washington. Based on the results of post-remedial action soil sampling and four quarters of groundwater sampling, we are requesting a No Further Action determination on behalf of the owner. This report has been revised to acknowledge comments made by the Washington State Department of Ecology in their letter dated January 30, 2018.

If you have questions, or if we may be of further service in any way, please contact us. Thank you for working with us on this project, we look forward to the opportunity of working with you again in the future.

Sincerely, Zipper Geo Associates, LLC

Jon Einarsen, LG Principal



Jeff Tinklepaugh, GIT Staff Geologist

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## 1.0 INTRODUCTION

This Remedial Investigation/Feasibility (RI/FS) and Remedial Action report describes investigations and remedial actions completed and documented by Zipper Geo Associates (ZGA) at the BMC millworks and lumber yard located at 5210 East Lake Sammamish Parkway SE in Issaquah, King County, Washington (the Property). This work was completed in response to a release from underground storage tanks that were removed in 1989.

The purpose of the Remedial Investigation is to collect, develop and evaluate sufficient soil and groundwater data to determine what cleanup actions at the Property are necessary pursuant to the Model Toxics Control Act (MTCA) WAC 173-340-350(1) - (7).

The purpose of the Feasibility Study (FS) is to develop and evaluate cleanup action alternatives to enable a cleanup action to be selected for the site. In accordance with WAC 173-340-350(8), this FS includes "cleanup action alternatives that are protective of human health and the environment by eliminating, reducing, or otherwise controlling risks posed through each exposure pathway and migration route".

The purpose of the Remedial Action is to remove the gasoline contaminated soil that was acting as a source area for groundwater contamination.

## 2.0 REMEDIAL INVESTIGATION

## 2.1 SITE IDENTIFICATION AND LOCATION

The Property is located at 5210 East Lake Sammamish Parkway Southeast, Issaquah, King County, Washington and comprises 15.15 acres. The Property is located in the southwestern quarter of the northeastern quarter of Township 24 N, Range 06 E, Section 21. The Property is identified as King County Tax Parcel #009500-0030 and is currently occupied by the BMC Issaquah Facility. A topographic map and 2016 air photo indicating the location of the Property is presented in Figure 1 and Figure 2, respectively.

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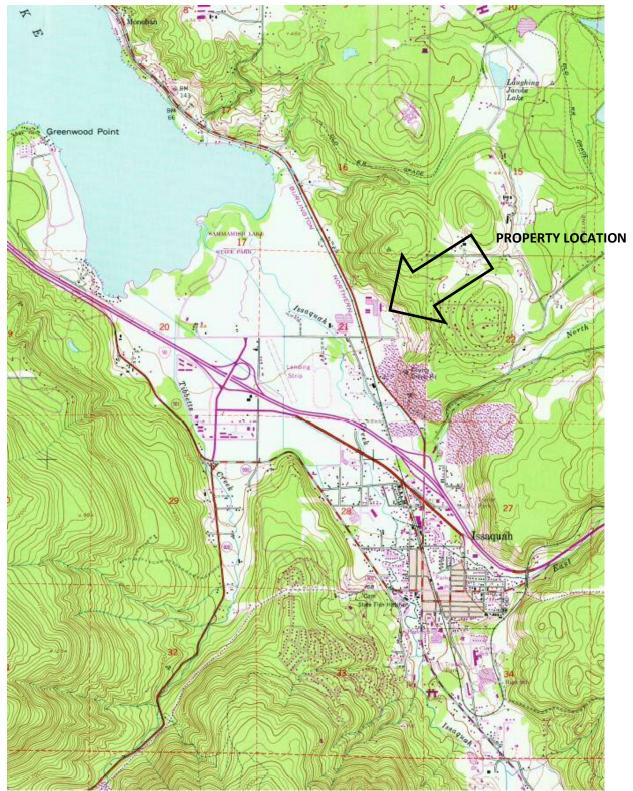


Figure 1. Approximate location of the Property depicted on the Issaquah, Washington Quadrangle (U.S. Geological Survey, 1950, photo-revised 1968 and 1973).





Figure 2 – 2016 Aerial Photograph (Google Earth). The property boundary is indicated by the black dashed line. The Site as defined by WAC 173-340-200 can be seen as the trapezoidal-shaped patch of fresh asphalt.



WAC 173-340-200 defines the Site as "any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, vessel, or aircraft; or any site or area where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, or placed, or otherwise come to be located". In accordance with this definition, the Site is located within the west central part of King County tax parcel #009500-0030. The approximate location of the Site as defined by WAC 173-340-200 is indicated on Figure 2.

The Property lies at an elevation of approximately 60 feet above Mean Sea Level. The Property and nearby areas lying south and west are relatively level and lie only a few feet higher than Lake Sammamish, which is located about 4,000 feet to the northwest. The property is bounded by uplands to the north and east. The immediate vicinity of the Property consists of mixed developed and undeveloped land. A storm water detention pond bounds the north side of the Property, beyond which lies a church and undeveloped forested land. The Property is bounded to the east by a residential housing development and undeveloped forested land, beyond which lies moderate density residential housing. The Property is bounded to the south by a McDonald's restaurant and a commercial building formerly occupied by an Albertson's grocery store and currently occupied by a Value Village, beyond which lie commercial businesses adjacent to East Lake Sammamish Parkway Southeast. The Property is bounded to the west by East Lake Sammamish Parkway Southeast, beyond which lie several multi-story office buildings.

## 2.2 Property Development and History

The Property was utilized for agricultural purposes from at least 1936 until the existing warehouse buildings were constructed in 1966. Since that time the Property has been used for light manufacturing of lumber products, lumber warehousing, and wholesale and retail lumber sales. The Property contains one large warehouse used for retail showroom space, offices, training, lumber storage, manufacturing of lumber products, and storage of finished products. The Property also contains two open-sided lumber sheds, a smaller building utilized for lumber storage and for pre-finishing manufactured lumber products, and a smaller building formerly utilized as a maintenance shop and currently utilized for storage. Several smaller buildings and open-sided lumber sheds have been constructed since 1966. Some of these have subsequently been demolished.

### 2.2.1 Current and Future Site Use and Facilities

It is our understanding that the future use of the Property will be consistent with its current use.

## 2.2.2 Zoning and Comprehensive Plan Designation

The City of Issaquah Zoning Map (dated July 14, 2015) and Comprehensive Plan Land Designation Map (dated June 30, 2015) indicate that the Property is designated as MU (Mixed Use).

### 2.2.3 Transportation and Roads

The Property is bounded to the west by East Lake Sammamish Parkway Southeast. No other roads are proximal.

### 2.2.4 Utilities

The property is served by the City of Issaquah for potable water, sanitary sewer, and storm sewer. Puget Sound Energy serves the area for natural gas and electricity. According to an as-built plan provided by the owner, a 24-inch storm water pipe is located along the west side of the Site. This storm water pipe was identified along the west side of the Site during remedial action activities. No other utilities were identified



in the Site.

## 2.2.5 Potential Sources of Contamination

The source of contamination was leaking USTs, leaking distribution piping or pipe fittings, improper fuel handling by employees or the fuel distributor (i.e., over-fills and other spills), or some combination of these when the UST system was active prior to its decommissioning in 1989.

### 2.3 Site Discovery

ZGA reviewed the following report and letters prepared by others for the Property describing the discovery of contamination and subsequent actions:

- 1. "Environmental Investigation Results" dated April 6, 1998 prepared by TRC Corporation, hereafter referred to as the TRC report.
- 2. Letter from the Washington State Department of Ecology to BMC West Building Materials dated April 22, 2003.
- 3. Letter from Building Materials Holding Corporation to the Washington State Department of Ecology dated May 13, 2003.

A copy of each of these documents is included in Appendix A.

The TRC report describes two subsurface investigations that were completed near the main entrance to the Property in 1996 and 1997. The purpose of the investigations was to evaluate the nature and extent of petroleum contamination on the west side of the facility suspected to be related to the former presence of three gasoline underground storage tanks (USTs) formerly located in this area. The USTs were reportedly removed in 1989 by Chempro Environmental Services. A single soil sample collected at that time contained 31 mg/kg total petroleum hydrocarbons and 22 mg/kg toluene. Benzene, ethylbenzene, and xylenes were not detected. The analytical methods are not described. The location of this sample is described as "collected from excavated soil while removing the tanks".

TRCs initial investigation consisted of advancing ten hollow-stem auger borings in the vicinity of the former USTs. Groundwater samples were collected from the hollow-stem auger (monitoring wells were not constructed). Four composite soil samples and three groundwater samples were submitted for laboratory analysis. Each sample was analyzed for BTEX (benzene, toluene, ethyl benzene, and total xylenes) using EPA Method 8020 and for total petroleum hydrocarbons using EPA Method 418.1. The second investigation consisted of advancing six direct-push explorations in the vicinity of the former USTs. Groundwater samples were collected using well points. Four discrete soil samples and six groundwater samples were submitted for laboratory analysis. Each sample was analyzed for BTEX and volatile petroleum hydrocarbons (gasoline) using EPA Method 8021B and 8015B, respectively. The analytical results for both investigations are summarized below.

Sample #	Media	Units	TPH or VPH	В	т	E	x
1989 Chempro			31	ND	22.0	ND	ND
Sample							
BH-1			99	0.010	0.004	0.0069	0.0065
BH-2			$ND^1$	ND	ND	ND	ND
BH-5	Soil	mg/kg	ND	0.076	0.022	0.100	0.790
BH-6			44	0.028	0.0022	0.008	0.031
BH-A, 2-4'			2,200	11	5.2	24	280
BH-B, 2-4'			2,100	15	8.8	15	110
BH-E, 2-4'			160	1.0	0.29	1.4	4.1
BH-F, 2-4'			0.650	0.0047	0.0019	0.0035	0.0064
Current Clean	Current Cleanup Standard		<b>30/100</b> <sup>2</sup>	0.03	7	6	9
BH-1			2,100	3.0	2.3	2.9	3.8
BH-3			280	ND	ND	ND	6.7
BH-5	er		3,000	7.3	1.5	10	110
BH-A	vat		5,100	62	96	130	1,300
BH-B	vbn	ug/L	13,000	170	110	350	1,600
BH-C	Groundwater		ND	ND	ND	ND	ND
BH-D	Ū		ND	ND	1.0	ND	ND
BH-E			870	25	4.6	26	8.2
BH-F			1,500	73	6.0	75	59
Current Cleanup Standard			<b>800/1000</b> <sup>2</sup>	5	1,000	700	1,000

## Table 1. Summarized Analytical Results from TRC 1998 Report

TPH, total petroleum hydrocarbons; VPH, volatile petroleum hydrocarbons; B, benzene; T, toluene; E, ethyl benzene; X, xylenes. <sup>1</sup> Not detected; <sup>2</sup> the lower cleanup level applies if benzene is present. The shaded values exceed current cleanup levels defined in the Model Toxics Control Act (WAC 173-340).

The analytical results for 11 of 17 of the soil and groundwater samples described in the TRC report exceed current cleanup levels defined in the Model Toxics Control Act (WAC 173-340). A copy of the TRC report was provided to the Washington State Department of Ecology (Ecology) and the Property was placed on the Leaking Underground Storage Tank list.

The 2003 letter from Ecology to BMC was a letter requesting more information based on Ecology's review of its files relating to leaking underground storage tanks. The 2003 BMC letter to Ecology stated that "TRC's recommendation that no further cleanup action was needed at the site and BMC WEST complied with this recommendation".

## 2.4 Supplemental Subsurface Investigation

BMC engaged ZGA in 2013 to complete additional subsurface investigation to further assess the nature and extent of soil and groundwater impacts near the former UST cavity. Activities associated with this task included completion of the following tasks:

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- 1. Performance of a geophysical investigation in an effort to locate the former UST cavity on the west part of the Property.
- 2. Subsurface exploration using direct-push methods in the vicinity of the former UST cavity.
- 3. Installation of four groundwater monitoring wells near the former UST cavity.
- 4. Soil and groundwater sampling.
- 5. Analytical laboratory testing.

Each of these investigation activities is summarized below.

#### 2.4.1 Geophysical Investigation

Underground Detection Services, Inc. (UDS) performed the geophysical investigation under subcontract to ZGA on April 17, 2013. A copy of their report is included in Appendix B. UDS utilized a ground penetrating radar device to locate the former UST cavity. The search was focused in the area of the former UST cavity as identified by TRC Corporation in their 1998 report. UDS identified an approximately 625 square-foot area that appears to have, in their opinion, been excavated and backfilled with soil that contrasts with surrounding soil. No other large anomalies were identified.

#### 2.4.2 Subsurface Exploration

Direct-push field activities were conducted on April 29 and April 30, 2013 by Mr. James Georgis, a licensed geologist with ZGA.

Figures indicating the approximate locations of the soil explorations and groundwater monitoring wells in relation to the pertinent structures and general site boundaries is attached as Figure 3 and Figure 4 (Appendix C and Appendix N).

Nine direct push soil borings (GP-1 to GP-9) were advanced in the vicinity of the former UST cavity. A direct-push sampling device was supplied and operated by Cascade Drilling. The device utilized a direct-push sampler equipped with disposable PVC sample sleeves. Throughout the drilling operation, soil samples were obtained continuously (to the extent practical) from four-foot long pushes driven into the ground using 550 foot-pound, percussion hammer. The steel sampling tube was extracted from the hole and the liners were removed and split open. All of the direct-push explorations were advanced to depths of approximately 15 feet below the ground surface (bgs). An effort was made to sample soil continuously from the ground surface to the total depth of each exploration, but sample recovery varied in each exploration.

A field log of each exploration was maintained, including the thickness and depth of each soil unit encountered and the depth to the uppermost water table. Soil samples were observed to document soil lithology, color, and moisture content. Soils were logged in general accordance with American Society for Testing and Materials (ASTM) Practice Designation D-2488, *Standard Practice for Description of Soils (Visual-Manual Procedure)*. Exploration logs are included in Appendix D of this report.

### 2.4.3 Groundwater Monitoring Well Installation

Dedicated groundwater monitoring wells were completed in GP-1, GP-6, GP-7, and GP-8. These wells are designated as MW-1 through MW-4 (Figure 4, Appendix C and Appendix N). All four wells are screened from 5 feet to 15 feet bgs. The monitoring wells consist of 2-inch inside diameter, schedule 40, flush-threaded PVC. A ten-foot section of 0.010-inch slotted screen was mated to an appropriate length section of blank riser, which extended to approximately 0.25 feet below the ground surface. The annular space between the well casing and the borehole wall was filled with #10-20 silica sand extending approximately



two feet above the screened interval. A hydrated bentonite seal was placed above this, and the wells were completed at the ground surface with lockable, flush-mount monuments that were cemented in place. The monitoring wells were constructed in accordance with the Washington State *Minimum Standards for Construction and Maintenance of Wells* (WAC 173-160). Monitoring well construction details are provided along with the exploration logs in Appendix D.

The monitoring wells were subsequently developed by purging with a bailer on May 8, 2013. Approximately 22 gallons of development water was generated during well development activities. Soil cuttings, development groundwater, and equipment cleaning water generated during the field activities were placed in Department of Transportation (DOT) approved, 55-gallon steel drums, closed and appropriately labeled with project-specific information and initial accumulation date. This investigation-derived waste was properly disposed along the impacted soil and groundwater during remedial action activities (see Section 4 of this report).

### 2.4.4 Soil and Groundwater Sampling

Two soil samples were retained for analysis from each exploration, except that three were retained from GP-1. Soil samples retained for chemical analysis from the direct-push explorations were collected at depths ranging from approximately 4 feet to 12 feet bgs. The shallow direct-push samples were collected in an effort to identify the lateral extent of contamination; the deeper samples were collected in an effort to quantify the vertical distribution of contamination.

All soil samples were extracted by hand from the direct-push sample liner using disposable gloves and placed directly into laboratory supplied glassware and preserved in accordance with EPA Method 5035B.

One groundwater sample was collected and analyzed from MW-1 to MW-4 on May 24, 2013. Prior to sample collection, each monitoring well was purged until consistent values (i.e., less than 10% variance between consecutive readings) were obtained for pH, turbidity, temperature and conductivity using a Horiba U-22 multi-parameter water quality meter equipped with a flow through cell.

Groundwater was collected with a peristaltic pump utilizing low flow techniques. The intake of the pump was set approximately one foot below the top of the screened interval in each well. Dedicated polyethylene tubing was used for each monitoring well. Discharge from the pump was directed into sample containers supplied by the laboratory, and preserved as appropriate for specific analyses.

Each sample container was labeled with the site name, date, time, exploration number, sample number, and sampling personnel. Sample containers were placed in a chilled cooler immediately after sampling, and subsequently transported to the analytical laboratory by ZGA under chain-of-custody procedures.

### 2.4.5 Analytical Laboratory Testing

Nineteen soil samples and four groundwater samples were submitted for chemical analysis. All samples were analyzed by ALS Laboratories of Everett, a Washington State accredited laboratory, as described below:

- Total petroleum hydrocarbons (TPH) in the gasoline, diesel and oil range using Northwest Methods NWTPH-GX and NWTPH-DX.
- BTEX (benzene, ethylbenzene, toluene, and xylenes) and MTBE (methyl tertiary-butyl ether) using EPA Method 8021.



• Lead using EPA Method 6020 (soil) and 200.8 (groundwater).

The executed chain-of-custody forms and laboratory analytical certificates are provided in Appendix E. All analyses were completed using standard turnaround times. Data packages were checked for completeness immediately upon receipt from the laboratory to ensure that data and QA/QC information requested were present. Data quality was assessed by considering holding times, surrogate recovery, method blanks, matrix spike and matrix spike duplicate recovery, and detection limits.

#### 2.4.6 Subsurface Conditions

Detailed lithologic descriptions are presented on the soil boring logs included in Appendix D. In general, subsurface conditions were consistent in each direct-push exploration and generally consisted of about two to four inches of asphalt pavement underlain by about two to four feet of gravely sand and sandy gravel fill soils, in turn underlain by native silty sand to gravelly sand interbedded with silt and clay.

Groundwater was encountered in each of the direct-push borings at depths ranging from about four to six feet at the time of drilling. The relative location and elevation of the PVC casing for each of the four groundwater monitoring wells were surveyed by PLS, Inc. of Issaquah using an arbitrary datum. Static groundwater levels were subsequently measured in these monitoring wells on May 24, 2013 as summarized in Table 2.

Monitoring Well	Relative Casing Elevation (Feet)	Depth to Groundwater (Feet)	Relative Groundwater Elevation (Feet)
MW-1	99.99	2.19	97.80
MW-2	99.45	1.84	97.61
MW-3	99.73	2.59	97.14
MW-4	99.96	2.12	97.84

### Table 2. Groundwater Elevations (May 24, 2013)

A groundwater contour map is presented in Figure 4 (Appendix C). Based on these results, groundwater in the immediate vicinity of the former UST cavity was estimated to flow in a west-southwesterly direction with a gradient of approximately 0.0235 ft./ft. at that time. It should be noted that the depth to groundwater and groundwater flow directions will likely vary depending upon seasonal variations in rainfall and other factors.

### 2.4.7 Analytical Laboratory Results

Soil and groundwater quality summary results are presented in Table 3 and Table 4, respectively. Analytical results that exceed applicable cleanup levels are highlighted. Complete laboratory reports and chains-of-custody are included in Appendix E. Additional discussion and interpretation of analytical results relative to applicable cleanup levels is included in Section 2.8. Summarized analytical results are also presented in Figure 3 (soil) and Figure 4 (groundwater, Appendix C).

### Soil Quality

Nineteen soil samples were collected from GP-1 to GP-9 in the assumed vicinity of the former UST cavity. Diesel-range organics (DRO), oil-range organics (ORO) and lead were not detected above laboratory reporting limits, or were detected in concentrations below applicable cleanup levels in all 19 samples.



Gasoline-range organics (GRO) and BTEX were not detected above laboratory reporting limits, or were detected in concentrations below applicable cleanup levels in GP-2, GP-3, GP-6, GP-7 and GP-9.

GRO was detected in concentrations above cleanup levels at depths of about five feet in GP-1, GP-4, GP-5, and GP-8. Certain BTEX components also exceeded cleanup levels in GP-1 and GP-5 at a depth of about five feet. GRO and BTEX were not detected above laboratory reporting limits, or were detected in concentrations below applicable cleanup levels in deeper samples collected in these four borings, indicating that the soil contamination is limited to shallow soil, and is likely influenced by historical groundwater elevation fluctuations. Based on this information (and additional information attained during the remedial excavation, see Section 4), the extent of the Site as defined by soil contaminated above cleanup levels is indicated on Figure 3 (Appendix C and Appendix N).

Sample	Depth (ft.)	Total Petroleum Hydrocarbons (mg/Kg)			Vo	Metals (mg/Kg)			
		GRO	DRO	ORO	В	т	E	Х	Pb
GP1-1	5	530	200	<50	0.20	<0.25	4.4	6.3	7.9
GP1-2	7	39	<25	<50	<0.03	<0.05	0.40	0.83	3.9
GP1-3	12	<3.0	<25	<50	<0.03	<0.05	<0.05	<0.20	2.6
GP2-1	5	36	<25	<50	<0.03	<0.50	0.11	<0.20	5.4
GP2-2	8	<3.0	<25	<50	<0.03	<0.05	<0.05	<0.20	2.8
GP3-1	5	<3.0	29	50	<0.03	<0.05	<0.05	<0.20	2.2
GP3-2	10	<3.0	<25	<50	<0.03	<0.05	<0.05	<0.20	2.7
GP4-1	5	1,100	70	<50	<0.30	<0.50	<0.50	<2.0	6.6
GP4-2	9	4.5	<25	<50	<0.03	<0.05	<0.05	<0.20	4.3
GP5-1	5	2,800	320	<50	2.0	<2.0	41	240	8.7
GP5-2	10	<3.0	<25	<50	<0.03	<0.05	<0.05	<0.20	3.7
GP6-1	5	<3.0	43	250	<0.03	<0.05	<0.05	<0.20	2.0
GP6-2	10	<3.0	<25	<50	<0.03	<0.05	<0.05	<0.20	2.3
GP7-1	4	<3.0	<25	<50	<0.03	<0.05	<0.05	<0.20	3.4
GP7-2	9	<3.0	<25	<50	<0.03	<0.05	<0.05	<0.20	4.0
GP8-1	5	1,900	85	<50	<0.60	<1.0	<1.0	<4.0	6.7
GP8-2	8	3.8	<25	<50	0.030	<0.05	<0.05	<0.20	2.4
GP9-1	4	<3.0	<25	<50	<0.03	<0.05	<0.05	<0.20	3.1
GP9-2	10	<3.0	<25	<50	<0.03	<0.05	<0.05	<0.20	2.5
Method A Level	Cleanup	100/30*	2,000	2,000	0.03	7	6	9	250

### Table 3. Summarized Analytical Results (Soil)

mg/Kg: milligrams per kilogram (parts-per-million); <: Not detected above indicated laboratory minimum reporting limit. Shaded values exceed MTCA Method A cleanup levels (see Section 4). B, benzene; T, toluene; E, ethylbenzene; X, total xylenes. Please refer to Appendix D for the complete set of analytes and analytical results for VOC. \*The higher value applies for gasoline mixtures without benzene and the total of toluene, ethylbenzene, and xylenes are less than 1% of the gasoline mixture.



## Groundwater Quality

Groundwater samples were collected from four wells installed near the assumed location of the former UST cavity (MW-1 to MW-4, see Figure 4). TPH, BTEX, and lead were not detected above laboratory reporting limits in MW-2 and MW-3. The reported concentration of GRO and MW-1 equals the cleanup level, and the reported concentration in MW-4 exceeds the cleanup level. BTEX components were also detected in MW-1 and MW-4, but in concentrations below cleanup levels.

Monitoring	Total Petroleum Hydrocarbons (ug/L)				Volatile O	Metals (ug/L)				
Well	GRO	DRO	ORO	В	т	E	x	МТВЕ	Pb (Total)	Pb (Dissolved)
MW-1	1,000	<130	<250	<1.0	<1.0	24	38	<3.0	<1.0	<1.0
MW-2	<50	<130	<250	<1.0	<1.0	<1.0	<3.0	<3.0	<1.0	<1.0
MW-3	<50	<130	<250	<1.0	<1.0	<1.0	<3.0	<3.0	<1.0	<1.0
MW-4	2,400	<130	<250	<1.0	1.1	69	200	<3.0	<1.0	<1.0
Method A Cleanup Level	1,000/ 800*	500	500	5	1,000	700	1,000	20	15	15

### Table 4. Summarized Analytical Results (Groundwater)

ug/L, micrograms per liter (parts-per-billion); GRO, gasoline-range organics; DRO, diesel-range organics; ORO, oil-range organics; B, benzene; T, toluene; E, ethylbenzene; X, total xylenes; MTBE, methyl T-butyl ether; Pb, lead. \*The higher value applies if benzene is not present.

### **Groundwater Geochemistry**

An evaluation of groundwater geochemistry was completed in an effort to characterize the oxidation state of groundwater in the vicinity of the former UST cavity. The oxidation state can be estimated by measurement with oxidation–reduction potential (ORP) and dissolved oxygen (DO) field instruments.

DO and ORP were measured with a Horiba U-22 multi-meter equipped with a flow cell. DO ranged from 9.61 to 9.99 mg/L and ORP ranged from 226 to 287 millivolts. We interpret these results to indicate the uppermost aquifer underlying in the Site is in an aerobic condition.

#### 2.4.8 Constituents of Concern

Soil and groundwater samples at the Site were analyzed for TPH, lead, and BTEX. Constituents of concern for the Site consist of GRO, benzene, ethylbenzene, and xylenes.

#### 2.4.9 Potential Receptors

#### Direct Contact

Impacted soil and groundwater are located less than 5 feet beneath the ground surface, and therefore construction workers could be at risk of direct contact.

#### Surface Water and Sediment

Issaquah Creek is the nearest waterbody to the property and meanders to within approximately 1,100 feet southwest of the down gradient end of the Site. Based on distance and the lack of detections in one down gradient well (MW-3) it is unlikely that Issaquah Creek has been impacted by the groundwater plume on the Site. Therefore, surface water and sediment in Issaquah Creek have not been sampled.



## Air/Soil Vapor

Indoor air and soil vapor sampling has not been completed at the Site. Based on the available soil and groundwater quality data, contaminated soil and groundwater is not present beneath or proximal to buildings at the property. The reported concentration of BTEX in groundwater do not exceed groundwater screening levels defined in the 2015 revisions to Ecology (2009).

## Natural Resources and Wildlife

The Site is fully developed and covered with asphalt pavement and is not likely to support natural resources or wildlife. The property is bounded by commercial development to the west and south and by residential neighborhoods to the east. A wooded slope bounds the north and northeastern edge of the property and could act as a wildlife corridor. Additionally, there is a detention pond in the northwestern corner of the Property, which covers approximately 20,000 square feet, that may support wildlife. However, these areas are not located within the Site.

## 2.5 Natural Conditions

## 2.5.1 Physiographic Setting and Topography

The Property lies at an elevation of approximately 60 feet above Mean Sea Level. The Property and nearby areas lying south and west are relatively level and lie only a few feet higher than Lake Sammamish, located about 4,000 feet to the northwest. The nearest downgradient water body is Issaquah Creek, which meanders to within 1,100 feet southwest of the property and flows to the northwest into Lake Sammamish. The property is bounded by uplands to the north and east.

## 2.5.2 Geology

Geologic conditions in the vicinity of the Property have been mapped by Booth and Minard (1992). According to this geologic map, the Property is underlain by young Quaternary alluvial sediments (unit Qyal, Figure 5), which extend south and west to Interstate 90 and northwest to Lake Sammamish. These soils consist of beach and lacustrine (lake) deposits.

Site specific lithologic descriptions are presented on the soil boring logs included in Appendix D. Fill soils were observed at depths of up to 4 feet. Fill soils varied greatly in grain size distribution and included silty sand, gravelly sand, sandy gravel, and gravel. Native soils were encountered at depths of 2 feet or greater and appeared as gray to brown deposits of silty clay, clayey silt, fine sandy silt, silty fine sand, silty sand, sand, gravelly sand, and sandy gravel. We interpret a unit of brown, wet, clayey silt, observed at 3 to 5 feet below ground surface in seven boreholes, to be a possible relic topsoil. We also interpret a unit of light-gray silt with a trace to some wood fragments, observed at 13 to 15 feet below ground surface in five boreholes, to be a possible volcanic ash deposit.



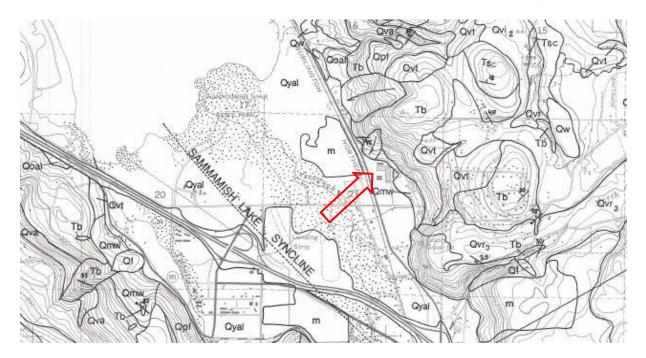


Figure 5. A portion of the Geologic Map of the Issaquah Quadrangle (Booth and Minard, 1992). The approximate location of the Site is indicated by the red arrow.

## 2.5.3 Surface Water

The Site and the Property are paved and developed. Surface water runoff at the Property drains to catch basins, which in turn drain to a retention pond located immediately north of the northwest part of the Property.

### 2.5.4 Groundwater

Based on a groundwater contour map on the King County Water and Land Services web site, produced by Golder Associates in 1993, shallow groundwater in the vicinity of the Site flows in a north-northwesterly direction (Figure 6). Groundwater was observed between about 2 to 3 feet below the ground surface during our post-remedial action groundwater sampling (see Section 5 of this report). Depth to groundwater and groundwater flow directions will likely vary seasonally.



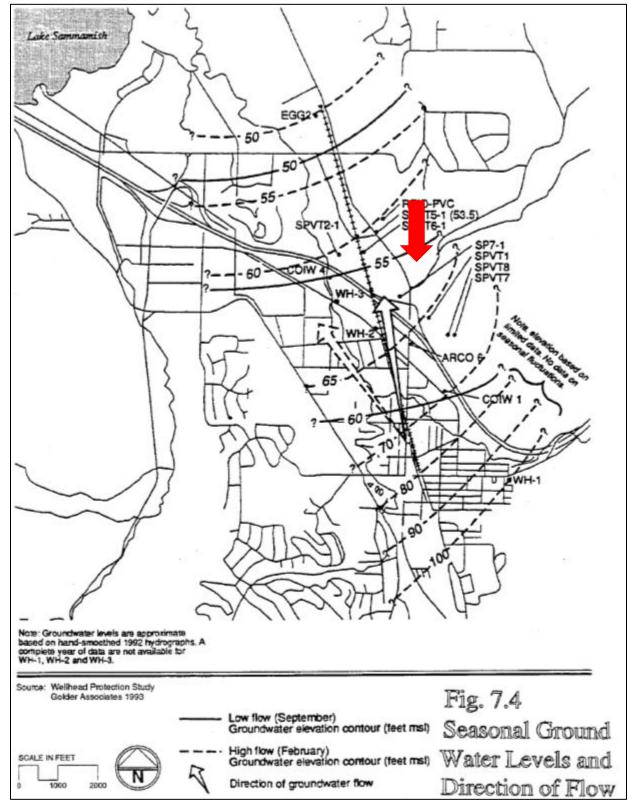


Figure 6. Groundwater contours. The approximate location of the property is indicated by the red arrow.

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Based on our review of a well log database maintained by the Washington State Department of Ecology (http://apps.ecy.wa.gov/welllog/index.asp), one water supply well installed in 1966 was identified on the Property. The well was 62 feet deep and penetrated a confined aquifer at a depth of 61½ feet. The well was artesian with three feet of water measured above the casing. The drillers well log indicates that native soils consisted of about 6 feet of peat and clay, underlain by sand and gravel to the total depth of the boring. The well was decommissioned by filling with cement-bentonite slurry in 1990.

## 2.5.5 Terrestrial Ecological Evaluation (TEE)

In accordance with WAC 173-340-7492(2)(c), the TEE can be ended because no hazardous substance listed in Table 749-2 will be present in soil following the completion of the remedial action. See Section 4 of this report. The only contaminant of concern listed in Table 749-2 is gasoline, which has a target cleanup level of 200 mg/kg for unrestricted land use and 12,000 mg/kg for commercial sites. The highest residual concentration of gasoline in soil is 120 mg/kg (see Table 9 of this report). The completed TEE form is attached in Appendix F.

### 2.5.6 Conceptual Model

Gasoline and BTEX were released to soil and groundwater sometime during or before 1989. Documentation regarding the condition of the USTs and fuel distribution system at the time of removal in 1989 has not been identified. Based on the results of soil and groundwater sampling and analysis as described herein, it is reasonable to assume that the source of the release was leaking USTs or associated distribution piping.

The source area is the former location of the USTs. A smear zone exists between about 2 feet and 5 feet, within the historical and seasonal fluctuation of groundwater at the Site. Groundwater at the site is assumed to flow in a generally westerly direction, towards Lake Sammamish. Given the length of time since the release, this conceptual model assumes that the groundwater plume is stable or shrinking.

Based on water quality results, the soil to groundwater pathway is complete. The Site is completely covered with asphalt pavement, therefore the soil exposure route (ingestion and dermal contact) for humans and wildlife is incomplete. Groundwater is not being extracted from the Site for beneficial use and therefore the groundwater exposure route for ingestion and dermal contact is incomplete, but could become complete in the future. Contaminated soil and groundwater is not present beneath or proximal to buildings, therefore the soil and groundwater to indoor air route for inhalation are incomplete. Construction workers are potential receptors and the direct exposure route to soil and groundwater could be complete during potential future subsurface improvements.

Issaquah Creek is the nearest waterbody to the property and meanders to within approximately 1100 feet southwest of the down gradient end of the Site. Based on distance it is unlikely that Issaquah Creek has been impacted by the groundwater plume on the Site.

### 2.7 Cleanup Standards

Soil and groundwater at the Site are confirmed to be impacted with gasoline, benzene, ethylbenzene, and xylenes. Method A cleanup standards are used for the purposes of this RI based on the potential for future use of groundwater on or near the Site and based on the potential for direct exposure to construction workers. Method A cleanup levels for COC are defined in Table 5.



#### **Table 5. Cleanup Standards**

Media	Gasoline	Benzene	Ethylbenzene	Xylenes
Soil	100/30* mg/kg	0.03 mg/kg	6 mg/kg	9 mg/kg
Groundwater	1,000/800** ug/L	5 ug/L	700 ug/L	1,000 ug/L

\*The higher value applies for gasoline mixtures without benzene and the total of toluene, ethylbenzene, and xylenes are less than 1% of the gasoline mixture.

\*\*The higher value applies if there is no detectable benzene in groundwater.

#### 2.7.1 Points of Compliance

The points of compliance are the locations at which cleanup levels for COC must be attained. The points of compliance are established in accordance with WAC 173-340-740(6)(b) for soil and WAC 173-340-720(8)(b) for groundwater.

### <u>Soil</u>

The point of compliance is based on groundwater protection and protection from vapors and is thus established as all soil throughout the Site.

#### Groundwater

The point of compliance for groundwater is established throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest most depth which could potentially be affected. For the purposes of this RI the point of compliance for groundwater is established from the ground surface to a depth of 15 feet.

### <u>Vapor</u>

The vapor intrusion pathway will be considered incomplete when the cleanup action objectives have been achieved at the points of compliance for soil and groundwater on the Property.

#### 2.8 Areas Requiring Cleanup

#### 2.8.1 Constituents of Concern

Soil and groundwater samples at the Site have been analyzed for TPH, lead, and BTEX. Constituents of concern for this site include GRO, benzene, ethylbenzene, and xylene.

The concentration of gasoline in soil samples GP1-1 (530 mg/Kg), GP4-1 (1,100 mg/Kg), GP5-1 (2,800 mg/Kg) and GP8-1 (1,900 mg/Kg) exceeds the Method A cleanup level (100 mg/Kg or 30 mg/Kg in the presence of benzene). The concentration of benzene in GP1-1 (0.20 mg/Kg) and GP5-1 (2.0 mg/Kg) exceeds the Method A cleanup level (0.03 mg/Kg) and equals the cleanup level in GP8-2.

The concentration of gasoline exceeds the cleanup level in MW-4 and equals the cleanup level in MW-1.

### 2.8.2 Soil – Vertical and Lateral

Soil is impacted above cleanup levels near the source area (the former UST cavity), and to a lesser degree in a smear zone north and west of the source area. Soil contaminated above cleanup levels was observed in samples taken at depths of approximately 5 feet. Assuming that a smear zone exists within the historic and seasonal groundwater levels, contaminated soils likely exist between approximately 2 and 6 feet below ground surface. The estimated extent of the area that includes soil contaminated above cleanup



levels is indicated on Figure 3 (Appendix C).

## 2.8.3 Groundwater – Vertical and Lateral

Groundwater in MW-4 has exceeded cleanup levels for gasoline but not BTEX. Gasoline and BTEX have not been detected, or have been detected in concentrations below cleanup levels in the other three wells. The estimated extent of the area that includes or has included groundwater contaminated above cleanup levels is indicated on Figure 4 (Appendix C). The vertical extend of groundwater contamination is assumed to coincide with the smear zone, from about 2 feet to about 6 feet deep.

## 2.8.4 Surface Water and Sediment

Impacts to surface water and sediment in Issaquah Creek are not likely given groundwater quality results in the down gradient well.

### 2.8.5 Indoor Air and Soil Vapor

It is unknown if the soil to indoor air and groundwater to indoor pathways are complete. Remedial action associated with the cleanup of soil and groundwater at the Site should effectively mitigate this risk.

## 3.0 FEASIBILITY STUDY

The purpose of this Feasibility Study (FS) is to develop and evaluate cleanup action alternatives to enable a cleanup action to be selected for the site. In accordance with WAC 173-340-350, this FS includes "cleanup action alternatives that are protective of human health and the environment by eliminating, reducing, or otherwise controlling risks posed through each exposure pathway and migration route".

Ten remedial action alternatives were evaluated for this FS. Alternatives were initially screened based on an assessment of effectiveness and implementability. Alternatives deemed to be not protective, feasible, or appropriate for the subject site were eliminated from further evaluation, except that certain alternatives were retained as a component of other technologies. Those alternatives that were deemed effective, could be implemented with minimal impacts to the community, workers, and the environment and that had a lower cost were retained for further evaluation. Methods selected for further evaluation included "Monitored Natural Attenuation", "Excavation and Offsite Disposal", and "Enhanced Bioremediation".

The recommended remedy utilizes excavation and offsite disposal combined with enhanced bioremediation. This approach optimizes achieving the Remedial Action Objectives at the best overall cost.

### 3.1 Remedial Action Objectives

The objectives of this FS were to identify a range of remedial action alternatives that are appropriate for the Site and to document and develop the information necessary to select an appropriate remedial action alternative consistent with WAC 173-340-360. The Remedial Action Objectives (RAOs) are media specific goals for protecting human health and the environment. Soil and groundwater comprise the media of concern at the Site. The Remedial Investigation as described in Section 2 of this report did not identify any ecological risk at the Site. Thus, the RAOs focus on the protection of human health due to potential contact with gasoline-range TPH and BTEX. The human health RAOs are as follows:

1. Achieve the MTCA Method A cleanup levels for gasoline-range TPH and BTEX in soil and groundwater at the Site.



## **3.2** Screening of Remedial Action Alternatives

An initial screening of remedial action alternatives was completed to reduce the number alternatives retained for detailed analysis. In accordance with WAC 173-340-360, the following elements were qualitatively evaluated for each alternative:

**Protectiveness.** Overall protectiveness of human health and the environment, including the degree to which existing risks are reduced, time required to reduce risk at the facility and attain cleanup standards, on-site and off-site risks resulting from implementing the alternative, and improvement of the overall environmental quality.

**Permanence.** The degree to which the alternative permanently reduces the toxicity, mobility or volume of hazardous substances, including the adequacy of the alternative in destroying the hazardous substances, the reduction or elimination of hazardous substance releases and sources of releases, the degree of irreversibility of waste treatment process, and the characteristics and quantity of treatment residuals generated.

**Cost.** The cost to implement the alternative, including the cost of construction, the net present value of any long-term costs, and agency oversight costs that are cost recoverable. Long term costs include operation and maintenance costs, monitoring costs, equipment replacement costs, and the cost of maintaining institutional controls. Cost estimates for treatment technologies shall describe pretreatment, analytical, labor, and waste management costs. The design life of the cleanup action shall be estimated and the cost of replacement or repair of major elements shall be included in the cost estimate.

**Effectiveness.** Long term effectiveness includes the degree of certainty that the alternative will be successful, the reliability of the alternative during the period of time hazardous substances are expected to remain on site at concentrations that exceed cleanup levels, the magnitude of residual risk with the alternative in place, and the effectiveness of controls required to manage treatment residues or remaining wastes. The following types of cleanup action components may be used as a guide, in descending order, when assessing the relative degree of long-term effectiveness: Reuse or recycling; destruction or detoxification; immobilization or solidification; on-site or off-site disposal in an engineered, lined and monitored facility; on-site isolation or containment with attendant engineering controls; and institutional controls and monitoring.

**Risk.** The risk to human health and the environment associated with the alternative during construction and implementation, and the effectiveness of measures that will be taken to manage such risks.

**Implementability.** Ability to be implemented including consideration of whether the alternative is technically possible, availability of necessary off-site facilities, services and materials, administrative and regulatory requirements, scheduling, size, complexity, monitoring requirements, access for construction operations and monitoring, and integration with existing facility operations and other current or potential remedial actions.



Ten remedial action alternatives were evaluated for this FS. These are tabulated on Table 6, which summarizes the effectiveness, implementability, implantation risk, and relative cost. Alternatives deemed to be not effective or implementable were eliminated from further evaluation, except that the "Monitored Natural Attenuation" alternative was retained as a baseline and the "Groundwater Monitoring" alternative was retained as a component of other technologies. Remedial methods retained for further evaluation included "Excavation and Offsite Disposal" and "Enhanced Bioremediation".



# Table 6. Remedial Action Alternatives Screening

					Screening Criteria				
Alternative	Technology	Media	Description	Effectiveness	Implementability	Implementation Risk	Cost	Screening Comments	Retained?
No Action	None	GW/S	No Action	Not effective	Easy	None	None	Does not prevent potential exposures. Does not monitor groundwater quality or plume dynamics.	No
	Groundwater Monitoring	GW	Groundwater sampling and analysis.	Effective for documenting groundwater quality conditions and plume dynamics.	Easy	Low	Low	Retained to document groundwater quality and effectiveness of other technologies.	Yes
Institutional Controls	Deed Restrictions	GW/S	Restrict access to soil and groundwater.	Effective at preventing direct contact with soil and groundwater.	Easy to Difficult	Low	Low	If necessary, a deed restriction would be practical for Site.	No
In – Situ Treatment	Monitored Natural Attenuation	GW	Passive treatment of groundwater using natural processes.	The continued presence of TPH exceeding cleanup levels in soil and groundwater suggest that MNA is not effective.	Easy	Low	Low	Retained as a baseline for comparison to other technologies.	Yes
	Chemical Oxidation	GW/S	Chemically oxidizes and destroys the contaminant.	Can be effective for treatment of contaminated groundwater and soil below the water table.	Moderate-Difficult	Moderate	Moderate	High reliability for GRO and BTEX, but the oxidant must come into direct contact with the contaminant. Very effective in groundwater and saturated soils but less effective in the vadose zone. May require multiple rounds of injections.	No
	Soil Vapor Extraction	S	Apply a vacuum to the vadose zone to extract volatile organic compounds	Can be an effective method of removing GRO and BTEX from the vadose zone.	Moderate	Low	Moderate	Requires multiple extraction wells with a radius of influence sufficient to reach contaminated soil within the Site. Not effective for remediation of contaminated groundwater. Soil vapor effluent may need to be treated prior to release to the atmosphere.	No
	In-Situ Air Stripping	GW	Uses a double screened well and injected air to strip volatile components.	Can be an effective method of removing GRO and BTEX in groundwater.	Moderate	Low	Moderate	Cost is high due to need for multiple treatment wells. Exhaust air may require treatment.	No
	Enhanced Bioremediation	GW/S	Encourages the biodegradation of contaminants by native microbes.	Can be effective for treatment of contaminated groundwater and soil below the water table	Easy	Low	Moderate	Cost, implementation risk, and implementability vary with method of application. Injection wells are easy to install but may not adequately disperse the product. Applying an enhanced bioremediation product in the base of an excavation will optimize dispersal, provided that the product is applied beneath the water table.	Yes
Ex-Situ Treatment	Dual Phase Extraction	GW	A high vacuum is applied to simultaneously remove contaminated ground water and volatile components from the vadose zone.	Can be effective in treating contaminated groundwater and soil in the vadose zone.	Moderate	Low	Moderate	Can hydraulically contain offsite migration of contaminants. Can mitigate the potential for vapor intrusion. Extracted groundwater and soil gas may need to be treated prior to disposal. Multiple treatment wells needed.	No
	Pump & Treat	GW	Pump contaminated groundwater and treat at the surface.	Ineffective for vadose zone soils.	Easy	Low	High	Pump & Treat does not have a history of high reliability. Requires construction of a water treatment system or disposal option.	No
Excavation / Off-Site Disposal Without Treatment	Excavation and Off-Site Disposal	S	Excavate contaminated soil and dispose at licensed landfill.	Highly effective for removal of GRO and BTEX in the vadose and smear zones.	Easy	Low	Moderate	When the extent of soil contamination is well defined, excavation and off-site disposal is a straightforward method of removing contaminated soil from the site.	Yes

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## **3.3** Site Specific Remedial Action Alternatives

Based on the preliminary screening of the Remedial Action Alternatives, three alternatives were retained for further evaluation. The alternatives retained are:

- Alternative A: Monitored Natural Attenuation (MNA)
- Alternative B: Excavation and Offsite Disposal
- Alternative C: Enhanced Bioremediation

The Monitored Natural Attenuation alternative is retained to provide a baseline for costs and risks at the Site. Groundwater monitoring was also retained as a method of documenting groundwater quality and effectiveness of remedial efforts. Excavation and offsite disposal of contaminated soil was retained as the primary method of remediation. Enhanced bioremediation was retained as a supplement to excavation and offsite disposal.

## 3.3.1 Monitored Natural Attenuation

"Monitored natural attenuation" (MNA) refers to the reliance on natural attenuation processes to achieve the RAOs. Natural attenuation includes a variety of physical, chemical, and biological processes that, under favorable conditions, reduce the mass, toxicity, mobility, volume, and/or concentration of contaminants in soil and/or groundwater. Natural attenuation includes "nondestructive" processes such as dispersion, adsorption, dilution and volatilization, and "destructive" processes such as biodegradation. Biodegradation is the preferred attenuation mechanism, because it results in actual reduction of contaminant mass. However, the measured concentrations of GRO and BTEX components in soil and groundwater at the site suggest that, despite a period of approximately 27 years since the removal of the USTs, the rate of natural attenuation is not likely to achieve the RAOs in a reasonable time span.

### 3.3.2 Excavation and Offsite Disposal

Excavation and Offsite Disposal consists of manually removing contaminated soil and exporting it to a licensed disposal facility. The effectiveness of this alternative depends on the accuracy of the estimated area of contamination and the thoroughness of the excavation. The process can be monitored and adjusted based on field testing for contaminants. A technician can field screen soil samples for TPH using "sheen tests" and a Photoionization Detector (PID). After the contaminated soil is removed, the resulting excavation is backfilled with suitable clean fill material. Groundwater monitoring can be implemented in the area after the excavation and disposal is complete to analyze the effectiveness of the remediation. This process can expose construction workers and field technicians to the discussed contaminants and requires a health and safety plan to be completed before work can begin.

### 3.3.3 Enhanced Bioremediation

Enhanced Bioremediation is a broad term for encouraging the consumption of contaminants by native organisms. In this case, Enhanced Bioremediation refers to the application of an oxygen releasing compound (ORC) to saturated soil. Oxygen is utilized by native microbes during the consumption of petroleum hydrocarbons. Therefore, increasing the oxygen available to the native microbes increases their capacity to consume TPH. Application methods and ORC products can be tailored to achieve the RAOs while taking into consideration site-specific geological and financial constraints. ORC compounds activate upon contact with water, which limits their effectiveness in the subsurface to saturated soils.



## **3.4** Evaluation of Remedial Action Alternatives

A detailed analysis of Alternatives A, B, and C with respect to the requirements of WAC 173-340-360 (Selection of Cleanup Actions) is presented in Table 7. Estimated costs to implement the alternatives are presented in Section 3.5.



## Table 7. Selected Alternatives Evaluation

Alternative A	<ul> <li>Protectiveness</li> <li>Degree to which existing risks are reduced</li> <li>Time required to reduce the risk and attain cleanup standards</li> <li>On-site and off-site risks resulting from implementing the alternative</li> <li>Improvement of the overall environmental quality</li> </ul>	<ul> <li>Permanence</li> <li>Degree of permanent reduction of contaminant toxicity, mobility, and volume</li> <li>Adequacy of destruction of hazardous substances</li> <li>Reduction or elimination of substance release, and source of release</li> <li>Degree of irreversibility of waste treatment processes</li> <li>Characteristics and quantity of generated treatment residuals</li> </ul>	<ul> <li>Long Term Effectiveness</li> <li>Degree of certainty of that the alternative will be successful</li> <li>Reliability while contaminants remain on-site greater than cleanup levels</li> <li>Magnitude of residual risk</li> <li>Effectiveness of controls implemented to manage residual risk</li> </ul>	<ul> <li>Management of Short Term Risks</li> <li>Risk to human health and the environment associated with the alternative during construction and implementation</li> <li>The effectiveness of measures taken manage short-term risks</li> </ul>	<ul> <li>Technical and Administrative Implementability</li> <li>Technical possibility</li> <li>Availability of off-site facilities, services, and materials</li> <li>Administrative and regulatory requirements</li> <li>Schedule, size, and complexity of construction</li> <li>Monitoring requirements</li> <li>Site access for construction, operations, and monitoring</li> <li>Integration with existing site operations or other current and potential future remedial action</li> </ul>
Monitored Natural Attenuation	This alternative provides some reduction to existing risk in groundwater, given continued advection, dispersion, sorption, and volatilization. Time required to reduce risks and attain cleanup standards is not within a reasonable time frame, and may not be achievable (particularly for soil). No on- or off-site risks result from implementing MNA as no actions are required for implementation. On- and off-site risks remain the same as currently exist. MNA provides no improvement in overall environmental quality when implemented as a standalone technology because no actions are conducted as part of implementation. Remedial action objectives are not achieved.	This alternative does not provide a reduction of contaminant toxicity, mobility, or volume. The destruction of contaminants does not appear to be occurring at the Site. Decreasing concentrations appear to be related to advection, dispersion, sorption, and volatilization. This alternative does not reduce, eliminate, or control sources as MNA does not address contaminated soil that appears to be the source of groundwater impacts. Off-site migration of contaminated groundwater remains active. Except for investigation derived waste (IDW) associated with groundwater sampling, no treatment residuals are generated by implementation of an MNA alternative	This alternative provides a low degree of success within a reasonable time frame. It is not expected to achieve cleanup goals for soil. This alternative is not reliable because contaminant destruction does not appear to be occurring at a high enough rate to achieve the RAOs in a reasonable time frame. The magnitude of residual risk with this alternative is unchanged from the existing conditions. The controls in place to manage risk include surface capping, which adequately manages direct-contact risk; however, there are no controls to manage ongoing migration of PCE from soil to groundwater.	Except for managing IDW, no short- term risk is associated with construction of this alternative because no construction activities will be conducted. Existing risk remains consistent with the current site risks.	This alternative is technically possible to implement and involves no construction. No facilities, services, or materials are needed for alternative implementation because no construction will be performed. However, this alternative is not administratively implementable because it does not meet the regulatory requirements for a cleanup action. Monitoring requirements are expected to be longer term than for other alternatives because risks will not be reduced with this alternative. There are no concerns with site access because no construction is associated with this alternative. This alternative does not impact existing site operations.

#### Cost

- Cost of construction
- Long-term monitoring, and operations and maintenance costs
- Cost to maintain
   institutional controls
- Agency oversight costs

This criterion includes construction cost and contingency, and includes estimated long-term maintenance and monitoring. Agency oversight costs are not included and are expected to be consistent for all proposed alternatives. The cost associated with an MNA alternative is expected to be low.



#### Table 7. Selected Alternatives Evaluation

Alternative B	<ul> <li>Protectiveness</li> <li>Degree to which existing risks are reduced</li> <li>Time required to reduce the risk and attain cleanup standards</li> <li>On-site and off-site risks resulting from implementing the alternative</li> <li>Improvement of the overall environmental quality</li> </ul>	<ul> <li>Permanence</li> <li>Degree of permanent reduction of contaminant toxicity, mobility, and volume</li> <li>Adequacy of destruction of hazardous substances</li> <li>Reduction or elimination of substance release, and source of release</li> <li>Degree of irreversibility of waste treatment processes</li> <li>Characteristics and quantity of generated treatment residuals</li> </ul>	<ul> <li>Long Term Effectiveness</li> <li>Degree of certainty that the alternative will be successful</li> <li>Reliability while contaminants remain on-site greater than cleanup levels</li> <li>Magnitude of residual risk</li> <li>Effectiveness of controls implemented to manage residual risk</li> </ul>	<ul> <li>Management of Short Term Risks</li> <li>Risk to human health and the environment associated with the alternative during construction and implementation</li> <li>The effectiveness of measures taken manage short-term risks</li> </ul>	<ul> <li>Technical and Administrative Implementability</li> <li>Technical possibility</li> <li>Availability of off-site facilities, services, and materials</li> <li>Administrative and regulatory requirements</li> <li>Schedule, size, and complexity of construction</li> <li>Monitoring requirements</li> <li>Site access for construction, operations, and monitoring</li> <li>Integration with existing site operations or other current and potential future remedial action</li> </ul>
Excavation and Offsite Disposal of Contaminated Soil	This alternative provides a high degree of reduction of existing risk through removal of contaminant mass in soil. The time required to reduce risk and achieve cleanup is the same as the time it takes to dig and backfill the excavation, which we estimate will take one to three weeks to complete. It is anticipated that the majority of contaminants are sorbed to the soil. Extracted soil will be considered hazardous and will be disposed of at a licensed off- site facility. This alternative provides a high degree of improvement in overall environmental quality through mass reduction in soil and some groundwater.	This alternative provides a high degree of permanent reduction of contaminant toxicity, mobility, and volume reduction. Removal of contaminated soils if done diligently effectively removes the contaminant from the system. However, the process does not destroy the contaminant and generated waste, including stockpiled soil, will require management during implementation over the short term. Contaminated soils will be disposed of at a licensed facility.	This alternative provides high degree of certainty of success because has been implemented successfully at similar sites. Excavation and offsite disposal is very reliable if the extent of the contaminated soil is well known. Monitoring can be conducted in the long term to confirm performance. The magnitude of residual risk associated with this alternative is small because the contaminant is removed from the system.	This alternative will generate a potential direct contact risks to workers during excavation, stockpiling, transport, and disposal. Stockpiled contaminated soil should be protected from precipitation to reduce the chance of the contaminants being reintroduced to the excavation. Site activities will require appropriate PPE, BMPs, and appropriate training requirements for management of risk. These controls are highly effective and anticipated to adequately manage short-term risk.	This alternative is simple to implement assuming the extent of the contaminated soils has been determined. All necessary off-site facilities, materials, and services are available within the region. This alternative meets administrative and regulatory requirements. This alternative is anticipated to require 1-3 weeks to complete the excavation. Short term monitoring will include sampling of sidewall soil and separation of contaminated from clean excavation soils through sheen tests, PID tests, and laboratory analyses. Long term groundwater monitoring will be in place after construction. Site access for construction is moderately complex because of active site uses, and will halt site operations in the excavation area.

#### Cost

- Cost of construction
- Long-term monitoring, and operations and maintenance costs
- Cost to maintain
   institutional controls
- Agency oversight costs

This criterion includes construction cost and contingency, and includes estimated long-term maintenance and monitoring. Agency oversight costs are not included, and are expected to be consistent for all proposed alternatives. The overall cost associated with this alternative is expected to be low as the overall time span for remediation is relatively short and long term monitoring will be performed in stretched intervals.



#### Table 7. Selected Alternatives Evaluation

Alternative C Enhanced Aerobic Bioremediation	<ul> <li>Protectiveness</li> <li>Degree to which existing risks are reduced</li> <li>Time required to reduce the risk and attain cleanup standards</li> <li>On-site and off-site risks resulting from implementing the alternative</li> <li>Improvement of the overall environmental quality</li> </ul>	<ul> <li>Permanence</li> <li>Degree of permanent reduction of contaminant toxicity, mobility, and volume</li> <li>Adequacy of destruction of hazardous substances</li> <li>Reduction or elimination of substance release, and source of release</li> <li>Degree of irreversibility of waste treatment processes</li> <li>Characteristics and quantity of generated treatment residuals</li> </ul>	<ul> <li>Long Term Effectiveness</li> <li>Degree of certainty that the alternative will be successful</li> <li>Reliability while contaminants remain on-site greater than cleanup levels</li> <li>Magnitude of residual risk</li> <li>Effectiveness of controls implemented to manage residual risk</li> </ul>	<ul> <li>Management of Short Term Risks</li> <li>Risk to human health and the environment associated with the alternative during construction and implementation</li> <li>The effectiveness of measures taken manage short-term risks</li> </ul>	<ul> <li>Technical and Administrative Implementability</li> <li>Technical possibility</li> <li>Availability of off-site facilities, services, and materials</li> <li>Administrative and regulatory requirements</li> <li>Schedule, size, and complexity of construction</li> <li>Monitoring requirements</li> <li>Site access for construction, operations, and monitoring</li> <li>Integration with existing site operations or other current and potential future remedial action</li> </ul>	
	This alternative provides a high degree of reduction of existing risk through the destruction of contaminant mass in saturated soil given accurate application and receptive microbes. The time required to reduce risk and achieve cleanup is anticipated to take one year or less. ORCs by their nature as oxidizers can damage the respiratory system of humans who inhale them. A health and safety plan will have to be implemented. This alternative provides a high degree of improvement in overall environmental quality through mass reduction in saturated soil.	This alternative provides a high degree of permanent reduction of contaminant toxicity, mobility, and volume reduction. If applied accurately within saturated soil, ORCs can promote the destruction of contaminants via biodegradation.	This alternative provides a high degree of certainty when accurately applied. We anticipate that the method of application will entail an excavation to the bottom of the smear zone, thus combining the effects of Alternatives B and C. Monitoring can be conducted in the long term to confirm performance. The magnitude of residual risk associated with this alternative is small because the contaminant is removed from the system.	This alternative will generate potential direct contact risk to workers during implementation. Site activities will require appropriate PPE, BMPs, and appropriate training requirements for management of risk. These controls are highly effective and anticipated to adequately manage short-term risk.	This alternative is simple to implement assuming the extent of the contamination has been determined. All necessary off-site facilities, materials, and services are available within the region. This alternative meets administrative and regulatory requirements. Long term monitoring should not influence site operations but will require coordination with the client.	

#### Cost

- Cost of construction
- Long-term monitoring, and operations and maintenance costs
- Cost to maintain
   institutional controls
- Agency oversight costs

This criterion includes construction cost and contingency, and includes estimated long-term maintenance and monitoring. Agency oversight costs are not included, and are expected to be consistent for all proposed alternatives. The overall cost associated with this alternative is expected to be low as the overall time span for remediation is relatively short and long term monitoring will be performed in stretched intervals.



## 3.5 Recommended Remedial Alternative

Estimated costs for the primary alternatives are summarized below:

Primary Alternative	Estimated Cost
Alternative A. Monitored Natural Attenuation	\$42,000
Alternatives B and C. Excavation and offsite disposal	
supplemented with enhanced aerobic bioremediation and	\$254,000
groundwater monitoring	

Alternative A is not likely to meet the remedial action objectives and has been retained as a baseline for comparison. A combination of Alternatives B and C, excavation and offsite disposal and enhanced bioremediation with post-remediation groundwater monitoring, is the recommended alternative. This approach optimizes achieving the RAOs and compliance with MTCA at the best overall cost. Key elements of the recommended alternative are described below.

- 1. Enroll the site in the Washington State Department of Ecology's Voluntary Cleanup Program and arrange for subcontractors. Prepare a Remedial Action Work Plan and a Site-Specific Health and Safety Plan.
- 2. Excavate and dispose of contaminated soil at a facility licensed to accept the material. Collect and analyze soil samples during and upon completion of the remedial activities to distinguish clean and contaminated soil and to document the soil cleanup.
- 3. Dose the base of the excavation with an oxygen-releasing compound in an effort to enhance the natural bioremediation of residual TPH in soil and groundwater.
- 4. Backfill, compact, and resurface the excavation.
- 5. We anticipate that one to two existing groundwater monitoring wells may need to be replaced following the completion of the remedial excavation.
- 6. Complete subsequent groundwater sampling and analysis to evaluate the effectiveness of the remedial actions in regard to dissolved phase hydrocarbons in groundwater.

### 4.0 **REMEDIAL ACTION**

BMC retained Clearcreek Contractors of Marysville, Washington to complete the remedial excavation. Clearcreek mobilized a Hitachi 200 LC excavator to the Site, and the work was initiated on July 20, 2015. The asphalt over the estimated extent of the Site, as determined during the RI, was removed and disposed. Clean overburden fill soils were removed to a depth of about two feet, stockpiled, and covered. Four discreet samples of stockpiled soil were collected and analyzed for gasoline and BTEX, which were not detected above laboratory reporting limits (Table 9). The clean overburden soil was returned to the excavation following the removal of impacted soil.

Excavated soil was field screened using the sheen test, a photo-ionization detector, and/or odor. Gasoline impacted soils were identified at depths ranging from about 2 feet to 6 feet below grade, except for on the south part of the excavation where three likely historical UST cavities were found. The cavities were identified by the presence of rectangular areas that contained several feet of pea gravel. Gasoline impacted soil in these areas extended to depths ranging from about 8 to 11 feet.

A 24-inch PVC storm water pipe was encountered along the west side of the remedial excavation on July 21, 2015. Although the pipe was not damaged by the excavator, water leaked into the remedial excavation from what appeared to be a faulty pipe join (see photos in Appendix G). We determined that the storm



water pipe discharged to the retention pond that is located immediately north of the northwest part of the Property (about 250 feet north of the Site).

A series of soil berms were constructed to block the water, and the removal of impacted soil continued through July 23, 2015. At that time work was stopped for a period of about 6 weeks to make arrangements to pump, treat, and dispose of the excavation pit water and to lower the water elevation in the north adjoining storm water retention pond such that the storm water would stop draining into the remedial excavation.

The remedial excavation work was re-initiated and completed on September 10 through September 15, 2015. Dewatering effluent was pumped into a series of four 17,640-gallon Baker Tanks. The effluent was treated by being pumped through a sand filter (to reduce turbidity) and an activated carbon filter (to adsorb TPH and BTEX). The treated dewatering effluent was disposed into the King County sanitary sewer system under a King County permit acquired by BMC. A copy of the permit is included in Appendix H.

Pre-treatment dewatering effluent samples were collected on July 22 and July 24, 2015. Post-treatment dewatering effluent samples were collected on August 5, 2015 and September 8, 2015. Gasoline and BTEX were not detected in the post-treatment samples. Dewatering effluent analytical results are presented in Table 8. Laboratory reports are presented in Appendix I.

A site plan depicting the location of soil samples collected during the remedial excavation is presented in Figure 7 (Appendix I and Appendix N). A total of 1,395.87 tons of gasoline-contaminated and suspect gasoline-contaminated soil was removed and trucked to the Regional Disposal Company transfer station in Seattle. Copies of the scale tickets are included in Appendix J. Twenty-four soil samples were collected to monitor the effectiveness of the remedial excavation (Table 9). TPH and BTEX were not detected above laboratory reporting limits, or were detected in concentrations below the Method A cleanup level in all residual soil samples except one. This sample (1099-21A), collected at a depth of about 6 feet on the north part of the west sidewall (Figure 7, Appendix N), contained gasoline and benzene at reported concentrations of 120 mg/kg and 0.12 mg/kg.

Upon completion of the over-excavation activities, eleven hundred pounds of the Regenesis product ORC Advanced pellets were placed at the base of the excavation and kneaded into the smear zone using an excavator. The purpose of the ORC Advanced pellets was to promote the biodegradation of any remaining TPH. The remedial excavation was backfilled with quarry spalls (at the base of the excavation, beneath the water table), clean overburden previously stockpiled on the Property, and clean imported pit run fill soil and subsequently covered with asphalt pavement.

ZGA returned to the Property on February 4, 2016 and advanced four hand auger explorations (HA-1 to HA-4) in the East Lake Sammamish Parkway Southeast right-of-way, immediately west of the Site (see Figure 7, Appendix N). A soil sample was collected from each exploration at the top of the water table (about 3 feet bgs) and analyzed for gasoline and BTEX. Gasoline and BTEX were not detected above laboratory reporting limits in any of the samples.



## **Table 8. Dewatering Effluent Analyses**

SAMPLE #	DATE	LOCATION	TOTAL PETROLEUM HYDROCARBONS (ug/L)			vo		NIC COMPOUN g/L)	NDS	FATE
			GRO	DRO	ORO	В	Т	E	X	
1099-BT1	7-22-15	Baker Tank	420	790	470	ND<1.0	2.8	11	20	Subsequently
1099-BT2	7-24-15	(Pre-Treatment)	1,100	3,100	490	ND<1.0	1.1	11	16	treated
TW-1	8-5-15	Poly Tank	ND<50	ND<130	ND<258	ND<1.0	ND<1.0	ND<1.0	ND<3.0	Transmitted
TW-2	9-8-15	(Post-Treatment)	NA	NA	NA	ND<1.0	ND<1.0	ND<1.0	ND<3.0	to sanitary sewer

ug/L, micrograms per liter (parts-per-billion); GRO, gasoline-range organics; DRO, diesel-range organics; ORO, oil-range organics; B, benzene; T, toluene; E, ethylbenzene; X, total xylenes; NA, not analyzed.



# Table 9. Remedial Excavation Analytical Results

				TOTAL PETROLEUM HYDROCARBONS (mg/kg)			VOLATILE ORGANIC COMPOUNDS (mg/kg)				Pb	
SAMPLE # DATE	DEPTH	LOCATION	FATE									
				GRO	DRO	ORO	В	Т	E	X		
SP-1				ND<3.0			ND<0.03	ND<0.05	ND<0.05	ND<0.2		
SP-2	7-20-15		Starturilad Overhunden Sail	ND<3.0			ND<0.03	ND<0.05	ND<0.05	ND<0.2		Clean fill soil returned to excavation
SP-3		NA	Stockpiled Overburden Soil	ND<3.0			ND<0.03	ND<0.05	ND<0.05	ND<0.2		
SP-4	7-21-15			ND<3.0	ND<25	58	ND<0.03	ND<0.05	ND<0.05	ND<0.2		
1099-1	7-20-15	5	Floor West	310	ND<25	ND<50	ND<0.30	1.2	1.6	ND<2.0	6.0	Removed
1099-2		6	Floor North	5.5	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2		
1099-3		6	Sidewall North	4.5	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2		
1099-4		6	Floor Central	ND<3.0	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2		
1099-5	7 24 45	6	Floor Southwest	6.5	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2		
1099-6	7-21-15	6	Floor Northeast	4.8	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2		Residual
1099-7		8.25	Floor Beneath UST Cavity #1	7.1	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2		
1099-8		8	Floor Beneath UST Cavity #2	ND<3.0	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2		
1099-9		5.75	Sidewall Southeast	ND<3.0	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2		
1099-10		6	Sidewall East	5.6	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2		
1099-11		6	Sidewall Northeast	7.8	ND<25	ND<50	0.031	ND<0.05	0.18	ND<0.2		Removed
1099-12	7 22 45	6	Sidewall Northwest	ND<3.0	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2		
1099-13	7-22-15	6	Sidewall Northeast	ND<3.0	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2		
1099-14		6	Floor Northeast	ND<3.0	(3.0 ND<25 ND<50 ND<0.03 ND<0.05 ND<0.05 ND<0.2	ND<0.2						
1099-15		6	Sidewall Northeast	6.0	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2		
1099-16	7 24 45	11	Floor Beneath UST Cavity #3	ND<3.0	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2		
1099-17	7-24-15	11	Floor Beneath UST Cavity #3	12	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2		
1099-18		8		ND<3.0	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2	5	
1099-19	0.10.15	8	Sidewall South	ND<3.0	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2	2.3	
1099-20	9-10-15	8		ND<3.0	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2	3.9	Residual
1099-21		6		ND<3.0	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2	2.9	
1099-21A		6	6 Sidewall West	120	ND<25	ND<50	0.12	0.29	1.0	0.69	3.4	
1099-22	9-15-15	6		11	ND<25	ND<50	ND<0.03	ND<0.05	0.10	ND<0.2	3.0	
1099-23		6		30	ND<25	ND<50	ND<0.03	ND<0.05	0.076	ND<0.20	3.5	
HA-1		3		ND<3.0			ND<0.03	ND<0.05	ND<0.05	ND<0.2		
HA-2		3	Immediately West of the Remedial Excavation	ND<3.0			ND<0.03	ND<0.05	ND<0.05	ND<0.2		
HA-3	2-4-16	3	in the City of Issaquah Right-Of-Way	ND<3.0			ND<0.03	ND<0.05	ND<0.05	ND<0.2		
HA-4	7	3		ND<3.0			ND<0.03	ND<0.05	ND<0.05	ND<0.2		
Method A Clean	hup Level			30/100*	2,000	2,000	0.03	7	6	9	250	

mg/Kg: milligrams per kilogram (parts-per-million); <: Not detected above indicated laboratory minimum reporting limit. Shaded values exceed MTCA Method A cleanup levels. B, benzene; T, toluene; E, ethylbenzene; X, total xylenes. \*The higher value applies for gasoline mixtures without benzene and the total of toluene, ethylbenzene, and xylenes are less than 1% of the gasoline mixture.



## 5.0 CONFIRMATION GROUNDWATER SAMPLING

After the completion of the remedial actions described in Section 4, quarterly groundwater samples were collected from five wells in the vicinity of the remedial excavation for a period of one year to evaluate the effectiveness of the remedial efforts.

## 5.1 Monitoring Well Installations

In 2013, as a part of the Phase II ESA, ZGA observed the installation of four groundwater monitoring wells in the vicinity of the TPH and BTEX impacted soil (MW-1 to MW-4). MW-1 and MW-4 were decommissioned during the remedial excavation described in Section 4. In November of 2015, ZGA observed the installation of three groundwater monitoring wells within the footprint of the remedial excavation (MW-1A, MW-4A, and MW-5). Well installation was performed by Environmental Drilling Inc. who operated a truck-mounted hollow stem auger drill rig. MW-1A and MW-4A were located near the former locations of the decommissioned wells for which they were named. MW-5 was located near the center of the remedial excavation footprint. MW-1A, MW-4A, and MW-5 were installed to a depth of approximately 10 feet bgs. These 2015 wells were developed with 2-inch PVC casings screened from approximately 4 to 10 feet bgs with a sand pack from approximately 3 to 10 feet bgs. The well heads were set into approximately 1½ feet of concrete at the surface with bentonite between the concrete and the sand pack. Groundwater was observed at a depth of approximately 2.5 to 3 feet bgs at the time of drilling.

A field log of each exploration was maintained, including the thickness and depth of each soil unit encountered and the depth to the uppermost water table recorded. Soil samples were observed to document soil lithology, color, and moisture content. Soils were recorded in general accordance with American Society for Testing and Materials (ASTM) Practice Designation D-2488, *Standard Practice for Description of Soils (Visual-Manual Procedure)*. Exploration logs are included in Appendix J of this report. Approximate locations of monitoring wells are presented in Appendix L and Appendix N.

## 5.2 Sampling Methodology

Groundwater was sampled quarterly over a one-year period since the completion of the remedial excavation. Wells sampled post-remediation include MW-1A, MW-2, MW-3, MW-4A, and MW-5.

Prior to sampling, the depth to groundwater in each well was measured with an electronic water level indicator. Top of casing elevations were surveyed by PLS, Inc. Elevations were recorded in feet relative to an arbitrary datum of 100 feet defined by a survey pin located to the northwest of the remedial excavation. Depth to groundwater was measured from the north rim of all PVC well casings. Depth to groundwater and corresponding groundwater elevations are presented in Table 10. Groundwater contour maps are presented in Appendix N. Groundwater elevations indicate a generally westward direction of groundwater flow, except for the final event in September of 2016, where groundwater mounding appeared to occur near MW-5.

Groundwater was collected with a peristaltic pump utilizing low flow techniques with a discharge rate of approximately 100 ml/minute. Dedicated polyethylene and silicon tubing were utilized for each well. The intake of the polyethylene tubing was set approximately one foot below the top of the screened interval in each well, at a depth of approximately four feet. Discharge from the peristaltic pump was directed through a Horiba U-50 multi-parameter water quality meter with a flow-through cell. Each well was developed until consistent values (Less than 10% variance) were obtained for pH, turbidity, temperature, conductivity, and dissolved oxygen content. After these conditions were met, groundwater was collected in laboratory supplied glassware.



Monitoring Well	Date of Measurement	Top of Casing Elevation (ft.)	Depth to Water (ft. bgs)	Groundwater Elevation (ft. MSL)
	12/10/2015		1.00	97.82
	3/16/2016	_	1.26	97.56
MW-1A	6/10/2016	98.82	1.51	97.31
·	9/07/2016	_	2.50	96.32
	5/24/2013	99.45	1.84	97.61
·	12/10/2015		1.18	97.83
MW-2	3/16/2016		1.43	97.58
	6/10/2016	- 99.01	2.69	96.32
·	9/07/16	-	3.13	95.88
	5/24/2013	99.73	2.59	97.14
	12/10/2015		2.05	97.19
MW-3	3/16/2016		2.22	97.02
	6/10/2016	- 99.24	2.50	96.74
	9/07/2016	_	2.88	96.36
	12/10/2015		1.68	97.72
	3/16/2016	00.40	1.89	97.51
MW-4A	6/10/2016	99.40	2.00	97.40
	9/07/2016		2.69	96.71
	12/10/2015		1.40	97.55
	3/16/2016	98.95	1.50	97.45
MW-5	6/10/2016	98.95	1.78	97.40
	9/07/2016		2.18	96.77

#### **Table 10. Post-Remediation Groundwater Elevations**

ft. bgs, Feet below ground surface.

Each sample container was labeled with our company name, the project number, the date and time of collection, and the monitoring well number. Sample containers were placed in a chilled cooler immediately after sampling, and subsequently transported to the ALS Environmental laboratory in Everett by ZGA personnel under chain-of-custody procedures.

## 5.3 Groundwater Quality Results

A total of 20 groundwater samples were submitted for chemical analysis. All samples were analyzed by ALS Laboratory Group, a Washington State accredited laboratory. Each groundwater sample was analyzed for gasoline using Northwest Method NWTPH-GX and for BTEX using EPA Method 8021. Gasoline and BTEX were not detected in any of the samples. Analytical results are summarized in Table 11. The executed chain-of-custody forms and laboratory analytical certificates are provided in Appendix M. Gasoline and BTEX were not reported above laboratory reporting limits in any of the samples.



		Gasoline-	BTEX (ug/L)				
Monitoring Well	Date of Sampling	Range TPH (ug/L)	Benzene	Toluene	Ethylbenzene	Total Xylenes	
	12/10/2015	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
	3/16/2016	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
MW-1A	6/10/2016	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
	9/7/2016	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
	12/10/2015	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
	3/16/2016	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
MW-2	6/16/2016	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
	9/7/2016	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
	12/10/2015	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
	3/16/2016	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
MW-3	6/16/2016	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
	9/7/2016	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
	12/10/2015	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
	3/16/2016	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
MW-4A	6/16/2016	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
	9/7/2016	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
	12/10/2015	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
	3/16/2016	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
MW-5	6/10/2016	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
	9/7/2016	ND <50	ND <1.0	ND <1.0	ND <1.0	ND <3.0	
MTCA Method A Cleanup Level:		100	5 ug/L	1,000 ug/L	700 ug/L	1,000 ug/L	

ug/L, micrograms per liter (parts-per-billion)

## 6.0 SUMMARY AND CONCLUSIONS

ZGA has completed a RI/FS and independent remedial action at the BMC facility in Issaquah, King County, Washington. Based on the results of the RI/FS the approximate extent of soil and groundwater contaminated with gasoline, benzene, ethylbenzene, and xylenes was defined and excavation and offsite disposal of impacted soil supplemented with post-excavation enhanced aerobic bioremediation was selected as the most effective remedial action alternative.

A total of 1,395.87 tons of gasoline-contaminated and suspect gasoline-contaminated soil was removed, and 26 residual soil samples were collected and analyzed for gasoline and BTEX. Gasoline and BTEX were not detected, or were detected in concentrations below MTCA Method A cleanup levels in 25 samples. One sample collected at a depth of about 6 feet on the west sidewall of the excavation contained 120 mg/kg gasoline and 0.12 mg/kg benzene, which slightly exceed the Method A cleanup levels. However, gasoline and BTEX were not detected in four samples collected in the immediately west adjoining Lake Sammamish Parkway Southeast right-of-way.



Upon completion of the over-excavation activities, eleven hundred pounds of the Regenesis product ORC Advanced pellets were placed at the base of the excavation and kneaded into the smear zone using an excavator.

Five groundwater monitoring wells installed in and immediately adjoining the Site were sampled for gasoline and BTEX quarterly for a period of one year. Gasoline and BTEX were not detected during any of the sampling events.

Based on these results, we request a No Further Action Determination from Ecology.

# 7.0 CLOSURE

ZGA's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. ZGA makes no warranties, either express or implied, regarding the findings, conclusions or recommendations. Please note that ZGA does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report. This report is intended to reduce, but not eliminate, uncertainty regarding the extent of contaminated soil and groundwater at the Property. Our findings are based upon information derived from soil and groundwater sampling at the indicated locations; such information is subject to change over time. Subsurface conditions may vary from those described herein during future investigations. If different conditions from those described herein are discovered, ZGA must be notified so that we can review these conditions and modify our conclusions and recommendations where necessary. This report has been prepared for the exclusive use of BMC West Corporation and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization of BMC West Corporation and ZGA.

# 7.0 REFERERCES

Booth, D.B and Minard, J.P., 1992 Geologic map of the Issaquah 7.5' Quadrangle, King County, Washington U.S. Geological Survey Miscellaneous Field Studies Map 2206.

Washington State Department of Ecology, 2009, Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action.

Appendix A – Previous Reports



April 6, 1998

13945

Mr. Joe Hickey Washington Department of Ecology Northwest Regional Office 3190 160<sup>th</sup> Avenue Southeast Bellevue, WA 98008

Re: Environmental Investigation Results 5210 East Lake Sammamish Parkway Southeast, Issaquah, Washington

Dear Mr. Hickey:

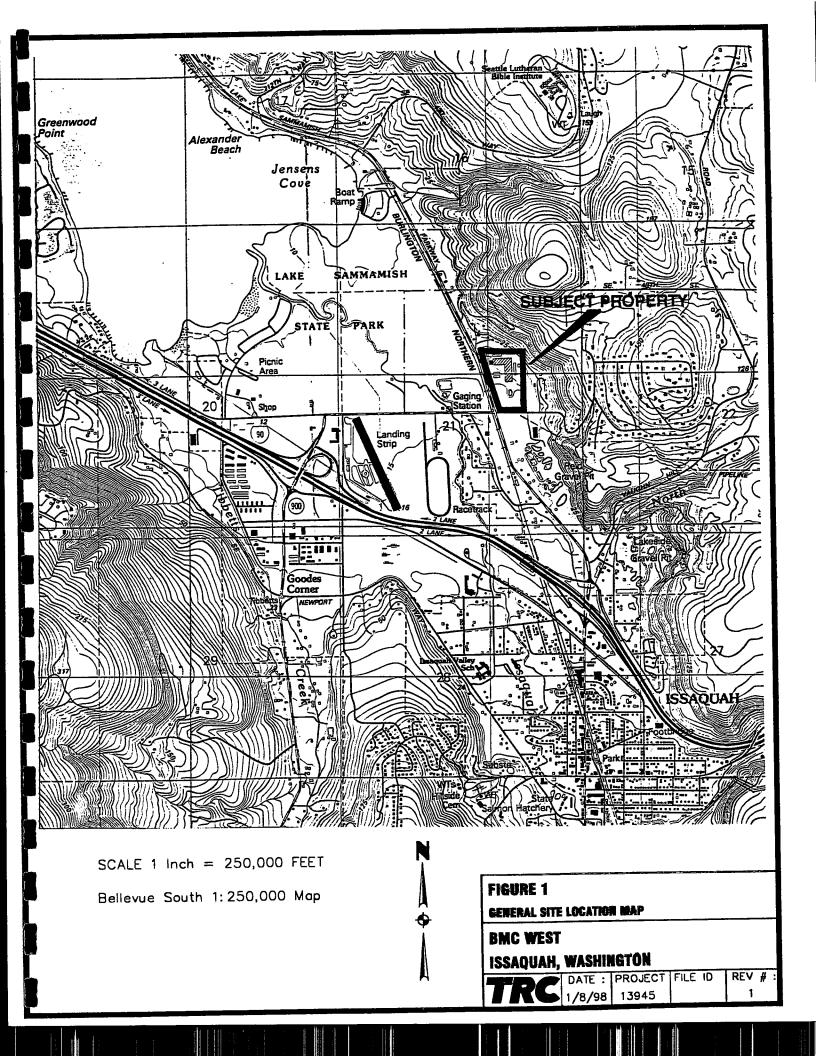
On behalf of BMC West Corporation (BMC West), TRC Environmental Corporation (TRC) conducted an environmental investigation at the BMC West facility at 5210 East Lake Sammamish Parkway Southeast, Issaquah, Washington (Figure 1). The objective of the investigation was to determine the nature and extent of petroleum contamination on the west side of the facility from an unknown source. During construction of a storm water catchment basin, petroleum contamination was observed in the subsurface soil and groundwater. The contamination may be from three gasoline underground storage tanks (USTs), which were removed in 1989, but initial testing of the tank area showed minimal contamination. BMC West requested TRC to conduct an investigation of the area to determine the source and extent of the petroleum contamination.

The TRC investigation was conducted in two phases. The first phase consisted of a subsurface investigation conducted on June 25, 1996. Results of the investigation were submitted to the Washington Department of Ecology in a letter report dated July 8, 1996. This investigation was designed with three goals; 1) to determine if soil and groundwater petroleum contamination was present, 2) to characterize potential contamination near the storm water basin, and 3) to assess if the petroleum contamination was flowing onto the site from adjacent properties.

The second phase was conducted on December 4, 1997 and consisted of a subsurface investigation to; 1) further evaluate the on-site extent of soil and groundwater petroleum contamination and 2) monitor potential changes in petroleum concentrations.

### SITE DESCRIPTION

The BMC West facility is currently operated as a retail lumber facility. The site occupies approximately 16 acres, the majority which consists of paved parking lots, paved yard areas, lumber storage, millwork, and office buildings. Asphalt paving or concrete aprons cover the entire yard area. There is one large structure on the site which houses the offices, store, and millworks located on the east side of the site. There are also several storage sheds and a maintenance shop located at the facility.



The St. Regis Corporation constructed the lumber facility in 1966. Henry Bacon Building Materials purchased the facility in 1986 and constructed improvements at the facility. BMC West has been leasing and operating the facility since 1994.

#### Site Location

The BMC facility is located in the city of Issaquah, King County, Washington, approximately 15 miles east of Seattle, Washington.

#### Adjacent Properties

The immediate area consists of mixed industrial and commercial uses. Albertson's Grocery Store and McDonald's restaurant are located adjacent to the south side of the property. Immediately north of the subject site are private residences, a church, and a bible institute. Immediately east of the subject property is a farmhouse. The facility abuts the base of the steep hill to the east. Residential developments are present upslope. West of the subject site is East Lake Sammamish Parkway Southeast, Burlington Northern Railroad track, and then some light industrial development. Lake Sammamish State Park is located approximately ¼ mile west of the site.

#### Hydrology

The facility is 15 feet above mean sea level. Surface water drainage is to the west. Lake Sammamish is located approximately ½ mile northwest of the site. The Issaquah River, which drains into Lake Sammamish, flows from the southeast to the northwest and is located about 1/3-mile southwest of the subject site.

Based on the local topography and location of surface water bodies, the anticipated direction of groundwater flow is to the west-northwest. The depth to groundwater at the site ranges from 4.5 to 6 feet below ground surface (bgs). Subsurface soil types at the site range from clayey sand to sandy clay.

To evaluate if existing water supply wells are located down gradient of the site, TRC contacted the Washington Department of Ecology to obtain a list of permitted water wells. One well was registered in the northwest ¼ of section 21, Township 24 north, range 6 east, which is approximately 1,500 feet northwest of the site. The well is completed in bedrock at a depth of 200 feet. The well is completed with a 20-foot surface seal.

Based on the construction details of the well, it is not completed in the shallow surface aquifer, therefore, it would not be impacted by the site. Well construction records are included as Attachment 2.

### DISCOVERY OF PETROLEUM CONTAMINATION

The area of concern is at the storage yard bordering East Lake Sammamish Parkway Southeast. The area is paved with asphalt and surface water runoff is to the west toward a drainage ditch that borders the west side of the site. In this area, BMC West installed a storm

water catchment basin in 1996. During construction of the basin, petroleum contamination was observed in the subsurface soil and groundwater.

#### POTENTIAL SOURCE OF PETROLEUM CONTAMINATION

A site plan previously provided to TRC by BMC West indicated that a former gasoline pump station was located approximately where BMC West installed the storm water catchment basin. In addition, a Phase I Environmental Site Assessment performed for the property by TRC in September 1994 indicated that three USTs and associated dispensers and piping were removed from this area. These tanks were removed by Chempro Environmental Services (Chempro) in January 1989. A soil sample was collected by Chempro from the excavated soil while removing the tanks. The results were below state cleanup standards (Table 1). Chempro received a closure permit (# M-F88-0721) for removing the USTs from King County.

Table 1
Soil Sampled During Tank Removal
by Chempro Environmental Services
January 1989

Constituent	Concentration (mg/kg)	State Standard (mg/kg)
Total Petroleum Hydrocarbons	31	100
Benzene	< 0.05	0.5
Toluene	22.0	40
Ethylbenzene	< 0.05	20
Xylenes	< 0.05	20

### INITIAL TRC SITE INVESTIGATION

At the request of BMC West, TRC conducted a subsurface investigation in response to the petroleum contamination observed while excavating the storm water basin. The investigation was conducted on June 25, 1996 and consisted of soil and groundwater sampling. The investigation was designed with three goals; 1) to determine if soil and groundwater petroleum contamination was present, 2) to characterize potential contamination near the storm water basin, and 3) to assess if the petroleum contamination was flowing onto the site from adjacent properties.

TRC focused the subsurface investigation in the area of the catchment basin and the approximate location of the former USTs. Ten boreholes were drilled using a hollow-stem auger drilling rig operated by Environmental West Exploration. Split spoon soil samples were collected at five-foot depth intervals, logged and then composited for laboratory analysis. Groundwater samples were collected from four of the boreholes. Groundwater samples were collected from each borehole with the augers in place. No monitoring wells were constructed. Hnu Photoionization measurements were collected for each soil sample. The Hnu detects volatile organic vapors and is useful in determining the potential and scale of petroleum

contamination in a sample. Table 2 summarizes the Hnu results for the collected samples. Values greater than zero where encountered in six boreholes 1, 2, 3, 5, 6, and 9.

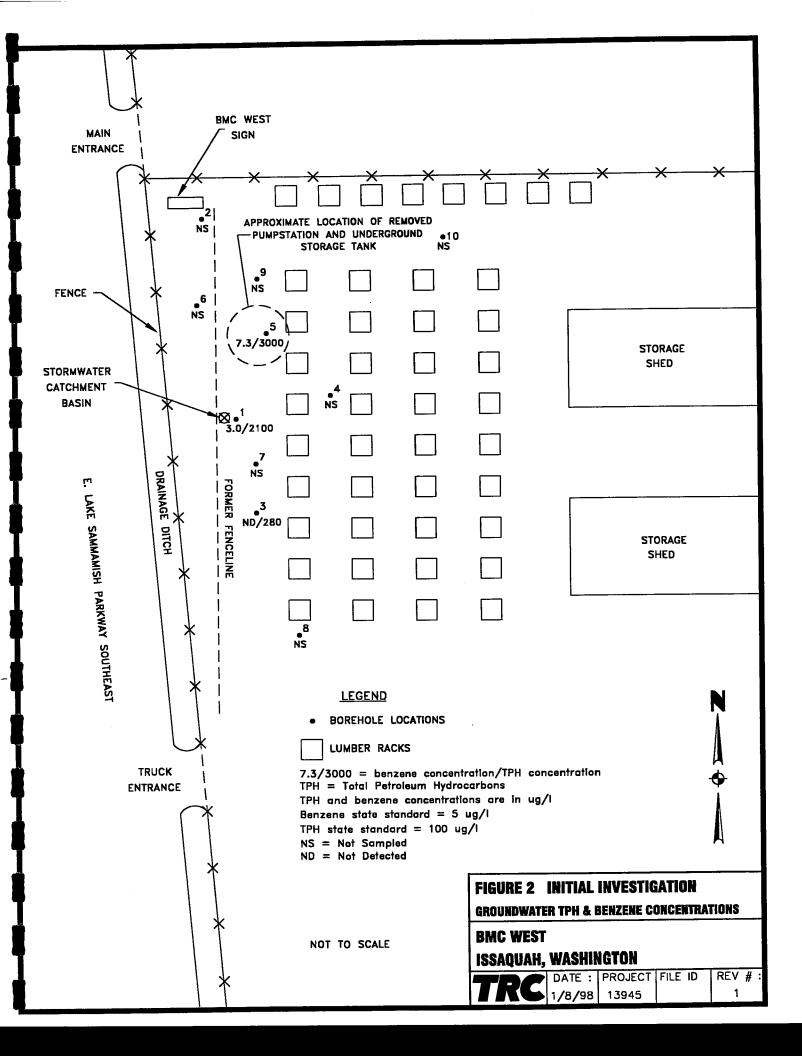
The highest concentrations were detected in boreholes 1, 5, 6, and 9. These four boreholes are located near the former UST and pumping station. Generally, concentrations were the highest in the 5 to 6.5-foot depth interval and concentrations decreased with depth.

Samples with the highest Hnu readings were submitted. Three groundwater and four soil samples were submitted to Analytica, Inc. and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), by EPA Method 8020 and total petroleum hydrocarbons (TPH) using EPA Method 418.1. Water and soil results are summarized in Tables 3 and 4, respectively. Also included in the tables are the state's cleanup criteria for each of the constituents. Benzene and TPH groundwater concentrations are graphically presented in Figure 2. Laboratory data sheets are included in Attachment 1.

Table 3 shows that BH-5, located near the removed USTs, exceeded the groundwater standards for benzene, xylenes, and TPH. BH-1, located near the storm water catchment basin, exceeded the standard for TPH. All other constituent concentrations in groundwater were below the state standards. Table 4 shows that none of the soil standards were exceeded.

Borehole Number	Depth Interval (ft)	Reading (ppm)
BH-1	5 - 6.5	20
BH-1	10 - 11.5	3.5
BH-2	5 - 6.5	0.5
BH-2	10 - 11.5	0.5
BH3	5 - 6.5	0.5
BH-3	10 - 11.5	0
BH-3	15 - 16.5	1.0
BH-4	5 - 6.5	0
BH-4	10 - 11.5	0
BH-5	56.5	9
BH-5	10 - 11.5	4
BH-5	15 - 16.5	9
BH-6	5 - 6.5	9
BH-6	10 - 11.5	12
BH-7	5 - 6.5	0
BH-7	10 - 11.5	0
BH-8	5 - 6.5	0
BH-8	10 - 11.5	0
BH-9	5 - 6.5	12
BH-9	10 - 11.5	3
BH-10	5 - 6.5	0
BH-10	10 - 11.5	0

# Table 2Hnu Photoionization MeasurementsInitial TRC Site Investigation



# Table 3 Groundwater Analytical Results (units: ug/l) Initial TRC Site Investigation

Constituent	State Standard	BH-1	BH-3	BH-5
Benzene	5	3.0	ND (1)	7.3
Toluene	40	2.3	ND (1)	1.5
Ethylbenzene	30	2.9	ND (1)	10
Total Xylenes	20	3.8	6.7	110
ТРН	1000	2100	280	3000

TPH = total petroleum hydrocarbons

 $ND_{(1)}$  = not detected above method detection limit of 1 ug/l.

	Table 4	
Soil Analytical	Results	(units: mg/kg)
Initial TRC	Site Inve	estigation

Constituent	State Standard	BH-1	BH-2	BH-5	BH-6
Benzene	0.5	0.010	ND	0.076	0.028
Toluene	40	0.004	ND	0.022	0.0022
Ethylbenzene	20	0.0069	ND	0.100	0.008
Total Xylenes	20	0.0065	ND	0.790	0.031
ТРН	100/200 (1)	99	31	ND	44

(1) Two standards depending on source, gasoline/diesel.

TPH = total petroleum hydrocarbons.

ND = not detected above the method detection limit.

Based on the results, TRC concluded that groundwater at the site had been impacted by petroleum hydrocarbons but the concentrations were relatively low and the extent of contamination is generally limited to the area near the removed USTs. The results did not indicate a potential off-site source of the petroleum contamination.

Results of the investigation were submitted to Mr. Joe Hickey of the Washington Department of Ecology, in a letter-report dated July 8, 1996. TRC contacted Mr. Hickey in October 1997 to

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discuss the status of the site and to determine what, if anything, needed to be done at the site. Mr. Hickey said he had no record of the site or the report in his database.

#### SECOND INVESTIGATION

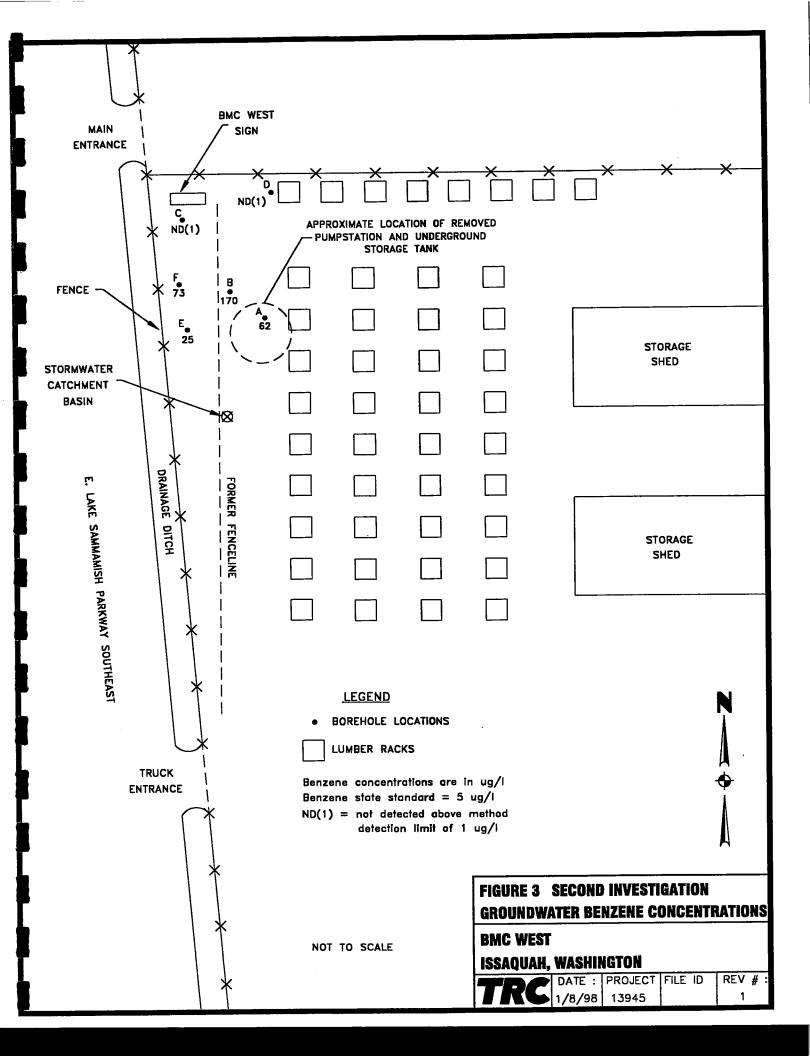
An second subsurface investigation was performed on December 4, 1997 by Geo-Tech Exploration Company of Portland, Oregon at the direction of TRC. The objective of the investigation was to; 1) further evaluate the on-site extent of soil and groundwater petroleum contamination and 2) monitor potential changes in petroleum concentrations.

The investigation consisted of using a Geoprobe drill rig to obtain soil and groundwater samples. The drill rig uses direct push technology to obtain soil and groundwater samples. With this technology, a steel drive probe is mechanically driven into the ground using a hydraulic, truck-mounted drilling rig. A soil sample is obtained using a sampler attached to the end of the probe. After the sample is obtained, the probe is extracted from the ground and the sample retrieved. To obtain a groundwater sample, the probe is driven to the desired depth using a dedicated drive tip. A 4-foot long, steel screened section is then installed inside of the probe rod and the outer rod extracted. Small diameter tubing is lowered inside of the screen and a water sample obtained using an inertia pump.

Six boreholes, labeled A through F and shown on Figure 3, were drilled to obtain soil and groundwater samples. Borehole locations were selected based on the location of the removed USTs and the anticipated direction of groundwater flow (predicted to be westerly). Borehole BH-A is located near the original location of the USTs and the other boreholes are located hydraulically down gradient and cross gradient to evaluate the extent of petroleum contamination. Results of groundwater sampling indicated the depth to groundwater ranged from 4.5 to 6 feet bgs.

Soil samples were obtained approximately every 4 feet from the boreholes. Discrete soil samples were obtained generally from the 2-4 foot and 6-8 foot depth zones. The total depth of the boreholes was approximately 8 feet. Soil types ranged from clayey sand to sandy clay. Soil samples were split with a portion of each sample stored on ice and the remainder put in a plastic bag to perform a headspace analysis. Headspace analyses were performed using an Hnu photoionization detector to estimate volatile petroleum concentrations in the samples. The bag samples were left in the sun for approximately 20 minutes to promote volatilization of the hydrocarbons and then the headspace measured with the Hnu. Concentrations ranged from 0.2 ppm to 340 ppm as shown in Table 5. Laboratory data sheets are included in Attachment 1. The highest concentrations were detected in boreholes BH-A (340 ppm), BH-B (260 ppm), BH-E (100 ppm), and BH-F (30 ppm) all from the 2 to 4 foot depth range.

The four soil samples with the highest headspace concentrations were submitted to Analytica, Inc. in Broomfield, Colorado for laboratory analysis. The samples were analyzed for BTEX by EPA method 8021B and Volatile Petroleum Hydrocarbons (VPH) by EPA Method 8015B/API. The laboratory results and state cleanup standards are summarized in Table 6 and VPH concentrations are graphically presented on Figure 3. Laboratory data sheets are included in Attachment 1. Soil constituent concentrations in boreholes BH-A, BH-B, and BH-E exceeded the state standards. Boreholes BH-A and BH-B generally had the highest concentrations. BH-A is near the previous UST location and BH-B is located to the northwest (down gradient).



Groundwater samples were obtained from all six boreholes and submitted for laboratory analysis of BTEX and VPH. Groundwater concentrations and state standards are listed in Table 7 and benzene concentrations are graphically presented in Figure 4. Groundwater petroleum concentrations exceeded the state standards in boreholes BH-A, BH-B, BH-E, and BH-F. Borehole BH-B generally had the highest petroleum concentrations. The benzene concentration was 170 ug/l; the state standard is 5 ug/l. Borehole BH-A generally had the next highest concentrations.

Borehole	Depth Interval (ft)	Reading (ppm)
	2-4	340
BH-A	6-8	3.6
BH-B	2-4	260
	2-4	0.6
BH-C	6-8	0.5
BH-D	2-4	0.2
BH-E	2-4	100
BH-F	2-4	30

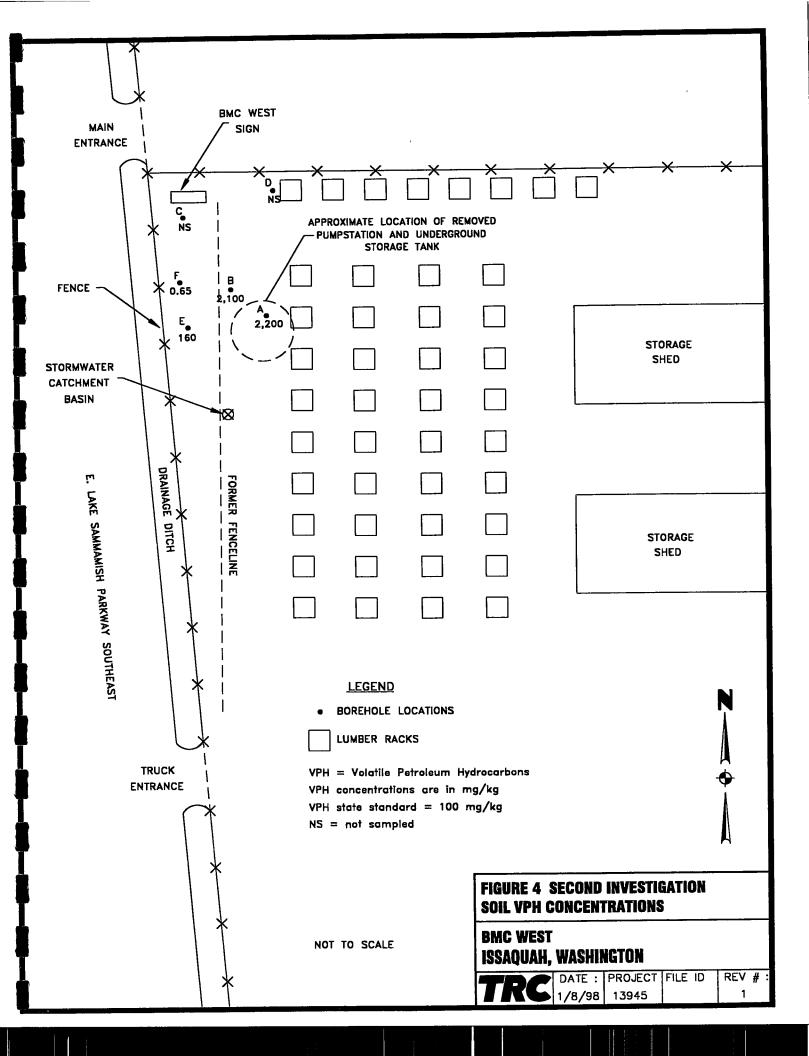
# Table 5Hnu Photoionization MeasurementsSecond TRC Site Investigation

ppm = parts per million

# Table 6Soil Analytical ResultsSecond TRC Site Investigation

	State Standard	BH-A, 2-4'	BH-B, 2-4'	BH-E, 2-4'	BH-F, 2-4'
Benzene	0.5	11	15	1.0	0.0047
Toluene	40	5.2	8.8	0.29	0.0019
Ethylbenzene	20	24	15	1.4	0.0035
Total Xylenes	20	280	110	4.1	0.0064
VPH	100	2200	2100	160	0.650

Units are mg/kg VPH = volatile petroleum hydrocarbons



Constituent	State Standard	BH-A	BH-B	BH-C	BH-D	BH-E	BH-F
Benzene	5	62	170	ND(1)	ND <sub>(1)</sub>	25	73
Toluene	40	96	110	ND(1)	1.0	4.6	6.0
Ethylbenzene	30	130	350	ND(1)	ND(1)	26	75
Total Xylenes	20	1300	1600	ND <sub>(2)</sub>	ND <sub>(2)</sub>	8.2	59
VPH	1000	5100	13000	ND(100)	ND(100)	870	1500

# Table 7Groundwater Analytical ResultsSecond TRC Site Investigation

Units are ug/l

VPH = volatile petroleum hydrocarbons

 $ND_{(1)}$  = not detected above method detection limit shown in parentheses, e.g., 1 ug/l.

### **Discussion of Results**

Concentrations detected during the second investigation (December 1997) were generally higher than concentrations detected during the June 1996 investigation. A possible explanation of why the current results show higher concentrations is likely due to different sampling methods. The 1996 investigation was intended to "screen" the site to evaluate if there was a potential release whereas the current investigation was intended more to quantify any petroleum contamination.

During the 1996 investigation, 2-foot long soil samples were obtained at 5 foot intervals (e.g., 5-7 feet bgs and 10-12 feet bgs) and composite samples submitted for analysis. During the recent investigation, discrete soil samples were collected from just above the water table and analyzed. This is where soil petroleum concentrations are expected to be the highest.

Groundwater samples during the 1996 investigation were obtained directly from inside hollowstem augers drilled to the total depth of the boreholes (up to 16.5 feet bgs). This may have averaged the groundwater petroleum concentrations across the borehole intervals. Groundwater samples obtained during the current investigation were obtained from a discrete interval near the top of the groundwater table.

## **Conclusions**

Investigation results indicate petroleum concentrations in the soil and groundwater above state standards are present at the site. However, petroleum contamination appears to be limited to an area near the former tank locations and concentrations are relatively low. There are no down gradient residences or water supply wells that may be impacted. The nearest surface water is the Issaquah River located approximately 1/3 mile away, a relatively large distance. In addition, the clayey soil at the site is expected to restrict the migration of contaminants.

#### **Recommendations**

Based on the site conditions, TRC believes that no further action is warranted at the site based on the following:

- The source of the petroleum contamination (i.e., the USTs) has been removed,
- The extent of soil and groundwater contamination appears to be limited,
- Detected petroleum concentrations are relatively low,
- The on-site soil consists of low permeability sandy clay and clayey sand which is expected to restrict the migration of petroleum contamination, and
- There are no registered water well users downgradient of the site which might be impacted.

If you have any questions or need additional information, please do not hesitate to contact Greg Groene or me at (303) 792-5555.

Sincerely,

# TRC ENVIRONMENTAL CORPORATION

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Matt Burrows, P.E. Principal Design Engineer

cc:	Ρ.	Street
	E.	Goebel

Attachments



# ATTACHMENT 1 LABORATORY RESULTS

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# TRC Environmental Corporation TEST RESULTS by SAMPLE

Sample: 02A BH5	Col	lected: 06/25/9	6 Mat	rix: WA	TER
Test Description	Method	Result 0	<u>Limit</u>	<u>Units</u>	Analyzed
BTEX	EPA 8020	7.3	1.0	ug/L	06/27/96
Benzene Toluene		1.5	1.0	ug/L	06/27/96
•••••		10	1.0	ug/L	06/27/96
Ethylbenzene Xylenes, Total		110	2.0	ug/L	06/27/96
SURROGATES, % Recovery p-Bromofluorobenzene		96.7	Min:	80	Max: 120
Sample: 02C BH5	Col	llected: 06/25/	96 Ma	trix: WA	ITER
Test Description	Method	<u>Result O</u>	<u>Limit</u>	<u>Units</u>	Analyzed
Petroleum Hydrocarbons, T/R	EPA 418.1	3.0	0.10	mg/L	06/28/96

Page 3

### TRC Environmental Corporation TEST RESULTS by SAMPLE

Sample: 03A BH1	Col	lected: 06/25/9	6 Mat	rix: WA	TER
Test Description	Method	<u>Result 0</u>	<u>Limit</u>	Units	Analyzed
BTEX	EPA 8020				
Benzene		3.0	1.0	ug/L	06/28/96
Toluene		2.3	1.0	ug/L	06/28/96
Ethylbenzene		2.9	1.0	ug/L	06/28/96
Xylenes, Total		. 3.8	2.0	ug/L	06/28/96
SURROGATES, % Recovery					
p-Bromofluorobenzene		100	Min:	80	Max: 120
Sample: 03C BH1	Col	lected: 06/25/9	96 Ma	trix: WA	TER
Test Description	Method	<u>Result Q</u>	<u>Limit</u>	<u>Units</u>	Analyzed
Petroleum Hydrocarbons, T/R	EPA 418.1	2.1	0.10	mg/L	06/28/96

# TRC Environmental Corporation TEST RESULTS by SAMPLE

Sample: 04A BH3	Collected: 06/25/96 Matrix: WATER					
Test Description	Method	<u>Result 0</u>	<u>Limit</u>	<u>Units</u>	Analyzed	
BTEX	EPA 8020	ND	1.0	ug/L	06/28/96	
Benzene		ND ND	1.0	ug/L	06/28/96	
Toluene Ethylbenzene		ND	1.0	ug/L	06/28/96	
Xylenes, Total		6.7	2.0	ug/L	06/28/96	
SURROGATES, % Recovery p-Bromofluorobenzene		100	Min:	80	Max: 120	
Sample: 04C BH3	Col	lected: 06/25/	96 Ma	trix: WA	TER	
Test Description	Method	Result 0	Limit	<u>Units</u>	Analyzed	
Petroleum Hydrocarbons, T/R	EPA 418.1	0.28	0.10	mg/L	06/28/96	

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# TRC Environmental Corporation TEST RESULTS by SAMPLE

Sample: 05A BH1	Collected: 06/25/96 Matrix: SOIL					
Test Description	Method	<u>Result 0</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	
BTEX	EPA 8020	10	1.3	ug/Kg-DRY	06/27/96	
Benzene Toluene		4.0	1.3	ug/Kg-DRY	06/27/96	
Ethylbenzene		6.9	1.3	ug/Kg-DRY	06/27/96	
Xylenes, Total		6.5	2.5	ug/Kg-DRY	06/27/96	
SURROGATES, % Recovery p-Bromofluorobenzene		92.1	Min:	70 Max	: 130	
Percent Moisture	ASTM D2216	20.5	0.1	WT8	07/01/96	
Petroleum Hydrocarbons, T/R	EPA 418.1M	99	4.2	mg/Kg-DRY	<b>06/2</b> 8/96	

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# TRC Environmental Corporation TEST RESULTS by SAMPLE

Sample: 06A BH2	Collected: 06/25/96 Matrix: SOIL					
Test Description	Method	<u>Result 0</u>	<u>Limit</u>	<u>Units</u>	Analyzed	
BTEX	EPA 8020	ND	1.3	ug/Kg-DRY	06/27/96	
Benzene Toluene		ND	1.3	ug/Kg-DRY	06/27/96	
Ethylbenzene		ND	1.3	ug/Kg-DRY	06/27/96	
Xylenes, Total		ND	2.6	ug/Kg-DRY	06/27/96	
SURROGATES, % Recovery p-Bromofluorobenzene		100	Min:	70 Max	: 130	
Percent Moisture	ASTM D2216	22.4	0.1	WTE	07/01/96	
Petroleum Hydrocarbons,T/R	EPA 418.1M	31	4.3	mg/Kg-DRY	06/28/96	

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# TRC Environmental Corporation TEST RESULTS by SAMPLE

Sample: 09A BH5	Collected: 06/25/96 Matrix: SOIL					
Test Description	Method	<u>Result</u>	<u>Limit</u>	<u>Units</u>	Analyzed	
BTEX Benzene	EPA 8020	76 D	6.2	ug/Kg-DRY	06/28/96	
Toluene		22 D 100 D	6.2 6.2	ug/Kg-DRY ug/Kg-DRY	06/28/96 06/28/96	
Ethylbenzene Xylenes, Total		790 D	12	ug/Kg-DRY	06/28/96	
SURROGATES, % Recovery p-Bromofluorobenzene		89.5	Min:	70 Max	: 130	
Percent Moisture	ASTM D2216	19.5	0.1	WT%	07/01/96	
Petroleum Hydrocarbons,T/R	EPA 418.1M	ND	4.1	mg/Kg-DRY	06/28/96	

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# TRC Environmental Corporation TEST RESULTS by SAMPLE

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Sample: 10A BH6	Collected: 06/25/96 Matrix: SOIL					
Test Description	Method	<u>Result Q</u>	<u>Lim_t</u>	<u>Units</u>	Analyzed	
BTEX Benzene Toluene Ethylbenzene	EPA 8020	28 2.2 8.0 31	1.3 1.3 1.3 2.6	ug/Kg-DRY ug/Kg-DRY ug/Kg-DRY ug/Kg-DRY	06/28/96 06/28/96 06/28/96 06/28/96	
Xylenes, Total SURROGATES, & Recovery p-Bromofluorobenzene		92.3	Min:	70 Max:	: 130	
Percent Moisture	ASTM D2216	22.2	0.1	WT%	07/01/96	
Petroleum Hydrocarb <b>o</b> ns,T/R	EPA 418.1M	44	4.2	mg/Kg-DRY	06/28/96	



RECEIVE DEC 23 1997, TRC 325 Interlocken Parkway Suite 200 Broomfield, CO 80021 (303) 469-8868 (800) 873-8707 FAX: (303) 469-5254

an Analytica Group company

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TRC Environmental Corporation 11 Inverness Drive East Englewood, CO 80112

Attn: Matt Burrows

Order #: 97-12-052 Date: 12/18/97 20:00 Work ID: BMC WEST - Issaquah, WA Date Received: 12/05/97 Date Completed: 12/18/97

#### SAMPLE IDENTIFICATION

Sample		Sample	
Number	Client Description	<u>Number Cli</u>	ent Description
01	BH-A	07 BH-	A,4'
02	BH-B	08 BH-	B,4'
03	BH-C	09 BH-	E,4'.
04	BH-D	10 BH-	F,4'
05	BH-E	11 TR]	P BLANK
06	BH-F		

Enclosed are the analytical results for the submitted sample(s). Please review the CASE NARRATIVE for a discussion of any data and/or quality control issues. A listing of data qualifiers and analytical codes is located on the TEST METHODOLOGIES page at the end of the report.

If you have any questions regarding the analyses, please feel free to call.

Sincerely,

Claire Toon Project Manager

## TRC Environmental Corporation CASE NARRATIVE

Samples were prepared and analyzed according to methods outlined in the following references:

 Test Methods for Evaluating Solid Waste, USEPA SW-846, Third Edition, Revision 3, January 1995.

Problems encountered with the analyses are discussed in the following narrative.

The BTEX analysis on soil samples BH-A,4' and BH-B,4' showed surrogate compound recovery that was above quality control limits. The recovery was biased high due to the presence of late eluting hydrocarbons which interferred with the quantitation of the surrogate. Secondary analyses confirmed this result.

The VPH analysis of soil sample BH-E,4' showed a similarly biased surrogate recovery for the reasons listed above. This result was also confirmed by secondary analysis.

SURROGATES, % Recovery

p-Bromofluorobenzene

# TRC Environmental Corporation TEST RESULTS by SAMPLE

Method EPA 8021B	<u>Result Q</u> 62 D 96 D 130 D 1300 D	<u>Limit</u> 10 10 20	<u>Units</u> ug/L ug/L ug/L		<u>Analyzed</u> 12/15/97
EPA 8021B	96 D 130 D	10 10	ug/L ug/L		12/15/97
	96 D 130 D	10 10	ug/L ug/L		12/12/2/
	130 D	10	ug/L		
			-		12/15/97
	1300 D	20			12/15/97
			ug/L		12/15/97
001 50 / NDT	107	Min:	76	Max:	112
60135/AF1	5100 D	1000	ug/L		12/15/97
	93.3	Min:	70	Max:	130
Coll	.ected: 12/04/	97 Mai	trix: WA	ter	
Method	<u>Result 0</u>	<u>Limit</u>	<u>Units</u>		<u>Analyzed</u>
EPA 8021B					
	170 D	10	-		12/15/97
	110 D	10	-		12/15/97
	350 D	10			12/15/97
	<b>1600</b> D	20	ug/L		12/15/97
	96.7	Min:	76	Max:	112
8015B/API	13000 D	1000	ug/L		12/15/97
	117	Min:	70	Max:	130
Col	lected: 12/04/	'97 Ma	trix: WA	TER	
Method	<u>Result O</u>	<u>Limit</u>	<u>Units</u>		<u>Analyzed</u>
EPA 8021B	1	1 0	uα/τ.		12/15/97
			-		12/15/9
					12/15/97
					12/15/9
	ND	2.0	цдул		
	107	Min:	76	Max	: 112
8015B/API	ND	100	ug/L		12/15/9
	Method EPA 8021B 8015B/API Col Method EPA 8021B	8015B/API 5100 D 93.3 Collected: 12/04/3 <u>Method</u> <u>Result O</u> EPA 8021B 170 D 110 D 350 D 1600 D 96.7 8015B/API 13000 D 117 Collected: 12/04/ <u>Method</u> <u>Result O</u> EPA 8021B ND ND ND ND ND ND ND	8015B/API 5100 D 1000 93.3 Min: Collected: 12/04/97 Max Method Result O Limit EPA 8021B 170 D 10 100 10 350 D 10 100 350 D 10 100 10 350 D 10 100 D 20 96.7 Min: 8015B/API 13000 D 1000 117 Min: Collected: 12/04/97 Max Method Result O Limit EPA 8021B ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 2.0 107 Min:	8015E/API       5100 D       1000 ug/L         93.3       Min:       70         Collected:       12/04/97       Matrix:       WA         Method       Result O       Limit       Units         EPA 8021B       170 D       10       ug/L         110 D       10       ug/L         350 D       10       ug/L         1600 D       20       ug/L         1600 D       20       ug/L         1600 D       20       ug/L         1600 D       1000       ug/L         1600 D       1000       ug/L         1600 D       20       ug/L         1600 D       1000       ug/L         117       Min:       76         8015B/API       13000 D       1000       ug/L         117       Min:       70         Collected:       12/04/97       Matrix:       WZ         Method       Result O       Limit       Units         EPA 8021B       ND       1.0       ug/L         ND       1.0       ug/L       ND       1.0         ND       1.0       ug/L       ND       1.0       ug/L	8015B/API       5100 D       1000 ug/L         93.3       Min:       70       Max:         Collected:       12/04/97       Matrix:       WATER         Method       Result O       Limit       Units         EPA 8021B       170 D       10 ug/L         110 D       10 ug/L         1500 D       10 ug/L         110 D       10 ug/L         1500 D       10 ug/L         1500 D       10 ug/L         1500 D       10 ug/L         1600 D       20 ug/L         96.7       Min:       76         8015B/API       96.7       Min:       70         13000 D       1000 ug/L       117       Min:       70         Method       Result O       Limit       Units         EPA 8021B       ND       1.0 ug/L       ND         ND       1.0 ug/L       ND       1.0 ug/L         ND       1.0 ug/L       1.

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Max:

TRC Environmental Corporation TEST RESULTS by SAMPLE

Order # 97-12-052 ANALYTICA, INC.

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Sample: 04A BH-D	Col	lected: 12/04/9	7 Mat	rix: WA	rer	
Test Description	Method	<u>Result</u> 0	<u>Limit</u>	<u>Units</u>	A	nalyzed
BTEX	EPA 8021B		1.0	ug/L	1	2/15/97
Benzene		ND	1.0	ug/L		2/15/97
Toluene		1.0		ug/L		2/15/97
Ethylbenzene		ND	1.0	ug/L ug/L		2/15/97
Xylenes, Total		ND	2.0	ug/ L	-	2/13/5
SURROGATES, % Recovery p-Bromofluorobenzene		103	Min:	76	Max:	112
Volatile Pet Hydrocarbons VPH	8015B/API	ND	100	ug/L	:	12/15/97
SURROGATES, % Recovery p-Bromofluorobenzene		100	Min:	70	Max:	130
Sample: 05A BH-B	Col	lected: 12/04/9	7 Mat	rix: WA	TER	
Test Description	Method	<u>Result 0</u>	<u>Limit</u>	<u>Units</u>	Å	Analyzed
BTEX	EPA 8021B					12/15/97
Benzene		<b>2</b> 5	1.0	ug/L		
Toluene		4.6	1.0	ug/L		12/15/97
Ethylbenzene		26	1.0	ug/L		12/15/97
Xylenes, Total		8.2	2.0	ug/L		12/15/97
SURROGATES, % Recovery p-Bromofluorobenzene		93.3	Min:	76	Max:	112
Volatile Pet Hydrocarbons VPH	8015B/API	870	100	ug/L		12/15/97
SURROGATES, % Recovery p-Bromofluorobenzene		100	Min:	70	Max:	130
Sample: 06A BH-F	Co	llected: 12/04/	97 Ma	trix: W	ATER	
Test Description	Method	Result 0	<u>Limit</u>	<u>Units</u>		<u>Analyzed</u>

Test Description	Method	<u>Result 0</u>	Limit	Units	Allaryzed
BTEX Benzene Toluene Ethylbenzene Xylenes, Total	EPA 8021B	73 6.0 75 59	1.0 1.0 1.0 2.0	ug/L ug/L ug/L ug/L	12/15/97 12/15/97 12/15/97 12/15/97
SURROGATES, % Recovery p-Bromofluorobenzene		90.0	Min:	76	Max: 112
Volatile Pet Hydrocarbons VPH	8015B/API	1500	100	ug/L	12/15/97
SURROGATES, % Recovery p-Bromofluorobenzene		103	Min:	70	Max: 130

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Page 4

# TRC Environmental Corporation TEST RESULTS by SAMPLE

Sample: 07A BH-A,4'

Collected: 12/04/97 Matrix: SOIL

Test Description	Method	<u>Result</u> 0	<u>Limit</u>	Units	<u>Analyzed</u>
BTEX Benzene Toluene Ethylbenzene Xylenes, Total	EPA 8021B	11000 D 5200 D 24000 D 280000 D	1600 1600 1600 3200	ug/Kg-DRY ug/Kg-DRY ug/Kg-DRY ug/Kg-DRY	12/16/97 12/16/97 12/16/97 12/16/97
SURROGATES, % Recovery p-Bromofluorobenzene Percent Moisture	ASTM D2216	123 * <b>2</b> 1.9	Min: 0.1	61 Max: WT%	114 12/10/97
Volatile Pet Hydrocarbons VPH	8015B/API	2200000 D	160000	ug/Kg-DRY	12/16/97
SURROGATES, % Recovery p-Bromofluorobenzene		104	Min:	50 Max	: 150
	<b>-</b> - 1	1	/07 Ma	trix: SOIL	

Sample: 08A BH-B,4'

Collected: 12/04/97 Matrix: SOIL

BTEX EPA 8021B						
Benzene150Toluene88Ethylbenzene150Xylenes, Total1100	300 000	D D	1600 1600 1600 3200	ug/Kg- ug/Kg- ug/Kg- ug/Kg-	DRY DRY	12/16/97 12/16/97 12/16/97 12/16/97
Percent Moisture ASTM D2216 2:	117 2.0	*	Min: 0.1	61 WT%	Max:	114 12/10/97
VPH 2100 SURROGATES, % Recovery	000 1 <b>0</b> 4	D	160000 Min:	ug/Kg- 50	DRY Max:	12/16/97 150

Sample: 09A BH-E,4'

Collected: 12/04/97 Matrix: SOIL

Test Description	Method	<u>Result 0</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>
BTEX Benzene Toluene Ethylbenzene Xylenes, Total	EPA 8021B	1000 D 290 D 1400 D 4100 D	130 130 130 270	ug/Kg-DRY ug/Kg-DRY ug/Kg-DRY ug/Kg-DRY	12/16/97 12/16/97 12/16/97 12/16/97
SURROGATES, % Recovery p-Bromofluorobenzene Percent Moisture	ASTM D2216	97.5 6.60	Min: 0.1	61 Max: WT%	: 114 12/10/97
Volatile Pet Hydrocarbons VPH	8015B/API	<b>16</b> 0000 D	13000	ug/Kg-DRY	12/16/97
SURROGATES, % Recovery p-Bromofluorobenzene		175 <b>*</b>	Min:	50 Max	: 150

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# TRC Environmental Corporation TEST RESULTS by SAMPLE

Sample: 10A BH-F,4'

Collected: 12/04/97 Matrix: SOIL

.

Test Description	Method	<u>Result 0</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>
BTEX Benzene Toluene Ethylbenzene Xylenes, Total	EPA 8021B	4.7 1.9 3.5 6.4	1.3 1.3 1.3 2.6	ug/Kg-DRY ug/Kg-DRY ug/Kg-DRY ug/Kg-DRY	12/17/97 12/17/97 12/17/97 12/17/97 12/17/97
SURROGATES, % Recovery p-Bromofluorobenzene Percent Moisture	ASTM D2216	110 24.2	Min: 0.1	61 Max: WT%	: 114 12/10/97
Volatile Pet Hydrocarbons VPH	8015B/API	650	130	ug/Kg-DRY	12/17/97
SURROGATES, % Recovery p-Bromofluorobenzene		113	Min:	50 Max	: 150

Sample: 11A TRIP BLANK

Collected: 12/04/97 Matrix: WATER

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Test Description	Method	<u>Result 0</u>	<u>Limit</u>	<u>Units</u>	1	Analyzed
BTEX	EPA 8021B					12/15/97
Benzene		ND	1.0	ug/L		• •
Toluene		ND	1.0	ug/L		12/15/97
Ethylbenzene		ND	1.0	ug/L		12/15/97
Xylenes, Total		ND	2.0	ug/L	:	12/15/97
SURROGATES, % Recovery p-Bromofluorobenzene		103	Min:	76	Max:	112
Volatile Pet Hydrocarbons VPH	8015B/API	ND	100	ug/L		12/15/97
SURROGATES, % Recovery p-Bromofluorobenzene		100	Min:	70	Max:	130

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TRC Environmental Corporation TEST METHODOLOGIES

THE FOLLOWING CODES APPLY TO THE ANALYTICAL REPORT

RESULT field... ND = not detected at the reported limit NA = analyte not applicable (see case narrative/methods for discussion) Q (qualifier) field... GENERAL: \* = Recovery or %RPD outside method specifications H = value is estimated due to analysis run outside EPA holding times E = reported concentration is above the instrument calibration range D = analyte was diluted to bring within instrument calibration range or to remove matrix interferences ORGANIC ANALYSIS DATA QUALIFIERS: B = analyte was detected in the laboratory method blank J = analyte was detected above the instrument detection limit (IDL) but below the analytical reporting limit (CRDL) . • INORGANIC ANALYSIS DATA QUALIFIERS: B = analyte was detected above the instrument detection limit (IDL) but below the analytical reporting limit (CRDL) W = post digestion spike did not meet criteria (80-120%) S = reported value determined by the Method of Standard Additions

TRC Environmental Corporation TEST METHODOLOGIES

METHOD: 8020

BTEX\_S: BTEX (GCPID)

METHOD: 8020

BTEX\_W: BTEX (GCPID)

- VPH\_S: VOLATILE PETROLEUM HYDROCARBONS METHOD: mod 8015/API gasoline Analysis of volatile gasoline components. 5 grams of sample are sparged per method 5030A and analyzed by GC-FID using chromatographic conditions outlined in the American Petroleum Institute method for gasoline and SW846 8015 modified for gasoline. The sample is quantitated against known concentrations of gasoline standards.
- VPH\_W: VOLATILE PETROLEUM HYDROCARBONS METHOD: mod 8015/API gasoline Analysis of volatile gasoline components. 5 mLs of sample are sparged per method 5030A and analyzed by GC-FID using chromatographic conditions outlined in the American Petroleum Institute method for gasoline and SW846 8015 modified for gasoline. The sample is quantitated against known concentrations of gasoline standards.

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PMOIST: PERCENT MOISTURE

METHOD: ASTM D2216

## TRC Environmental Corporation DATES REPORT

Matrix: WATER Sample: 01A BH-A Extracted Analyzed TCLP date Received Collected Method 12/15/97 Analysis NA 12/05/97 12/04/97 EPA 8021B BTEX 12/15/97 NA 12/05/97 12/04/97 8015B/API Volatile Pet Hydrocarbons Matrix: WATER Sample: 02A BH-B Analyzed Extracted TCLP date Received **Collected** Method <u>Analysis</u> 12/15/97 NA 12/05/97 12/04/97 EPA 8021B BTEX 12/15/97 NA 12/05/97 12/04/97 8015B/API Volatile Pet Hydrocarbons Matrix: WATER Sample: 03A BH-C Analyzed Extracted TCLP date Received **Collected** Method Analysis 12/15/97 NA 12/05/97 12/04/97 EPA 8021B BTEX 12/15/97 12/05/97 NA 12/04/97 8015B/API Volatile Pet Hydrocarbons •• Matrix: WATER Sample: 04A BH-D Analyzed Extracted TCLP date Collected Received Method Analysis 12/15/97 NA 12/05/97 12/04/97 EPA 8021B BTEX 12/15/97 NA 12/04/97 12/05/97 8015B/API Volatile Pet Hydrocarbons Matrix: WATER Sample: 05A BH-E Analyzed Extracted TCLP date Received **Collected** Method Analysis 12/15/97 12/05/97 NA 12/04/97 EPA 8021B BTEX 12/15/97 MA 12/05/97 12/04/97 Volatile Pet Hydrocarbons 8015B/API Matrix: WATER Sample: 06A BH-F Analyzed Extracted TCLP date Received **Collected** Method Analysis 12/15/97 NA 12/04/97 12/05/97 EPA 8021B BTEX 12/15/97 NA 12/05/97 12/04/97 8015B/API Volatile Pet Hydrocarbons Matrix: SOIL Sample: 07A BH-A,4' Analyzed Extracted TCLP date Received **Collected** <u>Analysis</u> Method 12/16/97 NA 12/05/97 12/04/97 EPA 80218 BTEX 12/10/97 NA 12/05/97 ASTM D2216 12/04/97 Percent Moisture 12/16/97 NA 12/05/97 12/04/97 8015B/API Volatile Pet Hydrocarbons Matrix: SOIL Sample: 08A BH-B,4' Analyzed Extracted TCLP date Received Collected Method Analysis 12/16/97 NA 12/05/97 EPA 8021B 12/04/97 BTEX 12/10/97 NA 12/05/97 12/04/97 ASTM D2216 Percent Moisture 12/16/97 NA

12/04/97

8015B/API

Volatile Pet Hydrocarbons

12/05/97

TRC Environmental Corporation DATES REPORT

# Sample: 09A BH-E,4'

#### Matrix: SOIL

Matrix: SOIL

Matrix: WATER

		Collected	Received	TCLP date	Extracted	Analyzed
Analysis	Method		12/05/97	NA		12/16/97
BTEX	EPA 8021B	12/04/97	12/03/3/			12/10/97
	ASTM D2216	12/04/97	12/05/97	NA		
Percent Moisture	•	12/04/97	12/05/97	NA		12/16/97
Volatile Pet Hydrocarbons	8015B/API	12/04/37				

## Sample: 10A BH-F,4'

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<u>Analysis</u>	<u>Method</u>	<u>Collected</u>	<u>Received</u>	<u>TCLP date</u>	<u>Extracted</u>	<u>Analyzed</u>
BTEX	EPA 8021B	12/04/97	12/05/97	NA		12/17/97
Percent Moisture	ASTM D2216	12/04/97	12/05/97	NA		12/10/97
Volatile Pet Hydrocarbons	8015B/API	12/04/97	12/05/97	NA		12/17/97
Percent Moisture Volatile Pet Hydrocarbons				NA		

# Sample: 11A TRIP BLANK

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
	EPA 8021B	12/04/97	12/05/97	NA		12/15/97
BTEX		• •	12/05/97	NA	• •	12/15/97
Volatile Pet Hydrocarbons	8015B/API	12/04/97	12103/31			

# ATTACHMENT 2 CORRESPONDENCE

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TRC

02/23/98 10:37	,
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	Dantal T Al	2100 A 200	2472	S.E. 30th Issaquah Wash. 98027				
			Addres	NE ( NM 1 0. 21	NE 16 MH			
•					alante a secondaria and			
			(10) SHIET T					
(3	) PROPOSED USE: Domestic B	Industrial 🗋 Municipal 🗍	(AU) WEAL	cribe by color, character, size of	I material and stru	ICTUTE		
	irrigadon 🗋	Tert Well Li Other L	show thickness stratum penetro	of aguiters and the kind and hause and hause with at least one entry fo	sure of the materi r each change of	forme		
(4	) TYPE OF WORK: Owner's num	n one)	San Charles and Charles	MATERIAL	FROM	T		
•	New well 28. 2	lethod: Dug 🖸 Bored 🖸			0	<b></b>		
		Rotary E Jetted			<u> </u>	+		
		u 8 Jackar			8			
(	b) <b>DIMENSIONS:</b> Diameter	mpleted well			11			
-					13			
(	) CONSTRUCTION DETAILS:				28	11		
	Casing installed: 8 Diam.	WREE     Nume     Date     2472.3.8.3000     Software     2472.3.8.3000     Software     2472.3.8.3000     Software     Wee     Wee	119	11				
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	Perforations: Yrs D No 🖰					1		
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	CAPTORATIONS FROM			· · · · · · · · · · · · · · · · · · ·				
	perforations from		·			<b>-</b>		
						+		
	Screens: Yes D No D			·		+		
	Terne	Model No.	1			1		
	Diam,	from St. to minimum ft.				<u> </u>		
1	Diem. Biol size automo					<u> </u>		
	Gravel packed: yes I No S	Bire of gravel:						
	Gravel placed from							
	Surface seal: Yes & No [] 7	o what depth?20 ft		DEFFIVE		1		
	traterial used in stalBontol	a valort Yes () No fi		N.L.		<u> </u>		
	Type of water?	Depth of strate			·	4		
	Method of sealing strate off			001	0.027	+		
	7) PUMP: Manufacturer's NameJBO	uzzi.		DEDAREMENT OF FL	OFFICE			
	Type:2S4C			OUTHWEST REGICHA		+		
. (	8) WATEB LEVELS: Land-sur	ace elevation	1	- Suumer-		T		
5	Laus level 130	op of well Date				+		
	rtesian pressureibs. per se	wart inch Date				-		
	Artesian water is controlled by.	(Cap. valve. etc.)	I		~	+		
-	(9) WELL TESTS: Drawdown	is amount water level is .		5-2 17 0	Jester 5-2			
	field: Cal/min. with ft	drawdown after hrs.						
	et EF		true to the	best of my knowledge and	belief.			
	the data (time taken as pare with	pump surned off) (water level		· ·				
	Property and Provide State or WARENORTS         (1) OWNEE: Mean Daniel T. Anderson         (2) OWNEE: Mean Daniel T. Anderson         (3) OWNEE: Mean Daniel T. Anderson         (4) LOCATION OF WELL County King         (3) PROPOSED USE: Demonsto & mbdWalam error         (4) TYPE OF WORK: Organization error         (5) DIMENSIONS: Demonsto & Medical State         (6) ONNER: Organization of the State         (7) FURPE OF WORK: Organization of the State         (8) CONSTRUCTION DETAILS:         (9) ONNER: Data to the State         (9) ONNER: Data to the State         (9) CONSTRUCTION DETAILS:         Casing installed: 8 - Death of comparised wall.200 - 4         (9) CONSTRUCTION DETAILS:         Casing installed: 8 - Death of comparised wall.200 - 4         State of proforeitons         State of and the state         State of and the context wall of the state         State of and the state         State of and the state         State of proforeitons         State of proforeitons         State of proforeitons         State of proforeitons         S	hardson Well Drill	ing Co.	print				
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# Building Materials Holding Corporation

720 Park Boulevard, Suite 200 P. O. Box 70006 (83707-0106) Boise, Idaho 83712-7714 Telephone: (208) 331-4300 • Fax: (208) 387-4367

BMC West Corporation, BMCW SouthCentral, L.P. and BMC Construction, Inc. are wholly-owned subsidiaries of Building Materials Holding Corporation

May 13, 2003

Paul S. Street Sr. Vice President, Chief Administrative Officer, General Counsel and Corporate Secretary Direct Dial: (208) 331-4381 E-Mail: street@bmhc.com

State of Washington Department of Ecology 3190 160<sup>th</sup> Avenue SE Bellevue, WA 98008-5452

Re: 5210 E. Lake Sammamish Parkway SE, Issaquah Underground Storage Tank #10246

This letter is in reference to your request for additional information relating to site cleanup activities on the above referenced property. BMC West Corporation hired TRC Environmental Corporation to conduct an Environmental Investigation of this property. You were provided a copy of the results of this investigation on April 6, 1998.

TRC's recommendation was that no further cleanup action was needed at the site and the BMC West complied with this recommendation.

If you require additional information on this property, please contact me.

Sincerely,

Paul S. Street, Senior Vice President, Chief Administrative Officer, General Counsel and Corporate Secretary

cc: Stan Wilson Jim Lee



### STATE OF WASHINGTON

# DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

April 22, 2003

BMC West Building Materials 720 Park Boulevard, Suite 200 Boise, ID 83712-7764

To Whom It May Concern:

Re: Former Henry Bacon Building, 5210 E. Lake Sammamish Parkway SE, Issaquah Underground Storage Tank #10246 Requesting additional information relating to site cleanup activities

The Department of Ecology (Ecology) is currently reviewing site files related to leaking underground storage tank sites. Because some of the cleanup levels for petroleum products have changed due to recent amendments to the Model Toxics Control Act, Washington Administrative Code Chapter 173-340, this site may qualify for a change in cleanup status. Currently the status of this site is "Cleanup Started". If you have completed this cleanup and can provide Ecology with additional information, we may be able to change the status of this site to "Reported Cleaned Up". Listed below is information Ecology maintains in the file:

- Environmental Investigation Results, prepared by TRC Environmental Corporation / April 6, 1998.
- Site Assessment Report, prepared by TRC Environmental Corporation / July 8, 1996.
- Underground Storage Tank Notice of Confirmed Release / April 9, 1998.
- Environmental Report Tracking System (ERTS) report / N29424 / April 9, 1998.

This release was reported to Ecology on April 9, 1998 during construction of a storm water catchment basin. Three gasoline underground storage tanks and pump station were removed in 1989. Soil and groundwater petroleum contamination remains in the area of the former pump station which exceeds the Model Toxic Control Act (MTCA) Method A cleanup levels for gasoline and BTEX. Ecology would like to know if there are soil and groundwater reports available for review.

BMC West Building Materials April 22, 2003 Page 2

Ecology is requesting any updated information you may have on the cleanup activities at this site by May 22, 2003. Please submit the documents to John Bails at the Department of Ecology, Northwest Regional Office-Toxic Cleanup Program, 3190 160<sup>th</sup> Avenue SE, Bellevue, WA 98008-5452. Ecology's objective is to facilitate the cleanup process at the site, with the goal of moving the site into a "Reported Cleaned Up" or "No Further Action" status with regard to the above mentioned petroleum release.

Your site is eligible for the Voluntary Cleanup Program. The Voluntary Cleanup Program is a fee-based service that Ecology offers to parties who want a detailed review of independent cleanup activities conducted at their site, and who want a determination documented by a letter. The Voluntary Cleanup Program offers a range of opportunities for assistance on completing the cleanup of your site, including the review of plans and proposals. Eventually, after the successful review of a completed cleanup, the result is a "No Further Action" letter. The "No Further Action" letter may be useful in the future to a buyer, seller, or financial institution in the event of a property transaction.

A "Reported Cleaned Up" status is not the same as a "No Further Action" status. It does not involve a detailed review by Ecology. The "Reported Cleaned Up" status may be based on the opinion of the site owner, consultant, or contractor as stated in the reports submitted to Ecology.

Your reports will be kept in the Central Files of the Northwest Regional Office of Ecology for public review by appointment only. Appointments can be made to review files by calling the Northwest Regional Office Records Center at (425) 649-7190.

If you have questions about any of the information presented in this letter, please contact John Bails at (425) 649-7099.

Sincerely,

anie MeDargel

Carrie McDougal Toxics Cleanup Program Department of Ecology

CM:cm Enclosure

cc: John Bails, State of Washington Department of Ecology, NWRO-TCP

Appendix B – Geophysical Report



Underground Detection Services, Inc.

> 6809 North 56th Ave. Glendale, AZ 85301

623/939-4690, tel 602/955-3146, fax 888/822-4999, toll-free April 19, 2013

James Georgis Zipper Geo Associates, LLC 19023 36th Ave W, Suite D Lynnwood, WA 98036

**Dear James:** 

This is a report on the equipment, procedures, and results of the geophysical survey performed at BMC Lumber, 5210 East Lake Sammamish Pkwy SE, Issaquah, WA. The survey was performed on April 17, 2013.

There were several areas that were to have soil borings and one area of a former UST to be surveyed with the GPR.

The equipment that was used for the survey included, but was not limited GSSI Sir 3000 System ground penetrating radar (GPR) with 270 MHz antenna and pipe/cable locators.

The GPR utilizes high frequency radio waves to probe the subsurface. A radio wave is emitted from the antenna and travels through the soil, if there is an anomaly below the antenna; the radio wave is reflected back. The data that is collected is displayed in real time, through a color display.

The data that is produced is a cross section of the geology directly below the antenna. The top of the data represents the ground surface while the bottom of the page is a reading depth of the equipment. The data is collected and displayed from left to right, with left being the beginning and right being the end of the particular survey line. Anomalies typically appear white on a color screen.

The depth of the signal penetration is dependent upon geological factors beyond the control of the surveyor. Conductive soils, clays, and saturated soils, do not allow the GPR signal to penetrate as deeply as less resistive sandy soil. The pipe/cable locators were used around each proposed soil boring. Utility lines that were found were marked on the surface with marking paint. A Public gas meter was observed on an east building. The utility company should be informed that the line had not been marked and should be marked before any drilling occurs on site.

The GPR survey was setup on the west side of the lumber yard where the reported UST had been removed. The antenna was pushed across the top of the surface where the soil borings were marked. Data was collected continually and examined on site. The data did show an area approximately 25' X 25' that appears to have been excavated. The area was marked on the surface with marking pain. An area directly north of the excavation was surveyed with the GPR. An unknown anomaly appears in the data. The anomaly could be a pipe associated with the drainage system. The anomaly was marked on the surface with marking paint.

UST's, excavations, and pipes/cables in the survey area may not have been located due to material, depth of pipe, the UST's collapsed and filled with native soil, reinforced concrete, and UST's that were not within the geophysical survey area.

Respectfully,

Rihand G. Jun

Richard A. Lund



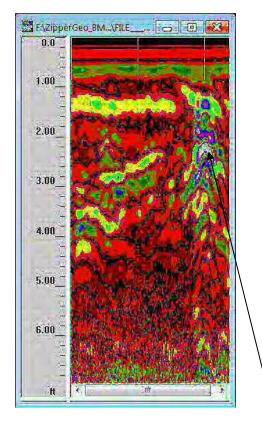
Possible UST pit



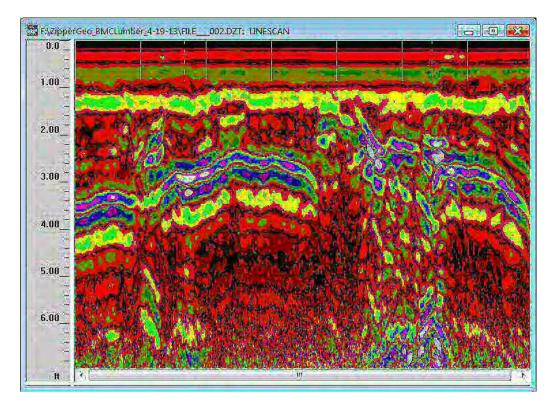
Unknown anomaly north of UST pit



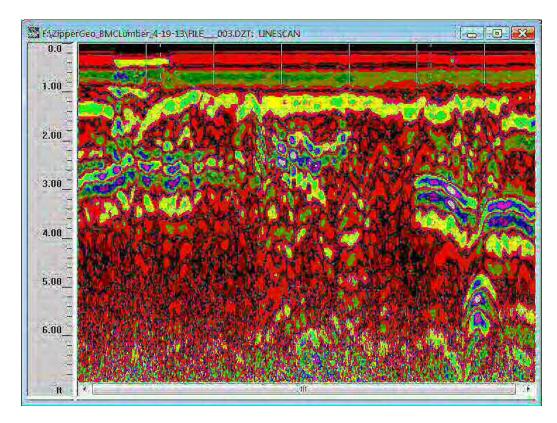
Electrical lines along perimeter fence



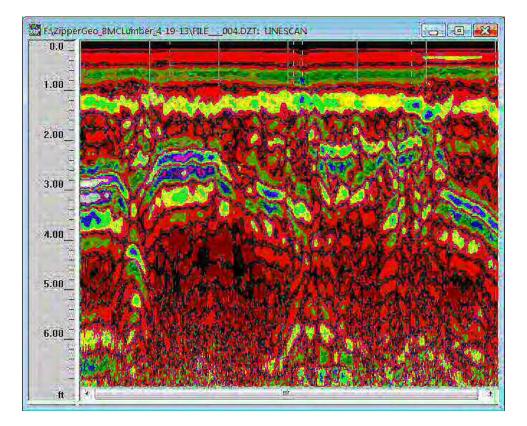
GPR Data; Catch basin, South to North, drain line



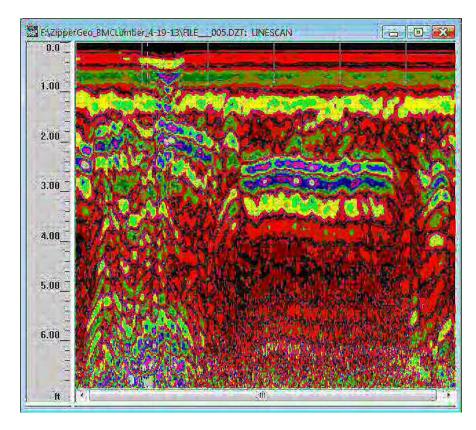
GPR Data; UST oit, East to West



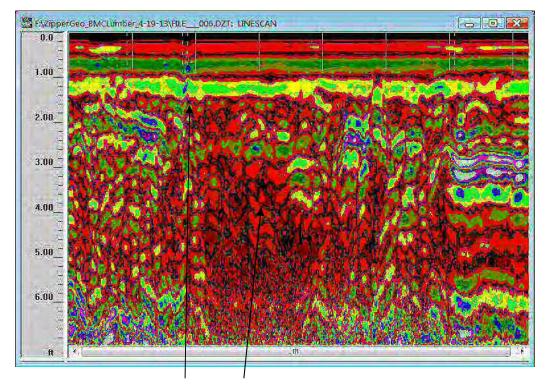
GPR Data; UST pit, W-E



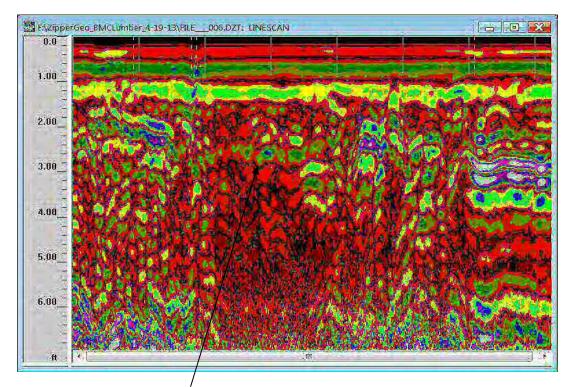
GPR Data; UST pit, S-N



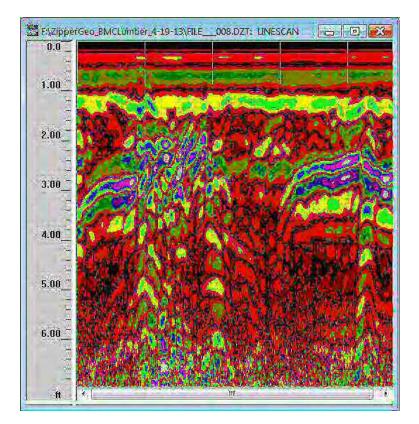
GPR Data; UST pit, N-S



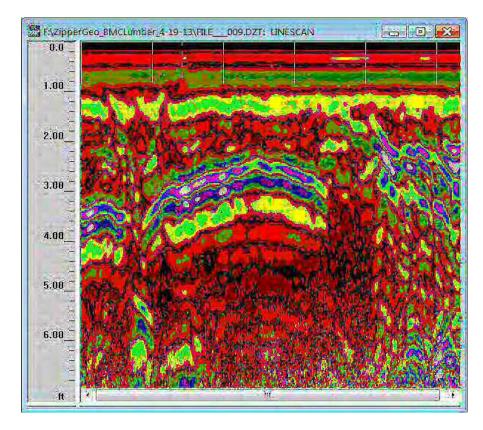
GPR Data; UST pit, S-N, soil boring, excavation



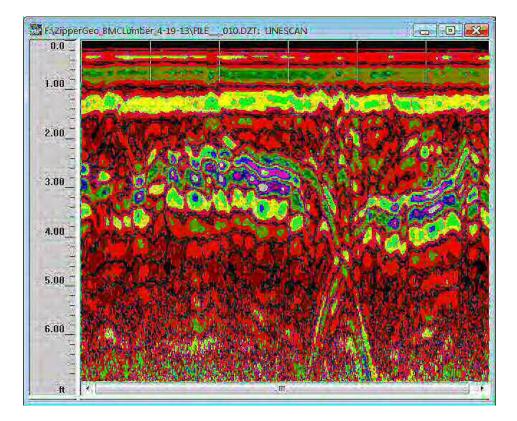
GPR Data; UST pit, S-N, excavation



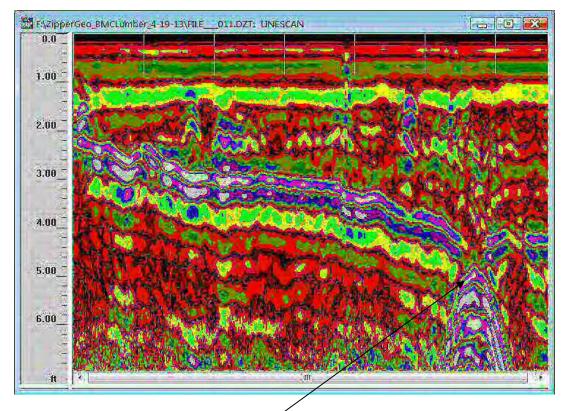
GPR Data; UST pit, W-E



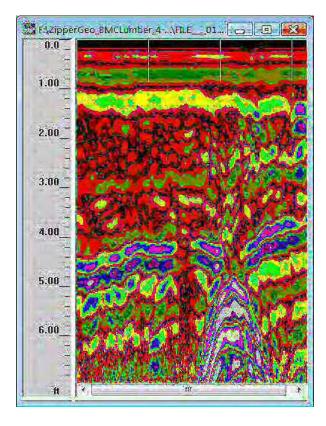
GPR Data; UST pit, E-W



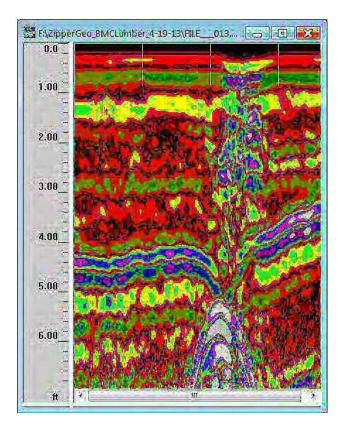
GPR Data; South of UST pit, W-E



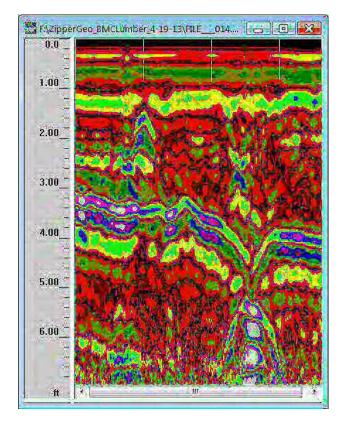
GPR Data; North of UST pit, W-E, unknown anomaly



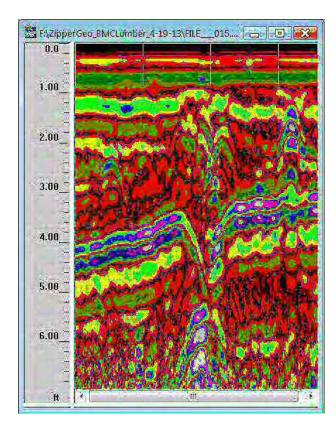
GPR Data; North of UST pit, E-W



GPR Data; North of UST pit, W-E

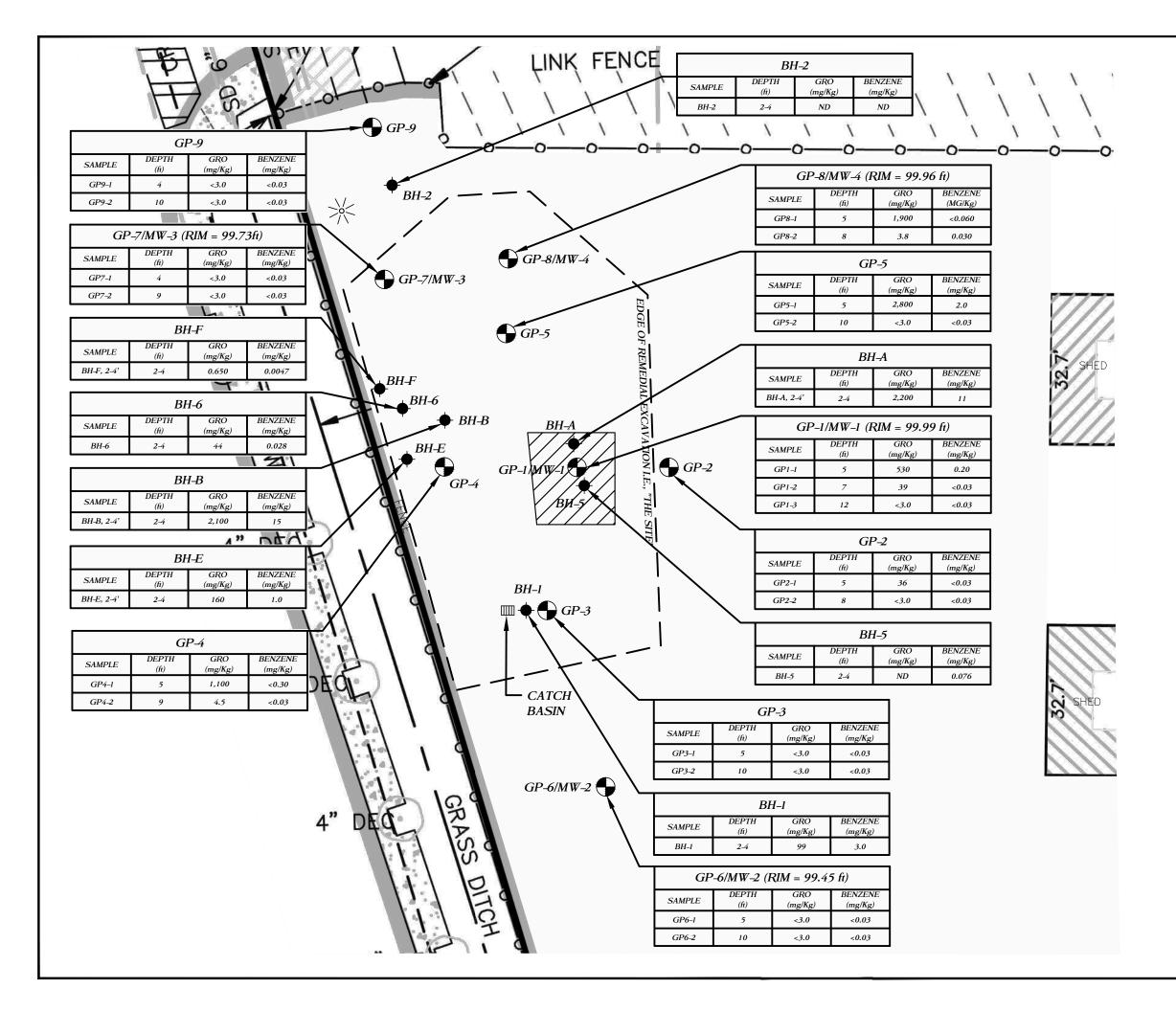


GPR Data; North of UST pit, E-W



GPR Data; North of UST pit, W-E

Appendix C – Supplemental Subsurface Investigation Figures



#### LEGEND

GP-1/MW-1 (RIM = 99.99 fi)	GROUNDWA WELL NUMI APPROXIMA GROUNDWA	ATE LOCATION ATER MONITC UMENT RIM	DRING N.	
-ф- ВН-1	1998 TRC IN LOCATIONS APPROXIM	WANCED DUR NVESTIGATION SARE ATE, REFEREN T TO SCALE.	N. ALL	
*	PINK NAIL W	FIC BENCHMA VITH WASHER ELEVATION = .	2	Т
	UNDERGRO CAVITY IDE PENETRATI APPROXIMA FORMER US	ATE LOCATION DUND STORAG NTIFIED BY GI NG RADAR SU ATE LOCATION STs AND PUMI D BY TRC (199	GE TANK ROUND JRVEY, J N OF P ISLAN	AND
	"THE SITE" I	PER WAC 173	-340-200	)
	20	0	10	20

 BMC WEST

 5210 East Lake Sammamish Parkway SE

 Issaquah, Washington

 SUMMARY OF REMEDIAL INVESTIGATION

 SOIL ANALYTICAL RESULTS

 DATE: FEBRUARY 2018

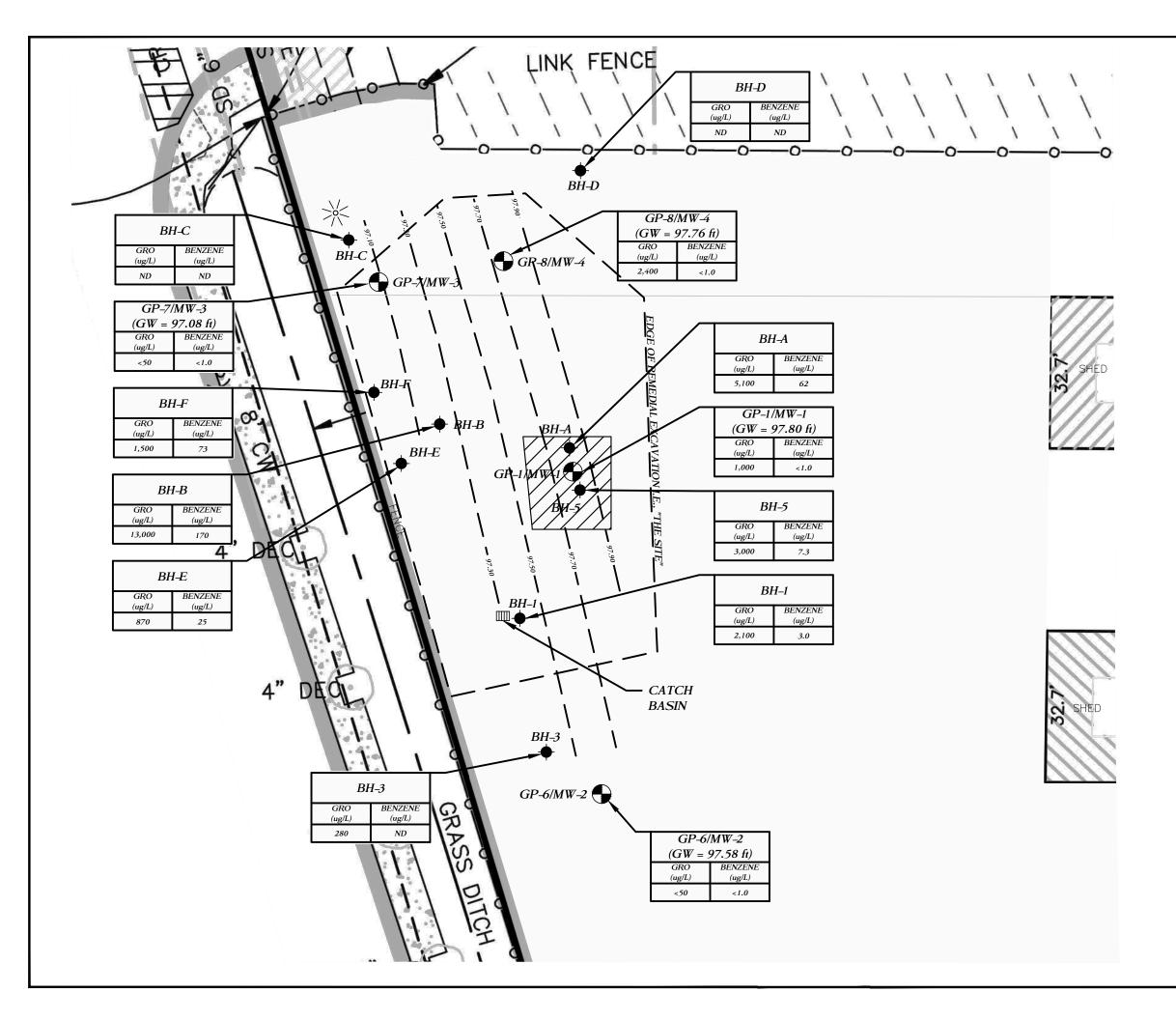
 Job No. 1099.25

 Zipper Geo Associates, LLC

 19023 36th Ave. W., Suite D
 FIGURE

 Lynnwood, WA
 SHT. 1 of 1

SCALE IN FEET



#### LEGEND

GP-1/MW-1 (GW = 97.80 ft)	DIRECT PUSH/GROUNDWATER MONITORING WELL NUMBER AND APPROXIMATE LOCATION. GROUNDWATER ELEVATION ON 5/8/2013 IN FEET.
-∲- ВН-1	BORING ADVANCED DURING 1998 TRC INVESTIGATION. ALL LOCATIONS ARE APPROXIMATE, REFERENCE FIGURE NOT TO SCALE.
*	SITE SPECIFIC BENCHMARK PK NAIL WITH WASHER ASSUMED ELEVATION = 100 FEET
<b>9</b> 7.60 <b></b>	ESTIMATED GROUNDWATER SURFACE CONTOUR WITH ELEVATION IN FEET
	APPROXIMATE LOCATION OF UNDERGROUND STORAGE TANK CAVITY IDENTIFIED BY GROUND PENETRATING RADAR SURVEY
	"THE SITE" PER WAC 173-340-200
	N

20 0	10	20				
SCALE IN FEET						
BMC WEST						
5210 East Lake Sammamis Issaquah, Washin	-					
	-					
SUMMARY OF REMEDIAL						
GROUNDWATER ANALYT	ICAL RESU	LTS				
DATE: FEBRUARY 2018	Job No.	1099.22				
Zipper Geo Associates, LLC	FIGURE	1				
19023 36th Ave. W.,Suite D Lynnwood, WA	SHT. 1 of 1	4				
1 1						

Appendix D – Supplemental Subsurface Investigation Exploration Logs

<u>Bori</u>	ng Location: See Figure 2, Site ar	nd Exploration Plan	Drilling Cor	npany:	Cascade Drilling	Bore Hole Dia.: 2-1/4"		
<u>Top</u>	Elevation: -		Drilling Met	thod:	Direct Push	<u>Hammer T</u>	ype: NA	GP1
Date	<u>e Drilled:</u> 4/25/2013		<u>Drill Rig:</u>		Track	Logged by	<u>r:</u> JPG	
Depth (ft)	SOIL DESC The stratification lines represent between soil types. The transiti report text and appendices t	the approximate boundaries on may be gradual. Refer to	Sample Number SAMPLES Recovery	Ground Water	Field Head Space	Sheen	Laboratory	Analysis
- 0 -	3 Inches of ASPHALT (Fill) Gray-brown, moist to wet, sandy Moderate probe resistance. Slig 2 feet. (Fill) Dark brown, wet, SILT, some fi Easily probed. Moderate hydro (Possible Relic Topsoil) Brown grading to gray, wet grad SAND, trace clay. Easily probed noted to about 8 feet. (Alluvium) Gray, saturated, silty SAND. Easily hydrocarbon odor noted. (Alluviu	ht hydrocarbon odor noted at ne sand, trace fine roots. carbon odor noted. ing to saturated, silty fine . Moderate hydrocarbon odor sily probed. No obvious im)	GP I 6 GP I 6 GP I 6 GP I 6		PID@5'=660ppm PID@9.5'=0ppm PID@12'=0ppm	NT NT NT NT	TPH, BTEX, M TPH, BTEX, M TPH, BTEX, M	ITBE, LEAD
20-	Light gray, saturated, SILT. Ec hydrocarbon odor noted. (Pose Exploration completed at 15 fee Groundwater observed at appro Well tag # BIC-221.	sible Volcanic Ash)						
	SAMPLE LEGEND Retained portion of 2-inch direct push sample NOTES PID = Photoionization detector readings in parts/million NT = Not tested	GROUNDWATER LEGEND		Z C A BORING				1099.22 GP1

Bori	ng Location: See Figure 2, Site an	d Exploration Plan	Drilling Cor	npany:	Cascade Drilling	Bore Hole Dia.: 2-1/4"		
Тор	Elevation: -		Drilling Met	thod:	Direct Push	<u>Hammer T</u>	ype: NA	GP2
Date	<u>e Drilled:</u> 4/25/2013		Drill Rig:		Track	Logged by	<u>r:</u> JPG	
	SOIL DESC	RIPTION		er				
Depth (ft)	The stratification lines represent between soil types. The transiti report text and appendices f	on may be gradual. Refer to	Sample Number SAMPLES Recovery	Ground Water	Field Head Space	Sheen	Laboratory	Analysis
-0-	3 Inches of ASPHALT (Fill)	;	/					
	Gray-brown, moist to wet, sandy Moderate probe resistance. Sligl 2 feet. (Fill)	ht hydrocarbon odor noted at						
- 5 -	Dark brown, wet, SILT, some fin probed. Slight hydrocarbon odor (Possible Relic Topsoil)	GP 2-1 <b>I</b> 6		PID@5'=0ppm	NT	TPH, BTEX, N	ITBE, LEAD	
	Gray, saturated, silty fine SAND, trace clay. Easily probed. No ob (Alluvium)		4/25/13	PID@7'=0ppm	NT	TPH, BTEX, N		
	Gray, saturated, clayey SILT. Ec hydrocarbon odor noted. (Alluviu	isily probed. No obvious im)	GP <b>I</b> 6		oppin -oppin	NT	ι τι τι, στελ, Ν	TIDE, LEAU
10-	Gray, saturated, SAND, some si hydrocarbon odor noted. (Alluviu							
	_ 				PID@12'=0ppm	NT		
15-	Light gray, saturated, SILT, some wood. Easily probed. No bvious hydrocarbon odor noted. (Possible Volcanic Ash)							
	Exploration completed at 15 feet Groundwater observed at approx	: . ximately 6 feet ATD.						
20 -								
25 -								
25	SAMPLE LEGEND	GROUNDWATER LEGEND						
	Retained portion of 2-inch	Clean Sand						
	direct push sample	Bentonite						
		Grout/Concrete						
	NOTES Screened Casing					BMC We		
	PID = Photoionization detector Blank Casing				2510 East Lake			ay SE
	readings in parts/million NT = Not tested	Groundwater level at time of drilling (ATD) or on date of measurement		Date.	4/29/2013	saquah, '	WA Project No.:	1099.22
		measurement.					BORING	
					pper Geo Assoc 023 36th Ave. W, S Lynnwood, WA	Suite D	LOG:	GP2
							Page 1	oti

Bori	Boring Location: See Figure 2, Site and Exploration Plan				Bore Hole Dia.: 2-1/4"			
Тор	Elevation: -		Drilling Met	hod:	Direct Push	<u>Hammer T</u>	ype: NA	GP3
Date	<u>e Drilled:</u> 4/25/2013		<u>Drill Rig:</u>		Track	Logged by	<u>r:</u> JPG	
Depth (ft)	SOIL DESC The stratification lines represent between soil types. The transiti report text and appendices f	the approximate boundaries on may be gradual. Refer to	Sample Number SAMPLES Recovery	Ground Water	Field Head Space	Sheen	Laboratory	Analysis
- 0 -	3 Inches of ASPHALT (Fill) Gray-brown, wet to saturated, G Moderate probe resistance. No noted. (Fill) Gray, saturated, gravely SAND, Slight hydrocarbon odor noted to	obvious hydrocarbon odor  some silt. Easily probed.	GP T	4/25/13				
			GP <b>I</b> 6	/13	PID@5'=0ppm PID@8'=0ppm	NT	TPH, BTEX, N	/TBE, LEAD
- 10 -							ТРН, ВТЕХ, М	ITBE, LEAD
- 15 -	Exploration completed at 15 feet . Groundwater observed at approximately 4 feet ATD.				PID@13'=0ppm	NT		
25 -								
	SAMPLE LEGEND Retained portion of 2-inch direct push sample <u>NOTES</u> PID = Photoionization detector readings in parts/million NT = Not tested	GROUNDWATER LEGEND         Image: Second state sta		Zi c A BORING			1099.22 GP3	

Borir	ng Location: See Figure 2, Site ar	nd Exploration Plan	Drilling Company: Cascade Drilling B		Bore Hole Dia.: 2-1/4"			
Тор	Elevation: -		Drilling Met	hod:	Direct Push	<u>Hammer T</u>	ype: NA	GP4
Date	Drilled: 4/25/2013		<u>Drill Rig:</u>		Track	Logged by	<u>:</u> JPG	
	SOIL DESC	CRIPTION		<u> </u>				
Depth (ft)	The stratification lines represent between soil types. The transiti report text and appendices t	on may be gradual. Refer to	Sample Number SAMPLES Recovery	Ground Water	Field Head Space	Sheen	Laboratory	Analysis
-0-	2-1/2 Inches of ASPHALT (Fill)	;						
	Gray-brown, moist, gravelly SAN SAND. Moderate probe resistan noted. (Fill)	ND, some silt to silty, gravelly						
- 5 -	Gray-brown, wet, SILT, some fi Easily probed. Moderate hydrod (Possible Relic Topsoil)	carbon odor noted.	GP 4-1 <b>I</b> 6	▼				
	Gray, wet grading to saturated, t probed. Moderate hydrocarbon o		4-1 📥 0	4/25/13	PID@5'=310ppm	NT	TPH, BTEX, N	ITBE, LEAD
	Gray, saturated, clayey SILT. Ec hydrocarbon odor noted. (Alluviu		GP 4-2 <b>I</b> 6		PID@9'=0ppm	NT	TPH, BTEX, N	ITBE, LEAD
10-	Gray, saturated, silty SAND. Eas hydrocarbon odor noted. (Alluviu	sily probed. No obvious ım)						
					PID@12'=0ppm	NT		
	/ Wood. No obvious hydrocarbor	· · · · · · · · · · · · · · · · · · ·						
	<ul> <li>Light gray, saturated, SILT, trace wood. Easily probed. No obvious hydrocarbon odor noted. (Possible Volcanic Ash)</li> </ul>							
15-	Exploration completed at 15 feet . Groundwater observed at approximately 5 feet ATD.							
20-								
25		000110000000000000000000000000000000000						
	SAMPLE LEGEND							
╽┘	Retained portion of 2-inch	Clean Sand						
	direct push sample	Bentonite						
		Grout/Concrete						
	NOTES	Screened Casing				BMC We		65
	PID = Photoionization detector	<ul> <li>Blank Casing</li> <li>Groundwater level at</li> </ul>			2510 East Lake			ay SE
	readings in parts/million					saquah, '		1000.00
	NT = Not tested	time of drilling (ATD) or on date of measurement.		Date:	4/29/2013		Project No.:	1099.22
					oper Geo Assoc 023 36th Ave. W, S Lynnwood, WA	Suite D	BORING LOG:	GP4
							Page 1	of 1

Bori	ng Location: See Figure 2, Site ar	nd Expl	oration Plan	Drilling Cor	npany:	Cascade Drilling	Bore Hole Dia.: 2-1/4"		
Тор	Elevation: -			Drilling Met	thod:	Direct Push	<u>Hammer T</u>	ype: NA	GP5
Date	<u>e Drilled:</u> 4/25/2013			<u>Drill Rig:</u>		Track	Logged by	<u>r:</u> JPG	
Depth (ft)	SOIL DESC The stratification lines represent between soil types. The transiti report text and appendices f	t the ap	proximate boundaries / be gradual. Refer to	Sample Number SAMPLES Recovery	Ground Water	Field Head Space	Sheen	Laboratory	Analysis
- 0 -					-				
	3 Inches of ASPHALT (Fill) Gray-brown, moist, silty, gravelly resistance. No obvious hydrocar								
- 5 -	Gray-brown, wet, SILT, some fi Easily probed. Moderate hydrod (Possible Relic Topsoil) Gray, saturated, fine sandy SILT probed. Moderate hydrocarbon o	carbon  T to silty	odor noted. ´ y fine SAND. Easily	GP <b>I</b> 6	4/25/13	PID@5'=720ppm PID@7'=95ppm	NT	TPH, BTEX, N	/TBE, LEAD
	Gray, saturated, clayey SILT to obvious hydrocarbon odor note	silty C	LAY. Easily probed. No			r iber ->5ppm			
10-	Gray, saturated, SAND, some silt. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)			GP 5-2 I 6			NT	TPH, BTEX, N	ITBE, LEAD
						PID@12'=0ppm	NT		
15-	Light gray, saturated, SILT, some wood. Easily probed. No obvious hydrocarbon odor noted. (Possible Volcanic Ash)								
	Exploration completed at 15 feet Groundwater observed at appro		ly 5 feet ATD						
20-									
25 -									
-	SAMPLE LEGEND Retained portion of 2-inch direct push sample	<u>GRC</u>	UNDWATER LEGEND Clean Sand Bentonite						
			Grout/Concrete						
	NOTES		Screened Casing				BMC We	st	
	PID = Photoionization detector		Blank Casing			2510 East Lake			ay SE
	readings in parts/million NT = Not tested	11/2/12	Groundwater level at time of drilling (ATD)				saquah,		1099.22
		2/12	or on date of measurement.						1077.22
						oper Geo Assoc 023 36th Ave. W, S Lynnwood, WA	Suite D	BORING LOG:	GP5
						_,		Page 1	l of 1

Bori	ng Location: See Figure 2, Site ar	nd Exploration Plan			Bore Hole Dia.: 2-1/4"			
Тор	Elevation: -		Drilling Met	thod:	Direct Push	<u>Hammer T</u>	ype: NA	GP6
Date	<u>e Drilled:</u> 4/25/2013		<u>Drill Rig:</u>		Track	Logged by	<u>:</u> JPG	
Depth (ft)	SOIL DESC The stratification lines represent between soil types. The transiti report text and appendices f	the approximate boundaries on may be gradual. Refer to	Sample Number SAMPLES Recovery	Ground Water	Field Head Space	Sheen	Laboratory	Analysis
- 5 -	4 Inches of ASPHALT (Fill) Gray-brown, moist, gravelly SAN resistance. No obvious hydrocar Gray-brown, wet, clayey SILT, Easily probed. No obvious hydr (Possible Relic Topsoil) Gray, saturated, silty SAND. Eas hydrocarbon odor noted. (Alluvit / Gray, saturated, clayey SILT. E / hydrocarbon odor noted. (Alluvit	bon odor noted. (Fill) trace fine sand and roots. rocarbon odor noted. sily probed. No obvious um)	GP <b>I</b> 6		PID@4'=0ppm	NT NT	TPH, BTEX, N	/TBE, LEAD
10-	<ul> <li>/ hydrocarbon odor noted. (Alluv</li> <li>/ Gray, saturated, clayey SILT. Eq</li> <li>/ hydrocarbon odor noted. (Alluv</li> <li>/ Light gray, saturated, SILT. Ea</li> <li>/ hydrocarbon odor noted. (Poss</li> <li>/ Gray, saturated, well graded S/</li> <li>No obvious hydrocarbon odor noter</li> <li>Exploration completed at 15 fee</li> <li>Groundwater observed at appro</li> <li>Well tag 3 BIC-222.</li> </ul>	asily probed. No obvious ium) sily probed. No obvious ible Volcanic Ash) AND, trace silt. Easily probed. t.			PID@10'=0ppm	NT	TPH, BTEX, N	ITBE, LEAD
25 -								
.	<u>SAMPLE LEGEND</u> Retained portion of 2-inch direct push sample	GROUNDWATER LEGEND Clean Sand Bentonite Grout/Concrete						
	NOTES	Screened Casing				BMC We		
PID = Photoionization detector Blank Casing					2510 East Lake			ay SE
	readings in parts/million	<ul> <li>Groundwater level at time of drilling (ATD)</li> <li>or on date of</li> <li>measurement</li> </ul>				saquah, '		
	NT = Not tested	<sup>1/2</sup> / <sub>12</sub> or on date of		Date:	4/29/2013		Project No.:	1099.22
		∾ measurement.			oper Geo Assoc 023 36th Ave. W, S Lynnwood, WA	Suite D	BORING LOG:	GP6
1							Page 1	IOTI

Borir	ng Location: See Figure 2, Site and Exploration Plan	Drilling Cor	npanv.	Cascade Drilling	Bore Hole Dia.: 2-1/4"		
	Elevation: -	Drilling Method: Direct Push		Hammer Type: NA		GP7	
	<u>e Drilled:</u> 4/25/2013	Drill Rig:		Track	Logged b		GI /
	SOIL DESCRIPTION		,				
Depth (ft)	The stratification lines represent the approximate boundaries between soil types. The transition may be gradual. Refer to report text and appendices for additional information.	Sample Number SAMPLES Recovery	Ground Water	Field Head Space	Sheen	Laboratory	Analysis
-0-	🔪 3 Inches of ASPHALT (Fill)	,					
	Gray-brown, moist, gravelly SAND to sandy GRAVEL, some silt. Moderate probe resistance. No obvious hydrocarbon odor noted. (Fill)		88				
- 5 -	Gray-brown, wet, clayey SILT, trace fine sand and roots. Easily probed. No obvious hydrocarbon odor noted. (Possible Relic Topsoil)	GP <b>I</b> 6	4/25/1	PID@4'=0ppm	NT	TPH, BTEX, N	ITBE, LEAD
$\square$	Gray, saturated, silty SAND. Easily probed. No obvious	1	5/13		NT		
$\vdash$	Gray, saturated, SILT, some sand and clay. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)	1		PID@6'=0ppm	NT		
	Gray, saturated, sand, some silt. Easily probed. No obvious			PID@7.5"=0ppm	NT		
10-	· · · · · · · · · · · · · · · · · · ·	, <sup>GP</sup> , <b>Ⅰ</b> 6		PID@9'=0ppm	NT	TPH, BTEX, N	ITBE, LEAD
	Gray, saturated, silty SAND. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)						
	Interbedded, gray, saturated, silty SAND and fine to medium SAND, some silt. No obvious hydrocarbon odor noted. (Alluvium)			PID@12'=0ppm	NT		
- 15 -	Exploration completed at 15 feet. Groundwater observed at approximately 4.5 feet ATD. Well tag 3 BIC-223.						
20 -							
$\vdash$							
25	SAMPLE LEGEND GROUNDWATER LEGEND	1		1	I	1	
1	Retained portion of 2-inch 💮 Clean Sand						
	direct push sample 🔀 Bentonite						
	Grout/Concrete						
1	NOTES Screened Casing			F	BMC We	est	
	PID = Photoionization detector Blank Casing			2510 East Lake			av SE
1	readings in parts/million 🗶 Groundwater level at				saquah,		,
1	NT = Not tested NT = Not tes		Date:	4/29/2013		Project No.:	1099.22
	measurement.			pper Geo Assoc	ciates	BORING	
			19023 36th Ave. W, S		Suite D	LOG:	GP7
				Lynnwood, WA	l l	Page	l of 1

Tape Elevation:       Otiling Method:       Direct Push       Hammer Type: NA       GP8         Out Drilled:       4/26/2013       Drill Rig.       Trock       Logged by:       JPG         Interstruttification lines represent the approximate boundaries in problem. Nancitom may be gradual. Refer to report text and appendices for additional information.       age of the struttification lines represent the approximate boundaries in the struttification lines represent the approximate boundaries in the struttification lines represent the approximate boundaries in the struttification lines represent the struttif	Borir	<u>q Location:</u> See Figure 2, Site and Exploration Plan	Drilling Company: Cascade Drilling			Bore Hole Dia.: 2-1/4"		
Date Drilled:     4/26/2013     Drill Hot:     Track     Logged by:     JPG       3     SOLD DESCRIPTION							GP8	
Image: Statistication lines represent the approximate boundaries between soil types. The transition may be gradual. Refer to expert text and oppendices for additional information.       Image: Statistication lines represent the approximate boundaries between soil types. The transition may be gradual. Refer to experiment the approximate boundaries between soil types. The transition may be gradual. Refer to experiment.       Image: Statistication lines represent the approximate boundaries between soil types. The transition may be gradual. Refer to experiment.       Image: Statistication lines represent the approximate boundaries between soil types. The transition may be gradual. Refer to experiment the approximate boundaries between soil types. The transition may be gradual. Refer to experiment the approximate boundaries by the approximate boundaries by the approximate bytes. The transition of the approximate bytes.       Image: Statistication lines represent the approximate boundaries bytes. The transition of the approximate bytes. The transition of the approximate bytes.       Image: Statistication lines represent the approximate boundaries bytes. The transition of the approximate bytes. The transitex approximate bytes. The transition of the approximate								GIU
Image: Statistication lines represent the approximate boundaries between soil types. The transition may be gradual. Refer to expert text and oppendices for additional information.       Image: Statistication lines represent the approximate boundaries between soil types. The transition may be gradual. Refer to experiment the approximate boundaries between soil types. The transition may be gradual. Refer to experiment.       Image: Statistication lines represent the approximate boundaries between soil types. The transition may be gradual. Refer to experiment.       Image: Statistication lines represent the approximate boundaries between soil types. The transition may be gradual. Refer to experiment the approximate boundaries between soil types. The transition may be gradual. Refer to experiment the approximate boundaries by the approximate boundaries by the approximate bytes. The transition of the approximate bytes.       Image: Statistication lines represent the approximate boundaries bytes. The transition of the approximate bytes. The transition of the approximate bytes.       Image: Statistication lines represent the approximate boundaries bytes. The transition of the approximate bytes. The transitex approximate bytes. The transition of the approximate		SOIL DESCRIPTION						
3 Inches of ASPHALT (Fill)         Grey Anown, mets, growelly SAND to sandy GRAVEL, some noted. (Fill)         5         Brown, wet, claywy SLT, trace fine sond and roots. Easily probed. Mediatrib hydrocarbon odor noted.         Grey, saturated, sity SAND to SAND, with sit. Easily probed.         Grey, saturated, sity SAND to SAND, with sit. Easily probed.         Grey, saturated, sity SAND to SAND, with sit. Easily probed.         Grey, saturated, fine samdy SLT, trace clay. Easily probed.         Grey, saturated, fine samdy SLT, trace clay. Easily probed.         Grey, saturated, fine samdy SLT, trace clay. Easily probed.         Grey, saturated.	Depth (ft)	The stratification lines represent the approximate boundaries between soil types. The transition may be gradual. Refer to	Sample Number SAMPLES Recovery	Ground Wate	Field Head Space	Sheen	Laboratory	Analysis
site Moderate problemation address frequency of the second of an other second of the second of th	-0-	、3 Inches of ASPHALT (Fill)	/					
5       probed. Moderate hydrocarbon odor noted. (Possible Relic Topsci)       PID@7.5"=80ppm       NT         10       Groy, saturated, silly SAND to SAND, with sill. Easily probed. Sight hydrocarbon odor noted to depth of about 8 feet. (Alluvium)       PID@7.5"=80ppm       NT       TPH, BTEX, MTBE, LEAD         10       Groy, saturated, fine sandy SILT, trace clay, Easily probed. No obvious hydrocarbon odor noted. (Alluvium)       NT       PID@10"=0ppm       NT         11       Groy, saturated, SAND, some sill. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)       NT       PID@13"=0ppm       NT         12       Group, saturated, SAND, some sill. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)       NT       PID@13"=0ppm       NT         15       Exploration completed at 15 feet. Groundwater observed at approximately 4.5 feet ATD.       PID@213"=0ppm       NT         20       Image: Saturated at the saturate and th		Gray-brown, moist, gravelly SAND to sandy GRAVEL, some silt. Moderate probe resistance. No obvious hydrocarbon odor			× ×			
Slight hydrocarbon odor noted to depth of about 8 feet.       Gr J I 6       PID@7.5'=80ppm       NT       TPH, BTEX, MTBE, LEAD         10       Gray, saturated, fine sandy SILT, trace clay, Easily probed. No obvious hydrocarbon odor noted. (Alluvium)       NT       PID@7.5'=80ppm       NT         Gray, saturated, fine sandy SILT, trace clay, Easily probed. No obvious hydrocarbon odor noted. (Alluvium)       NT       PID@713'=0ppm       NT         Gray, saturated, SAND, some silt. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)       NT       PID@713'=0ppm       NT         25       SAMPLE LEGEND       GROUNDWATER LEGEND       NT       PID@713'=0ppm       NT         26       Sate of the same sitt Easily probed. No obvious hydrocarbon odor noted. (Alluvium)       NT       PID@713'=0ppm       NT         27       Sate of the same sitt. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)       NT       PID@713'=0ppm       NT         28       SAMPLE LEGEND       GROUNDWATER LEGEND       Image: Same sitted	- 5 -	probed. Moderate hydrocarbon odor noted. (Possible Relic Topsoil)	GP <b>I</b> 6	4/26/1	PID@4.5'=950ppm	NT	TPH, BTEX, N	/TBE, LEAD
Gray, saturated, fine sandy SILT, vace (cby. Easily probed. No obvious hydrocarbon odor neted. (Alluvium)       NT         Gray, saturated, SAND, some silt. Easily probed. No obvious hydrocarbon odor neted. (Alluvium)       NT         Is       Exploration completed at 15 feet. Groundwater observed at approximately 4.5 feet ATD. Well tog # BIC-224       NT         20       In the same silt. Easily probed. No obvious hydrocarbon odor neted. (Alluvium)       NT         21       SAMPLE LEGEND I Retained portion of 2-inch direct push sample       GROUNDWATER LEGEND Clean Sand Bentonite       Same Sand Sand         22       Image: Same Silt,		Slight hydrocarbon odor noted to depth of about 8 feet.	GP 8-2 <b>I</b> 6	ω.	PID@7.5"=80ppm	NT	TPH, BTEX, N	ITBE, LEAD
abvious hydrocarbon odor noted. (Alluvium)         Gray, saturated, SAND, some silt. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)         15         Exploration completed at 15 feet. Groundwater observed at approximately 4.5 feet ATD.         Well tag # BIC-224         20         21         22         SAMPLE LEGEND         Grout/Concrete         NOTES         PID = Photoionization detector readings in parts/million         NT = Not tested         NT = Not tested             Same NT = Not tested             PID = Photoionization detector             readings in parts/million             NT = Not tested             PID = Photoionization detector             Image: Super-Gree Associates 19023 36th Are. W, Suite D             BORING LOG:	10-	Come entropy fine entropy SUIT to a start Factoria (194			PID@10'=0ppm	NT		
hydrocarbon odor noted. (Alluvium) 15 Exploration completed at 15 feet. Groundwater observed at approximately 4.5 feet ATD. Well tag # BIC-224 20 20 20 20 20 21 SAMPLE LEGEND I Retained portion of 2-inch direct push sample Grout/Concrete Grout/Concrete Grout/Concrete Grout/Concrete Screened Casing PID = Photoionization detector readings in parts/million NT = Not tested T  Screened Casing D  Groundwater level at time of drilling (ATD) or on date of measurement. T  Screened MA  Date: 4/29/2013 Project No.: 1099.22 Zipper Geo Associates 19023 36th Ave. W, Suite D  LOG: GP8								
Exploration completed at 15 feet.         Groundwater observed at approximately 4.5 feet ATD.         Well tag # BIC-224         20         21         22         SAMPLE LEGEND         GROUNDWATER LEGEND         Retained portion of 2-inch direct push sample         Groundwater level at time of drilling (ATD) or on date of measurement.         NT = Not tested         Simple Retained portion detector readings in parts/million         NT = Not tested         Simple Retained portion of 2-inch direct push sample         Groundwater level at time of drilling (ATD) or on date of measurement.         Blank Casing         Date: 4/29/2013         Project No.: 1099.22         Zipper Geo Associates 19023 36th Ave. W, Suite D         Lorg:       GP8					PID@13'=0ppm	NT		
25       SAMPLE LEGEND       GROUNDWATER LEGEND         25       SAMPLE LEGEND       GROUNDWATER LEGEND         I Retained portion of 2-inch direct push sample       Grout/Concrete         Grout/Concrete       Grout/Concrete         Screened Casing       Blank Casing         PID = Photoionization detector readings in parts/million NT = Not tested       ▼         Groundwater level at time of drilling (ATD) or on date of measurement.       ▼         Screened Casing       Blank Casing         Blank Casing       Screened Casing         PID = Photoionization detector readings in parts/million       ▼         Groundwater level at time of drilling (ATD) or on date of measurement.       ▼         Screened Casing       Blank Casing         Blank Casing       Blank Casing         Screened Casing       Blank Casing         Screened Casing       Blank Casing         Blank Casing       Screened Casing         Blank Casing       Blank Casing         Blank Casing       Blank Casing         Screened Casing       Blank Casing         Date: 4/29/2013       Project No.: 1099.22         Zipper Geo Associates       BORING         LOG:       CP8	- 15 -	Groundwater observed at approximately 4.5 feet ATD.						
SAMPLE LEGEND       GROUNDWATER LEGEND         I Retained portion of 2-inch direct push sample       Image: Clean Sand         Image: Direct push sample       Bentonite         Image: Direct push sample       Image: Direct push sample         Image: Direct push sample       Grout/Concrete         Image: Direct push sample       Image: Direct push sample         Image: Direct push sample </td <td>20 -</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	20 -							
SAMPLE LEGEND       GROUNDWATER LEGEND         I Retained portion of 2-inch direct push sample       Image: Clean Sand         Image: Direct push sample       Bentonite         Image: Direct push sample       Image: Direct push sample         Image: Direct push sample       Grout/Concrete         Image: Direct push sample       Image: Direct push sample         Image: Direct push sample </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
SAMPLE LEGEND       GROUNDWATER LEGEND         I Retained portion of 2-inch direct push sample       Image: Clean Sand         Image: Direct push sample       Bentonite         Image: Direct push sample       Image: Direct push sample         Image: Direct push sample       Grout/Concrete         Image: Direct push sample       Image: Direct push sample         Image: Direct push sample </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
Retained portion of 2-inch direct push sample       Image: Clean Sand         Motest and the construction of 2-inch direct push sample       Bentonite         Grout/Concrete       Grout/Concrete         NOTES       Screened Casing         PID = Photoionization detector readings in parts/million       Blank Casing         Torm of drilling (ATD) or on date of measurement.       Groundwater level at time of drilling (ATD) or on date of measurement.         NT = Not tested       Top or on date of measurement.	25	SAMPLE LEGEND GROUNDWATER LEGEND	1			I	<u> </u>	
PID = Photoionization detector readings in parts/million       Blank Casing       2510 East Lake Samammish Parkway SE         NT = Not tested       Image: Second structure       Image: Second structure       Image: Second structure         NT = Not tested       Image: Second structure       Image: Second structure       Image: Second structure         NT = Not tested       Image: Second structure       Image: Second structure       Image: Second structure         Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure         Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure         Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure         Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure         Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure         Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure         Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure         Image: Second structure       Image: Second structure       Image: Second structure       I	_	Retained portion of 2-inch   Image: Clean Sand     direct push sample   Image: Clean Sand						
readings in parts/million NT = Not tested T = Not test		NOTES Screened Casing			E	BMC We	est	
Interview     Inter		PID = Photoionization detector Blank Casing		:	2510 East Lake	Samam	mish Parkw	ay SE
NT = Not tested     Image: Second state of measurement.     Date: 4/29/2013     Project No.:     1099.22       Zipper Geo Associates     19023 36th Ave. W, Suite D     BORING     GP8				L	lss	saquah,	WA	
Zipper Geo Associates 19023 36th Ave. W, Suite D Lynnwood WA		NT = Not tested $\frac{12}{2}$ or on date of		Date:	4/29/2013		Project No.:	1099.22
Lynnwood, WA Page 1 of 1		∾ measurement.			023 36th Ave. W, S	Suite D		GP8
					Lynnwood, WA	·	Page	l of 1

<u>Bori</u> ı	ng Location: See Figure 2, Site ar	nd Exploration Plan	Drilling Company: Cascade Drilling		Bore Hole Dia.: 2-1/4"			
Тор	Elevation: -		Drilling Met	hod:	Direct Push	<u>Hammer T</u>	ype: NA	GP9
Date	Drilled: 4/26/2013		<u>Drill Rig:</u>		Track	Logged by	<u>:</u> JPG	
Depth (ft)	SOIL DESC The stratification lines represent between soil types. The transiti report text and appendices t	t the approximate boundaries ion may be gradual. Refer to	Sample Number SAMPLES Recovery	Ground Water	Field Head Space	Sheen	Laboratory	Analysis
- 0	3 Inches of ASPHALT (Fill) Gray-brown, moist, gravelly SAN resistance. No obvious hydrocarbo Gray-brown, wet, SILT, some of probed. No obvious hydrocarbo (Possible Relic Topsoil) Gray, saturated, silty fine SAND obvious hydrocarbon odor noted Gray, saturated, SILT, some fine probed. No obvious hydrocarbo Gray, saturated, SILT, some fine probed. No obvious hydrocarbo Gray, saturated, SAND, with silt hydrocarbon odor noted. (Alluvit Exploration completed at 15 feet Groundwater observed at appro	t.	GP 9-1 I 6 9-2 I 6	4/26/13	PID@4'=0ppm PID@6'=0ppm PID@10'=0ppm PID@12'=0ppm	NT NT NT NT	TPH, BTEX, N	
	SAMPLE LEGEND Retained portion of 2-inch direct push sample NOTES PID = Photoionization detector readings in parts/million NT = Not tested	GROUNDWATER LEGEND         Clean Sand         Bentonite         Grout/Concrete         Screened Casing         Blank Casing         Groundwater level at time of drilling (ATD) or on date of measurement.		Date: Zij	2510 East Lake	saquah, V ciates Guite D	mish Parkw	1099.22 GP9

Appendix E – Supplemental Subsurface Investigation Analytical Results



May 6, 2013

Mr. Jon Einarsen Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-

Dear Mr. Einarsen,

On April 26th, 21 samples were received by our laboratory and assigned our laboratory project number EV13040174. The project was identified as your BMC. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

**ALS Laboratory Group** 

Rick Bagan Laboratory Director

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## CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associa 19023 - 36th Ave V Lynnwood, WA 980	DATE: 5/6/2013 ALS JOB#: EV13040174 ALS SAMPLE#: -01							
CLIENT CONTACT:	Jon Einarsen			DATE RECEIVE		-01 4/26/2013			
CLIENT PROJECT:	BMC			LLECTION DAT		5/2013 8:00	•00 AM		
CLIENT SAMPLE ID	GP 1-1			ACCREDITATIC			.007.00		
	GF I-I		VDOL /	ACCILENTATIC	M. COC	71			
		DA	TA RESULTS						
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS / DATE	ANALYSIS BY		
TPH-Volatile Range	NWTPH-GX	530	30	10	MG/KG	04/30/2013	DLC		
Benzene	EPA-8021	0.20	0.15	5	MG/KG	04/30/2013	DLC		
Toluene	EPA-8021	U	0.25	5	MG/KG	04/30/2013	DLC		
Ethylbenzene	EPA-8021	4.4	0.25	5	MG/KG	04/30/2013	DLC		
Xylenes	EPA-8021	6.3	1.0	5	MG/KG	04/30/2013	DLC		
TPH-Diesel Range	NWTPH-DX	200	25	1	MG/KG	04/29/2013	EBS		
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	04/29/2013	EBS		
Lead	EPA-6020	7.9	0.50	5	MG/KG	04/30/2013	RAL		
						ANALYSIS /	ANALYSIS BY		
SURROGATE	METHOD	%REC				DATE	DI		
TFT 10X Dilution	NWTPH-GX	8.77 GS2				04/30/2013	DLC		
TFT 5X Dilution	EPA-8021	107				04/30/2013	DLC		
C25	NWTPH-DX	92.8				04/29/2013	EBS		

GS2 - Surrogate outside of control limits due to dilution.

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains highly weathered gasoline and weathered diesel.

Gasoline range product results biased high due to semivolatile range product overlap. Diesel range product results biased high due to gasoline range product overlap.

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		CERTIFIC	CATE OF ANALYSIS	S				
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980	V., Suite D	DATE: 5/6/2013 ALS JOB#: EV13040174 ALS SAMPLE#: -02					
CLIENT CONTACT: CLIENT PROJECT: CLIENT SAMPLE ID	Jon Einarsen BMC GP 1-2		DATE RECEIVED: 4/26/2013 COLLECTION DATE: 4/25/2013 8:00:00 / WDOE ACCREDITATION: C601					
		DA	TA RESULTS					
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS / DATE	ANALYSIS BY	
TPH-Volatile Range	NWTPH-GX	39	3.0	1	MG/KG	04/29/2013	DLC	
Benzene	EPA-8021	U	0.030	1	MG/KG	04/29/2013	DLC	
Toluene	EPA-8021	U	0.050	1	MG/KG	04/29/2013	DLC	
Ethylbenzene	EPA-8021	0.40	0.050	1	MG/KG	04/29/2013	DLC	
Xylenes	EPA-8021	0.83	0.20	1	MG/KG	04/29/2013	DLC	
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	04/29/2013	EBS	
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	04/29/2013	EBS	
Lead	EPA-6020	3.9	0.50	5	MG/KG	04/30/2013	RAL	
SURROGATE	METHOD	%REC				ANALYSIS ANALYSI DATE BY		
TFT	NWTPH-GX	98.1				04/29/2013	DLC	
TFT	EPA-8021	98.8				04/29/2013	DLC	
C25	NWTPH-DX	76.6				04/29/2013	EBS	

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

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		CERTIFIC	CATE OF ANALYSI	S						
CLIENT:	Zipper Geo Associ	ates	DATE: 5/6/2013							
	19023 - 36th Ave V			ALS JO	B#: EV <sup>·</sup>	13040174				
	Lynnwood, WA 980	036-		ALS SAMPLE#: -03						
CLIENT CONTACT:	Jon Einarsen			DATE RECEIVE	ED: 4/20	6/2013				
CLIENT PROJECT:	BMC		CC	LLECTION DA	TE: 4/2	5/2013 8:00:	00 AM			
CLIENT SAMPLE ID	GP 1-3		WDOE /	ACCREDITATIO	DN: C60	)1				
		DA	TA RESULTS							
			REPORTING	DILUTION		ANALYSIS ANALY				
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY			
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	04/29/2013	DLC			
Benzene	EPA-8021	U	0.030	1	MG/KG	04/29/2013	DLC			
Toluene	EPA-8021	U	0.050	1	MG/KG	04/29/2013	DLC			
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	04/29/2013	DLC			
Xylenes	EPA-8021	U	0.20	1	MG/KG	04/29/2013	DLC			
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	04/29/2013	EBS			
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	04/29/2013	EBS			
Lead	EPA-6020	2.6	0.50	5	MG/KG	04/30/2013	RAL			
						ANALYSIS A				
SURROGATE	METHOD	%REC				DATE	BY			
TFT	NWTPH-GX	80.5				04/29/2013	DLC			
TFT	EPA-8021	79.7				04/29/2013	DLC			
C25	NWTPH-DX	86.2				04/29/2013	EBS			

U - Analyte analyzed for but not detected at level above reporting limit.

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		CERTIFIC	ATE OF ANALYSI	S				
CLIENT:	Zipper Geo Associ	ates	DATE: 5/6/2013					
	19023 - 36th Ave V			ALS JOE		/13040174		
	Lynnwood, WA 980	036-		ALS SAMPLE#: -04				
CLIENT CONTACT:	Jon Einarsen			DATE RECEIVE	D: 4/2	6/2013		
CLIENT PROJECT:	BMC		CO	LLECTION DAT	E: 4/2	5/2013 8:00:	00 AM	
CLIENT SAMPLE ID	GP 2-1		WDOE /	ACCREDITATIC	N: C60	01		
		DA	TA RESULTS					
			REPORTING	DILUTION		ANALYSIS ANALYS		
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY	
TPH-Volatile Range	NWTPH-GX	36	3.0	1	MG/KG	04/29/2013	DLC	
Benzene	EPA-8021	U	0.030	1	MG/KG	04/29/2013	DLC	
Toluene	EPA-8021	U	0.050	1	MG/KG	04/29/2013	DLC	
Ethylbenzene	EPA-8021	0.11	0.050	1	MG/KG	04/29/2013	DLC	
Xylenes	EPA-8021	U	0.20	1	MG/KG	04/29/2013	DLC	
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	04/29/2013	EBS	
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	04/29/2013	EBS	
Lead	EPA-6020	5.4	0.50	5	MG/KG	04/30/2013	RAL	
						ANALYSIS A		
SURROGATE	METHOD	%REC				DATE	BY	
TFT	NWTPH-GX	85.1				04/29/2013	DLC	
TFT	EPA-8021	86.1				04/29/2013	DLC	
C25	NWTPH-DX	87.3				04/29/2013	EBS	

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains an unidentified gasoline range product.

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		CERTIFIC	CATE OF ANALYSI	S					
CLIENT:	Zipper Geo Associ	ates	DATE: 5/6/2013						
	19023 - 36th Ave V		ALS JOB#: EV13040174						
	Lynnwood, WA 980	036-		ALS SAMPLE#: -05					
CLIENT CONTACT:	Jon Einarsen			DATE RECEIVE	ED: 4/20	6/2013			
CLIENT PROJECT:	BMC		CC	LLECTION DA	TE: 4/2	5/2013 8:00:	00 AM		
CLIENT SAMPLE ID	GP 2-2		WDOE	ACCREDITATIO	DN: C60	01			
		DA	TA RESULTS						
			REPORTING	DILUTION		ANALYSIS ANAL			
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY		
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	04/29/2013	DLC		
Benzene	EPA-8021	U	0.030	1	MG/KG	04/29/2013	DLC		
Toluene	EPA-8021	U	0.050	1	MG/KG	04/29/2013	DLC		
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	04/29/2013	DLC		
Xylenes	EPA-8021	U	0.20	1	MG/KG	04/29/2013	DLC		
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	04/29/2013	EBS		
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	04/29/2013	EBS		
Lead	EPA-6020	2.8	0.50	5	MG/KG	04/30/2013	RAL		
SURROGATE	METHOD	%REC				ANALYSIS ANALYSIS DATE BY			
TFT	NWTPH-GX	83.1				04/29/2013	DLC		
TFT	EPA-8021	89.1				04/29/2013	DLC		
C25	NWTPH-DX	80.2				04/29/2013	EBS		

U - Analyte analyzed for but not detected at level above reporting limit.

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		CERTIFIC	CATE OF ANALYSI	S					
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980	V., Suite D	DATE: 5/6/2013 ALS JOB#: EV13040174 ALS SAMPLE#: -06						
CLIENT CONTACT: CLIENT PROJECT: CLIENT SAMPLE ID	Jon Einarsen BMC GP 3-1	Jon Einarsen         DATE RECEIVED:         4/26/2013           BMC         COLLECTION DATE:         4/25/2013 8:00:00							
		DA	TA RESULTS						
ANALYTE	METHOD RESULTS		REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	NALYSIS BY		
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	04/29/2013	DLC	;	
Benzene	EPA-8021	U	0.030	1	MG/KG	04/29/2013	DLC	;	
Toluene	EPA-8021	U	0.050	1	MG/KG	04/29/2013	DLC	;	
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	04/29/2013	DLC	;	
Xylenes	EPA-8021	U	0.20	1	MG/KG	04/29/2013	DLC	:	
TPH-Diesel Range	NWTPH-DX	29	25	1	MG/KG	04/29/2013	EBS	:	
TPH-Oil Range	NWTPH-DX	50	50	1	MG/KG	04/29/2013	EBS	;	
Lead	EPA-6020	2.2	0.50	5	MG/KG	04/30/2013	RAL		
SURROGATE	METHOD	%REC	ANALYSIS A DATE			NALYSIS BY			
TFT	NWTPH-GX	74.0				04/29/2013	DLC	:	
TFT	EPA-8021	79.5				04/29/2013	DLC	:	
C25	NWTPH-DX	92.6				04/29/2013	EBS	:	

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains weathered diesel and lube oil.

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		CERTIFIC	CATE OF ANALYSI	S				
CLIENT:	Zipper Geo Associ	ates		DA	TE: 5/6/	/2013		
	19023 - 36th Ave V			ALS JO	B#: EV <sup>·</sup>	13040174		
	Lynnwood, WA 980	036-		ALS SAMPL	E#: -07			
CLIENT CONTACT:	Jon Einarsen			DATE RECEIVE		6/2013		
CLIENT PROJECT:	BMC		CC	LLECTION DA	TE: 4/2	5/2013 8:00:	00 AM	
CLIENT SAMPLE ID	GP 3-2		WDOE /	ACCREDITATIO	DN: C60	01		
		DA	TA RESULTS					
			REPORTING	DILUTION		ANALYSIS A		
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY	
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	04/29/2013	DLC	
Benzene	EPA-8021	U	0.030	1	MG/KG	04/29/2013	DLC	
Toluene	EPA-8021	U	0.050	1	MG/KG	04/29/2013	DLC	
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	04/29/2013	DLC	
Xylenes	EPA-8021	U	0.20	1	MG/KG	04/29/2013	DLC	
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	04/29/2013	EBS	
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	04/29/2013	EBS	
Lead	EPA-6020	2.7	0.50	5	MG/KG	04/30/2013	RAL	
						ANALYSIS A		
SURROGATE	METHOD	%REC				DATE	BY	
TFT	NWTPH-GX	80.4				04/29/2013	DLC	
TFT	EPA-8021	79.8				04/29/2013	DLC	
C25	NWTPH-DX	83.9				04/29/2013	EBS	

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		CERTIFIC	ATE OF ANALYSI	S				
CLIENT:	Zipper Geo Associ			DAT		2013		
	19023 - 36th Ave V			ALS JOE		13040174		
	Lynnwood, WA 980	036-						
CLIENT CONTACT:	Jon Einarsen					6/2013	00 4 4 4	
CLIENT PROJECT:	BMC			LLECTION DAT		5/2013 8:00:	UU AIVI	
CLIENT SAMPLE ID	GP 4-1		WDOE A	ACCREDITATIC	N: C60	)1		
		DA	TA RESULTS					
			REPORTING LIMITS	DILUTION FACTOR		ANALYSIS A	NALYSIS BY	
ANALYTE	<b>METHOD</b> NWTPH-GX	RESULTS 1100	60	20	UNITS MG/KG	05/01/2013	DLC	
TPH-Volatile Range	EPA-8021			-			-	
Benzene		U	0.30	10	MG/KG	04/30/2013	DLC	
Toluene	EPA-8021	U	0.50	10	MG/KG	04/30/2013	DLC	
Ethylbenzene	EPA-8021	7.7	0.50	10	MG/KG	04/30/2013	DLC	
Xylenes	EPA-8021	8.2	2.0	10	MG/KG	04/30/2013	DLC	
TPH-Diesel Range	NWTPH-DX	70	45	1	MG/KG	04/29/2013	EBS	
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	04/29/2013	EBS	
Lead	EPA-6020	6.6	0.50	5	MG/KG	04/30/2013	RAL	_
						ANALYSIS A		
SURROGATE	METHOD	%REC				DATE	BY	
TFT 20X Dilution	NWTPH-GX	23.9 GS2				05/01/2013	DLC	
TFT 10X Dilution	EPA-8021	40.7 GS2				04/30/2013	DLC	
C25	NWTPH-DX	86.3				04/29/2013	EBS	

U - Analyte analyzed for but not detected at level above reporting limit. GS2 - Surrogate outside of control limits due to dilution.

Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

Diesel range product reporting limits raised due to volatile range product overlap.

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		CERTIFIC	ATE OF ANALYSI	S					
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980	V., Suite D	DATE: 5/6/2013 ALS JOB#: EV13040174 ALS SAMPLE#: -09						
CLIENT CONTACT: CLIENT PROJECT: CLIENT SAMPLE ID	Jon Einarsen BMC GP 4-2		CO	DATE RECEIVE PLLECTION DA ACCREDITATIO	TE: 4/2	6/2013 5/2013 8:00: )1	00 AM		
		DA	TA RESULTS						
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A DATE	NALYSIS BY		
TPH-Volatile Range	NWTPH-GX	4.5	3.0	1	MG/KG	04/30/2013	DLC	1	
Benzene	EPA-8021	U	0.030	1	MG/KG	04/30/2013	DLC	1	
Toluene	EPA-8021	U	0.050	1	MG/KG	04/30/2013	DLC	;	
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	04/30/2013	DLC	1	
Xylenes	EPA-8021	U	0.20	1	MG/KG	04/30/2013	DLC	1	
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	04/29/2013	EBS	1	
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	04/29/2013	EBS	1	
Lead	EPA-6020	4.3	0.50	5	MG/KG	04/30/2013	RAL	:	
SURROGATE	METHOD	%REC				ANALYSIS A DATE	NALYSIS BY		
TFT	NWTPH-GX	82.9				04/30/2013	DLC	;	
TFT	EPA-8021	83.2				04/30/2013	DLC	;	
C25	NWTPH-DX	64.9				04/29/2013	EBS	;	

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

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		CERTIFIC	CATE OF ANALYSI	S				
CLIENT:	Zipper Geo Associa 19023 - 36th Ave V Lynnwood, WA 980	V., Suite D		DA <sup>-</sup> ALS JO ALS SAMPL	B#: EV	/2013 13040174		
CLIENT CONTACT:	Jon Einarsen			DATE RECEIVE		6/2013		
CLIENT PROJECT:	BMC					5/2013 8:00:	00 AM	
CLIENT SAMPLE ID	GP 5-1		WDOE /	ACCREDITATIO	DN: C60	01		
		DA	TA RESULTS					
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A DATE	NALYSIS BY	
TPH-Volatile Range	NWTPH-GX	2800	120	40	MG/KG	04/30/2013	DLC	
Benzene	EPA-8021	2.0	1.2	40	MG/KG	04/30/2013	DLC	
Toluene	EPA-8021	U	2.0	40	MG/KG	04/30/2013	DLC	
Ethylbenzene	EPA-8021	41	2.0	40	MG/KG	04/30/2013	DLC	
Xylenes	EPA-8021	240	8.0	40	MG/KG	04/30/2013	DLC	
TPH-Diesel Range	NWTPH-DX	320	25	1	MG/KG	04/29/2013	EBS	
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	04/29/2013	EBS	
Lead	EPA-6020	8.7	0.50	5	MG/KG	04/30/2013	RAL	
						ANALYSIS A		
SURROGATE	METHOD	%REC				DATE	BY	
TFT 40X Dilution	NWTPH-GX	12.2 GS2				04/30/2013	DLC	
TFT 40X Dilution	EPA-8021	14.0 GS2				04/30/2013	DLC	
C25	NWTPH-DX	79.6				04/29/2013	EBS	

GS2 - Surrogate outside of control limits due to dilution. U - Analyte analyzed for but not detected at level above reporting limit.

Chromatogram indicates that it is likely that sample contains highly weathered gasoline and diesel. Diesel range product results biased high due to gasoline range product overlap.

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		CERTIFIC	ATE OF ANALYSI	S				
CLIENT:	Zipper Geo Associ	ates		DAT	TE: 5/6/	/2013		
	19023 - 36th Ave V			ALS JOE	3#: EV	13040174		
	Lynnwood, WA 980	036-	ALS SAMPLE#: -11					
CLIENT CONTACT:	Jon Einarsen			DATE RECEIVE	D: 4/2	6/2013		
CLIENT PROJECT:	BMC		CO	LLECTION DAT	E: 4/2	5/2013 8:00:	00 AM	
CLIENT SAMPLE ID	GP 5-2		WDOE /	ACCREDITATIC	N: C60	01		
		DA	TA RESULTS					
			REPORTING	DILUTION		ANALYSIS A	NALYSIS	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY	
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	04/30/2013	DLC	
Benzene	EPA-8021	U	0.030	1	MG/KG	04/30/2013	DLC	
Toluene	EPA-8021	U	0.050	1	MG/KG	04/30/2013	DLC	
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	04/30/2013	DLC	
Xylenes	EPA-8021	U	0.20	1	MG/KG	04/30/2013	DLC	
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	04/29/2013	EBS	
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	04/29/2013	EBS	
Lead	EPA-6020	3.7	0.50	5	MG/KG	04/30/2013	RAL	
SURROGATE	METHOD	%REC				ANALYSIS A DATE	NALYSIS BY	
TFT	NWTPH-GX	73.9				04/30/2013	DLC	
TFT	EPA-8021	76.8				04/30/2013	DLC	
C25	NWTPH-DX	82.7				04/29/2013	EBS	

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		CERTIFIC	CATE OF ANALYSI	S						
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980	V., Suite D		DATE: 5/6/2013 ALS JOB#: EV13040174 ALS SAMPLE#: -12						
CLIENT CONTACT:	Jon Einarsen				6/2013					
CLIENT PROJECT:	BMC		CC	LLECTION DA	TE: 4/2	5/2013 8:00:	00 AM			
CLIENT SAMPLE ID	GP 6-1		WDOE /	ACCREDITATIO	DN: C60	)1				
		DA	TA RESULTS							
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A DATE	NALYSIS BY			
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	04/30/2013	DLC			
Benzene	EPA-8021	U	0.030	1	MG/KG	04/30/2013	DLC			
Toluene	EPA-8021	U	0.050	1	MG/KG	04/30/2013	DLC			
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	04/30/2013	DLC			
Xylenes	EPA-8021	U	0.20	1	MG/KG	04/30/2013	DLC			
TPH-Diesel Range	NWTPH-DX	43	25	1	MG/KG	05/01/2013	EBS			
TPH-Oil Range	NWTPH-DX	250	50	1	MG/KG	05/01/2013	EBS			
Lead	EPA-6020	2.0	0.50	5	MG/KG	04/30/2013	RAL	_		
SURROGATE	METHOD	%REC				ANALYSIS A DATE	NALYSIS BY			
TFT	NWTPH-GX	75.0				04/30/2013	DLC			
TFT	EPA-8021	76.6				04/30/2013	DLC			
C25	NWTPH-DX	85.2				05/01/2013	EBS			

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains weathered diesel and lube oil.

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		CERTIFIC	CATE OF ANALYSI	S					
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980	V., Suite D	DATE: 5/6/2013 ALS JOB#: EV13040174 ALS SAMPLE#: -13						
CLIENT CONTACT:	Jon Einarsen			DATE RECEIVI	ED: 4/20	6/2013			
CLIENT PROJECT:	BMC		CO	LLECTION DA	TE: 4/2	5/2013 8:00:	00 AM		
CLIENT SAMPLE ID	GP 6-2		WDOE /	ACCREDITATIO	DN: C60	)1			
		DA	TA RESULTS						
			REPORTING	DILUTION FACTOR		ANALYSIS A			
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS		BY		
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	04/30/2013	DLC		
Benzene	EPA-8021	U	0.030	1	MG/KG	04/30/2013	DLC		
Toluene	EPA-8021	U	0.050	1	MG/KG	04/30/2013	DLC		
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	04/30/2013	DLC		
Xylenes	EPA-8021	U	0.20	1	MG/KG	04/30/2013	DLC		
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	04/29/2013	EBS		
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	04/29/2013	EBS		
Lead	EPA-6020	2.3	0.50	5	MG/KG	04/30/2013	RAL		
						ANALYSIS A DATE	NALYSIS BY		
SURROGATE	METHOD	%REC				DATE			
TFT	NWTPH-GX	80.8				04/30/2013	DLC		
TFT	EPA-8021	85.3				04/30/2013	DLC		
C25	NWTPH-DX	84.7				04/29/2013	EBS		

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		CERTIFIC	CATE OF ANALYSI	S			
CLIENT:	Zipper Geo Associ			DA	TE: 5/6/	/2013	
	19023 - 36th Ave V			ALS JOB#: EV130401 ALS SAMPLE#: -14			
	Lynnwood, WA 980	036-					
CLIENT CONTACT:	Jon Einarsen			DATE RECEIVE		6/2013	
CLIENT PROJECT:	BMC		CO	LLECTION DAT	TE: 4/2	5/2013 8:00:	00 AM
CLIENT SAMPLE ID	GP 7-1		WDOE /	ACCREDITATIO	DN: C60	01	
		DA	TA RESULTS				
			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	04/30/2013	DLC
Benzene	EPA-8021	U	0.030	1	MG/KG	04/30/2013	DLC
Toluene	EPA-8021	U	0.050	1	MG/KG	04/30/2013	DLC
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	04/30/2013	DLC
Xylenes	EPA-8021	U	0.20	1	MG/KG	04/30/2013	DLC
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	04/29/2013	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	04/29/2013	EBS
Lead	EPA-6020	3.4	0.50	5	MG/KG	04/30/2013	RAL
SURROGATE	METHOD	%REC				ANALYSIS A DATE	NALYSIS BY
TFT	NWTPH-GX	81.0				04/30/2013	DLC
TFT	EPA-8021	81.0				04/30/2013	DLC
C25	NWTPH-DX	91.4				04/29/2013	EBS

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		CERTIFIC	ATE OF ANALYSI	S				
CLIENT:	Zipper Geo Associ	ates		DA	TE: 5/6/	/2013		
-	19023 - 36th Ave V			ALS JOI		13040174		
	Lynnwood, WA 980	036-		E#: -15	-15			
CLIENT CONTACT:	Jon Einarsen			DATE RECEIVE	ED: 4/2	6/2013		
CLIENT PROJECT:	BMC		CO	LLECTION DA		5/2013 8:00:	00 AM	
CLIENT SAMPLE ID	GP 7-2		WDOE	ACCREDITATIO	DN: C60	01		
		DA	TA RESULTS					
			REPORTING	DILUTION		ANALYSIS A	NALYSIS	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY	
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	04/30/2013	DLC	
Benzene	EPA-8021	U	0.030	1	MG/KG	04/30/2013	DLC	
Toluene	EPA-8021	U	0.050	1	MG/KG	04/30/2013	DLC	
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	04/30/2013	DLC	
Xylenes	EPA-8021	U	0.20	1	MG/KG	04/30/2013	DLC	
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	04/29/2013	EBS	
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	04/29/2013	EBS	
Lead	EPA-6020	4.0	0.50	5	MG/KG	04/30/2013	RAL	
SURROGATE	METHOD	%REC				ANALYSIS A DATE	NALYSIS BY	
TFT	NWTPH-GX	73.3				04/30/2013	DLC	
TFT	EPA-8021	72.8				04/30/2013	DLC	
C25	NWTPH-DX	86.7				04/29/2013	EBS	

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		CERTIFIC	ATE OF ANALYSI	S				
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980	V., Suite D		DA <sup>.</sup> ALS JO ALS SAMPL	B#: EV <sup>.</sup>	/2013 13040174		
CLIENT CONTACT: CLIENT PROJECT: CLIENT SAMPLE ID	Jon Einarsen BMC GP 8-1		CO	DATE RECEIVE PLLECTION DA ACCREDITATIO	TE: 4/2	6/2013 6/2013 8:00: )1	00 AM	
		DA	TA RESULTS					
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A DATE	NALYSIS BY	
TPH-Volatile Range	NWTPH-GX	1900	60	20	MG/KG	04/30/2013	DLC	
Benzene	EPA-8021	U	0.60	20	MG/KG	04/30/2013	DLC	
Toluene	EPA-8021	U	1.0	20	MG/KG	04/30/2013	DLC	
Ethylbenzene	EPA-8021	19	1.0	20	MG/KG	04/30/2013	DLC	
Xylenes	EPA-8021	72	4.0	20	MG/KG	04/30/2013	DLC	
TPH-Diesel Range	NWTPH-DX	85	25	1	MG/KG	04/29/2013	EBS	
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	04/29/2013	EBS	
Lead	EPA-6020	6.7	0.50	5	MG/KG	04/30/2013	RAL	
SURROGATE	METHOD	%REC				ANALYSIS A DATE	NALYSIS BY	
TFT 20X Dilution	NWTPH-GX	24.0				04/30/2013	DLC	
TFT 20X Dilution	EPA-8021	25.4				04/30/2013	DLC	
C25	NWTPH-DX	85.4				04/29/2013	EBS	

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains highly weathered gasoline and diesel. Diesel range product results biased high due to gasoline range product overlap.

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		CERTIFIC	ATE OF ANALYSI	S					
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980	V., Suite D	DATE: 5/6/2013 ALS JOB#: EV13040174 ALS SAMPLE#: -17						
CLIENT CONTACT:	Jon Einarsen		DATE RECEIVED: 4/26/2013						
CLIENT PROJECT:	BMC		CO	COLLECTION DATE: 4/26/2013 8:00:0					
CLIENT SAMPLE ID	GP 8-2		WDOE A	ACCREDITATIO	DN: C60	)1			
		DA	TA RESULTS						
			REPORTING	DILUTION		ANALYSIS A			
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY		
TPH-Volatile Range	NWTPH-GX	3.8	3.0	1	MG/KG	04/30/2013	DLC		
Benzene	EPA-8021	0.030	0.030	1	MG/KG	04/30/2013	DLC		
Toluene	EPA-8021	U	0.050	1	MG/KG	04/30/2013	DLC		
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	04/30/2013	DLC		
Xylenes	EPA-8021	U	0.20	1	MG/KG	04/30/2013	DLC		
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	04/29/2013	EBS		
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	04/29/2013	EBS		
Lead	EPA-6020	2.4	0.50	5	MG/KG	04/30/2013	RAL		
						ANALYSIS A	ANALYSIS BY		
SURROGATE	METHOD	%REC							
TFT	NWTPH-GX	91.4				04/30/2013	DLC		
TFT	EPA-8021	93.3				04/30/2013	DLC		
C25	NWTPH-DX	84.0				04/29/2013	EBS		

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

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		CERTIFIC	CATE OF ANALYSI	S				
CLIENT:	Zipper Geo Associ			DA		/2013		
	19023 - 36th Ave V Lynnwood, WA 980			ALS JOB#: EV130401 ALS SAMPLE#: -18				
CLIENT CONTACT:	Jon Einarsen	550-		DATE RECEIVE	-	6/2013		
CLIENT PROJECT:	BMC			LLECTION DA		6/2013 8:00:		
CLIENT SAMPLE ID	GP 9-1			ACCREDITATIO				
CLIENT SAWFLE ID	GF 9-1		VDOE /	ACCREDITATIC	JN. CO			
		DA	TA RESULTS					
			REPORTING	DILUTION		ANALYSIS A	NALYSIS	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY	
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	04/30/2013	DLC	
Benzene	EPA-8021	U	0.030	1	MG/KG	04/30/2013	DLC	
Toluene	EPA-8021	U	0.050	1	MG/KG	04/30/2013	DLC	
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	04/30/2013	DLC	
Xylenes	EPA-8021	U	0.20	1	MG/KG	04/30/2013	DLC	
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	04/29/2013	EBS	
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	04/29/2013	EBS	
Lead	EPA-6020	3.1	0.50	5	MG/KG	04/30/2013	RAL	
	METHOD	N DEO				ANALYSIS A	NALYSIS BY	
SURROGATE TFT	METHOD NWTPH-GX	%REC 73.7				04/30/2013	DLC	
	EPA-8021	73.7 76.7				04/30/2013	-	
TFT	NWTPH-DX					04/30/2013	DLC	
C25	INVVIPH-DX	89.2				04/29/2013	EBS	_

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		CERTIFIC	CATE OF ANALYSI	S				
CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-		DATE: 5/6/2013 ALS JOB#: EV13040174 ALS SAMPLE#: -19					
CLIENT CONTACT:	Jon Einarsen			DATE RECEIVI	ED: 4/20	6/2013		
CLIENT PROJECT:	BMC		CO	COLLECTION DATE: 4/26/2013 8:00:00 AM				
CLIENT SAMPLE ID	GP 9-2		WDOE /	ACCREDITATIO	DN: C60	01		
		DA	TA RESULTS					
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A DATE	NALYSIS BY	
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	04/30/2013	DLC	
Benzene	EPA-8021	U	0.030	1	MG/KG	04/30/2013	DLC	
Toluene	EPA-8021	U	0.050	1	MG/KG	04/30/2013	DLC	
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	04/30/2013	DLC	
Xylenes	EPA-8021	U	0.20	1	MG/KG	04/30/2013	DLC	
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	04/29/2013	EBS	
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	04/29/2013	EBS	
Lead	EPA-6020	2.5	0.50	5	MG/KG	04/30/2013	RAL	
SURROGATE	METHOD	%REC				ANALYSIS A DATE	NALYSIS BY	
TFT	NWTPH-GX	76.4				04/30/2013	DLC	
TFT	EPA-8021	78.5				04/30/2013	DLC	
C25	NWTPH-DX	81.0				04/29/2013	EBS	

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Appendix F – Terrestrial Ecological Evaluation



# **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 <a href="http://www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm">www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm</a>.

# Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are documenting an evaluation.

Facility/Site Name: Henry Bacon Building Materials

Facility/Site Address: 5210 East Lake Sammamish Parkway SE

Facility/Site No:

VCP Project No.: NW3149

Title: Principal

# Step 2: IDENTIFY EVALUATOR

Please identify below the person who conducted the evaluation and their contact information.

Name: Jon Einarsen

Organization: Zipper Geo Associates, LLC

Mailing address: 19019 36th Avenue West, Suite E

City: Lynnwood			te: WA	Zip code: 98036
Phone: 425-582-9928 Fax: 425-582-9930		)	E-mail: jeinar	rsen@zippergeo.com

ECY 090-300 (07/2015) To request ADA accommodation including materials in a format for the visually impaired, call Ecology Toxic Cleanup Program 360-407-7170. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

St	Step 3: DOCUMENT EVALUATION TYPE AND RESULTS					
Α.	A. Exclusion from further evaluation.					
1.	1. Does the Site qualify for an exclusion from further evaluation?					
		🗌 Y	es 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.	Wha	t is the	e basis for the exclusion? Check all that apply. Then skip to Step 4 of this form.			
	Poin	t of Co	ompliance: 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.			
	Barri	ers 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.			
	Unde	evelop	ed Land: WAC 173-340-7491(1)(c)			
			There is less than 0.25 acres of contiguous <sup>#</sup> undeveloped <sup>±</sup> 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 <sup>#</sup> undeveloped <sup>±</sup> land on or within 500 feet of any area of the Site.			
	Back	groun	d 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.			
ac ± pr # hig	<ul> <li>* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.</li> <li>* "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.</li> <li># "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.</li> </ul>					

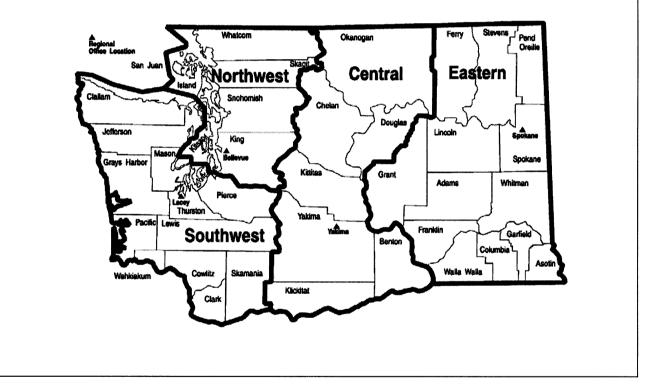
В.	Simplifie	d evaluation.
1.	Does the	Site qualify for a simplified evaluation?
		Yes If you answered "YES," then answer Question 2 below.
		No or If you answered <b>"NO"</b> or <b>"UNKNOWN,"</b> then skip to <b>Step 3C</b> of this form.
2.	Did you d	conduct a simplified evaluation?
		Yes If you answered "YES," then answer Question 3 below.
		No If you answered " <b>NO,</b> " then skip to <b>Step 3C</b> of this form.
3.	Was furt	ner evaluation necessary?
		Yes If you answered <b>"YES,"</b> then answer <b>Question 4</b> 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. <i>If so, then skip to</i> <b>Step 4</b> of this form.
		Conducted a site-specific evaluation. If so, then skip to Step 3C of this form.
5.		ner evaluation was necessary, what was the reason? Check all that apply. Then skip 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.
	Contamin	ant 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.	the proble	<b>ific evaluation.</b> A site-specific evaluation process consists of two parts: (1) formulating m, and (2) selecting the methods for addressing the identified problem. Both steps nsultation with and approval by Ecology. <i>See</i> WAC 173-340-7493(1)(c).		
1.	Was there	a problem? See WAC 173-340-7493(2).		
	ו 🗆	(es If you answered "YES," then answer Question 2 below.		
		No If you answered <b>"NO,"</b> then identify the reason here and then skip to <b>Question 5</b> 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 y	you do to resolve the problem? See WAC 173-340-7493(3).		
		Used the concentrations listed in Table 749-3 as cleanup levels. <i>If so, then skip to Question 5 below.</i>		
		Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. <i>If so, then answer <b>Questions 3 and 4</b> below.</i>		
3.		ducted further site-specific evaluations, what methods did you use? hat 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.		already obtained Ecology's approval of both your problem formulation and resolution steps?		
	י 🗆	es If so, please identify the Ecology staff who approved those steps:		
	Νο			

# Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.

Northwest Region:	Central Region:
Attn: VCP Coordinator	Attn: VCP Coordinator
3190 160 <sup>th</sup> Ave. SE	1250 West Alder St.
Bellevue, WA 98008-5452	Union Gap, WA 98903-0009
Southwest Region:	<b>Eastern Region:</b>
Attn: VCP Coordinator	Attn: VCP Coordinator
P.O. Box 47775	N. 4601 Monroe
Olympia, WA 98504-7775	Spokane WA 99205-1295



ECY 090-300 (07/2015) To request ADA accommodation including materials in a format for the visually impaired, call Ecology Toxic Cleanup Program 360-407-7170. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

Appendix G – Remedial Action Photographs

Zipper Geo Associates, LLC BMC Issaquah – Remedial Investigation/Feasibility Study and Remedial Action Report Project No. 1099.25



Photo #1. Asphalt removed and preparing to excavate contaminated soil.



Photo #2. Removal of clean overburden fill soils.



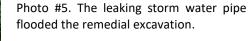
Photo #3. The stockpiled clean overburden soil was returned to the excavation following the remedial action.

# Zipper Geo Associates, LLC

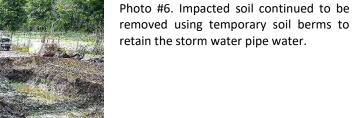
BMC Issaquah – Remedial Investigation/Feasibility Study and Remedial Action Report Project No. 1099.25



Photo #4. A 24-inch PVC storm water pipe was encountered along the west side of the remedial excavation. The pipe was not damaged by the excavator, instead water appeared to be leaking from a faulty pipe join.









## Zipper Geo Associates, LLC

BMC Issaquah – Remedial Investigation/Feasibility Study and Remedial Action Report Project No. 1099.25



Photo #7. A sump was installed in the remedial excavation to extract water for treatment and subsequent permitted disposal to the King County sanitary sewer system.



Photo #8. Dewatering effluent was stored in a series of four Baker tanks.



Photo #9. Dewatering effluent was treated with a sand filter and activated carbon, sampled and analyzed for TPH and BTEX, and discharged to the sanitary sewer under a King County permit.

Zipper Geo Associates, LLC BMC Issaquah – Remedial Investigation/Feasibility Study and Remedial Action Report Project No. 1099.25



Photo #10. Rectangular-shaped areas that had been backfilled with pea gravel are assumed to be the former location of the three USTs removed in 1989.

Photo #11. The final extent of excavation.





Photo #12. Backfilled excavation.

Appendix H – Remedial Action Permits

#### CITY OF ISSAQUAH MITIGATED DETERMINATION OF NONSIGNIFICANCE (MDNS)

**Description of Proposal:** Proposal to remediate contaminated soil resulting from former underground storage tanks. The proposal includes excavating and disposing of an estimated 800 cubic yards of contaminated soil in a 3,600 SF area, collecting and analyzing soil samples during and after completion of remedial excavation, adding an oxygen-releasing compound to aid natural remediation, backfilling and resurfacing the excavation area, and subsequent groundwater sampling to evaluate the effectiveness of the remedial actions. Contaminated soil would be disposed of in a facility licensed to accept such material and replaced with clean fill.

The site is currently developed for commercial use. The contaminated soil area that would be excavated is presently asphalt paved and flat topography.

Proponent: Zipper Geo Associates 19023 36<sup>th</sup> Ave W, Suite D Lynnwood, WA. 98036 Attn: Jon Einarsen

Permit Number: SW14-00057

Location of Proposal: 5210 East Lake Sammamish Parkway

Lead Agency: City of Issaquah

**Determination:** The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

**Comment/Appeal Period:** This MDNS is issued under WAC 197-11-340(2) and 197-11-680(3)(a)vii. There is a 21-day combined comment/appeal period for this determination, between **September 17, 2014 and October 8, 2014.** Anyone wishing to comment may submit written comments to the Responsible Official. The Responsible Official will reconsider the determination based on timely comments. Any person aggrieved by this determination may appeal by filing a Notice of Appeal with the City of Issaquah Permit Center. Appellants should prepare specific factual objections. Copies of the environmental determination and other project application materials are available from the Issaquah Development Services Department, 1775 12th Avenue NW.

Appeals of this SEPA determination must be consolidated with appeal of the underlying permit, per IMC 18.04.250.

#### Notes:

- This threshold determination is based on review of the Remedial Investigation Report (Zipper Geo Associates) dated July 1, 2013; Phase 1 Environmental Site Assessment (Zipper Geo Associates) dated March 27, 2013; environmental checklist received August 20, 2014; and other documents in the file.
- 2) Issuance of this threshold determination does not constitute approval of the permit. The proposal will be reviewed for compliance with all applicable City of Issaquah codes, which regulate development activities, including the Land Use Code, Critical Area Regulations, Building Codes, Clearing and Grading Ordinance, and Surface Water Design Manual.

#### Findings:

cc:

- 1. The site is currently developed for commercial use; BMC West, a building materials and construction services company. The contaminated soil and remediation area is located in the asphalt paved parking area, approximately 50 feet east of East Lake Sammamish Parkway. The proposed remedial action would not affect current land uses on the subject site or impact adjacent properties.
- 2. The soil remediation area would be located approximately 350 feet south of Park Hill Creek, a Class 2 stream with salmonids. A Temporary Erosion Sedimentation Control (TESC) Report is required to ensure Best Management Practices (BMPs) are employed to prevent potential erosion, and to include provisions for stockpiling and transport of contaminated soils.
- 3. Soil contamination shall be removed consistent with the Washington State Model Toxic Control Act (MTCA) requirements. The applicant shall enroll in the State Department of Ecology (DOE) Voluntary Cleanup Program and pursue a No Further Action determination from DOE. A copy of the cleanup reports and subsequent monitoring reports shall be provided to the City of Issaquah.

**Mitigation Measures:** The Mitigated Determination of Nonsignificance is based on the checklist received August 20, 2014 and supplemental information in the application. The following SEPA mitigation measures shall be deemed conditions of the approval of the licensing decision pursuant to Chapter 18.10 of the Issaquah Land Use Code. All conditions are based on policies adopted by reference in the Land Use Code.

- 1. A Temporary Erosion Sedimentation Control (TESC) Report is required to ensure Best Management Practices (BMPs) are employed to prevent potential erosion, and to include provisions for stockpiling and transport of contaminated soils. The report shall be approved by the City of Issaquah prior to issuing construction permits.
- Soil contamination shall be removed consistent with the Washington State Model Toxic Control Act (MTCA) requirements. The applicant shall enroll in the State Department of Ecology (DOE) Voluntary Cleanup Program and pursue a No Further Action determination from DOE. A copy of the cleanup reports and subsequent monitoring reports shall be provided to the City of Issaquah.

Responsible Official:	Peter Rosen
Position/Title:	Environmental Planner
Address/Phone:	P.O. Box 1307, Issaquah, WA 98027-1307 (425) 837-3094
Date: 9/17/2014	Signature: Reter Regen

Washington State Department of Ecology
Washington State Department of Ecology, Toxics Cleanup Program, attn: Donna Musa
Muckleshoot Indian Tribe
U.S. Army Corps of Engineers
Washington State Department of Fish and Wildlife

Issaquah Development Services Department

Issaquah Public Works Engineering and Parks and Recreation Departments

### CERTIFIED MAIL RETURN RECEIPT REQUESTED

Alex Fraser BMC Issaquah 5210 E. Lake Sammamish Parkway Issaquah, WA 98029

Issuance of Wastewater Discharge Authorization No. 996-01 to BMC Issaquah – PCS Excavation Construction Project

Dear Mr. Fraser:

The King County Industrial Waste Program (KCIW) has reviewed your application to discharge construction dewatering to the sewer system from the BMC Issaquah – PCS Excavation Construction Project located at 5210 East Lake Sammamish Parkway SE, Issaquah, Washington, and has issued the enclosed Minor Discharge Authorization No. 996-01.

This authorization permits you to discharge limited amounts of industrial wastewater into King County's sewer system in accordance with the effluent limitations and other requirements and conditions set forth in the document and the regulations outlined in King County Code 28.84.060 (enclosed). As long as you maintain compliance with regulations and do not change the nature and volume of your discharge, KCIW will not require you to apply for an industrial wastewater discharge permit, a type of approval that would result in additional requirements and increased fees.

If you propose to increase the volume of your discharge or change the type or quantities of substances discharged, you must contact KCIW at least 60 days before making these changes.

King County Code 28.84 authorizes a fee for each Minor Discharge Authorization issued by the King County Department of Natural Resources and Parks. The current fee for issuance of a Minor Discharge Authorization is \$1,200. King County will send you an invoice for this amount.

environment.

Sincerely,

Dana Heinz Compliance Investigator

Enclosures

cc: Bob Brock, City of Issaquah Kristin Painter, King County

# for BMC Issaquah – PCS Excavation Construction Project

Site address:	5210 E Lake Sammamish Parkway SE
	Issaquah, WA 98029

Mailing address: 5210 E Lake Sammamish Parkway Issaquah, WA 98029

**Phone:** 425-391-8000

**Emergency (24-hour) phone:** 206-423-6516

Industry type: Construction dewatering

**Discharge to:** South Treatment Plant

\*Note: This authorization is valid only for the specific discharges shown below:

**Discharge process:** Wastewater generated by construction dewatering operation

**Pretreatment process:** Gravity settling, bag filters, GAC

Maximum discharge volume:	36,000 gallons per day
Maximum discharge rate:	25 gallons per minute

Effective date:August 27, 2015Expiration date:November 30, 2015

Permission is hereby granted to discharge industrial wastewater from the above-identified facility into the King County sewer system in accordance with the effluent limitations and monitoring requirements set forth in this authorization.

If the industrial user wishes to continue to discharge after the expiration date, an application must be filed for re-issuance of this discharge authorization at least 90 days prior to the expiration date. For information concerning this King County Discharge Authorization please call Industrial Waste Compliance Investigator Dana Heinz at 206-477-5457.

#### **24-HOUR EMERGENCY NOTIFICATION**

South Treatment Plant: 206-263-1760 Washington State Department of Ecology: 425-649-7000

- B. In accordance with the City of Issaquah requirements the discharge point is the side sewer manhole located at 5210 East Lake Sammamish Parkway SE or as otherwise designated by City of Issaquah representatives.
- C. No later than **September 4, 2015**, the permittee must submit a list of BMC Issaquah PCS Excavation Construction Project and contractor personnel responsible for dewatering activities, including operation and maintenance of the wastewater treatment system and monitoring of the discharge to the sanitary sewer. The list shall include the site contacts' name, title, company, and phone numbers (office and cell).
- D. All persons responsible for monitoring the discharge to the sanitary sewer shall review a copy of this authorization.
- E. A copy of this authorization shall be on site at all times for review and reference.
- F. This authorization grants the discharge of limited amounts of wastewater from the following waste streams:
  - 1. Contaminated stormwater runoff
  - 2. Excavation dewatering
  - 3. Well(s) dewatering

Wastes or contaminants from sources other than permitted herein shall not be discharged to the sanitary sewer without prior approval from KCIW.

- G. The discharge shall not cause hydraulic overloading conditions of the sewerage conveyance system. During periods of peak hydraulic loading KCIW and City Of Issaquah representatives reserve the authority to request that discharge to the sewer be stopped.
- H. This discharge authorization is being issued with the understanding that no known soil or groundwater contamination is present on site. The authorization holder is responsible for contacting KCIW should site conditions indicate potential for contamination.
- I. All wastewater shall be collected and treated in accordance with treatment methods approved by KCIW. Wastewater shall not bypass treatment systems. Modifications to wastewater treatment systems shall not occur without prior approval from KCIW.
- J. Totalizing and non-resettable flow meters must be installed on all permitted discharge pipes to the sewer.

amount of solids discharged to the sanitary sewer system. As a minimum precaution, the wastewater must be pumped to an appropriately sized settling tank(s) prior to entering the sewer system.

- M. The permittee shall properly operate and maintain all wastewater treatment units to ensure compliance with established discharge limits. Solids accumulation in tanks used for solids settling shall not exceed 25 percent of the tank's working hydraulic capacity. Each tank's working hydraulic capacity is based on the water column height as measured from the bottom of the tank to either the invert elevation of the tank's outlet pipe (gravity discharges) or discharge pump intake (pumped discharges).
- N. Results of all required self-monitoring sampling must be recorded daily. Recorded information for each discharge site must include:
  - 1. Sample date
  - 2. Sample time
  - 3. Sample results
  - 4. Operator name
  - 5. Comments (if applicable)

These records shall be maintained on site and shall be available for review by KCIW personnel during normal business hours.

O. The permittee must establish a sewer account with City of Issaquah and provide necessary reports to ensure accurate assessment of sewer charges for all construction dewatering discharge sites associated with this project.

Discharge rate	Daily	In-line flow meter
Settleable solids	Daily	Grab by Imhoff cone
pН	Daily	Hand-held meter
Nonpolar FOG	Weekly	3 Grabs
BTEX	Weekly	Grab
Lead, total	Weekly	Grab

- B. The settleable solids field test by Imhoff cone must be performed as follows:
  - 1. Fill cone to one-liter mark with well-mixed sample
  - 2. Allow 45 minutes to settle
  - 3. Gently stir sides of cone with a rod or by spinning; settle 15 minutes longer
  - 4. Record volume of settleable matter in the cone as ml/L
- C. The three nonpolar fats, oils, and grease (FOG) grab samples shall be of equal volume, collected at least five minutes apart, and analyzed separately. When using U.S. Environmental Protection Agency approved protocols specified in 40 CFR Part 136, the individual grab samples may be composited (at the laboratory) prior to analysis. The result of the composite sample or the average of the concentrations of the three grab samples may be reported as Total FOG unless the value is 100 mg/L or greater, in which case the concentration of nonpolar FOG must be reported.
- D. If a violation of any discharge limits or operating criteria is detected in monitoring, you shall notify KCIW immediately upon receipt of analytical data.
- E. You shall submit an end-of project self-monitoring report (form enclosed) within 15 days from completion of all construction dewatering activities to the sewer or by December 15, 2015, whichever comes first. The report must contain results of required self-monitoring and total volume discharged to the sewer.
- F. All self-monitoring data submitted to KCIW, which required a laboratory analysis, must have been performed by a laboratory accredited by the Washington State Department of Ecology for each parameter tested, using procedures approved by 40 CFR 136. This does not apply to field measurements performed by the industrial user such as pH, temperature, flow, atmospheric hydrogen sulfide, total dissolved sulfides, total settleable solids by Imhoff cone, or process control information.
- G. All sampling data collected by the permittee and analyzed using procedures approved by 40 CFR 136, or approved alternatives, shall be submitted to KCIW whether required as part of this authorization or done voluntarily by the permittee.

- 2. The manager of one or more manufacturing, production, or operating facilities, but only if the manager:
  - a. Is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations
  - b. Can ensure that the necessary systems are established or actions taken to gather complete and accurate information for control mechanism requirements and knowledgeable of King County reporting requirements
  - c. Has been assigned or delegated the authority to sign documents, in accordance with corporate procedures
- 3. A general partner or proprietor if the industrial user is a partnership or proprietorship, respectively
- 4. A director or highest official appointed or designated to oversee the operation and performance of the industry if the industrial user is a government agency
- 5. The individuals described in one through four above may designate an authorized representative if:
  - a. The authorization is submitted to King County in writing
  - b. The authorization specifies the individual or position responsible for the overall operation of the facility from which the discharge originates or having overall responsibility for environmental matters for the company or agency

limits are exceeded, you must stop discharging and notify KCIW at 206-477-5300.

### **Corrosive substances**

Limits	
Maximum:	pH 12.0 (s.u.)
Instantaneous minimum:	pH 5.0 (s.u.)
Daily minimum:	pH 5.5 (s.u.)

The instantaneous minimum pH limit is violated whenever any single grab sample or any instantaneous recording is less than pH 5.0. The daily minimum pH limit is violated whenever any continuous recording of 15 minutes or longer remains below pH 5.5 or when each pH value of four consecutive grab samples collected at 15-minute intervals or longer within a 24-hour period remains below pH 5.5.

Discharges of more than 50 gallons per day of caustic solutions equivalent to more than 5 percent NaOH by weight or greater than pH 12.0 are prohibited unless authorized by KCIW and subject to special conditions to protect worker safety, the collection system, and treatment works.

#### Fats, oils, and grease

Discharge of FOG shall not result in significant accumulations that either alone or in combination with other wastes are capable of obstructing flow or interfere with the operation or performance of sewer works or treatment facilities.

Dischargers of polar FOG (oil and grease from animal and/or vegetable origin) shall minimize free-floating polar FOG. Dischargers may not add emulsifying agents exclusively for the purpose of emulsifying free-floating FOG.

Nonpolar FOG limit: 100 mg/L

The limit for nonpolar FOG is violated when the arithmetic mean of the concentration of three grab samples, taken no more frequently than at five minute intervals, or when the results of a composite sample exceed the limitation.

#### Flammable or explosive materials

No person shall discharge any pollutant, as defined in 40 CFR 403.5, that creates a fire or explosion hazard in any sewer or treatment works, including, but not limited to, waste streams

Pollutants subject to this prohibition include, but are not limited to, gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides, and sulfides, and any other substances that King County, the fire department, Washington State, or the U.S. Environmental Protection Agency has notified the user are a fire hazard or a hazard to the system.

Petroleum	Maximum Concentration		
Compounds	ppm (mg/L)		
Benzene	0.07		
Ethylbenzene	1.7		
Toluene	1.4		
Total xylenes	2.2		

#### Heavy metals/cyanide

The industrial user shall not discharge wastes, which exceed the following limitations:

Heavy Metals & Cyanide	Instantaneous Maximum ppm (mg/L) <sup>1</sup>	Daily Average ppm (mg/L) <sup>2</sup>
Arsenic	4.0	1.0
Cadmium	0.6	0.5
Chromium	5.0	2.75
Copper	8.0	3.0
Lead	4.0	2.0
Mercury	0.2	0.1
Nickel	5.0	2.5
Silver	3.0	1.0
Zinc	10.0	5.0
Cyanide	3.0	2.0

<sup>1</sup> The instantaneous maximum is violated whenever the concentration of any sample, including a grab within a series used to calculate daily average concentrations, exceeds the limitation.

 $^2$  The daily average limit is violated: a) for a continuous flow system when a composite sample consisting of four or more consecutive samples collected during a 24-hour period over intervals of 15 minutes or greater exceeds the limitation, or b) for a batch system when any sample exceeds the limitation. A composite sample is defined as at least four grab samples of equal volume taken throughout the processing day from a well-mixed final effluent chamber, and analyzed as a single sample.

Atmospheric hydrogen sulfide: 10.0 ppm (As measured at a monitoring manhole designated by KCIW)

Soluble sulfide limits may be established on a case-by-case basis depending upon volume of discharge and conditions in the receiving sewer, including oxygen content and existing sulfide concentrations.

# **Organic compounds**

No person shall discharge any organic pollutants that result in the presence of toxic gases, vapors, or fumes within a public or private sewer or treatment works in a quantity that may cause worker health and safety problems.

Organic pollutants subject to this restriction include, but are not limited to: Any organic pollutants compound listed in 40 CFR Section 433.11 (e) (total toxic organics [TTO] definition), acetone, 2-butanone (MEK), 4-methyl-2-pentanone (MIBK), and xylenes.

# Settleable solids

Settleable solids concentrations: 7.0 ml/L

limited to, secondary containment of chemicals and wastes, elimination of connections to the municipal sewer system, and spill response equipment.

- C. Any facility changes, which will result in a change in the character or volume of the pollutants discharged to the municipal sewer system, must be reported to your KCIW representative. Any changes that will cause the violation of the effluent limitations specified herein will not be allowed.
- D. In the event the permittee is unable to comply with any of the conditions of this discharge authorization because of breakdown of equipment or facilities, an accident caused by human error, negligence, or any other cause, such as an act of nature the company shall:
  - 1. Take immediate action to stop, contain, and clean up the unauthorized discharges and correct the problem.
  - 2. Immediately notify KCIW and, if after 5 p.m. weekdays and on weekends, call the emergency King County treatment plant phone number on Page 1 so steps can be taken to prevent damage to the sewer system.
  - 3. Submit a written report within 14 days of the event (*14-Day Report*) describing the breakdown, the actual quantity and quality of resulting waste discharged, corrective action taken, and the steps taken to prevent recurrence.
- E. Compliance with these requirements does not relieve the permittee from responsibility to maintain continuous compliance with the conditions of the discharge authorization or the resulting liability for failure to comply.
- F. The permittee shall, at all reasonable times, allow authorized representatives of KCIW to enter that portion of the premises where an effluent source or disposal system is located or in which any records are required to be kept under the terms and conditions of this authorization.
- G. Nothing in this discharge authorization shall be construed as excusing the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations including discharge into waters of the state. Any such discharge is subject to regulation and enforcement action by the Washington State Department of Ecology.
- H. This discharge authorization does not authorize discharge after its expiration date. If the permittee wishes to continue to discharge after the expiration date, an application must be filed for reissuance of this discharge authorization at least 90 days prior to the expiration date. If the permittee submits its reapplication in the time specified herein, the permittee shall be deemed to have an effective wastewater discharge authorization. If the permittee fails to file its reapplication in the time period specified herein, the permittee will be deemed to be discharging without authorization.

Compliance Investigator:\_

Date: August 27, 2015

Dana Heinz

Send to: King County Industrial Waste Program 201 S. Jackson Street, Suite 513 Seattle, WA 98104-3855 Phone 206-477-5300 / FAX 206-263-3001 Email: info.KCTW@kingcounty.gov	Authorization No.: 996-01		Name or initials of person collecting and recording samples and volume each day. If permitted for relief only, explain why you did not discharge to surface water for each day of discharge.	pue	or or afe.	inooe ie inooe	ed per per bratio all d acc acc	nusu off the niterit	nar q uiry c tgat	r enu prii y pris i	isss m n disn apbe	edə( sinni odsə odsə odsə odsə odsə	igne Basi for ions tions te I	desi ed. 1 direc fities fities fities fities fities fities	froris ngtor ngtor froris	a sys pers fhe know know know kachi	vith atio soce s, to phific for l a V a V	rce / form e sig nent a by d. d.	rdan e int m, c mitt mitt e ar yzec este	ccol ste sub pris pris anal pris anal pris	ite ni ke s noii ni ter mi t s f e s tem	100 943 16 16 17 16 17 16 10 16 10 10 10 10 10 10 10 10 10 10 10 10 10	sivis pna intoi swa intoi i i i i i i i i i i i i i i i i i i	or ea ana ty of am the ber supe	nors boty boty fory fory fory fory fory fory for for for for for for for for for for	ction ction ction	s la the pers pers pers proj	
onitoring Report	t		Discharge Volume (gallons)														-							and we also and the second				
oring	BMC Issaquah - PCS Excavation Construction Project	ah	Max. flowrate (gallons per min.)																								olime.	
	struction	Issaqu	<b>רפּאַל, לסלא</b> ו (חטאר)																								Narge V	
Industrial Waste Program Self-M	on Cons	5210 E Lake Sammamish Parkway Se, Issaquah	Total Xylenes (µg/L)																								Total Discharde Volume:	
gram	xcavati	sh Park	(חמ/ך) əuənjoT																								Tot	5
e Pro	- PCS E	mmami	(hɑ\r) Ethylbenzene																									
Wast	saquah -	Lake Sa	(hâיL) Benzene																									
strial	3MC Is	(210 E I	<b>Nonpolar FOG</b> (mg≀L)																									
Indu	щ		Settleable Solids (mL/L)																									
vunty	Name:	Project Location:	Hq (.u.s)																									
King County	Project Name:	Project	Sample Date	-																								

The authorization holder is responsible for monitoring the discharge in accordance with the monitoring requirements specified in King County Discharge Authorization No. **996-01**. This report form must be completed, signed, and submitted to KCIW by **December 15**, **2015**. Your King County Industrial Waste Program Contact: Dana Heinz, 206-477-5457

			0101111010	5	21p. 30028
State IU/Keg No:	8	State Approval/Waste Code:		(if applicable)	NAICS # :
		720 Park Boulevard #200	00		
City: Boise	County:		State: Idaho		Zip: 83712
Generator Contact Name: Mike Da Dalto	ke Da Dalto		Ema	il: Michael.D	Email: Michael.DaDaito@Buildwith BMO
Phone Number: (425) 657-4013	13	Ext:	Fax Number: (425) 557-0066	425) 557-006	90
II. Billing Information					
Bill To: Clearcreek Contractors	Ø		Contact Name: Kim Curnett	Kim Curnett	
Billing Address: 3919 88th St NE	NE		Emai	I: Kim@clea	Email: Klm@clearcreekcon.com
City: Marysville	State: WA		Zip: 98270	Phone:	Phone: (360) 659-2459
III. Waste Stream Information	nation				
Name of Waste: Petroleum co	Petroleum contaminated soil				
Process Generating Waste:					
Leaking underground storage tanks	tanks				
Type of Waste:		<b>INDUSTRIAL PROCESS WASTE</b>	POLLUTION CONTROL WASTE	N CONTROL	WASTE
Physical State:	Zourd Ds			9	
Method of Shipment:					
<b>Estimated Annual Volume:</b>	1,000	Tons			
Frequency:					
Disposal Consideration:		<b>SOLIDIFICATION</b>		DIATION	
IV. Representative Samı	ative Sample Certification		TNO SAMPLE TAKEN	EN (	
	ollected to prepar S. EPA 40 CFR	e this profile and lab 261_20(c) quidelines	oratory analysis,		
Type of Sample: COMPOSI		CGRAB SAMPLE			
Sample Date: 04/29/13					
26 soil sai	mples were collec	26 soil samples were collected as part of a remedial investigation	edial investigatio	-	

© Republic Services, April 2013

Gray	odor (describe) Slight hydrocarbon	Does Waste Contain Free Liquids?	% Solids 100	Hq NA	Flash Point NA	<sub>년</sub> 분
Attach Lá	iboratory Analytical Re Rec	Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile	Sheet) Includir this Profile	ig Chain of	Custody and	-
Does this waste ( Herbicides: Chlor 2,4,5-TP Silvex a	Does this waste or generating process contain Herbicides: Chlordane, Endrin, Heptachlor (an 2,4,5-TP Silvex as defined in 40 CFR 261.337	Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.337	wing Pesticides al lor, Toxaphene, 2,		Ves or No	<b></b>
Does this waste con ppm)[reference 40 C	contain reactive sulfides (gr 0 CFR 261.23(a)(5)]?	Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	le (greater than 25			
Does this waste of Part 761?	contain regulated concentra	Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	Bs) as defined in 4			
Does this waste cont including RCRA F-Li	contain concentrations of lis F-Listed Solvents?	tain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, isted Solvents?	FR 261.31, 261.32			
Does this waste (	exhibit a Hazardous Charac	Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	tate regulations?			Τ
Does this waste ( other dioxin as de	Does this waste contain regulated concentra other dioxin as defined in 40 CFR 261.317	Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	kin (2,3,7,8-TCCD)			
Is this a regulated	d Radioactive Waste as defi	is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	IS?			Τ
Is this a regulated	d Medical or Infectious Was	is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	egulations?			
is this waste a rei	is this waste a reactive or heat generating waste?	aste?	-			
Does the waste c	Does the waste contain sulfur or sulfur by-products?	oducts?				
Is this waste gene	s this waste generated at a Federal Superfund Clean Up Site?	nd Clean Up Site?				T
Is this waste from a	a TSD facility, TSD like facility or consolidator?	ality or consolidator?				
VI. Certification	tion					]
I nereby certify th description of the Results/Material {	at to the best of my knowlec waste material being offere Safety Data Sheets submitte	I nereby certriy that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.	ad herein is a true, ted hazards have presentative of the	complete and been disclose waste.	l accurate d. All Analytical	
I further certify that by deliver for disposal ai facility is prohibited fr provided herein. Our being inaccurate or u	at by utilizing this profile, nei al any waste which is classif ad from accepting by law. 1 Our company hereby agree or untrue.	I further cartify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.	the company will. r infectious waste, any change or co / against any dama	deliver for dis or any other ndition pertair ages resulting	oosal or attempt waste material th ling to the waste from this certific	s o Ition
I further certify that th	at the company has not alter	6 company has not altered the form or content of this profile chood a	d hohimme og tood	0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -	-	

offile sheet as provided by Republic Services Inc.	BMC West Corporation	Company Name	287	Date
I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.	Chief Administrative Officer	Authorized Representative Name And Title (Type or Print)	The	Authorized Representative Signature

© Republic Services, April 2013

# **Certification of UST Corrective Action**

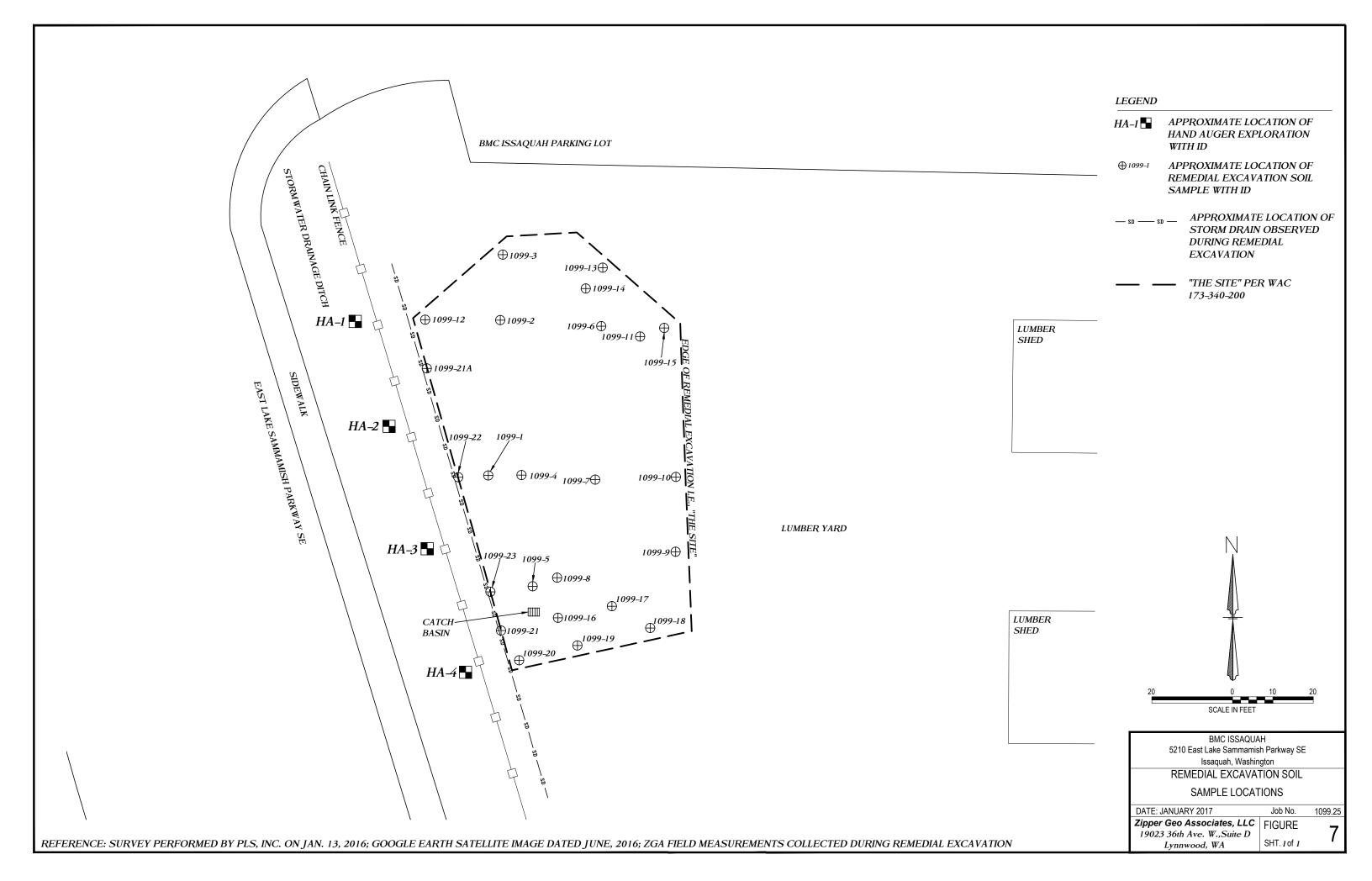
The waste described on the attached profile sheet is subject to the UST corrective action petroleum contaminated media and debris that fails the tests for TLCP (D018 through D043) and is subject to UST corrective action regulations under 40 CFR 280 are not regulations under 40 CFR Part 280. Furthermore, 40 CFR 261.4(b)(10) states that considered hazardous waste.

SE Раккылу 5210 EAST LAKE SAMMAMISH SITE ADDRESS

Generator Signature, Title

Date

Appendix I – Remedial Action Analytical Results



Mr. Jon Einarsen Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036

Dear Mr. Einarsen,

On July 20th, 4 samples were received by our laboratory and assigned our laboratory project number EV15070089. The project was identified as your 1099.25. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan Laboratory Director

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CLIENT SAMPLE ID	SP-1		CCREDITATION:	C601			
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	IALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	07/20/2015	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	07/20/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	07/20/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/20/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/20/2015	PAB
						ANALYSIS AN	ALYSIS
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	101				07/20/2015	PAB
TFT	EPA-8021	110				07/20/2015	PAB

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		WDOL NOOKEDITATION. COOT									
		SAMPLE	DATA RESULTS								
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	NALYSIS BY				
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	07/20/2015	PAB				
Benzene	EPA-8021	U	0.030	1	MG/KG	07/20/2015	PAB				
Toluene	EPA-8021	U	0.050	1	MG/KG	07/20/2015	PAB				
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/20/2015	PAB				
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/20/2015	PAB				
					1	ANALYSIS AN	ALYSIS				
SURROGATE	METHOD	%REC				DATE	BY				
TFT	NWTPH-GX	97.4				07/20/2015	PAB				
TFT	EPA-8021	107				07/20/2015	PAB				

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	0 0										
		SAMPLE	DATA RESULTS								
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	IALYSIS BY				
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	07/20/2015	PAB				
Benzene	EPA-8021	U	0.030	1	MG/KG	07/20/2015	PAB				
Toluene	EPA-8021	U	0.050	1	MG/KG	07/20/2015	PAB				
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/20/2015	PAB				
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/20/2015	PAB				
					1	ANALYSIS AN	ALYSIS				
SURROGATE	METHOD	%REC				DATE	BY				
TFT	NWTPH-GX	91.1				07/20/2015	PAB				
TFT	EPA-8021	103				07/20/2015	PAB				

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		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	310	30	10	MG/KG	07/21/2015	PAB
Benzene	EPA-8021	U	0.30	10	MG/KG	07/21/2015	PAB
Toluene	EPA-8021	1.2	0.50	10	MG/KG	07/21/2015	PAB
Ethylbenzene	EPA-8021	1.6	0.50	10	MG/KG	07/21/2015	PAB
Xylenes	EPA-8021	U	2.0	10	MG/KG	07/21/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/20/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/20/2015	EBS
Lead	EPA-6020	6.0	0.50	5	MG/KG	07/21/2015	RAL
SURROGATE	METHOD	%REC				ANALYSIS AN DATE	NALYSIS BY
TFT 10X Dilution	NWTPH-GX	172 GS2				07/21/2015	PAB
TFT 10X Dilution	EPA-8021	158 GS2				07/21/2015	PAB
C25	NWTPH-DX	86.9				07/20/2015	EBS

U - Analyte analyzed for but not detected at level above reporting limit. GS2 - Surrogate outside of control limits due to dilution.

Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

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### LABORATORY BLANK RESULTS

### MBG-072015S - Batch 95401 - Soil by NWTPH-GX

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	07/20/2015	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

### MB-072015S - Batch 95401 - Soil by EPA-8021

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
Benzene	EPA-8021	U	0.030	1	MG/KG	07/20/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	07/20/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/20/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/20/2015	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

## MB-071715S - Batch 95411 - Soil by NWTPH-DX

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/17/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/17/2015	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

### MB-072115S - Batch 95446 - Soil by EPA-6020

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
Lead	EPA-6020	U	0.10	1	MG/KG	07/21/2015	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

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### LABORATORY CONTROL SAMPLE RESULTS

### ALS Test Batch ID: 95401 - Soil by NWTPH-GX

					ANALYSIS	ANALYSIS
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY
TPH-Volatile Range - BS	NWTPH-GX	92.8			07/20/2015	PAB
TPH-Volatile Range - BSD	NWTPH-GX	92.1	1		07/20/2015	PAB

### ALS Test Batch ID: 95401 - Soil by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	91.9			07/20/2015	PAB
Benzene - BSD	EPA-8021	92.4	1		07/20/2015	PAB
Toluene - BS	EPA-8021	93.7			07/20/2015	PAB
Toluene - BSD	EPA-8021	94.0	0		07/20/2015	PAB
Ethylbenzene - BS	EPA-8021	95.7			07/20/2015	PAB
Ethylbenzene - BSD	EPA-8021	95.9	0		07/20/2015	PAB
Xylenes - BS	EPA-8021	97.8			07/20/2015	PAB
Xylenes - BSD	EPA-8021	98.5	1		07/20/2015	PAB

# ALS Test Batch ID: 95411 - Soil by NWTPH-DX

					ANALYSIS	ANALYSIS
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY
TPH-Diesel Range - BS	NWTPH-DX	91.9			07/17/2015	EBS
TPH-Diesel Range - BSD	NWTPH-DX	101	9		07/17/2015	EBS

# ALS Test Batch ID: 95446 - Soil by EPA-6020

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Lead - BS	EPA-6020	98.4			07/21/2015	RAL
Lead - BSD	EPA-6020	97.4	1		07/21/2015	RAL

APPROVED BY

Laboratory Director

Pa	a	e	7

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Reference     Reference     Reference     Reference     Reference       R     12     12     12     12     12       R     13     12     12     12     12       R     13     12     12     12     12       R     13     12     13     12     12       R     13     14     12     12     12       R     13     14     14     14     14       R     13     14     14     14     14       R     14     14     14     14     14       R     14     14     14     14     14       R     14 <t< td=""><td>35         вил.           10         1</td><td>Other Biology         Start SAMPLELO         Darte Darte         Time Internet           0.1         0.494.15         Exot.         Exot.           0.1         0.494.15         Exot.         Exot.           0.1         0.1         0.1         0.1         0.1           0.1         0.1         0.1         0.1         0.1         0.1           0.1         0.1         0.1         0.1         0.1         0.1         0.1           0.1</td><td></td><td>4</td><td>5</td><td></td><td></td><td></td><td></td><td></td><td>09</td><td>1</td><td></td><td></td><td></td><td>∏edhaH ∏tea9 [</td><td>n de la companya de l Reference de la companya de la company</td><td></td><td></td><td></td></t<>	35         вил.           10         1	Other Biology         Start SAMPLELO         Darte Darte         Time Internet           0.1         0.494.15         Exot.         Exot.           0.1         0.494.15         Exot.         Exot.           0.1         0.1         0.1         0.1         0.1           0.1         0.1         0.1         0.1         0.1         0.1           0.1         0.1         0.1         0.1         0.1         0.1         0.1           0.1		4	5						09	1				∏edhaH ∏tea9 [	n de la companya de l Reference de la companya de la company			
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Hypolic Hypol     Hypol     Hypol     K     K       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1	-1 7/20/15/1440 W 4 XVR	1099-1 7/20/15 1440 V 4 XVR 1 0. 0. 0. 0. 0. 0. CIATURES (Name, Company, Date, Time): 14-10 VI 5 amples - 1 day Ruch. CIATURES (Name, Company, Date, Time): 1-20-15 1620 CIATURES (Name, Company, Date, Time): 1-20-15 1620 CIATURES (Name, Company, Date, Time): 26A 1-20-15 1620 Received By. 000 Received By. 0000 Received By. 0000 Received By.	T,	>	Sepi	3	m.		へ、×											
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(R) Jon E. added BTEX to all samples - I day	TIONS (R) Jon E. addled BTER to all samples - I day Ruch me. company, Date, Time): 1-20-15/1620 Organic, Metals & Inorg	PECIAL INSTRUCTIONS (B) Jon E. addled BTER to all samples - 1 day Ruch. GNATURES (Name, Company, Date, Jime): Relinquished By: Received By: Received By: Received By: Fuels & Hydrocarpo	10.																	01
	me. Company, Date, Time): 7-20-15/1620 Organic, Metals & Inorganic, Metals & Inorganic	GNATURES (Name, Company, Date, Time); Relinquished By: Organic, Metals & Inorganic, Me	SPECIAL INSTRUCTIONS	) Jon E		and in	at x	81. YAN	mple	) -		ach								



July 22, 2015

Mr. Jon Einarsen Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036

Dear Mr. Einarsen,

On July 21st, 9 samples were received by our laboratory and assigned our laboratory project number EV15070096. The project was identified as your 1099.25. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan Laboratory Director

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### CERTIFICATE OF ANALYSIS

CLIENT: CLIENT CONTACT: CLIENT PROJECT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980 Jon Einarsen	V., Suite D		DATE: ALS JOB#: ALS SAMPLE#: ATE RECEIVED: LECTION DATE:	7/22/201 EV15070 EV15070 07/21/20	)096 )096-01 15	M
CLIENT PROJECT.	1099.25 1099-2			CCREDITATION:	C601	5 7:20:00 A	IVI
	1099-2	SAMPLE	DATA RESULTS	CREDITATION.	001		
		OAMI LL					
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS A	ANALYSIS AN DATE	BY
TPH-Volatile Range	NWTPH-GX	5.8	3.0	1	MG/KG	07/22/2015	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	07/22/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	07/22/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/22/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/22/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/22/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/22/2015	EBS
						ANALYSIS AN	
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	121				07/22/2015	PAB
TFT	EPA-8021	119				07/22/2015	PAB
C25	NWTPH-DX	77.6				07/22/2015	EBS

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

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		CERTIFIC/	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 98	V., Suite D		DATE: ALS JOB#: ALS SAMPLE#:	7/22/201 EV15070 EV15070	0096	
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	07/21/20	15	
CLIENT PROJECT:	1099.25		COLI	LECTION DATE:	7/21/201	5 7:30:00 A	M
CLIENT SAMPLE ID	1099-3		WDOE AC	CREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	4.5	3.0	1	MG/KG	07/22/2015	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	07/22/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	07/22/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/22/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/22/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/22/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/22/2015	EBS
						ANALYSIS AN DATE	NALYSIS BY
SURROGATE	METHOD	%REC				DATE	БТ
TFT	NWTPH-GX	116				07/22/2015	PAB
TFT	EPA-8021	118				07/22/2015	PAB
C25	NWTPH-DX	89.3				07/22/2015	EBS

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	- ( ) - / / /	IALYSIS

CLIENT:	Zipper Geo Associ 19023 - 36th Ave \ Lynnwood, WA 98	V., Suite D		DATE: ALS JOB#: ALS SAMPLE#:	7/22/201 EV15070 EV15070	0096	
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	07/21/20		
CLIENT PROJECT:	1099.25			LECTION DATE:		5 8:50:00 A	M
CLIENT SAMPLE ID	1099-4		WDOE AC	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	IALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	07/22/2015	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	07/22/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	07/22/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/22/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/22/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/22/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/22/2015	EBS
					,	ANALYSIS AN	
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	122				07/22/2015	PAB
TFT	EPA-8021	124				07/22/2015	PAB
C25	NWTPH-DX	90.5				07/22/2015	EBS

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		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980	V., Suite D		DATE: ALS JOB#: ALS SAMPLE#:	7/22/20 <sup>7</sup> EV1507 EV1507		
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	07/21/20		
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	7/21/201	15 10:10:00	AM
CLIENT SAMPLE ID	1099-5		WDOE AC	CREDITATION:	C601		
		SAMPLE	DATA RESULTS				
			REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN	NALYSIS BY
ANALYTE TPH-Volatile Range	<b>METHOD</b> NWTPH-GX	RESULTS 6.5	3.0	1	MG/KG	07/22/2015	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	07/22/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	07/22/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/22/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/22/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/22/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/22/2015	EBS
						ANALYSIS AN	
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	118				07/22/2015	PAB
TFT	EPA-8021	120				07/22/2015	PAB
C25	NWTPH-DX	79.7				07/22/2015	EBS

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		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980	V., Suite D		DATE: ALS JOB#: ALS SAMPLE#:	7/22/20 <sup>7</sup> EV1507 EV1507	0096	
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	07/21/20		
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	7/21/201	15 11:10:00	AM
CLIENT SAMPLE ID	1099-6		WDOE AC	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
			REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	NALYSIS BY
ANALYTE TPH-Volatile Range	<b>METHOD</b> NWTPH-GX	RESULTS 4.8	3.0	1	MG/KG	07/22/2015	PAB
Benzene	EPA-8021	<b>4.8</b> U	0.030	1	MG/KG	07/22/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	07/22/2015	PAB
Ethylbenzene	EPA-8021 EPA-8021	U	0.050	1	MG/KG	07/22/2015	PAB
Xylenes	EPA-8021	U	0.000	1	MG/KG	07/22/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/22/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/22/2015	EBS
						ANALYSIS AN	
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	129				07/22/2015	PAB
TFT	EPA-8021	132				07/22/2015	PAB
C25	NWTPH-DX	68.6				07/22/2015	EBS

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

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		CERTIFIC	ATE OF ANALYSIS						
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V	V., Suite D		ALS JOB#: EV15			2/2015 15070096		
CLIENT CONTACT: CLIENT PROJECT: CLIENT SAMPLE ID	Jon Einarsen 1099.25 1099-7	1099.25		ALS SAMPLE#: DATE RECEIVED: COLLECTION DATE: WDOE ACCREDITATION:		EV15070096-06 07/21/2015 7/21/2015 1:05:00 PM C601			
		SAMPLE	DATA RESULTS						
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	IALYSIS BY		
TPH-Volatile Range	NWTPH-GX	7.1	3.0	1	MG/KG	07/22/2015	PAB		
Benzene	EPA-8021	U	0.030	1	MG/KG	07/22/2015	PAB		
Toluene	EPA-8021	U	0.050	1	MG/KG	07/22/2015	PAB		
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/22/2015	PAB		
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/22/2015	PAB		
						ANALYSIS AN			
SURROGATE	METHOD	%REC				DATE	BY		
TFT	NWTPH-GX	108				07/22/2015	PAB		
TFT	EPA-8021	108				07/22/2015	PAB		

Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

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CERTIFI	CATEOF	ANALYSIS

CLIENT:	19023 - 36th Ave V	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036		DATE: ALS JOB#: ALS SAMPLE#:	7/22/2015 EV15070096 EV15070096-07		
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	07/21/20		
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	7/21/201	5 2:40:00 P	Μ
CLIENT SAMPLE ID	1099-8		WDOE AC	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	IALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	07/22/2015	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	07/22/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	07/22/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/22/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/22/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/22/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/22/2015	EBS
						ANALYSIS AN	
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	115				07/22/2015	PAB
TFT	EPA-8021	115				07/22/2015	PAB
C25	NWTPH-DX	87.2				07/22/2015	EBS

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IFICATE	

CLIENT:	19023 - 36th Ave V	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036		DATE: ALS JOB#: ALS SAMPLE#:	7/22/2015 EV15070096 EV15070096-08		
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	07/21/20		
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	7/21/201	5 3:50:00 P	M
CLIENT SAMPLE ID	1099-9		WDOE AC	CREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR		ANALYSIS AN DATE	IALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	07/22/2015	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	07/22/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	07/22/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/22/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/22/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	26	1	MG/KG	07/22/2015	EBS
TPH-Oil Range	NWTPH-DX	U	52	1	MG/KG	07/22/2015	EBS
					ļ	ANALYSIS AN	IALYSIS
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	84.6				07/22/2015	PAB
TFT	EPA-8021	93.7				07/22/2015	PAB
C25	NWTPH-DX	91.2				07/22/2015	EBS

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		CERTIFIC	CATE OF ANALYSIS						
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980	V., Suite D		DATE: ALS JOB#: ALS SAMPLE#:			7/22/2015 EV15070096 EV15070096-09		
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	07/21/20	15			
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	7/21/201	5 3:35:00 P	M		
CLIENT SAMPLE ID	SP-4		WDOE AC	CREDITATION:	C601				
		SAMPLI	E DATA RESULTS						
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS 4	ANALYSIS AN DATE	IALYSIS BY		
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	07/22/2015	PAB		
Benzene	EPA-8021	U	0.030	1	MG/KG	07/22/2015	PAB		
Toluene	EPA-8021	U	0.050	1	MG/KG	07/22/2015	PAB		
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/22/2015	PAB		
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/22/2015	PAB		
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/22/2015	EBS		
TPH-Oil Range	NWTPH-DX	58	50	1	MG/KG	07/22/2015	EBS		
SURROGATE	METHOD	%REC			ļ	ANALYSIS AN DATE	IALYSIS BY		
TFT	NWTPH-GX	99.7				07/22/2015	PAB		

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains lube oil.

EPA-8021

NWTPH-DX

110

92.8

TFT

C25

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07/22/2015

07/22/2015

PAB

EBS



### CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates	DATE:	7/22/2015
	19023 - 36th Ave W., Suite D	ALS SDG#:	EV15070096
	Lynnwood, WA 98036	WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25		
	Lynnwood, WA 98036 Jon Einarsen		

### LABORATORY BLANK RESULTS

## MBG-072015S - Batch 95401 - Soil by NWTPH-GX

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	07/20/2015	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

# MB-072015S - Batch 95401 - Soil by EPA-8021

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	NALYSIS BY
Benzene	EPA-8021	U	0.030	1	MG/KG	07/20/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	07/20/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/20/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/20/2015	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

# MB-071715S - Batch 95411 - Soil by NWTPH-DX

			REPORTING	DILUTION		ANALYSIS A	ANALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/17/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/17/2015	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

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### CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates	DATE:
	19023 - 36th Ave W., Suite D	ALS SDG#:
	Lynnwood, WA 98036	WDOE ACCREDITATION:
CLIENT CONTACT:	Jon Einarsen	
CLIENT PROJECT:	1099.25	

## LABORATORY CONTROL SAMPLE RESULTS

### ALS Test Batch ID: 95401 - Soil by NWTPH-GX

					ANALYSIS	ANALYSIS
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY
TPH-Volatile Range - BS	NWTPH-GX	92.8			07/20/2015	PAB
TPH-Volatile Range - BSD	NWTPH-GX	92.1	1		07/20/2015	PAB

# ALS Test Batch ID: 95401 - Soil by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	91.9			07/20/2015	PAB
Benzene - BSD	EPA-8021	92.4	1		07/20/2015	PAB
Toluene - BS	EPA-8021	93.7			07/20/2015	PAB
Toluene - BSD	EPA-8021	94.0	0		07/20/2015	PAB
Ethylbenzene - BS	EPA-8021	95.7			07/20/2015	PAB
Ethylbenzene - BSD	EPA-8021	95.9	0		07/20/2015	PAB
Xylenes - BS	EPA-8021	97.8			07/20/2015	PAB
Xylenes - BSD	EPA-8021	98.5	1		07/20/2015	PAB

# ALS Test Batch ID: 95411 - Soil by NWTPH-DX

					ANALYSIS	ANALYSIS	
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY	
TPH-Diesel Range - BS	NWTPH-DX	91.9			07/17/2015	EBS	
TPH-Diesel Range - BSD	NWTPH-DX	101	9		07/17/2015	EBS	

APPROVED BY

7/22/2015

C601

EV15070096

Laboratory Director

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ALS Environmental 8620 Holly Drive, Suite 100 Everett, WA 98208	Suite 100 B				Chain Of Custody		Cust	lody/		-			ALS	ALS Job#	(Laborat	(Laboratory Use Only)	(ylu)	
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PROJECT ID: 1099.25		•	-		ANALYSIS REQUESTED	S REQU	JESTED	-		-	-		OTHER (Specify)	(Specif	ړ)			
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PROJECT Jon Ein	Einarsen									NS 022	] JAT	] Herk			**			
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PHONE:	FAX:						8560	y EPA	λq spι			oV-Im				58:		
PO.# 1099.25	E-MAIL:										8-AA	98 (						
INVOICE TO ZGA																		
AITENTION:																		
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4. 1099-5		1010		5														1
5. 1099-6	***********	(1)0		5														1
6. logg-7		1305		م		<u></u>												
7. 1099-8		1440		ĥ														
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2. Relinquished By:		-	, ,				Standard	Fuels & Hy	ar		Analysis						1	1
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\*Turnaround request less than standard may incur Rush Charges

Received By: \_



July 23, 2015

Mr. Jon Einarsen Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036

Dear Mr. Einarsen,

On July 22nd, 7 samples were received by our laboratory and assigned our laboratory project number EV15070104. The project was identified as your 1099.25. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan Laboratory Director

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### CERTIFICATE OF ANALYSIS

CLIENT: CLIENT CONTACT: CLIENT PROJECT: CLIENT SAMPLE ID	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980 Jon Einarsen 1099.25 1099-10	V., Suite D	COL	DATE: ALS JOB#: ALS SAMPLE#: ATE RECEIVED: LECTION DATE: CCREDITATION:	7/23/201 EV15070 EV15070 07/22/20 7/22/201 C601	)104 )104-01	M
	1000 10	SAMPLE	DATA RESULTS		0001		
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	IALYSIS BY
TPH-Volatile Range	NWTPH-GX	5.6	3.0	1	MG/KG	07/23/2015	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	07/23/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	07/23/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/23/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/23/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/22/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/22/2015	EBS
						ANALYSIS AN DATE	IALYSIS BY
SURROGATE	METHOD	%REC					
TFT	NWTPH-GX	110				07/23/2015	PAB
TFT	EPA-8021	108				07/23/2015	PAB
C25	NWTPH-DX	86.0				07/22/2015	EBS

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

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		CERTIFIC/	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 98	V., Suite D		DATE: ALS JOB#: ALS SAMPLE#:	7/23/201 EV15070 EV15070	0104	
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	07/22/20	15	
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	7/22/201	5 8:05:00 A	M
CLIENT SAMPLE ID	1099-11		WDOE AC	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	7.8	3.0	1	MG/KG	07/23/2015	PAB
Benzene	EPA-8021	0.031	0.030	1	MG/KG	07/23/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	07/23/2015	PAB
Ethylbenzene	EPA-8021	0.18	0.050	1	MG/KG	07/23/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/23/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/22/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/22/2015	EBS
SURROGATE	METHOD	%REC				ANALYSIS AN DATE	NALYSIS BY
TFT	NWTPH-GX	103				07/23/2015	PAB
TFT	EPA-8021	102				07/23/2015	PAB

C25

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

94.4

NWTPH-DX

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CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 98	V., Suite D		DATE: ALS JOB#: ALS SAMPLE#:	7/23/201 EV15070 EV15070	0104	
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	07/22/20		
CLIENT PROJECT:	1099.25			LECTION DATE:		5 10:55:00	AM
CLIENT SAMPLE ID	1099-12		WDOE AC	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS A	ANALYSIS AN DATE	IALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	07/23/2015	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	07/23/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	07/23/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/23/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/23/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/22/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/22/2015	EBS
						ANALYSIS AN	
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	112				07/23/2015	PAB
TFT	EPA-8021	112				07/23/2015	PAB
C25	NWTPH-DX	96.2				07/22/2015	EBS

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IFICATE	

CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 98	V., Suite D		DATE: ALS JOB#: ALS SAMPLE#:	7/23/201 EV15070 EV15070	0104	
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	07/22/20		
CLIENT PROJECT:	1099.25			LECTION DATE:		5 11:35:00	AM
CLIENT SAMPLE ID	1099-13		WDOE AC	CREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	IALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	07/23/2015	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	07/23/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	07/23/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/23/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/23/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/22/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/22/2015	EBS
					,	ANALYSIS AN	
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	106				07/23/2015	PAB
TFT	EPA-8021	106				07/23/2015	PAB
C25	NWTPH-DX	96.7				07/22/2015	EBS

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IFICAT		YSIS

CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 98	V., Suite D		DATE: ALS JOB#: ALS SAMPLE#:	7/23/201 EV15070 EV15070	0104	
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	07/22/20		
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	7/22/201	5 11:40:00	AM
CLIENT SAMPLE ID	1099-14		WDOE AC	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	IALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	07/23/2015	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	07/23/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	07/23/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/23/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/23/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/23/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/23/2015	EBS
						ANALYSIS AN	
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	113				07/23/2015	PAB
TFT	EPA-8021	112				07/23/2015	PAB
C25	NWTPH-DX	96.2				07/23/2015	EBS

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		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 98	V., Suite D		DATE: ALS JOB#: ALS SAMPLE#:	7/23/201 EV1507( EV1507(	0104	
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	07/22/20		
CLIENT PROJECT:	1099.25			LECTION DATE:		5 12:40:00	PM
CLIENT SAMPLE ID	1099-15		WDOE AC	CREDITATION:	C601		
		SAMPLE	DATA RESULTS				
			REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	IALYSIS BY
ANALYTE TPH-Volatile Range	<b>METHOD</b> NWTPH-GX	RESULTS 6.0	3.0	1	MG/KG	07/23/2015	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	07/23/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	07/23/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/23/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/23/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/22/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/22/2015	EBS
	METHOD	W REC				ANALYSIS AN DATE	IALYSIS BY
SURROGATE	METHOD	%REC					
TFT TFT	NWTPH-GX EPA-8021	103 102				07/23/2015 07/23/2015	PAB PAB
C25	NWTPH-DX	92.6				07/23/2015	EBS
025		52.0				01/22/2015	LDO

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

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		CERTIFIC	ATE OF ANALYSIS					
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 98	V., Suite D		DATE: 7/23/2015 ALS JOB#: EV15070104 ALS SAMPLE#: EV15070104-07				
CLIENT CONTACT: CLIENT PROJECT: CLIENT SAMPLE ID	Jon Einarsen 1099.25 1099-BT1		COL	ATE RECEIVED: LECTION DATE: CCREDITATION:		07/22/2015 7/22/2015 12:05:00 PM		
		SAMPLE	DATA RESULTS					
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	IALYSIS BY	
TPH-Volatile Range	NWTPH-GX	420	50	1	UG/L	07/23/2015	PAB	
Benzene	EPA-8021	U	1.0	1	UG/L	07/23/2015	PAB	
Toluene	EPA-8021	2.8	1.0	1	UG/L	07/23/2015	PAB	
Ethylbenzene	EPA-8021	11	1.0	1	UG/L	07/23/2015	PAB	
Xylenes	EPA-8021	20	3.0	1	UG/L	07/23/2015	PAB	
TPH-Diesel Range	NWTPH-DX	790	130	1	UG/L	07/22/2015	EBS	
TPH-Oil Range	NWTPH-DX	470	250	1	UG/L	07/22/2015	EBS	
SURROGATE	METHOD	%REC				ANALYSIS AN DATE	IALYSIS BY	
TFT	NWTPH-GX	94.3				07/23/2015	PAB	
TFT	EPA-8021	104				07/23/2015	PAB	
C25	NWTPH-DX	77.1				07/22/2015	EBS	

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains highly weathered gasoline, weathered diesel and lube oil. Diesel range product results biased high due to gasoline range product overlap.

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CLIENT:	Zipper Geo Associates	DATE:	7/23/2015
	19023 - 36th Ave W., Suite D	ALS SDG#:	EV15070104
	Lynnwood, WA 98036	WDOE ACCREDITATION:	C601
CLIENT CONTACT: CLIENT PROJECT:	Jon Einarsen 1099.25		0001

# LABORATORY BLANK RESULTS

# MBG-072315S - Batch 95525 - Soil by NWTPH-GX

			REPORTING	DILUTION		ANALYSIS ANALYSIS	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	07/23/2015	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

#### MBG-072115W - Batch 95497 - Water by NWTPH-GX

			REPORTING	DILUTION	ANALYSIS ANALYS		NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	07/21/2015	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

#### MB-072315S - Batch 95525 - Soil by EPA-8021

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
Benzene	EPA-8021	U	0.030	1	MG/KG	07/23/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	07/23/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/23/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/23/2015	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

#### MB-072115W - Batch 95497 - Water by EPA-8021

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
Benzene	EPA-8021	U	1.0	1	UG/L	07/21/2015	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	07/21/2015	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	07/21/2015	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	07/21/2015	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

# MB-072215S - Batch 95534 - Soil by NWTPH-DX

			REPORTING	EPORTING DILUTION		ANALYSIS ANALYSIS		
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY	
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/22/2015	EBS	
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/22/2015	EBS	

U - Analyte analyzed for but not detected at level above reporting limit.

### MB-072115W - Batch 95457 - Water by NWTPH-DX

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	07/21/2015	EBS

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	CERTIFICATE OF ANALYSIS								
CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D	DATE: ALS SDG#:	7/23/2015 EV15070104						
CLIENT CONTACT:	Lynnwood, WA 98036 Jon Einarsen	WDOE ACCREDITATION:	C601						
CLIENT PROJECT:	1099.25								
LABORATORY BLANK RESULTS									
MB-072115W - Batch	MB-072115W - Batch 95457 - Water by NWTPH-DX								

250

1

UG/L

07/21/2015

EBS

U - Analyte analyzed for but not detected at level above reporting limit.

NWTPH-DX

U

TPH-Oil Range

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CLIENT:	Zipper Geo Associates	DATE:	7/23/2015
	19023 - 36th Ave W., Suite D	ALS SDG#:	EV15070104
	Lynnwood, WA 98036	WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25		

### LABORATORY CONTROL SAMPLE RESULTS

# ALS Test Batch ID: 95525 - Soil by NWTPH-GX

	METHOD			01141	ANALYSIS DATE	ANALYSIS BY
SPIKED COMPOUND TPH-Volatile Range - BS	<b>METHOD</b> NWTPH-GX	%REC 82.2	RPD	QUAL	07/23/2015	PAB
TPH-Volatile Range - BSD	NWTPH-GX	83.2	1		07/23/2015	PAB

## ALS Test Batch ID: 95497 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	79.8			07/21/2015	PAB
TPH-Volatile Range - BSD	NWTPH-GX	83.5	5		07/21/2015	PAB

### ALS Test Batch ID: 95525 - Soil by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	90.2			07/23/2015	PAB
Benzene - BSD	EPA-8021	89.4	1		07/23/2015	PAB
Toluene - BS	EPA-8021	92.1			07/23/2015	PAB
Toluene - BSD	EPA-8021	89.4	3		07/23/2015	PAB
Ethylbenzene - BS	EPA-8021	90.4			07/23/2015	PAB
Ethylbenzene - BSD	EPA-8021	89.7	1		07/23/2015	PAB
Xylenes - BS	EPA-8021	92.3			07/23/2015	PAB
Xylenes - BSD	EPA-8021	91.7	1		07/23/2015	PAB

# ALS Test Batch ID: 95497 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	95.2			07/21/2015	PAB
Benzene - BSD	EPA-8021	97.8	3		07/21/2015	PAB
Toluene - BS	EPA-8021	96.2			07/21/2015	PAB
Toluene - BSD	EPA-8021	98.1	2		07/21/2015	PAB
Ethylbenzene - BS	EPA-8021	96.6			07/21/2015	PAB
Ethylbenzene - BSD	EPA-8021	99.7	3		07/21/2015	PAB
Xylenes - BS	EPA-8021	98.1			07/21/2015	PAB
Xylenes - BSD	EPA-8021	102	4		07/21/2015	PAB

# ALS Test Batch ID: 95534 - Soil by NWTPH-DX

					ANALYSIS A	NALYSIS
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY
TPH-Diesel Range - BS	NWTPH-DX	112			07/23/2015	EBS
TPH-Diesel Range - BSD	NWTPH-DX	104	8		07/23/2015	EBS

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CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036
CLIENT CONTACT:	Jon Einarsen
CLIENT PROJECT:	1099.25

DATE: ALS SDG#: WDOE ACCREDITATION:

7/23/2015 EV15070104 C601

# LABORATORY CONTROL SAMPLE RESULTS

# ALS Test Batch ID: 95457 - Water by NWTPH-DX

					ANALYSIS	ANALYSIS	
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY	
TPH-Diesel Range - BS	NWTPH-DX	93.4			07/21/2015	EBS	
TPH-Diesel Range - BSD	NWTPH-DX	93.3	0		07/21/2015	EBS	

APPROVED BY

Laboratory Director

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July 29, 2015

Mr. Jon Einarsen Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036

Dear Mr. Einarsen,

On July 24th, 3 samples were received by our laboratory and assigned our laboratory project number EV15070121. The project was identified as your 1099.25. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

**Rick Bagan** Laboratory Director

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CLIENT: CLIENT CONTACT: CLIENT PROJECT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980 Jon Einarsen 1099.25	V., Suite D	COL	DATE: ALS JOB#: ALS SAMPLE#: ATE RECEIVED: LECTION DATE:		)121 )121-01	AM
CLIENT SAMPLE ID	1099-16			CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	IALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	07/27/2015	DLC
Benzene	EPA-8021	U	0.030	1	MG/KG	07/27/2015	DLC
Toluene	EPA-8021	U	0.050	1	MG/KG	07/27/2015	DLC
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/27/2015	DLC
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/27/2015	DLC
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/24/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/24/2015	EBS
						ANALYSIS AN DATE	IALYSIS BY
SURROGATE	METHOD	%REC				DATE	Ы
TFT	NWTPH-GX	105				07/27/2015	DLC
TFT	EPA-8021	99.0				07/27/2015	DLC
C25	NWTPH-DX	95.7				07/24/2015	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

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		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980	V., Suite D		DATE: ALS JOB#: ALS SAMPLE#:	7/29/20 EV1507 EV1507		
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	07/24/2	015	
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	7/24/20	15 11:20:00	AM
CLIENT SAMPLE ID	1099-17		WDOE AC	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
			REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	IALYSIS BY
ANALYTE	METHOD	RESULTS	_	FACTOR			
TPH-Volatile Range	NWTPH-GX	12	3.0	1	MG/KG	07/28/2015	DLC
Benzene	EPA-8021	U	0.030	1	MG/KG	07/28/2015	DLC
Toluene	EPA-8021	U	0.050	1	MG/KG	07/28/2015	DLC
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/28/2015	DLC
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/28/2015	DLC
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/24/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/24/2015	EBS
						ANALYSIS AN	
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	75.2				07/28/2015	DLC
TFT	EPA-8021	66.1				07/28/2015	DLC
C25	NWTPH-DX	99.2				07/24/2015	EBS

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

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		CERTIFIC/	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 98	N., Suite D		DATE: ALS JOB#: ALS SAMPLE#:	7/29/20 EV1507 EV1507	-	
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	07/24/2	015	
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	7/24/20	15 11:40:00	AM
CLIENT SAMPLE ID	1099-BT2		WDOE AC	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	1100	50	1	UG/L	07/26/2015	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	07/26/2015	DLC
Toluene	EPA-8021	1.1	1.0	1	UG/L	07/26/2015	DLC
Ethylbenzene	EPA-8021	11	1.0	1	UG/L	07/26/2015	DLC
Xylenes	EPA-8021	16	3.0	1	UG/L	07/26/2015	DLC
TPH-Diesel Range	NWTPH-DX	3100	130	1	UG/L	07/24/2015	EBS
TPH-Oil Range	NWTPH-DX	490	250	1	UG/L	07/24/2015	EBS
						ANALYSIS AN DATE	NALYSIS BY
SURROGATE	METHOD	%REC					
TFT	NWTPH-GX	103				07/26/2015	DLC
TFT	EPA-8021	112				07/26/2015	DLC
C25	NWTPH-DX	75.4				07/24/2015	EBS

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains highly weathered gasoline, highly weathered diesel and lube oil.

Diesel range product results biased high due to gasoline range product overlap. Oil range product results biased high due to diesel range product overlap.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Laboratory Group A Campbell Brothers Limited Company

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CLIENT:	Zipper Geo Associates	DATE:	7/29/2015
	19023 - 36th Ave W., Suite D	ALS SDG#:	EV15070121
	Lynnwood, WA 98036	WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25		

#### LABORATORY BLANK RESULTS

# MBG-072515S - Batch 95652 - Soil by NWTPH-GX

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	07/25/2015	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

#### MBG-072515W - Batch 95638 - Water by NWTPH-GX

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	07/25/2015	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

#### MB-072515S - Batch 95652 - Soil by EPA-8021

			REPORTING	DILUTION		ANALYSIS A	ANALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
Benzene	EPA-8021	U	0.030	1	MG/KG	07/25/2015	DLC
Toluene	EPA-8021	U	0.050	1	MG/KG	07/25/2015	DLC
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/25/2015	DLC
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/25/2015	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

#### MB-072515W - Batch 95638 - Water by EPA-8021

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
Benzene	EPA-8021	U	1.0	1	UG/L	07/25/2015	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	07/25/2015	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	07/25/2015	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	07/25/2015	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

# MB-071715S - Batch 95411 - Soil by NWTPH-DX

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	07/17/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	07/17/2015	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

### MB-072415W2 - Batch 95608 - Water by NWTPH-DX

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	07/25/2015	EBS

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	CERTIFIC	ATE OF ANALYSIS			
CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS SDG#: WDOE ACCREDITATION:	7/29/2015 EV15070121 C601		
CLIENT CONTACT: CLIENT PROJECT:	Jon Einarsen 1099.25	WDOL ACCREDITATION.	0001		
LABORATORY BLANK RESULTS					
MB-072415W2 - Batch 95608 - Water by NWTPH-DX					

250

1

UG/L

07/25/2015

EBS

U - Analyte analyzed for but not detected at level above reporting limit.

NWTPH-DX

U

TPH-Oil Range

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FAX 425-356-2626

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CLIENT:	Zipper Geo Associates	DATE:	7/29/2015
	19023 - 36th Ave W., Suite D	ALS SDG#:	EV15070121
	Lynnwood, WA 98036	WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25		

### LABORATORY CONTROL SAMPLE RESULTS

### ALS Test Batch ID: 95652 - Soil by NWTPH-GX

	METHOD			01141	ANALYSIS DATE	ANALYSIS BY
SPIKED COMPOUND TPH-Volatile Range - BS	<b>METHOD</b> NWTPH-GX	%REC 95.1	RPD	QUAL	07/25/2015	DLC
TPH-Volatile Range - BSD	NWTPH-GX	95.7	1		07/25/2015	DLC

### ALS Test Batch ID: 95638 - Water by NWTPH-GX

					ANALYSIS	ANALYSIS
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY
TPH-Volatile Range - BS	NWTPH-GX	78.7			07/25/2015	DLC
TPH-Volatile Range - BSD	NWTPH-GX	85.2	8		07/25/2015	DLC

# ALS Test Batch ID: 95652 - Soil by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	101			07/25/2015	DLC
Benzene - BSD	EPA-8021	99.5	2		07/25/2015	DLC
Toluene - BS	EPA-8021	102			07/25/2015	DLC
Toluene - BSD	EPA-8021	102	0		07/25/2015	DLC
Ethylbenzene - BS	EPA-8021	104			07/25/2015	DLC
Ethylbenzene - BSD	EPA-8021	104	0		07/25/2015	DLC
Xylenes - BS	EPA-8021	104			07/25/2015	DLC
Xylenes - BSD	EPA-8021	104	0		07/25/2015	DLC

# ALS Test Batch ID: 95638 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	98.6			07/25/2015	DLC
Benzene - BSD	EPA-8021	99.6	1		07/25/2015	DLC
Toluene - BS	EPA-8021	97.5			07/25/2015	DLC
Toluene - BSD	EPA-8021	99.0	2		07/25/2015	DLC
Ethylbenzene - BS	EPA-8021	97.6			07/25/2015	DLC
Ethylbenzene - BSD	EPA-8021	98.2	1		07/25/2015	DLC
Xylenes - BS	EPA-8021	101			07/25/2015	DLC
Xylenes - BSD	EPA-8021	102	1		07/25/2015	DLC

# ALS Test Batch ID: 95411 - Soil by NWTPH-DX

					ANALYSIS	ANALYSIS
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY
TPH-Diesel Range - BS	NWTPH-DX	91.9			07/17/2015	EBS
TPH-Diesel Range - BSD	NWTPH-DX	101	9		07/17/2015	EBS

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CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036
CLIENT CONTACT:	Jon Einarsen
CLIENT PROJECT:	1099.25

DATE: 7/29 ALS SDG#: EV1 WDOE ACCREDITATION: C60

7/29/2015 EV15070121 C601

# LABORATORY CONTROL SAMPLE RESULTS

# ALS Test Batch ID: 95608 - Water by NWTPH-DX

					ANALYSIS	ANALYSIS	
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY	
TPH-Diesel Range - BS	NWTPH-DX	100			07/24/2015	EBS	
TPH-Diesel Range - BSD	NWTPH-DX	101	1		07/24/2015	EBS	

APPROVED BY

Laboratory Director

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Child         Contraction         Contraction           Contraction         Contraction         Contraction         Contraction         Contraction           Execution         Contraction         Contraction         Contraction         Contraction         Contraction         Contraction           Execution         Contraction         Con	Mail         Mail <th< th=""><th>Парти и продукт (15)         Полони и продукт (15)</th><th>Понсказование         Понсказование         Понсказ</th><th>Ð</th><th>6-2600</th><th></th><th></th><th>and a construction of the construction of the</th><th></th><th></th><th></th><th>-</th><th></th><th>-</th><th></th><th></th><th></th><th></th><th>/</th><th>&gt;</th><th>)</th><th>)</th><th>6-) 、) つ-</th><th>-</th></th<>	Парти и продукт (15)         Полони и продукт (15)	Понсказование         Понсказ	Ð	6-2600			and a construction of the construction of the				-		-					/	>	)	)	6-) 、) つ-	-
Instruction	India:         Indi:         Indi:         Indi: </th <th>GRAFT         ANALYSIS REQUESTED         OTHER Specify           CAA         CA</th> <th>Организа СССА ЗССА ОТСК 25 ПОС 1: ПОС 2: 5 ПОС 1: 1 ПОС 1: 1</th> <th>Fax</th> <th>6-2626 ww.alsglobal.co</th> <th>Ę</th> <th></th> <th></th> <th></th> <th>a</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>Date</th> <th>2/2</th> <th></th> <th>Page_</th> <th>~</th> <th></th> <th>Of 1</th> <th></th>	GRAFT         ANALYSIS REQUESTED         OTHER Specify           CAA         CA	Организа СССА ЗССА ОТСК 25 ПОС 1: ПОС 2: 5 ПОС 1: 1 ПОС 1: 1	Fax	6-2626 ww.alsglobal.co	Ę				a							Date	2/2		Page_	~		Of 1	
ZCH     ZCH       JOU     JOU	ZCH       ZCH       ZCH         ZCH       ZCH       Z	Characterize         Characterize         Characterize           Characterize         Characterize         Characterize         Characterize <th>Полити 2.6 А         Полити 2.6 А           Волован Поли Гермали Поли Гермал</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>ANAL</th> <th></th> <th>EQUE</th> <th>STED</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>10</th> <th>ER (S)</th> <th>oecify</th> <th></th> <th></th> <th></th>	Полити 2.6 А         Полити 2.6 А           Волован Поли Гермали Поли Гермал						ANAL		EQUE	STED							10	ER (S)	oecify			
	State     State     State     State       State     State     State     State	The field of t	Половина	ZGA	Val Con											TOMOS	ר⊡	Clarkel!	نېسې مەنبوچ يېچ				1	19
1     1 <td>Image: Second Second</td> <td>Поли         Поли         <t< td=""><td>Опе         Так         Опе         Так         Опе         Так         Опе         Так         Опе         Так         Опе         Так         Опе         One         One</td></t<><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>09</td><td></td><td></td><td></td><td>e senteros en</td><td>D 400 Q</td><td></td><td></td><td></td><td></td><td></td><td></td></td>	Image: Second	Поли         Поли <t< td=""><td>Опе         Так         Опе         Так         Опе         Так         Опе         Так         Опе         Так         Опе         Так         Опе         One         One</td></t<> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>09</td> <td></td> <td></td> <td></td> <td>e senteros en</td> <td>D 400 Q</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Опе         Так         Опе         Так         Опе         Так         Опе         Так         Опе         Так         Опе         Так         Опе         One										09				e senteros en	D 400 Q						
IOG4:23     EMUIL       IOG4:23     EMUIL       IOG4:24     EMUIL       IOG4:25     IOG4:25       IOG4:25     IOG4:26       IOG4:25     IOG4:26       IOG4:25     IOG4:26       IOG4:26     IOG4:26       IOG4:27     IOG4:26       IOG4:28     IOG4:26       IOG4:29     IOG4:26       IOG4:20     IOG4:26       IOG4:26     IOG4:26       IOG4:26     IOG4:26       IOG4:26     IOG4:26       IOG4:26     IOG4:26       IOG4:26     IOG4:26       IOG4:27     IOG4:26       I		71.2.7     #.M.       71.2     #.M.       71.2 <td>0.4         1.053.2         смол.         <t< td=""><td>PIRONE.</td><td>La V.</td><td></td><td></td><td></td><td></td><td></td><td>00</td><td>09</td><td></td><td></td><td></td><td>d</td><td>CLAMP &amp; UN</td><td></td><td></td><td></td><td></td><td></td><td></td><td>S</td></t<></td>	0.4         1.053.2         смол.         смол. <t< td=""><td>PIRONE.</td><td>La V.</td><td></td><td></td><td></td><td></td><td></td><td>00</td><td>09</td><td></td><td></td><td></td><td>d</td><td>CLAMP &amp; UN</td><td></td><td></td><td></td><td></td><td></td><td></td><td>S</td></t<>	PIRONE.	La V.						00	09				d	CLAMP & UN							S
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Заминали         Дание		EliD.         DATE         TIME         TYPE         LAB#         WMTPH-DX           6         1/2.4//s         1015         Soirt         /         Vesile Ofgan         Pesale           1         1         1         1         V         NTPL         MMTPH-DX           5         1         2         X         X         N         NTPL         MMTPH-DX           5         1         2         X         X         N         NTPL         MMTPH-DX           5         2         2         X         X         N	Defects         Sample ID         Models         Mod	Joh	Narsen							olatile		1			THE SQL							F CC
SAMPLEID.       DATE       TIME       TYPE       LAB#       TIME       TYPE       LAB#         10994-16 $3/24/15$ 1015       soit       /       X       X       Notesta         10994-16 $3/24/15$ 1015       soit       /       X       K       Notesta         10999-16 $3/24/15$ 1015       soit       /       X       K       Notesta         10999-16 $3/24/15$ 1120       L       X       K       Notesta       Notesta         10999-16 $3/24/15$ 1140       112.0       L       X       Notesta         10999-16 $3/24/15$ 1140       112.0       L       Notesta         10999-16 $3/24/15$ 1140       112.0       L       Notesta         10999-16 $3/24/15$ 1140       112.0       L       Notesta         10999-17 $3/24/15$	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	ELD.       DATE       TYPE       LBB#       WE RE RE       RE RE RE       RE RE       RE RE RE	SamPle LD.         DATE         The         The <th< td=""><td>ADDRESS:</td><td></td><td></td><td></td><td></td><td></td><td>XĐ-H</td><td></td><td>V beten</td><td></td><td></td><td></td><td></td><td>C Project data (C S</td><td>-</td><td></td><td></td><td>one</td><td></td><td></td><td>o hae</td></th<>	ADDRESS:						XĐ-H		V beten					C Project data (C S	-			one			o hae
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(079-BTZ 7/2/1140 1/20 3 X X X	#kt/kg       It 40       It 20       3       X       X         It 10       It 20       3       X       X	3T 2     3[2]     3[2]     3[2]     3[2]     1     1       3T 2     3[2]     3[2]     1     1     1       3T 2     1     1     1     1     1       3T 2     1     1     1     1     0	(0 99 - BT 2	3.		Ť																-+		
		TIONS	O     O       D <td>1099</td> <td>7/24/15</td> <td>011</td> <td>1420</td> <td>m</td> <td>×</td> <td>×</td> <td>1</td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td>-</td> <td></td> <td>m</td>	1099	7/24/15	011	1420	m	×	×	1				-					-		-		m
	5.       1	TIONS	Belinouished By:     Company, Bate, Time):       Fuels & Hydrocarbo	5.																_		-		
10	7. 3. 3. 9. 10. 10. 10.	TIONS TIONS	0     0       DECIAL INSTRUCTIONS     D       Received By:     D       D     D       Received By:     D       Received By:     D       Relinquished By:     D       Relinquished By:     D	6.				-																
	3. 9. 10. 5.EciAL INSTRUCTIONS	TIONS TIONS TONS TONS TONS TONS TONS TONS TONS T	Decidal INSTRUCTIONS     Decidal INSTRUCTIONS       Decidal INSTRUCTIONS     Decidal INSTRUCTIONS       Decidal INSTRUCTIONS     Decidential Instructions       Decidal Instructions     Decidential Instructions       Decided By:     Decidential Instructions       Received By:     Decidential Instructions       Relinquished By:     Decidential Instructions	7.											-									
	3. 10. special instructions	TIONS TIONS TONS TONS TONS TONS TONS TONS TONS T	0     Declat INSTRUCTIONS       PECIAL INSTRUCTIONS       GNATURES (Name, Company, Pate, Time):       Relinquished By:       Petinquished By:	ß					-				-									1		
10.	10. SPECIAL INSTRUCTIONS	TIONS TIONS TO Company, Date, Time): 2001-1-1-4-15   1505 100 101 - 101	0 PECIAL INSTRUCTIONS GNATURES (Name Company, Pate, Time): Relinquished By: Received By: Received By: Fuels & Hydrocarbo Relinquished By: Fuels & Hydrocarbo	9.					-											-				
	SPECIAL INSTRUCTIONS	TIONS The Company, Date, Time): Company, Date, Time): De Company, De Company, D	PECIAL INSTRUCTIONS GNATURES (Name Company, Pate, Time): Relinquished By: Contraction Active States A Inorganic, Metals & Inorgenic, Metals & Inor	10.					_		_		-		-							-		



September 11, 2015

Mr. Jon Einarsen Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036

Dear Mr. Einarsen,

On September 10th, 4 samples were received by our laboratory and assigned our laboratory project number EV15090062. The project was identified as your 1099.25. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan Laboratory Director

Page 1
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ALS Group USA, Corp



CLIENT: CLIENT CONTACT: CLIENT PROJECT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980 Jon Einarsen 1099.25	V., Suite D		DATE: ALS JOB#: ALS SAMPLE#: ATE RECEIVED: LECTION DATE:	9/11/201 EV1509 EV1509 09/10/20 9/10/201	0062 0062-01	M
CLIENT SAMPLE ID	1099-18			CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	09/10/2015	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	09/10/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	09/10/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	09/10/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	09/10/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	09/10/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	09/10/2015	EBS
Lead	EPA-6020	5.0	0.50	5	MG/KG	09/11/2015	RAL
SURROGATE	METHOD	%REC				ANALYSIS AN DATE	NALYSIS BY
TFT	NWTPH-GX	98.4				09/10/2015	PAB
TFT	EPA-8021	95.1				09/10/2015	PAB
C25	NWTPH-DX	103				09/10/2015	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

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CLIENT:	Zipper Geo Associ 19023 - 36th Ave V			DATE:	9/11/201		
	Lynnwood, WA 98	,		ALS JOB#: ALS SAMPLE#:	EV1509		
	•	000	П		EV1509		
CLIENT CONTACT:	Jon Einarsen			ATE RECEIVED:	09/10/20		
CLIENT PROJECT:	1099.25			LECTION DATE:		5 9:20:00 A	AIVI
CLIENT SAMPLE ID	1099-19		WDOE A	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	09/10/2015	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	09/10/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	09/10/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	09/10/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	09/10/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	09/10/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	09/10/2015	EBS
Lead	EPA-6020	2.3	0.50	5	MG/KG	09/11/2015	RAL
						ANALYSIS AN	NALYSIS
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	105				09/10/2015	PAB
TFT	EPA-8021	103				09/10/2015	PAB
C25	NWTPH-DX	127				09/10/2015	EBS

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CERTIF	ICATE	$O \vdash A$	ANAL	YSIS

CLIENT: CLIENT CONTACT: CLIENT PROJECT: CLIENT SAMPLE ID	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980 Jon Einarsen 1099.25 1099-20	V., Suite D	COL	DATE: ALS JOB#: ALS SAMPLE#: ATE RECEIVED: LECTION DATE: CCREDITATION:	09/10/20	0062 0062-03	١M
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	09/10/2015	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	09/10/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	09/10/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	09/10/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	09/10/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	09/10/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	09/10/2015	EBS
Lead	EPA-6020	3.9	0.50	5	MG/KG	09/11/2015	RAL
						ANALYSIS AN DATE	
SURROGATE	METHOD	%REC					
TFT	NWTPH-GX	109				09/10/2015	PAB
TFT	EPA-8021	107				09/10/2015	PAB
C25	NWTPH-DX	93.6				09/10/2015	EBS

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IFICATE	

CLIENT:	Zipper Geo Associ 19023 - 36th Ave V			DATE:	9/11/201		
	Lynnwood, WA 98			ALS JOB#: ALS SAMPLE#:	EV1509		
	•	000	П		EV15090		
CLIENT CONTACT:	Jon Einarsen			ATE RECEIVED:	09/10/20		
CLIENT PROJECT:	1099.25			LECTION DATE:		5 9:35:00 A	AIVI
CLIENT SAMPLE ID	1099-21		WDOE A	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	09/10/2015	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	09/10/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	09/10/2015	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	09/10/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	09/10/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	09/10/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	09/10/2015	EBS
Lead	EPA-6020	2.9	0.50	5	MG/KG	09/11/2015	RAL
						ANALYSIS AN	ALYSIS
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	107				09/10/2015	PAB
TFT	EPA-8021	106				09/10/2015	PAB
C25	NWTPH-DX	99.6				09/10/2015	EBS

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CLIENT:	Zipper Geo Associates	DATE:	9/11/2015
	19023 - 36th Ave W., Suite D	ALS SDG#:	EV15090062
	Lynnwood, WA 98036	WDOE ACCREDITATION:	C601
CLIENT CONTACT: CLIENT PROJECT:	Jon Einarsen 1099.25	WDOL AGOREDITATION.	0001

### LABORATORY BLANK RESULTS

# MBG-090815S2 - Batch 96952 - Soil by NWTPH-GX

ANALYTE	METHOD	RESULTS	QUAL UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS By
TPH-Volatile Range	NWTPH-GX	U	MG/KG	3.0	09/08/2015	PAB

# MB-090815S2 - Batch 96952 - Soil by EPA-8021

					REPORTING	ANALYSIS	ANALYSIS
ANALYTE	METHOD	RESULTS	QUAL	UNITS	LIMITS	DATE	BY
Benzene	EPA-8021	U		MG/KG	0.030	09/08/2015	PAB
Toluene	EPA-8021	U		MG/KG	0.050	09/08/2015	PAB
Ethylbenzene	EPA-8021	U		MG/KG	0.050	09/08/2015	PAB
Xylenes	EPA-8021	U		MG/KG	0.20	09/08/2015	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

### MB-090815S2 - Batch 96947 - Soil by NWTPH-DX

ANALYTE	METHOD	RESULTS	QUAL	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U		MG/KG	25	09/09/2015	EBS
TPH-Oil Range	NWTPH-DX	U		MG/KG	50	09/09/2015	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

### MB-091115S - Batch 97033 - Soil by EPA-6020

					REPORTING	ANALYSIS	ANALYSIS
ANALYTE	METHOD	RESULTS	QUAL	UNITS	LIMITS	DATE	BY
Lead	EPA-6020	U		MG/KG	0.10	09/11/2015	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

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CLIENT:	Zipper Geo Associates	DATE:	9/11/2015
	19023 - 36th Ave W., Suite D	ALS SDG#:	EV15090062
	Lynnwood, WA 98036	WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25		

### LABORATORY CONTROL SAMPLE RESULTS

### ALS Test Batch ID: 96952 - Soil by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD QUAL	ANALYSIS ANALYSIS BY DATE
TPH-Volatile Range - BS	NWTPH-GX	90.6		09/08/2015 PAB
TPH-Volatile Range - BSD	NWTPH-GX	91.9	1	09/08/2015 PAB

# ALS Test Batch ID: 96952 - Soil by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	ANALYSIS BY
Benzene - BS	EPA-8021	87.1			09/08/2015	PAB
Benzene - BSD	EPA-8021	89.1	2		09/08/2015	PAB
Toluene - BS	EPA-8021	89.8			09/08/2015	PAB
Toluene - BSD	EPA-8021	91.5	2		09/08/2015	PAB
Ethylbenzene - BS	EPA-8021	90.2			09/08/2015	PAB
Ethylbenzene - BSD	EPA-8021	91.8	2		09/08/2015	PAB
Xylenes - BS	EPA-8021	90.2			09/08/2015	PAB
Xylenes - BSD	EPA-8021	91.9	2		09/08/2015	PAB

# ALS Test Batch ID: 96947 - Soil by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD QUAL	ANALYSIS ANALYSIS BY DATE	
TPH-Diesel Range - BS	NWTPH-DX	94.8		09/08/2015 EBS	
TPH-Diesel Range - BSD	NWTPH-DX	98.2	3	09/08/2015 EBS	

## ALS Test Batch ID: 97033 - Soil by EPA-6020

SPIKED COMPOUND	METHOD	%REC	RPD QUAL	ANALYSIS DATE	ANALYSIS BY
Lead - BS	EPA-6020	98.7		09/11/2015	RAL
Lead - BSD	EPA-6020	97.4	1	09/11/2015	RAL

APPROVED BY

Laboratory Director

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September 17, 2015

Mr. Jon Einarsen Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036

Dear Mr. Einarsen,

On September 16th, 3 samples were received by our laboratory and assigned our laboratory project number EV15090097. The project was identified as your 1099.25. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan Laboratory Director

Page 1
ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626

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CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980	V., Suite D		DATE: ALS JOB#: ALS SAMPLE#:		0097 0097-01	
CLIENT CONTACT:	Jon Einarsen			ATE RECEIVED:	09/16/2		
CLIENT PROJECT:	1099.25			LECTION DATE:		15 3:15:00 A	M
CLIENT SAMPLE ID	1099-21			CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AI DATE	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	120	15	5	MG/KG	09/17/2015	PAB
Benzene	EPA-8021	0.12	0.030	1	MG/KG	09/17/2015	PAB
Toluene	EPA-8021	0.29	0.050	1	MG/KG	09/17/2015	PAB
Ethylbenzene	EPA-8021	1.0	0.050	1	MG/KG	09/17/2015	PAB
Xylenes	EPA-8021	0.69	0.20	1	MG/KG	09/17/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	09/17/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	09/17/2015	EBS
Lead	EPA-6020	3.4	0.50	5	MG/KG	09/17/2015	RAL
						ANALYSIS A	
SURROGATE	METHOD	%REC				DATE	BY
TFT 5X Dilution	NWTPH-GX	136				09/17/2015	PAB
TFT	EPA-8021	145 GS3				09/17/2015	PAB
C25	NWTPH-DX	88.3				09/17/2015	EBS

U - Analyte analyzed for but not detected at level above reporting limit. GS3 - Surrogate outside of control limits due to coeluting compounds. Chromatogram indicates that it is likely that sample contains weathered gasoline.

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CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 98	V., Suite D		DATE: ALS JOB#: ALS SAMPLE#:	9/17/201 EV15090 EV15090	0097	
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	09/16/20	15	
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	9/15/201	5 3:18:00 A	M
CLIENT SAMPLE ID	1099-22		WDOE AC	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	11	3.0	1	MG/KG	09/17/2015	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	09/17/2015	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	09/17/2015	PAB
Ethylbenzene	EPA-8021	0.10	0.050	1	MG/KG	09/17/2015	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	09/17/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	09/17/2015	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	09/17/2015	EBS
Lead	EPA-6020	3.0	0.50	5	MG/KG	09/17/2015	RAL
						ANALYSIS AN DATE	
SURROGATE	METHOD	%REC					
TFT	NWTPH-GX	89.3				09/17/2015	PAB
TFT	EPA-8021	88.2				09/17/2015	PAB
C25	NWTPH-DX	87.8				09/17/2015	EBS

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

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	TE OF	VOID
		YSIS

CLIENT:	Zipper Geo Associ	ates		DATE:	9/17/201	5		
	19023 - 36th Ave V	V., Suite D		ALS JOB#:	EV1509	EV15090097		
	Lynnwood, WA 98	036		ALS SAMPLE#:	EV1509	0097-03		
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	09/16/20	)15		
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	9/15/201	5 3:20:00 A	M	
CLIENT SAMPLE ID	1099-23		WDOE AG	CCREDITATION:	C601			
		SAMPLE	DATA RESULTS					
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	NALYSIS BY	
TPH-Volatile Range	NWTPH-GX	30 RESULTS	3.0	1	MG/KG	09/17/2015	PAB	
Benzene	EPA-8021	U	0.030	1	MG/KG	09/17/2015	PAB	
Toluene	EPA-8021	U	0.050	1	MG/KG	09/17/2015	PAB	
Ethylbenzene	EPA-8021	0.076	0.050	1	MG/KG	09/17/2015	PAB	
Xylenes	EPA-8021	U	0.20	1	MG/KG	09/17/2015	PAB	
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	09/17/2015	EBS	
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	09/17/2015	EBS	
Lead	EPA-6020	3.5	0.50	5	MG/KG	09/17/2015	RAL	
						ANALYSIS AN	NALYSIS	
SURROGATE	METHOD	%REC				DATE	BY	
TFT	NWTPH-GX	72.4				09/17/2015	PAB	
TFT	EPA-8021	70.1				09/17/2015	PAB	
C25	NWTPH-DX	87.5				09/17/2015	EBS	

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

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CLIENT:	Zipper Geo Associates	DATE:	9/17/2015
	19023 - 36th Ave W., Suite D	ALS SDG#:	EV15090097
	Lynnwood, WA 98036	WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25		

### LABORATORY BLANK RESULTS

# MBG-091015S - Batch 97071 - Soil by NWTPH-GX

ANALYTE	METHOD	RESULTS	QUAL	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS By
TPH-Volatile Range	NWTPH-GX	U		MG/KG	3.0	09/11/2015	PAB
U - Analyte analyzed for but no MB-091015S - Batch 970	•	0			REPORTING		

					REFORTING	ANALISIS	ANALYSIS	
ANALYTE	METHOD	RESULTS	QUAL	UNITS	LIMITS	DATE	BY	
Benzene	EPA-8021	U		MG/KG	0.030	09/11/2015	PAB	
Toluene	EPA-8021	U		MG/KG	0.050	09/11/2015	PAB	
Ethylbenzene	EPA-8021	U		MG/KG	0.050	09/11/2015	PAB	
Xylenes	EPA-8021	U		MG/KG	0.20	09/11/2015	PAB	

U - Analyte analyzed for but not detected at level above reporting limit.

### MB-091715S - Batch 97179 - Soil by NWTPH-DX

ANALYTE	METHOD	RESULTS	QUAL UNITS		REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	MG/KG		25	09/17/2015	EBS
TPH-Oil Range	NWTPH-DX	U	9/1 <b>1/(2/0:15</b>	EBS	50		

U - Analyte analyzed for but not detected at level above reporting limit.

#### MB-091715S - Batch 97167 - Soil by EPA-6020

					REPORTING	ANALYSIS	ANALYSIS
ANALYTE	METHOD	RESULTS	QUAL	UNITS	LIMITS	DATE	BY
Lead	EPA-6020	U		MG/KG	0.10	09/17/2015	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

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ALS Group USA, Corp



CLIENT:	Zipper Geo Associates	DATE:	9/17/2015
	19023 - 36th Ave W., Suite D	ALS SDG#:	EV15090097
	Lynnwood, WA 98036	WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25		

### LABORATORY CONTROL SAMPLE RESULTS

# ALS Test Batch ID: 97071 - Soil by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	88.8		09/11/2015	PAB
TPH-Volatile Range - BSD	NWTPH-GX	90.4	2	09/11/2015	PAB

# ALS Test Batch ID: 97071 - Soil by EPA-8021

METHOD	%REC	RPD QUAL	DATE	ANALYSIS BY
EPA-8021	85.1		09/11/2015	PAB
EPA-8021	85.9	1	09/11/2015	PAB
EPA-8021	87.9		09/11/2015	PAB
EPA-8021	88.7	1	09/11/2015	PAB
EPA-8021	88.5		09/11/2015	PAB
EPA-8021	88.8	0	09/11/2015	PAB
EPA-8021	87.7		09/11/2015	PAB
EPA-8021	89.3	2	09/11/2015	PAB
	EPA-8021 EPA-8021 EPA-8021 EPA-8021 EPA-8021 EPA-8021 EPA-8021	EPA-802185.1EPA-802185.9EPA-802187.9EPA-802188.7EPA-802188.5EPA-802188.8EPA-802187.7	EPA-802185.1EPA-802185.91EPA-802187.9EPA-802188.71EPA-802188.5EPA-802188.80EPA-802187.7	METHOD         %REC         RPD         QUAL         DATE           EPA-8021         85.1         09/11/2015         09/11/2015           EPA-8021         85.9         1         09/11/2015           EPA-8021         87.9         09/11/2015         09/11/2015           EPA-8021         88.7         1         09/11/2015           EPA-8021         88.5         09/11/2015         09/11/2015           EPA-8021         88.8         0         09/11/2015           EPA-8021         87.7         09/11/2015         09/11/2015

# ALS Test Batch ID: 97179 - Soil by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	106		09/17/2015	EBS
TPH-Diesel Range - BSD	NWTPH-DX	96.2	10	09/17/2015	EBS

# ALS Test Batch ID: 97167 - Soil by EPA-6020

SPIKED COMPOUND	METHOD	%REC	RPD QUAL	ANALYSIS ANALYSIS BY DATE
Lead - BS	EPA-6020	98.1		09/17/2015 RAL
Lead - BSD	EPA-6020	101	3	09/17/2015 RAL

Page 6

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	CERTIFICATE OF ANALYSIS							
CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS SDG#: WDOE ACCREDITATION:	9/17/2015 EV15090097 C601					
CLIENT CONTACT: CLIENT PROJECT:	Jon Einarsen 1099.25							
	MATRIX	SPIKE RESULTS						
ALS Test Batch ID: 9 Parent Sample: 1	17179 - Soil 099-22							

SPIKED COMPOUND	METHOD	%REC	RPD QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - MS	NWTPH-DX	96.9		09/17/2015	EBS

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(ALS) Fax (425) 356- http://ww	-2626 w.alsglobal.c	ШO										Dat	6	6-1	Date 9-16-15 Page			Of		] Т
PROJECT ID: 1099.25					ANALYSIS REQUESTED	SIS RE(	QUEST	ĒD						H	OTHER (Specify)	(Spec	ify)			T T
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February 9, 2016

Mr. Jon Einarsen Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036

Dear Mr. Einarsen,

On February 4th, 4 samples were received by our laboratory and assigned our laboratory project number EV16020037. The project was identified as your 1099.25 BMC Issaquah. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan Laboratory Director

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CLIENT: CLIENT CONTACT: CLIENT PROJECT: CLIENT SAMPLE ID	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980 Jon Einarsen 1099.25 BMC Issa HA-1	V., Suite D 036	DA COLL	DATE: ALS JOB#: ALS SAMPLE#: DATE RECEIVED: COLLECTION DATE: WDOE ACCREDITATION:			2/9/2016 EV16020037 EV16020037-01 02/04/2016 2/4/2016 10:45:00 AM C601			
		SAMPLE DATA RESULTS								
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	IALYSIS BY			
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	02/08/2016	PAB			
Benzene	EPA-8021	U	0.030	1	MG/KG	02/08/2016	PAB			
Toluene	EPA-8021	U	0.050	1	MG/KG	02/08/2016	PAB			
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	02/08/2016	PAB			
Xylenes	EPA-8021	U	0.20	1	MG/KG	02/08/2016	PAB			
SURROGATE	METHOD	%REC				ANALYSIS AN DATE	IALYSIS BY			
TFT	NWTPH-GX	63.2				02/08/2016	PAB			
TFT	EPA-8021	62.2				02/08/2016	PAB			

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS	

CLIENT:	Zipper Geo Associ	ates		DATE:	2/9/2016	6	
	19023 - 36th Ave V	V., Suite D		ALS JOB#: EV16020			
	Lynnwood, WA 98	036		ALS SAMPLE#:	EV1602	0037-02	
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	02/04/20	016	
CLIENT PROJECT:	1099.25 BMC Issa	quah	COL	LECTION DATE:	2/4/2016	6 10:45:00 A	M
CLIENT SAMPLE ID	HA-2		WDOE AG	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD RESULTS		REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	02/05/2016	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	02/05/2016	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	02/05/2016	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	02/05/2016	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	02/05/2016	PAB
						ANALYSIS AN	ALYSIS
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	76.6				02/05/2016	PAB
TFT	EPA-8021	82.6				02/05/2016	PAB

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CERTIFICATE OF ANALYS	IS
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CLIENT:	Zipper Geo Associ 19023 - 36th Ave V	V., Suite D		DATE: ALS JOB#:			
CLIENT CONTACT: CLIENT PROJECT:	Lynnwood, WA 98 Jon Einarsen 1099.25 BMC Issa			ALS SAMPLE#: ATE RECEIVED: LECTION DATE:	02/04/2	20037-03 016 6 10:45:00 A	M
CLIENT SAMPLE ID	HA-3		WDOE AG	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AI DATE	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	02/05/2016	PAB
Benzene	EPA-8021	U	0.030	1	MG/KG	02/05/2016	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	02/05/2016	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	02/05/2016	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	02/05/2016	PAB
						ANALYSIS A	
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	68.0				02/05/2016	PAB
TFT	EPA-8021	73.7				02/05/2016	PAB

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		CERTIFIC	ATE OF ANALYSIS							
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 98	V., Suite D		DATE: ALS JOB#: ALS SAMPLE#:	2/9/2016 EV16020 EV16020	0037				
CLIENT CONTACT: CLIENT PROJECT:	Jon Einarsen 1099.25 BMC Issa	quah	COL	ATE RECEIVED: LECTION DATE:	02/04/20 2/4/2016		М			
CLIENT SAMPLE ID	HA-4			CCREDITATION:	C601					
	SAMPLE DATA RESULTS									
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	IALYSIS BY			
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	02/05/2016	PAB			
Benzene	EPA-8021	U	0.030	1	MG/KG	02/05/2016	PAB			
Toluene	EPA-8021	U	0.050	1	MG/KG	02/05/2016	PAB			
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	02/05/2016	PAB			
Xylenes	EPA-8021	U	0.20	1	MG/KG	02/05/2016	PAB			
						ANALYSIS AN				
SURROGATE	METHOD	%REC				DATE	BY			
TFT	NWTPH-GX	72.7				02/05/2016	PAB			
TFT	EPA-8021	78.0				02/05/2016	PAB			

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CLIENT:	Zipper Geo Associates	DATE:	2/9/2016
	19023 - 36th Ave W., Suite D	ALS SDG#:	EV16020037
	Lynnwood, WA 98036	WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25 BMC Issaquah		

# LABORATORY BLANK RESULTS

## MBG-020416S - Batch 101216 - Soil by NWTPH-GX

ANALYTE TPH-Volatile Range	METHOD NWTPH-GX	RESULTS U	UNITS M02/8552016 PAB	REPORTING LIMITS 3.0	ANALYSIS ANALYSIS DATE BY
U - Analyte analyzed for but not detection <b>MB-020416S - Batch 101216</b>	·	0			
	METHOD	RESULTS	UNITS	REPORTING	ANALYSIS ANALYSIS
ANALYTE	WIETHOD	RESULIS	UNITS	LIMITS	DATE BY
ANALY I E Benzene	EPA-8021	U C	DINITS DINIG/KGPAB	0.030	DATE BY
					DATE BY
Benzene	EPA-8021	U C	)16//G/KGPAB	0.030	DATE BY

U - Analyte analyzed for but not detected at level above reporting limit.

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CLIENT:	Zipper Geo Associates	DATE:	2/9/2016
	19023 - 36th Ave W., Suite D	ALS SDG#:	EV16020037
	Lynnwood, WA 98036	WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25 BMC Issaquah		

#### LABORATORY CONTROL SAMPLE RESULTS

### ALS Test Batch ID: 101216 - Soil by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD QUAL	ANALYSIS ANALYSIS BY DATE
TPH-Volatile Range - BS	NWTPH-GX	96.9		02/04/2016 PAB
TPH-Volatile Range - BSD	NWTPH-GX	98.2	1	02/04/2016 PAB

#### ALS Test Batch ID: 101216 - Soil by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD QUAL	DATE	ANALYSIS BY
Benzene - BS	EPA-8021	88.0		02/04/2016	PAB
Benzene - BSD	EPA-8021	84.8	4	02/04/2016	PAB
Toluene - BS	EPA-8021	95.1		02/04/2016	PAB
Toluene - BSD	EPA-8021	91.2	4	02/04/2016	PAB
Ethylbenzene - BS	EPA-8021	90.6		02/04/2016	PAB
Ethylbenzene - BSD	EPA-8021	88.5	2	02/04/2016	PAB
Xylenes - BS	EPA-8021	92.0		02/04/2016	PAB
Xylenes - BSD	EPA-8021	89.3	3	02/04/2016	PAB

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August 6, 2015

Mr. Jon Einarsen Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036

Dear Mr. Einarsen,

On August 5th, 1 sample was received by our laboratory and assigned our laboratory project number EV15080015. The project was identified as your 1099.25. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan Laboratory Director

Page 1
ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626

ALS Group USA, Corp



CLIENT: CLIENT CONTACT: CLIENT PROJECT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 980 Jon Einarsen 1099.25	V., Suite D	COLI	DATE: ALS JOB#: ALS SAMPLE#: ATE RECEIVED: LECTION DATE:	08/05/2 8/4/201	30015 30015-01	'M
CLIENT SAMPLE ID	TW-1			CREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	08/05/2015	PAB
Benzene	EPA-8021	U	1.0	1	UG/L	08/05/2015	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	08/05/2015	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	08/05/2015	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	08/05/2015	PAB
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	08/05/2015	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	08/05/2015	EBS
SURROGATE	METHOD	%REC				ANALYSIS AN DATE	IALYSIS BY
TFT	NWTPH-GX	78.7				08/05/2015	PAB
TFT	EPA-8021	89.8				08/05/2015	PAB
C25	NWTPH-DX	82.4				08/05/2015	EBS
020		02.4				00/05/2015	EDO

U - Analyte analyzed for but not detected at level above reporting limit.

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Page 2

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CLIENT:	Zipper Geo Associates	DATE:	8/6/2015
	19023 - 36th Ave W., Suite D	ALS SDG#:	EV15080015
	Lynnwood, WA 98036	WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25		

#### LABORATORY BLANK RESULTS

#### MBG-080515W - Batch 95904 - Water by NWTPH-GX

					REPORTING	ANALYSIS	ANALYSIS
ANALYTE	METHOD	RESULTS	QUAL	UNITS	LIMITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U		UG/L	50	08/05/2015	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

#### MB-080515W - Batch 95904 - Water by EPA-8021

				REPORTING	ANALYSIS	ANALYSIS
ANALYTE	METHOD	RESULTS	QUAL UNITS	LIMITS	DATE	BY
Benzene	EPA-8021	U	UG/L	1.0	08/05/2015	PAB
Toluene	EPA-8021	U	UG/L	1.0	08/05/2015	PAB
Ethylbenzene	EPA-8021	U	UG/L	1.0	08/05/2015	PAB
Xylenes	EPA-8021	U	UG/L	3.0	08/05/2015	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

#### MB-080415W - Batch 95873 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	QUAL	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U		UG/L	130	08/04/2015	EBS
TPH-Oil Range	NWTPH-DX	U		UG/L	250	08/04/2015	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

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CLIENT:	Zipper Geo Associates	DATE:	8/6/2015
	19023 - 36th Ave W., Suite D	ALS SDG#:	EV15080015
	Lynnwood, WA 98036	WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25		

#### LABORATORY CONTROL SAMPLE RESULTS

#### ALS Test Batch ID: 95904 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD QUAL	ANALYSIS ANALYSIS BY DATE	
TPH-Volatile Range - BS	NWTPH-GX	81.6		08/05/2015 PAB	
TPH-Volatile Range - BSD	NWTPH-GX	79.3	3	08/05/2015 PAB	

#### ALS Test Batch ID: 95904 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	ANAL 1515 BY
Benzene - BS	EPA-8021	97.0			08/05/2015	PAB
Benzene - BSD	EPA-8021	99.3	2		08/05/2015	PAB
Toluene - BS	EPA-8021	95.8			08/05/2015	PAB
Toluene - BSD	EPA-8021	99.1	3		08/05/2015	PAB
Ethylbenzene - BS	EPA-8021	94.6			08/05/2015	PAB
Ethylbenzene - BSD	EPA-8021	98.2	4		08/05/2015	PAB
Xylenes - BS	EPA-8021	96.4			08/05/2015	PAB
Xylenes - BSD	EPA-8021	100	4		08/05/2015	PAB

# ALS Test Batch ID: 95873 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD QUAL	ANALYSIS ANALYSIS BY DATE	
TPH-Diesel Range - BS	NWTPH-DX	103		08/04/2015 EBS	
TPH-Diesel Range - BSD	NWTPH-DX	102	1	08/04/2015 EBS	

APPROVED BY

Laboratory Director

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ALS Environmental		Chain	Chain Of Custody/	usto	dy/						ALS Job#	P#	(Laboratory Use Only)	Use Only	5
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(ALS) rax (420) 500-2020 http://www.alsglobal.com								Date	ه ۵	8/5/	IS Page		đ		
PROJECT ID: 1099.25		ANALYSIS	S REQUESTED	TED							OTHER (Specify)	pecify)			
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MANAGER: Jon Zurauser							80728	JAT		eH 🗄					
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										*Tuma	*Turnaround request less than standard may incur Rush Charges	ss than sta	ndard may inc	ur Rush Cl	harges



September 11, 2015

Mr. Jon Einarsen Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036

Dear Mr. Einarsen,

On September 8th, 1 sample was received by our laboratory and assigned our laboratory project number EV15090054. The project was identified as your 1099.25. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan Laboratory Director





CLIENT: CLIENT CONTACT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 98 Jon Einarsen	V., Suite D	D	DATE: ALS JOB#: ALS SAMPLE#: ATE RECEIVED:	9/11/20 EV1509 EV1509 09/08/2	90054 90054-01	
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	9/8/201	5 12:40:00 F	M
CLIENT SAMPLE ID	TW-2		WDOE AG	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	NALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	09/09/2015	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	09/09/2015	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	09/09/2015	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	09/09/2015	PAB
Fats/Oils/Grease (Total)	EPA-1664	U	5.0	1	MG/L	09/10/2015	DNT
						ANALYSIS AN	NALYSIS BY
SURROGATE	METHOD	%REC				DATE	вт
TFT	EPA-8021	95.6				09/09/2015	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

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Page 2



9/11/2015

C601

EV15090054

CLIENT:	Zipper Geo Associates	DATE:
	19023 - 36th Ave W., Suite D	ALS SDG#:
	Lynnwood, WA 98036	WDOE ACCREDITATION:
CLIENT CONTACT:	Jon Einarsen	
CLIENT PROJECT:	1099.25	

# LABORATORY BLANK RESULTS

# MB-090315W2 - Batch 96965 - Water by EPA-8021

				REPORTING	ANALYSIS	ANALYSIS
ANALYTE	METHOD	RESULTS	QUAL UNITS	LIMITS	DATE	BY
Benzene	EPA-8021	U	UG/L	1.0	09/03/2015	PAB
Toluene	EPA-8021	U	UG/L	1.0	09/03/2015	PAB
Ethylbenzene	EPA-8021	U	UG/L	1.0	09/03/2015	PAB
Xylenes	EPA-8021	U	UG/L	3.0	09/03/2015	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

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1099.25

#### CERTIFICATE OF ANALYSIS

С	LI	E	Ν	Т	:

CLIENT CONTACT:

CLIENT PROJECT:

Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036 Jon Einarsen

DATE: ALS SDG#: WDOE ACCREDITATION:

9/11/2015 EV15090054 C601

#### LABORATORY CONTROL SAMPLE RESULTS

#### ALS Test Batch ID: 96965 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD QL	AL	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	94.8			09/03/2015	PAB
Benzene - BSD	EPA-8021	96.9	2		09/03/2015	PAB
Toluene - BS	EPA-8021	95.7			09/03/2015	PAB
Toluene - BSD	EPA-8021	95.9	0		09/03/2015	PAB
Ethylbenzene - BS	EPA-8021	97.3			09/03/2015	PAB
Ethylbenzene - BSD	EPA-8021	99.1	2		09/03/2015	PAB
Xylenes - BS	EPA-8021	99.4			09/03/2015	PAB
Xylenes - BSD	EPA-8021	101	2		09/03/2015	PAB

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

Page 4

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STRUCT OF	Events         Laboratory Analysis Request         CVISOR05.           Remain Ministered         Remain Ministered         CVISOR05.           Remain Ministered         Remain Ministered         Remain Ministered           Remain Ministered         Ministered         Ministered           Ministered         Ministered	ALS EIVIYONMENTAI 8620 Holly Drive, Suite 100				Chain	in O	Of Custody/	Isto	Jyl					L	ALS Job# (La	(Laboratory Use Only)	(AluO	F
Оди         Оди <th>Полнолодити Поря. 25         Полнолодити Поря. 25         Поря. 26         Поря. 26</th> <th>Everett, WA 98208 Phone (425) 356-2600</th> <th></th> <th></th> <th>Lab</th> <th>orato</th> <th>ry A</th> <th>naly</th> <th>Sis</th> <th>Req</th> <th>nes</th> <th>ىبە</th> <th></th> <th></th> <th>W.</th> <th>VISOG</th> <th>0054</th> <th></th> <th>-</th>	Полнолодити Поря. 25         Полнолодити Поря. 25         Поря. 26	Everett, WA 98208 Phone (425) 356-2600			Lab	orato	ry A	naly	Sis	Req	nes	ىبە			W.	VISOG	0054		-
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	ID-24-2.7         тол.           10-47-2.7         с.м.и.           10-47-47         Кинав одик Сопсонов и Кина           10-47         Кинав одик Сопсонов и Кина           10-7         2-7         2-7           10-7         2-7         2-7           10-7         2-7         2-7           11-7         12-7         12-40           11-7         12-7         12-40           11-7         12-7         12-7           11-7         12-7         12-7           11-7         12-7         12-7           11-7         12-7         12-40           11-7         12-7         12-40           11-7 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>560</td><td></td><td>0728 A9</td><td></td><td>and the second second</td><td></td><td>LIZONAH LIZZAH L</td><td></td><td></td><td>UILO</td><td>ZNO</td></td<>								560		0728 A9		and the second second		LIZONAH LIZZAH L			UILO	ZNO
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"Turmaround request less than standard may incur Rush Charges

Appendix J – Remedial Action Scale Tickets

# Clearcreek

# Environmental/Civil

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Document ID Job # Date	Facility	Material Type	Scale Ticket # Trucking Co.		BOL #	Tons
81674 214058	9/22/2015 Lakeside Industries	Asphalt	318190 Lakeside	46	318190	15.15
81675 214058	9/22/2015 Lakeside Industries	Asphalt	318191 Lakeside	30	318191	17.19
81677 214058	9/22/2015 Lakeside Industries	Asphalt	318199 Lakeside	30 46	318199 318206	16.95
81678 214058 81679 214058	9/22/2015 Lakeside Industries 9/22/2015 Lakeside Industries	Asphalt Asphalt	318206 Lakeside 318208 Lakeside	30	318208	15.11 16.91
81680 214058	9/22/2015 Lakeside Industries	Asphalt	318210 Lakeside	46	318208	15.25
81676 214058	9/22/2015 Lakeside Industries	Asphalt	319198 Lakeside	40	318210	15.02
01070 214030		Asphalt Total		-0	510150	111.58
80828 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926063 Clearcreek	44	8288	32.50
80833 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926065 Clearcreek	43	7183	33.63
80838 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926068 Winter Trucking	10	5318	32.20
80853 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926070 Springbrook	25	105795	33.17
80843 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926071 Springbrook	10	108578	28.92
80829 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926075 Clearcreek	44	8288	33.31
80834 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926076 Clearcreek	43	7183	28.07
80839 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926078 Winter Trucking	10	5318	29.99
80854 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926081 Springbrook	25	105795	31.67
80844 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926082 Springbrook	10	108578	31.55
80830 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926084 Clearcreek	44	8288	34.15
80836 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926085 Clearcreek	43	7183	29.35
80840 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926090 Winter Trucking	10	5318	30.02
80856 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926091 Springbrook	25	105795	29.35
80845 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926093 Springbrook	10	108578	29.73
80831 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926095 Clearcreek	44	8288	33.34
80835 214058 80841 214058	7/21/2015 Regional Disposal 7/21/2015 Regional Disposal	Class III/IV Soil	926099 Clearcreek 926105 Winter Trucking	43 10	7183 5318	30.31 43.19
80846 214058	7/21/2015 Regional Disposal	Class III/IV Soil Class III/IV Soil	926109 Springbrook	10	108578	33.99
80855 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926115 Springbrook	25	108578	32.35
80832 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926116 Clearcreek	44	8288	34.12
80889 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926117 Clearcreek	43	7183	33.20
81132 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926118 Winter Trucking	10	, 100	28.78
81133 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926119 Springbrook	10	108578	31.08
80890 214058	7/21/2015 Regional Disposal	Class III/IV Soil	926120 Springbrook	25	105795	28.97
80917 214058	7/22/2015 Regional Disposal	Class III/IV Soil	926124 Springbrook	25	105796	26.04
80922 214058	7/22/2015 Regional Disposal	Class III/IV Soil	926125 Springbrook	26	108885	23.28
80912 214058	7/22/2015 Regional Disposal	Class III/IV Soil	926128 Clearcreek	43	7184	23.85
80911 214058	7/22/2015 Regional Disposal	Class III/IV Soil	926131 Clearcreek	43	7184	26.06
80915 214058	7/22/2015 Regional Disposal	Class III/IV Soil	926132 Springbrook	25	105796	22.39
80923 214058	7/22/2015 Regional Disposal	Class III/IV Soil	926133 Springbrook	26	108885	25.45
80913 214058	7/22/2015 Regional Disposal	Class III/IV Soil	926138 Clearcreek	43	7184	34.29
80916 214058	7/22/2015 Regional Disposal	Class III/IV Soil	926139 Springbrook	25	105796	25.88
80921 214058	7/22/2015 Regional Disposal	Class III/IV Soil	926142 Springbrook	26	108885	26.40
81055 214058	7/22/2015 Regional Disposal	Class III/IV Soil	926145 Clearcreek	43/50	7184	36.40
80918 214058	7/22/2015 Regional Disposal	Class III/IV Soil	926147 Springbrook	25	105796	32.48
80920 214058	7/22/2015 Regional Disposal	Class III/IV Soil	926150 Springbrook	26	108885	32.52
80896 214058 80897 214058	7/23/2015 Regional Disposal 7/23/2015 Regional Disposal	Class III/IV Soil Class III/IV Soil	926173 Springbrook 926176 Springbrook	25 26	105797 108886	43.33 37.23
81134 214058	7/23/2015 Regional Disposal	Class III/IV Soil	926211 Springbrook	20	108880	23.50
81135 214058	7/23/2015 Regional Disposal	Class III/IV Soil	926212 Springbrook	26	108886	26.65
80892 214058	7/24/2015 Regional Disposal	Class III/IV Soil	926256 Clearcreek	44	8292	25.18
81136 214058	7/24/2015 Regional Disposal	Class III/IV Soil	926274 Springbrook	25	104664	26.22
81578 214058	9/10/2015 Regional Disposal	Class III/IV Soil	928912 Clearcreek	43/50	7200	33.65
81579 214058	9/10/2015 Regional Disposal	Class III/IV Soil	928926 Clearcreek	43/50	7200	28.56
81587 214058	9/16/2015 Regional Disposal	Class III/IV Soil	929111 Springbrook	25	108240	9.96
81668 214058	9/18/2015 Regional Disposal	Class III/IV Soil	929237 Clearcreek	43		9.61
		Class III/IV Soil To	tal			1,395.87
81615 214058	9/17/2015 Cadman	CSTC	3825281 Springbrook	25	108241	29.84
81616 214058	9/17/2015 Cadman	CSTC	3825283 Springbrook	25	108241	30.33
81617 214058	9/17/2015 Cadman	CSTC	3825286 Springbrook	25	108241	29.84
81618 214058	9/17/2015 Cadman	CSTC	3825288 Springbrook	25	108241	29.77
01430 344050	0/0/2015 C- 4	CSTC Total		12	74.00	119.78
81430 214058 81435 214058	9/9/2015 Cadman	Quarry Spalls	3825078 Clearcreek	43	7199	16.83 32.49
81435 214058 81436 214058	9/14/2015 Cadman 9/14/2015 Cadman	Quarry Spalls Quarry Spalls	3825140 Clearcreek 3825142 Clearcreek	43/50 43/50	8602 8602	32.49 32.35
81430 214058	9/14/2015 Cadman	Quarry Spalls	3825143 Clearcreek	43/50	8602	32.55
81437 214058	9/14/2015 Cadman	Quarry Spalls	3825145 Clearcreek	43/50	8602	32.09
				-,		

81439 214058	9/14/2015 Cadman	Quarry Spalls	3825147 Clearcreek	43/50	8602	31.7
81440 214058	9/14/2015 Cadman	Quarry Spalls	3825150 Clearcreek	43/50	8602	31.7
81441 214058	9/14/2015 Cadman	Quarry Spalls	3825152 Clearcreek	43/50	8602	32.1
81442 214058	9/14/2015 Cadman	Quarry Spalls	3825153 Clearcreek	43/50	8602	31.8
81443 214058	9/14/2015 Cadman	Quarry Spalls	3825157 Clearcreek	43/50	8602	31.2
81444 214058	9/14/2015 Cadman	Quarry Spalls	3825159 Clearcreek	43/50	8602	31.4
81445 214058	9/14/2015 Cadman	Quarry Spalls	3825160 Clearcreek	43/50	8602	31.9
81446 214058	9/14/2015 Cadman	Quarry Spalls	3825162 Clearcreek	43/50	8602	32.1
		Quarry Spalls Total				400.4
81600 214058	9/15/2015 Cadman	Type 17	3825198 Springbrook			22.1
81601 214058	9/15/2015 Cadman	Type 17	3825199 Springbrook			22.8
81602 214058	9/15/2015 Cadman	Type 17	3825200 Springbrook			23.1
81603 214058	9/15/2015 Cadman	Type 17	3825204 Springbrook			23.2
81604 214058	9/15/2015 Cadman	Type 17	3825206 Springbrook			22.8
81605 214058	9/15/2015 Cadman	Type 17	3825208 Springbrook			22.0
81606 214058	9/15/2015 Cadman	Type 17	3825210 Springbrook			22.6
81607 214058	9/15/2015 Cadman	Type 17	3825213 Springbrook			22.5
81608 214058	9/15/2015 Cadman	Type 17	3825215 Springbrook	949	3825215	22.3
81588 214058	9/16/2015 Cadman	Type 17	3825220 Springbrook	25	108240	29.5
81589 214058	9/16/2015 Cadman	Type 17	3825225 Springbrook	25	108240	29.3
81590 214058	9/16/2015 Cadman	Type 17	3825226 Springbrook	25	108240	29.4
81591 214058	9/16/2015 Cadman	Type 17	3825227 Springbrook	25	108240	29.
81592 214058	9/16/2015 Cadman	Type 17	3825228 Springbrook	25	108240	29.
81593 214058	9/16/2015 Cadman	Type 17	3825229 Springbrook	25	108240	29.
81594 214058	9/16/2015 Cadman	Type 17	3825230 Springbrook	25	108240	28.0
81595 214058	9/16/2015 Cadman	Type 17	3825231 Springbrook	25	108240	29.4
81596 214058	9/16/2015 Cadman	Type 17	3825232 Springbrook	25	108240	29.
81597 214058	9/16/2015 Cadman	Type 17	3825236 Springbrook	25	108240	29.4
81598 214058	9/16/2015 Cadman	Type 17	3825239 Springbrook	25	108240	29.
81599 214058	9/16/2015 Cadman	Type 17	3825241 Springbrook	25	108240	29.4
81619 214058	9/17/2015 Cadman	Type 17	3825245 Springbrook	25	108241	28.
81620 214058	9/17/2015 Cadman	Type 17	3825252 Springbrook	25	108241	29.
81621 214058	9/17/2015 Cadman	Type 17	3825257 Springbrook	25	108241	29.4
81622 214058	9/17/2015 Cadman	Type 17	3825261 Springbrook	25	108241	29.0
81623 214058	9/17/2015 Cadman	Type 17	3825265 Springbrook	25	108241	28.4
81624 214058	9/17/2015 Cadman	Type 17	3825269 Springbrook	25	108241	28.
81625 214058	9/17/2015 Cadman	Type 17	3825272 Springbrook	25	108241	28.
81626 214058	9/17/2015 Cadman	Type 17	3825274 Springbrook	25	108241	28.
81627 214058	9/17/2015 Cadman	Type 17	3825276 Springbrook	25	108241	29.0
81628 214058	9/17/2015 Cadman	Type 17	3825279 Springbrook	25	108241	29.
		Type 17 Total				847.
80847 214058	7/20/2015 Lakeside Industries	Waste Asphalt	310975 Clearcreek	44	8247	13.
80848 214058	7/20/2015 Lakeside Industries	Waste Asphalt	310987 Clearcreek	44	8247	15.
80849 214058	7/20/2015 Lakeside Industries	Waste Asphalt	310995 Clearcreek	44	8247	13.
80850 214058	7/20/2015 Lakeside Industries	Waste Asphalt	311016 Clearcreek	44	8247	14.
80851 214058	7/20/2015 Lakeside Industries	Waste Asphalt	311024 Clearcreek	44	8247	10.
81669 214058	9/18/2015 Lakeside Industries	Waste Asphalt	317901 Clearcreek	43		16.
81670 214058	9/18/2015 Lakeside Industries	Waste Asphalt	317913 Clearcreek	43		23.7
		Waste Asphalt Total				107.8

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3919 88t	REGIONAL DISPOSAL INTERMODA 3rd and lander Seattle, WA ek Contractors n ST NE le, WA 98270	AL	SITE TICKI 01 WEIGHMASTEF IN – JAJ DATE/TIME IN 07–22–21 VEHICLE 26 SPRI REFERENCE BILL OF LADIN	926150 MIE B. O 015 2:5 NGBROOK	UT - Rayler DATE/TI 3 pm 07-2. CONTAI	<b>ME OUT</b> 2-2015 3:	09 рп Е
		,540 NET ,500 NET W	TONS EIGHT	32.52 65,040	II	IBOUND	
	DESCRIPTI	ON		RATE	EXTENSION	ТАХ	TOTAL
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	signed individual signing this document on behalf of Custo	amor acknowledges that he or sl	ne has read and	understands the te	erms and conditions	TE	
The under on the rev RS-F042UPR (07	erse side and that he or she has the authority to sign this o	SIGNATURE	ner.				CHECK#

SITE		REGIONAL DISPOSAL INTER	RMODAL		TICKET #	CELL	
	•	3rd and lander		01 WEIGHMA	926142		
						OUT - Rayl	ene W.
CUSTOMER				DATE/TIM	E IN	DATE/T	IME OUT
0147					-2015 1:0	5 pm 07-2	<u>2-2015 1:24 pm</u>
		k Contractors ST NE			PRINGBROOK	CONTA	
		e, WA 98270		REFEREN	CE		
LW-1		2, WI 30270		BILL OF L	ADING		INVOICE
TM-T	51/1						
	SCALE	IN GROSS WEIGHT	94,560	NET TONS	26.40		
	SCALE		41,760	NET WEIGHT	52,800	T	VBOUND
×	1						
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Th	e undersig	ned individual signing this document on behalf	of Customer acknowled	haes that he or she has read	and understands the t	arms and conditions	CHANGE
		e side and that he or she has the authority to sig					
							CHECK#
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3919	rcree 88th svill	REGIONAL DISPOSAL INTE 3rd and lander Seattle, WA k Contractors ST NE e, WA 98270	RMODAL		01 WEIGHMASTE IN – JZ DATE/TIME IN 07–22–2 VEHICLE	<u>MIE B. C</u> 2015 8:3 INGBROOK	7 am 07-1	da L. TIME OUT 22-2015 AINER	8:58 am /OICE
1	SCALE SCALE		88,480 41,920	NET NET WE		23.28 46,560	I	NBOUND	
QTY.	UNIT	D	ESCRIPTION			RATE	EXTENSION	TAX	TOTAL
0.00 23.28	YD TN	TRACKING QTY SW-CONT SOIL W/FUEL	ISSAQU	JAH/KING					
	the rever	gned individual signing this document on behal se side and that he or she has the authority to s 2)	ign this document on be		er.	understands the te	rms and conditions		NET AMOUNT TENDERED CHANGE CHECK#

3919 8	cree} 88th 7ille	REGIONAL DISPOSAL INTEN 3rd and lander Seattle, WA k Contractors ST NE e, WA 98270	RMODAL	01 WEIGHMASTE IN - JA DATE/TIME IN 07-22-2 VEHICLE	AMIE B. C 2015 10:4 INGBROOK		<b>FIME OUT</b> 22-2015 11:41	1 ar
		IN GROSS WEIGHT OUT TARE WEIGHT	93,240 42,340	NET TONS NET WEIGHT	25.45 50,900	I	NBOUND	
	UNIT		SCRIPTION		RATE	EXTENSION	TAX TO	OTAL
	YD TN	TRACKING QTY SW-CONT SOIL W/FUEL	ISSAOU	AH/KING				
							. NET AM	NOUNT
							TENDE	
		ned individual signing this document on behalf			understands the te	erms and conditions	CHAN	NGE
on th	e revers	e side and that he or she has the authority to sig	gn this document on be	half of the customer.			CHEC	

DSTOMER 014755 Clearcreek 3919 88th Marysville	Seattle, WA	MODAL	SITE TICKET 01 WEIGHMASTER IN - JAM DATE/TIME IN 07-22-20 VEHICLE 43 CLEAF REFERENCE BILL OF LADING	926145 IE B. OU 15 2:03 ACREEK	JT - Raylene JT - Raylene 3 pm 07-22 CONTAIN	-2015	2:19 pm ICE
LW-15171 SCALE SCALE	OUT TARE WEIGHT	112,300 39,500	NET TONS NET WEIGHT	36.40 72,800	I N EXTENSION	NBOUND	TOTAL
0.00 YD 36.40 TN	TRACKING QTY SW-CONT SOIL W/FUEL	ISSAQUA	4/KING				NET AMOU
The und	ersigned individual signing this document on b everse side and that he or she has the authority	ehalf of Customer acknowled to sign this document on be	iges that he or she has read a shalf of the customer.	and understands t	he terms and condition	ns	TENDERI CHANG CHECK

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TE			AL DISPOSAL INTE 3rd and lander attle, WA	RMODAL		WEIGHMASTEI IN - JP	MIE B. O				
USTOMER 01475	55					DATE/TIME IN	2015 8:4	9 am	<b>DATE/TI</b> 09-1	ME OUT 0-2010	9:06 a
		k Contra	actors			VEHICLE 43 CLEA	RCREEK		CONTAI	NER	
		ST NE	20070			REFERENCE					
-		e, WA 🤤	38270			BILL OF LADIN				INV	OICE
LW-15	5171				j		10				
	SCALE	EIN	GROSS WEIGHT	97,340	NET	TONS	28.56				-
		E OUT	TARE WEIGHT	40,220	NET W		57,120		I	NBOUND	
QTY.	UNIT		und day from Dr	SCRIPTION	· .		RATE	EXTENS		TAX	TOTAL
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28.56	TN			ISSAQUA	AE/KING						
						<u></u>					NET AMOUN
					6.(						NET AMOUN

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

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۲E ۲	REGIONAL DISH 3rd an Seattle,	nd lander	RMODAL			<sup>(ET</sup> 928912 Arry C. O		CELL rinda L.	
STOMER 014755 Clearcree 3919 88th	ek Contractors				DATE TIME IN	2015 6:5 ARCREEK	3 am	DATE/TIME OUT	7:13 a
	e, WA 98270				REFERENCE BILL OF LADIN	NG	I	INV	OICE
		S WEIGHT RE WEIGHT	107,520 40,220		TONS EIGHT	33.65 67,300		INBOUND	
0.00 YD	TRACKING QTY		SCRIPTION	· · · · · · · · · · · · · · · · · · ·		RATE	EXTENSIC	N TAX	TOTAL
33.65 TN	SW-CONT SOIL	W/FUEL	ISSAQUAH	H/KING					
						4, I.,_			NET AMOUNT

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

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3919	55 rcreek 88th sville					09-16-2 VEHICLE	rinda L. 2015 8:2 INGBROOK		ATE/THE OUT 9-16-2015 ONTAINER INV	8:35 a /OICE
	SCALE SCALE	E IN E OUT	GROSS WEIGHT TARE WEIGHT	46,640 26,720	NET T NET WEI		9.96 19,920		INBOUND	
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3919	cree} 88th sville		rs	RMODAL		01 WEIGHMASTE Drinda DATE/TIME IN 09-18-2 VEHICLE	L. N 2015 10:52 ARCREEK	2 am 09-	21403 E/TIME OUT -18-2015 ITAINER	
	SCALE SCALE		ROSS WEIGHT TARE WEIGHT	61,360 42,140		TONS VEIGHT	9.61 19,220		INBOUND	
QTY.	UNIT		DE	SCRIPTION			RATE	EXTENSION	ТАХ	TOTAL
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										NET AMOUN
Th	e undersig	gned individual signing	this document on behalf	of Customer acknowled	iges that he or si	he has read and	d understands the te	erms and condition	ns	NET AMOUN TENDERED CHANGE

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3919 8 Marys	5 creek 88th ville	REGIONAL DISPOSAL INTERMODAL 3rd and lander Seattle, WA Contractors ST NE 2, WA 98270			926063 .nda L. ( 015 7:39 CREEK	DUT - JAMIE DATE/TH	L-2015 NER	. <b>3)</b> 7:48 ar DICE
	SCALE SCALE SCALE	IN GROSS WEIGHT 100,400 NE		TONS MEIGHT	32.50 65,000 RATE	I	NBOUND TAX	TOTAL
0.00	YD	TRACKING QTY SW-CONT SOIL W/FUEL ISSAQUAH/KI	NG					
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						e terms and condition	s	CHANGE
<b>ј</b> т	The under	signed individual signing this document on behalf of Customer acknowledges that	he or ne cusi	she has read and tomer.	d understands the	e terma una conten	ŀ	CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she ha on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

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REGIONAL DISPOSAL INTERM 3rd and lander		SITE TICK 01 WEIGHMASTE	926075	CELL DUT - JAMIE	B.	
Seattle, WA		DATE/TIME IN		5 am 07-21 CONTAI	1-2015	<u>9:32 am</u>
CUSTOMER 014755 Clearcreek Contractors 3919 88th ST NE Marysville, WA 98270		VEHICLE SOIL	ARCREEK			DICE
LW-15171 SCALE IN GROSS WEIGHT SCALE OUT TARE WEIGHT	106,660 40,040	NET TONS NET WEIGHT	33.31 66,620		INBOUND	TOTAL
	SCRIPTION		RATE	EXTENSION		
GTY. UNIT 0.00 YD TRACKING QTY 33.31 TN SW-CONT SOIL W/FUEL	ISSAQ	UAH/KING				NET AMOUNT
						TENDERED
	alf of Customer acknow	wledges that he or she has read	d and understands th	ne terms and condition	ons	CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she ha on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

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3919	rcreek 88th sville	REGIONAL DISPOSAL INTERMODAL 3rd and lander Seattle, WA k Contractors ST NE e, WA 98270		DATE/TIN 07-22 VEHICLE SOIL REFEREN	Drinda L. MEIN 1-2015 10:5 NCE CLEARCREEK		IME OUT 1-2015 INER	11:02 aπ DICE	
	SCALE IN GROSS WEIGHT 108,400 NE SCALE OUT TARE WEIGHT 40,100 NET				68,300		NBOUND		
	UNIT	DESCRIPTION			RATE	EXTENSION	TAX	TOTAL	
0.00	1 1	TRACKING QTY SW-CONT SOIL W/FUEL ISSAQU	JAH/KING						
	The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.								

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				s		T# 926095	CELL		
SITE		L DISPOSAL INTER 3rd and lander tle, WA	MODAL					<u>1-2015 1</u>	12:27 pm
CUSTOMER 014755 Clearcree 3919 88th	I ST NE				VEHICLE 44 CLEA REFERENCE	R CREEK	CONTAI		DICE
Marysvill LW-15171	Le, WA 9	8270							
SCAL	LE IN LE OUT	GROSS WEIGHT TARE WEIGHT	106,940 40,260	NET NET WI		66,680	EXTENSION	NBOUND	TOTAL
		D	ESCRIPTION			RATE			(
ατγ. UNIT 0.00 YD 33.34 TN	TRACKI	NG QTY I SOIL W/FUEL	ISSAQU	JAH/KING					NET AMOUN
							terms and conditio	ns	TENDERED
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The undersigned individual signing this document on behalf of Customer acknowledges that he or she had on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

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3112		REGIONAL DISPOSAL		IODAL		01		926116			
		3rd and la						lone W	ОШТ - 1	Drinda L.	
		Seattle, WA				DATE/TI		Telle W.		ATE/TIME OUT	
CUSTOMER	_					07-2	1-20	15 1:43	βpm ()	7-21-2015	2:19 pm
	014755 Clearanack Contractors					VEHICLE	E D D D	CREEK	c	CONTAINER	
	Clearcreek Contractors 3919 88th ST NE							CREEK			
		e, WA 98270				REFERE	INCE			T N	VOICE
		e, WA 90270				BILL OF					.0105
LW-15:	171				)	BILL OF					
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	DOVID IN GROOD HELOWIN TOOL IN			NET W	EIGHT	Г	68,240		INBOUND		
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on t	on the reverse side and that he or she has the authority to sign this document on behalf of the customer.							CHECK#			

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SITE		L DISPOSAL INTER 3rd and lander	RMODAL		01 WEIGHMA			CELL			
	Seat	ttle, WA			IN - Drinda L. OUT - JAMIE B.						
CUSTOMER 014755 Clearcreek Contractors 3919 88th ST NE Marysville, WA 98270 LW-15171					07-21 Vehicle SOIL Referen	L-2015 ICE JEARCREEI			21-2015 AINER	8:01 am /OICE	
SCALE SCALE	E IN E OUT	GROSS WEIGHT TARE WEIGHT	107,000 39,740	NET NET W	TONS EIGHT	33 67,1		I	NBOUND		
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L	,									NET AMOUNT	
										TENDERED	
The undersi	aned individual (	signing this document on behalf	of Customer acknowled	does that he or sl	e has read	and understan	ds the terms	and conditions		CHANGE	

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

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SITE		REGIONAL DISPOSAL INTERN	MODAL		01		926076			
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CUSTOMER				1	07-21	1-201	5 9:40	) am   07-21	1-2015	9:45 am
01475					VEHICLE			CONTAI	INER	
Clear	creek	Contractors		1	SOIL					
3919	88th	ST NE			REFEREN		DEEV		INVC	DICE
Marvs	ville	e, WA 98270			43 CI	LEARC	KEEK		<u>+ iv v (</u>	
LW-15					BILL OF	LADING				
										)
	<u>ገር ካ</u> ተ ም	IN GROSS WEIGHT	95 <b>,</b> 780		TONS		28.07	-	IDOINID	
	SCALE IN GROSS WEIGHT 95,780 N. SCALE OUT TARE WEIGHT 39,640 NET				WEIGHT		56,140	ΙÌ	NBOUND	)
(	U CAPE					<del></del> T	RATE	EXTENSION	TAX	TOTAL
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	· · ·	inned individual signing this document on behall	f of Customer acknowle	edges that he or	she has re	ead and u	inderstands the	terms and conditions	-	

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and co on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

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				SITE	TICKET #	CELL				
SITE		REGIONAL DISPOSAL INTE	RMODAL	01 WEIGHM	926099					
		3rd and lander		) IN -	Kim L. OUT	- Drinda I DATE/T				
		Seattle, WA			MEIN 1-2015 12:3	DATE		12:48 pm		
CUSTOMER 01475	5			VEHICLE		CONTAI	NER			
Clear	 creek	Contractors		43 C	LEARCREEK					
3919	88th	ST NE		REFERE	REFERENCE					
Marys	sville	, WA 98270		BILL OF	LADING					
LW-1	5171									
Y		CROCO WEICHT	100,300	NET TONS	30.31					
(	SCALE	IN GROSS WEIGHT OUT TARE WEIGHT	39,680	NET WEIGH		I	NBOUND			
Į	SCALE				BATE	EXTENSION	TAX	TOTAL		
QTY.	UNIT		DESCRIPTION							
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		signed individual signing this document on be	nalf of Customer acknowledge	es that he or she has	read and understands th	e terms and condition	s			
	The under	signed individual signing this document of be	o sign this document on beha	If of the customer.				CHECK#		

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

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3919	creek 88th ville		270			01 WEIGHMASTI IN - D DATE/TIME IN 07-21-2 VEHICLE SOIL REFERENCE	rinda L. ( 2015 11:0) ARCREEK		1-2015 INER	11:11 am DICE
	SCALE SCALE		GROSS WEIGHT TARE WEIGHT	98,440 39,740		IGNS	58,700	I	NBOUND	
			DE	SCRIPTION			RATE	EXTENSION	TAX	TOTAL
0.00 29.35	OTY.     UNIT     DESCRIPTION       0.00     YD     TRACKING QTY									
The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.									NET AMOUNT TENDERED . CHANGE CHECK#	

SIGNATURE \_\_\_\_

3919	5 creek 88th ville	REGIONAL DISPOSAL INTERMODAL 3rd and lander Seattle, WA c Contractors ST NE e, WA 98270	SITE TICK 01 WEIGHMASTER IN - Dr DATE/TIME IN 07-21-2 VEHICLE SOIL REFERENCE 10 WINT BILL OF LADIF	926068 inda L. ( 015 8:07 ER NG	DUT – JAMIE 7 am DATE/TI 7 CONTAI	ME OUT 2015 NER	8:19 am DICE
	SCALE SCALE	IN GRUSS WEIGHT IN, OTO	ET TONS F WEIGHT	32.20 64,400 <b>RATE</b>	I	IBOUND	TOTAL
0.00 32.20		TRACKING QTY SW-CONT SOIL W/FUEL ISSAQUAH/KIN	1G				NET AMOUNT
				i i u anda dha	terms and conditions	-	TENDERED

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3919	cree 88th sville	3		RMODAL		DATE/TIM	IASTER Drin ME IN 1-201 E NCE	926078 nda L. ( 15 10:03		IME OUT 1-2015 INER	10:12 aπ OICE
			GROSS WEIGHT TARE WEIGHT		NET NET V	TONS ÆIGHT		29.99 59,980	I	NBOUND	
	UNIT		DI	ESCRIPTION				RATE	EXTENSION	TAX	TOTAL
0.00		TRACKING SW-CONT	GQTY SOIL W/FUEL	ISSAQU	JAH/KING						
	<u> </u>	<u> </u>					1		orme and conditions		NET AMOUNT TENDERED CHANGE

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RS-F042UPR (07/12)

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					SITE TICKE	Γ#	CELL		
SITE		REGIONAL DISPOSAL INTEF 3rd and lander Seattle, WA	MODAL		DATE/TIME IN			L.	11.50 am
CUSTOMER		Seattle, wit			07-21-20	15 11:4	7 am 07-	21-2015	11:59 all
01475	5				VEHICLE 10 BUD V	VINTER			
Clear	creek	Contractors ST NE		l.	REFERENCE			INV	OICE
3919 Marvs	ville	, WA 98270			BILL OF LADIN	G			
LW-1				)					
	SCALE	IN GROSS WEIGHT	101,300 41,260		TONS VEIGHT	30.02 60,040		INBOUND	
	SCALE					RATE	EXTENSION	TAX	TOTAL
	UNIT		ESCRIPTION						
0.00	1 1	TRACKING QTY SW-CONT SOIL W/FUEL	ISSAQUA	H/KING					
00.02									
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RS-F042UPR (07/12)

3919 88t	REGIONAL DISPOSAL INTERMODAL 3rd and lander Seattle, WA ek Contractors n ST NE le, WA 98270	VEIGHMASTE IN - Ra DATE/TIME IN 07-21-2 VEHICLE SOIL REFERENCE	aylene W. 2015 1:1 YER TRUCKIN	бот 07-2 07-2 солт	TIME OUT 21-2015 AINER	'1:30 pg OICE
	E IN GROSS WEIGHT (127,100) E OUT TARE WEIGHT (127,100)	NET TONS NET WEIGHT	43.19 86,380	I	NBOUND	
	DESCRIPTION		RATE	EXTENSION	TAX	
0.00 YD	TRACKING QTY					
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						NET AMOUNT
						TENDERED
The unde	signed individual signing this document on behalf of Customer acknowledges tha rse side and that he or she has the authority to sign this document on behalf of t	at he or she has read and the customer.	d understands the te	erms and conditions		CHANGE
on the rev	arse side and that he or she has the authority to sign this document of behalf of a					CHECK#

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ТЕ		AL DISPOSAL INTER 3rd and lander ttle, WA	MODAL		01 WEIGHMAST		CELL		
3919 88th	14755 Learcreek Contractors 919 88th ST NE arysville, WA 98270 W-15171 SCALE IN GROSS WEIGHT 99,980					4		TIME OUT 21-2015 AINER	8:52 am OICE
		GROSS WEIGHT TARE WEIGHT	99,980 42,140		TONS WEIGHT	28.92 57,840	I	NBOUND	
QTY. UNIT		DES	SCRIPTION	-		RATE	EXTENSION	TAX	TOTAL
0.00 YD 28.92 TN	TRACKIN SW-CONT	SOIL W/FUEL	ISSAQU	AH/KING					
									NET AMOUNT
The unders	igned individual	signing this document on behalf o	f Customer acknowled	ges that he or s	ne has read and	understands the te	erms and conditions		CHANGE
on the reve	rse side and that	he or she has the authority to sig	n this document on be	half of the custo	ner.				CHECK#

SIGNATURE

3919 88th ST NE       REFERENCE         Marysville, WA 98270       10 SPRINGBROOK         LW-15171       Bill OF LADING		INV	OICE
SCALE INGROSS WEIGHT104,240NET TONS31.55SCALE OUTTARE WEIGHT41,140NET WEIGHT63,100	I	NBOUND	
QTY. UNIT DESCRIPTION RATE	EXTENSION	TAX	TOTAL
0.00 YD TRACKING QTY 31.55 TN SW-CONT SOIL W/FUEL ISSAQUAH/KING			
			NET AMOUNT
The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms on the reverse side and that he or she has the authority to sign this document on behalf of the customer.	and conditions		CHANGE CHECK#

SIGNATURE

				CKET #	CELL					
SITE		REGIONAL DISPOSAL INTERMODAL	01 WEIGHMAS	926093						
		3rd and lander	) IN - F	(im_LOUT	- Drinda I					
		Seattle, WA		IN 2015 12:04	DAIDIN		12:09 pm			
CUSTOMER 01475	5		VEHICLE		CONTAI	NER				
Clear	creek	Contractors	10 SPH	RINGBROOK						
3919	88th	ST NE	REFERENC	E		INV	DICE			
Marys	ville	, WA 98270	BILL OF LA	DING						
LW-15	171									
×		IN GROSS WEIGHT 100,680	NET TONS	29.73						
	SCALE		NET WEIGHT	59,460	II	NBOUND				
{	SCALE			RATE	EXTENSION	TAX	TOTAL			
QTY.	UNIT	DESCRIPTION								
0.00	YD	TRACKING QTY SML CONT. SOLL W/FUEL ISSAQUAH/K	TNG							
29.73	TN	SW-CONT SOIL W/FUEL ISSAQUAH/K								
						l	NET AMOUNT			
						-	TENDERED			
			the terms and conditions							

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands t on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE \_\_\_\_\_

SITE					1 1	KET #	CELL		·
		REGIONAL DISPOSAL INTE	RMODAL		01	926109			
		3rd and lander			WEIGHMASTE			1 T	
		Seattle, WA			IN - Ra	<u>aylene W.</u>	OUT - Dri	<u>nda L.</u> IME OUT	·
CUSTOMER						2015 1:2		1-2015	1:52 pm
01475					VEHICLE	.015 1:2			
Clear	ccree!	k Contractors				INGBROOK			
3919	88th	ST NE			REFERENCE				
Marvs	svill	e, WA 98270			BILL OF LADING				
LW-1									
	J I / I								
			100 040	אבית	TONS	33.99			,
		IN GROSS WEIGHT	109,040				т		
	SCALE	E OUT TARE WEIGHT	41,060	NET W	EIGHT	67,980	T	NBOUND	
	UNIT		ESCRIPTION			RATE	EXTENSION	TAX	TOTAL
0.00	1 1	TRACKING QTY							
33.99	TN	SW-CONT SOIL W/FUEL	ISSAQU	AH/KING					
	¦ '								
	ļ								
<u> </u>	<u> </u>							<u> </u>	NET AMOUNT
									TENDERED
								ļ	
							and conditions	$\vdash$	CHANGE
IT	ne undersi	gned individual signing this document on beha	If of Customer acknowled	dges that he or s	he has read and mer	a understands the t	erms and conditions		
on the reverse side and that he or she has the authority to sign this document on behalf of the customer.								CHECK#	

SIGNATURE \_\_

3919 88th	REGIONAL DISPOSAL INTEN 3rd and lander Seattle, WA Contractors ST NE , WA 98270		01 WEIGHMAS IN - I DATE/TIME 07-21- VEHICLE SOIL REFERENC	Drinda L. N -2015 8:33 E RINGBROOK	DATE/	TIME OUT 21-2015 AINER	8:47 aπ QICE	
SCALE SCALE		107,480 41,140	NET NET W	TONS EIGHT	33.17 66,340	I	NBOUND	
	DE	SCRIPTION			RATE	EXTENSION	ТАХ	TOTAL
	TRACKING QTY SW-CONT SOIL W/FUEL	ISSAQU.	AH/KING					
								NET AMOUNT
The undersign on the reverse RS-E04211PR (07/12)	ned individual signing this document on behalf e side and that he or she has the authority to si	gn this document on bel	ges that he or sh half of the custon SIGNATURE	e has read a ner.	ind understands the te	rms and conditions	L	CHECK#

SIGNATURE

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RS-F042UPR (07/12)

SCALE IN SCALE OUT     GROSS WEIGHT     104,480     INT TOTAL       OTV.     UNIT     DESCRIPTION     RATE     EXTENSION     TAX       0.00     YD     TRACKING QTY     ISSAQUAH/KING     I     I       31.67     TN     SW-CONT SOIL W/FUEL     ISSAQUAH/KING     I     I       .     I     I     I     I     I     I	Clear 3919 Marys	REGIONAL DISFOSAL INTERMENT         3rd and lander         Seattle, WA         014755         Clearcreek Contractors         3919 88th ST NE         Marysville, WA         Marysville, WA         98270         LW-15171         SCALE IN       GROSS WEIGHT         104,480       NET TONS         31.67         INBOUND								
OTY.     UNIT     DESCRIPTION       0.00     YD     TRACKING QTY       31.67     TN     SW-CONT SOIL W/FUEL     ISSAQUAH/KING       .     .     .       .     .     .			OUT TARE WEIGHT	41,140 NET		63,340			TOTAL	
31.67 TN SW-CONT SOIL W/FUEL ISSAQUAH/KING .		UNIT	DESCR	IPTION						
TENDERED	0.00		TRACKING QTY SW-CONT SOIL W/FUEL	ISSAQUAH/KIN	NG					
								-	TENDERED	
The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions	_		terest individual signing this document on behalf of	Customer acknowledges that	he or she has rea	ad and understands the	terms and condition	s	CHANGE	

The undersigned individual signing this document on behalf of Customer acknowledges that he or she ha on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

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3919	5 creek 88th ville	Seat	ctors	MODAL		DATE/TIME IN 07-21-2	926115 ylene W. 015 1:4 NGBROOK	OUT - Drij DATE/ 0 pm 07-2 CONTA	IME OUT 1-2015 INER	2:17 pr 0ICE
	SCALE SCALE	IN OUT	GROSS WEIGHT TARE WEIGHT	105,880 41,180		TONS WEIGHT	32.35 64,700		NBOUND	TOTAL
l			D	SCRIPTION			RATE	EXTENSION		
0.00 32.35	1	TRACKIN SW-CONT	G QTY SOIL W/FUEL	ISSAQU	JAH/KING					NET AMOUNT
	The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.									TENDERED CHANGE CHECK#

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SITE		REGIONZ	AL DISPOSAL INTE			SITE 01	ті <b>скет</b> # 926091	CELL				
		INEGIONF	3rd and lander									
		Sea	ttle, WA		)		Kim L. OUT	- Drinda	L.			
CUSTOMER						DATE/TIM	EIN	DATE/1	IME OUT	10.05		
01475	5						-2015 11:5			12:05 pm		
Clear	creel	< Contra	ctors			25 SI	PRINGBROOK	CONTA	INER			
		ST NE				REFEREN		I				
Marys	sville	e, WA 9	8270						INV	OICE		
LW-1	5171					BILL OF L	ADING					
<u></u>												
(	SCALE	IN	GROSS WEIGHT	100,300	NET	TONS	29.35					
	SCALE	OUT	TARE WEIGHT	41,600	NET W	EIGHT	58 <b>,</b> 700	I	NBOUND			
<u></u>				SCRIPTION			RATE	EXTENSION	ТАХ	TOTAL		
QTY.	UNIT			LOCHIF HON			10.10					
0.00	YD	TRACKIN		TOODOL								
29.35	ΤN	SW-CON'I	SOIL W/FUEL	ISSAQU	JAH/KING							
· ·												
										•		
										NET AMOUNT		
									L			
									1	TENDERED		
									-	CHANGE		
Th	e undersi	The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions										

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

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SHE     REGIONAL DISPOSAL INTERMODAL 3rd and lander     Steatle, WA        CUSTOMER     Seattle, WA        014755     Clearcreek Contractors       3319     86th ST NE       Marysville, WA     98270       LW-15171     SCALE IN GROSS WEIGHT 105,800       SCALE OUT TARE WEIGHT 39,400     NET TONS       SCALE OUT TARE WEIGHT 39,400     NET WEIGHT 66,400       OWN     NET WEIGHT 66,400       OWN     SW-CONT SOIL W/FUEL       INSACCINC OTY     ISSAQUAH/KING										
Sard and lander       Seattle, WA       Old 755       Scale Out     Take KEING QTY       Scale Out     Take KEING QTY       Scale Out     Take KEING QTY       Scale Out     Scale Out       Scale Out	SITE	REG	TONAL DISPOSAL	INTERMODAL				CELL		
Seattle, WA        customer     014755       Clearcreek Contractors     3919 88th ST NE       Marysville, WA 98270     Clearcreek Contractors       LW-15171     SCALE IN GROSS WEIGHT 105,800       SCALE OUT TARE WEIGHT 39,400     NET TONS 33.20       SCALE OUT TARE WEIGHT 39,400     NET WEIGHT 66,400       OV     UNT       OV     Description       Are Extension     TAX       TrackING QTY     ISSAQUAH/KING       33.20     TN       SW-CONT SOIL W/FUEL     ISSAQUAH/KING										
CONSTONER     DATETINE OUT     DATETINE OUT       014755     Clearcreek Contractors     3919 88th ST NE     CONTAINER     CONTAINER       3319 88th ST NE     Marysville, WA 98270     INVOICE     CONTAINER       LW-15171     SCALE IN     GROSS WEIGHT     105,800     NET TONS     33.20       SCALE OUT     TARE WEIGHT     39,400     NET TONS     33.20       SCALE OUT     TARE WEIGHT     39,400     NET WEIGHT     66,400     INBOUND       OTV     UNIT     DESCRIPTION     RATE     EXTENSION     TAX     TOTAL       0.00     YD     TRACKING QTY     ISSAQUAH/KING     INBOUND     NET AMOUNT       33.20     TN     SW-CONT SOIL W/FUEL     ISSAQUAH/KING     INFORMATION     NET AMOUNT			Seattle, WA		J			OUT - Drir	ida L.	
U14733       Clearcreek Contractors         3919 88th ST NE       Contanter         Marysville, WA 98270       INVOICE         LW-15171       SCALE IN       GROSS WEIGHT 105,800       NET TONS       33.20         SCALE OUT       TARE WEIGHT       39,400       NET WEIGHT       66,400       INBOUND         OV       Y       TRACKING QTY       DESCRIPTION       RATE       EXTENSION       TAX       TOTAL         0.00       YD       TRACKING QTY       ISSAQUAH/KING       NET WEIGHT       66,400       INBOUND         33.20       TN       SW-CONT SOIL W/FUEL       ISSAQUAH/KING       ISSAQUAH/KING       NET AMOUNT         Contanter         The undersigned individual signing this document on behalf of Customer achrowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the automity to sign this document on behalf of the customer.       CHANGE       CHANGE	CUSTOMER					DATE/TIME IN	1	DATE/TI	ME OUT	0.01
Clearcreek Contractors 3919 88th ST NE Marysville, WA 98270 LW-15171       43 CLEARCREEK NETERENCE       INVOICE         SCALE IN SCALE OUT       GROSS WEIGHT       105,800       NET TONS       33.20         SCALE OUT       TARE WEIGHT       39,400       NET WEIGHT       66,400       INBOUND         OTV.       UNT       DESCRIPTION       RATE       EXTENSION       TAX       TOTAL         0.00       YD       TRACKING QTY       ISSAQUAH/KING       ISSAQUAH/KING       INBOUND       NET AMOUNT         33.20       TN       SW-CONT SOIL W/FUEL       ISSAQUAH/KING       ISSAQUAH/KING       NET AMOUNT         The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.       2/14058.30       NET AMOUNT	0147	55					2015 1:5	0 0111		
3919 88th ST NE Marysville, WA 98270 LW-15171       INVOICE         SCALE IN SCALE OUT       GROSS WEIGHT       105,800 TARE WEIGHT       NET TONS       33.20 66,400         OV       UNT       DESCRIPTION       RATE       EXTENSION       TAX         OU       VD SW-CONT SOIL W/FUEL       ISSAQUAH/KING       ISSAQUAH/KING       INT       NET AMOUNT         Description       RATE       EXTENSION       TAX       TOTAL         OU       VD SW-CONT SOIL W/FUEL       ISSAQUAH/KING       ISSAQUAH/KING       ISSAQUAH/KING         The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.       TENDERED         2/20       2/21       2/21       2/21	Clea	rcreek Co	ontractors				ARCREEK	CONTRI		
Marysville, war 96270       Bill of LADING         LW-15171       Bill of LADING         SCALE IN SCALE OUT TARE WEIGHT 39,400 NET TONS 33.20       S3.20         OTY.       UNIT       DESCRIPTION         ATE       EXTENSION       TAX         OUO YD       TRACKING QTY       ISSAQUAH/KING         33.20       TN       SW-CONT SOIL W/FUEL       ISSAQUAH/KING         VI       SW-CONT SOIL W/FUEL       ISSAQUAH/KING       NET AMOUNT         L/HOSS.3D       TENDERED       TENDERED         The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that or she has read and understands the terms and conditions       CHANGE         CHANGE       CHECK#       221       CHECK#									TNI	OTCE
IW-151/1       SCALE IN GROSS WEIGHT 105,800 NET TONS 33.20         SCALE OUT       TARE WEIGHT 39,400 NET WEIGHT 66,400 INBOUND         OTV.       UNT       DESCRIPTION       RATE       EXTENSION       TAX       TOTAL         0.00       YD       TRACKING QTY       ISSAQUAH/KING       ISSAQUAH/KING       INBOUND         33.20       TN       SW-CONT SOIL W/FUEL       ISSAQUAH/KING       ISSAQUAH/KING       INBOUND         Image: SW-CONT SOIL W/FUEL       ISSAQUAH/KING       Image: SW-CONT SOIL W/FUEL       ISSAQUAH/KING       Image: SW-CONT SOIL W/FUEL       Image: SW-CONT SOIL W/	Mary	sville, V	IA 98270						TINY	OICE
SCALE OUT       TARE WEIGHT       39,400       NET WEIGHT       66,400       INBOUND         OTY.       UNIT       DESCRIPTION       RATE       EXTENSION       TAX       TOTAL         0       YD       TRACKING QTY       DESCRIPTION       RATE       EXTENSION       TAX       TOTAL         0       YD       TRACKING QTY       ISSAQUAH/KING       ISSAQUAH/KING       I       I       I         1       SW-CONT SOIL W/FUEL       ISSAQUAH/KING       I       I       I       I       I         1       ISSAQUAH/KING       I       I       I       I       I       I       I       I       I         1       I       I       ISSAQUAH/KING       I	LW-1	5171			J		ING			
OTY.     UNIT     DESCRIPTION     RATE     EXTENSION     TAX       0.00     YD     TRACKING QTY     33.20     TN     SW-CONT SOIL W/FUEL     ISSAQUAH/KING       1     ISSAQUAH/KING     1     ISSAQUAH/KING     1     ISSAQUAH/KING       1     ISSAQUAH/KING     1     ISSAQUAH/KING     1	$\succ$	SCALE IN	GROSS WEI	GHT 105,80	0 NET	TONS	33.20			
UNIT     Description       0.00     YD     TRACKING QTY       33.20     TN     SW-CONT SOIL W/FUEL     ISSAQUAH/KING       ISSAQUAH/KING     ISSAQUAH/KING				•		VEIGHT	66,400	I	NBOUND	
0.00       YD       TRACKING QTY         33.20       TN       SW-CONT SOIL W/FUEL       ISSAQUAH/KING         1       NET AMOUNT         2       1       1         2       1       1         221       221				DESCRIPTION			RATE	EXTENSION	ТАХ	TOTAL
33.20 TN SW-CONT SOIL W/FUEL ISSAQUAH/KING NET AMOUNT 2/4058.30 Tendered Tendered CHANGE CHECK# 2/21	L	and the second	ACKING OTY	in an	· · · · · · · · · · · · · · · · · · ·					
2/4058.30         TENDERED         The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.         2/21				L ISS	SAQUAH/KING	;				
2/4058.30         TENDERED         The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.         2/21										
2/4058.30         The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.         2/21										
2/4058.30         The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.         2/21										
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2/4058.30         The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.         2/21										
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2/4058.30         The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.         2/21										
TENDERED The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer. CHECK#		1						-A - >		
The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.							2140	58.30		
The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.  2/21 CHECK#										TENDERED
on the reverse side and that he or she has the authority to sign this document on behalf of the customer.  CHECK#  2/21							d da meteor de 19 - 1	termine and appendix?		CHANGE
2/21	Th	ne undersigned in the reverse side	dividual signing this document of and that he or she has the author	on behalf of Customer ack prity to sign this document	nowledges that he or t on behalf of the cus	she has read an tomer.	a understands the t	terms and conditions		
RS-F042UPR (07/12) SIGNATURE	0			,					Į	CHECK#
	RS-F042U	IPR (07/12)	<b>212</b> I		SIGNATURE			A LINE AND AND A LINE A	\	

SITE REGIONAL DISPOSAL INTERMODAL	SITE 01	тіскет # 926120	CELL								
3rd and lander	WEIGHM				ALL						
Seattle, WA		Raylene W.									
CUSTOMER				<b>ime out</b> 1 <b>-</b> 2015	4:22 pm						
014755 Clearcreek Contractors	VEHICLE		CONTA		Title pr						
3919 88th ST NE		PRINGBROOK									
Marysville, WA 98270	REFERE	NCE		INV	OICE						
LW-15171	BILL OF	LADING									
SCALE IN GROSS WEIGHT 98,72	0 NET TONS	28.97									
SCALE OUT TARE WEIGHT 40,78	0 NET WEIGHT	57,940	I	NBOUND							
QTY. UNIT DESCRIPTION		RATE	EXTENSION	ТАХ	TOTAL						
0.00 YD TRACKING QTY											
28.97 TN SW-CONT SOIL W/FUEL IS	SAQUAH/KING										
			-		•						
		0.4	Into 2		NET AMOUNT						
		21-	1058.30								
					TENDERED						
The undersigned individual signing this document on behalf of Customer ac	nowledges that he or she has rea	d and understands the te	erms and conditions		CHANGE						
on the reverse side and that he or she has the authority to sign this document	t on behalf of the customer.				CHECK#						
2/21					CHECK#						
RS-F042UPR (07/12)	SIGNATURE			\							

SITE REGIONAL DISPOSAL INTERMO	DAT.			CELL		
3rd and lander			926256			
Seattle, WA			-	- Drinda I		
CUSTOMER	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	DATE/TIME IN		DATE/T	ME OUT	
014755		07-24-2	015 8:5		4-2015	9:52 ar
Clearcreek Contractors		VEHICLE	ODEEN	CONTA	NER	
3919 88th ST NE		44 CLEAN REFERENCE	K URFIER			
Marysville, WA 98270					INV	JOICE
LW-15171		BILL OF LADIN	G			
SCALE IN GROSS WEIGHT	90,440 NE	ET TONS	25.18			
SCALE OUT TARE WEIGHT	40,080 NET	WEIGHT	50,360	I	NBOUND	
			RATE	EXTENSION	ТАХ	TOTAL
	PTION		NA IE	EATENSION	100	
0.00 YD TRACKING QTY						
25.18 TN SW-CONT SOIL W/FUEL	IS\$AQUAH/KI	NG				
					-	NET AMOUNT
		214058.	30			
		219050.			-	TENDERED
The undersigned individual signing this document on behalf of Co	stomer acknowledges that he	or she has read and	understands the te	erms and conditions		CHANGE
on the reverse side and that he or she has the authority to sign th	is document on behalf of the o	customer.			-	CHECK#
RS-F042UPR (07/12) 2/21	SIGNATUR	E				
	0.0.111 011					

SITE REGIONAL DISPOSAL INTERMODAL	
3rd and lander	
Seattle, WA IN - JAMIE B. OUT - Drinda L.	
CUSTOMER DATE/TIME OUT	
014755 0147555 0014555 014755 014755 014755 014755 014755 014755 014755 0147550	9:40 am
Clearcreek Contractors 25 SPRINGBROOK	
3919 88th ST NE	NUCLOF
Marysville, WA 98270	NVOICE
LW-15171 BILL OF LADING	
SCALE IN GROSS WEIGHT 128,000 NET TONS 43.33	
SCALE OUT TARE WEIGHT 41,340 NET WEIGHT 86,660 INBOUN	D
QTY. UNIT DESCRIPTION RATE EXTENSION TAX	TOTAL
0.00 YD TRACKING QTY	
43.33 TN SW-CONT SOIL W/FUEL ISSAQUAH/KING	
	NET AMOUNT
211058 20	
214058.30	TENDERED
	CHANCE
The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions	CHANGE
on the reverse side and that he or she has the authority to sign this document on behalf of the customer.	CHECK#
RS-F042UPR (07/12) 2/21 SIGNATURE	

SITE REGIONAL DISPOSAL INTERMODAL		<b>KET #</b>	CELL								
3rd and lander	01 WEIGHMAST	926176									
Seattle, WA			UT - Drind	⊃ T							
CUSTOMER		DATE/TIME IN DATE/TIME OUT									
014755	07-23-	2015 8:5		3-2015	9:45 am						
Clearcreek Contractors	VEHICLE		CONTA	INER							
3919 88th ST NE	26 SPR REFERENCE	INGBROOK			and an						
Marysville, WA 98270				INV	OICE						
	BILL OF LAD	DING									
LW-15171											
SCALE IN GROSS WEIGHT 116,50	0 NET TONS	37.23									
SCALE OUT TARE WEIGHT 42,04		74,460		INBOUND							
	O NEI WEIGHI				<						
QTY. UNIT DESCRIPTION		RATE	EXTENSION	TAX	TOTAL						
0.00 YD TRACKING QTY	_										
37.23 TN SW-CONT SOIL W/FUEL IS	SAQUAH/KING										
					NET AMOUNT						
		- 1105-2	(A)								
		Z14058	- <b>2</b> ()		TENDERED						
The undersigned individual signing this document on behalf of Customer ack	nowledges that he or she has read ar	nd understands the te	erms and conditions		CHANGE						
on the reverse side and that he or she has the authority to sign this documen	on behalf of the customer.				CHECK#						
2/21	SIGNATURE										
RS-F042UPR (07/12)											

SITE	and the second of the second of the second se		L DISPOSAL INTER 3rd and lander	MODAL		SITE TICK	ELL								
			ttle, WA -	-		WEIGHMASTER									
CUSTOMER						<u>IN – JA</u> Date/Time in	ATE/TIME OUT								
0147						07-22-2015 11:22 am 07-22-2015 11:3 VEHICLE CONTAINER									
Clearcreek Contractors 3919 88th ST NE						43 CLEARCREEK									
		e, WA 9	8270			REFERENCE			ΤN	VOICE					
LW-1	5171					BILL OF LADIN	IG		£						
$\left( \right)$		E IN	GROSS WEIGHT	92,280	NET T	ONS	26.06								
	SCAL	E OUT	TARE WEIGHT	40,160	NET WEI	GHT	52,120		INBOUND						
ατγ.	UNIT		DES	CRIPTION			RATE	EXTENSION	TAX	TOTAL					
0.00 26.06	YD TN	TRACKII SW-CONI	NG QTY F SOIL W/FUEL	ISSAQU	JAH/KING										
										NET AMOUNT					
							2140	58.36	-	TENDERED					
The	e undersig the reverse	ned individual si e side and that h	gning this document on behalf of the or she has the authority to sign	Customer acknowledg	ges that he or she h	nas read and u	inderstands the te	rms and conditio	ons	CHANGE					
RS-F042UF		0.0			SIGNATURE	•				CHECK#					
									```````````````````````````````````````						

3919	rcree 88th svill				01 WEIGHMAST IN – J DATE/TIME II 07–22– VEHICLE	AMIE B. ( N 2015 9:! ARCREEK		IME OUT 2-2015 INER	10:08 am /OICE	
	SCAL SCAL	E IN E OUT	GROSS WEIGHT TARE WEIGHT	87,980 40,280		TONS WEIGHT	23.85 47,700	]	NBOUND	
QTY.	UNIT			CRIPTION		1	RATE	EXTENSION	TAX	TOTAL
0.00 23.85	YD TN	TRACKIN SW-CONT	G QTY SOIL W/FUEL	ISSA	AQUAH/KING					
							210	4058.30		NET AMOUNT
The	The undersigned individual signing this document on behalf of Customer a					he has read and	understands the te	erms and conditions		CHANGE
	on the reverse side and that he or she has the authority to sign this docume RS-F042UPR (07/12) $^{2/21}$				SIGNATURE	mer.				CHECK#

SITE REGIONAL DISPOSAL INTEF 3rd and lander Seattle, WA CUSTOMER 014755 Clearcreek Contractors 3919 88th ST NE Marysville, WA 98270	MODAL	SITE 01 WEIGHMAST IN - D DATE/TIME II 07-22- VEHICLE 43 CLE/ REFERENCE	<u>I.</u> Ліме оит 22-2015 12:54 рл Ainer		
LW-15171		BILL OF LAD	ING		INVOICE
SCALE IN GROSS WEIGHT SCALE OUT TARE WEIGHT		T TONS WEIGHT	34.29 68,580	anala da para ang sa ang s	INBOUND
QTY. UNIT DE	SCRIPTION		RATE	EXTENSION	TAX TOTAL
0.00 YD TRACKING QTY 34.29 TN SW-CONT SOIL W/FUEL	ISSAQUAH/KIN	IG			
			214058.3	50	TENDERED
The undersigned individual signing this document on behalf o on the reverse side and that he or she has the authority to sign	f Customer acknowledges that he o n this document on behalf of the cu	or she has read and stomer.	understands the te	erms and conditions	CHANGE
RS-F042UPR (07/12)	SIGNATURE		CHECK#		

SITE REGIONAL DISPOSAL INTERMO 3rd and lander <u>Seattle, WA</u> CUSTOMER 014755 Clearcreek Contractors 3919 88th ST NE Marysville, WA 98270 LW-15171	DDAL	DATE/TIME IN	926132 MIE B. OU 015 10:26 NGBROOK	DATE/T	IME OUT 2-2015 INER	11:40 am /OICE
SCALE IN GROSS WEIGHT SCALE OUT TARE WEIGHT	•	TONS WEIGHT	22.39 44,780	II	NBOUND	
OTY.         UNIT         DESCF           0.00         YD         TRACKING QTY           22.39         TN         SW-CONT SOIL W/FUEL	ISSAQUAH/KING		RATE	EXTENSION	TAX	TOTAL
The undersigned individual signing this document on behalf of C on the reverse side and that he or she has the authority to sign th	ustomer acknowledges that he or s is document on behalf of the custo	he has read and u mer.	nderstands the term	s and conditions		NET AMOUNT TENDERED CHANGE
RS-F042UPR (07/12)	SIGNATURE					CHECK#

Appendix K – Post-Remedial Action Well Logs

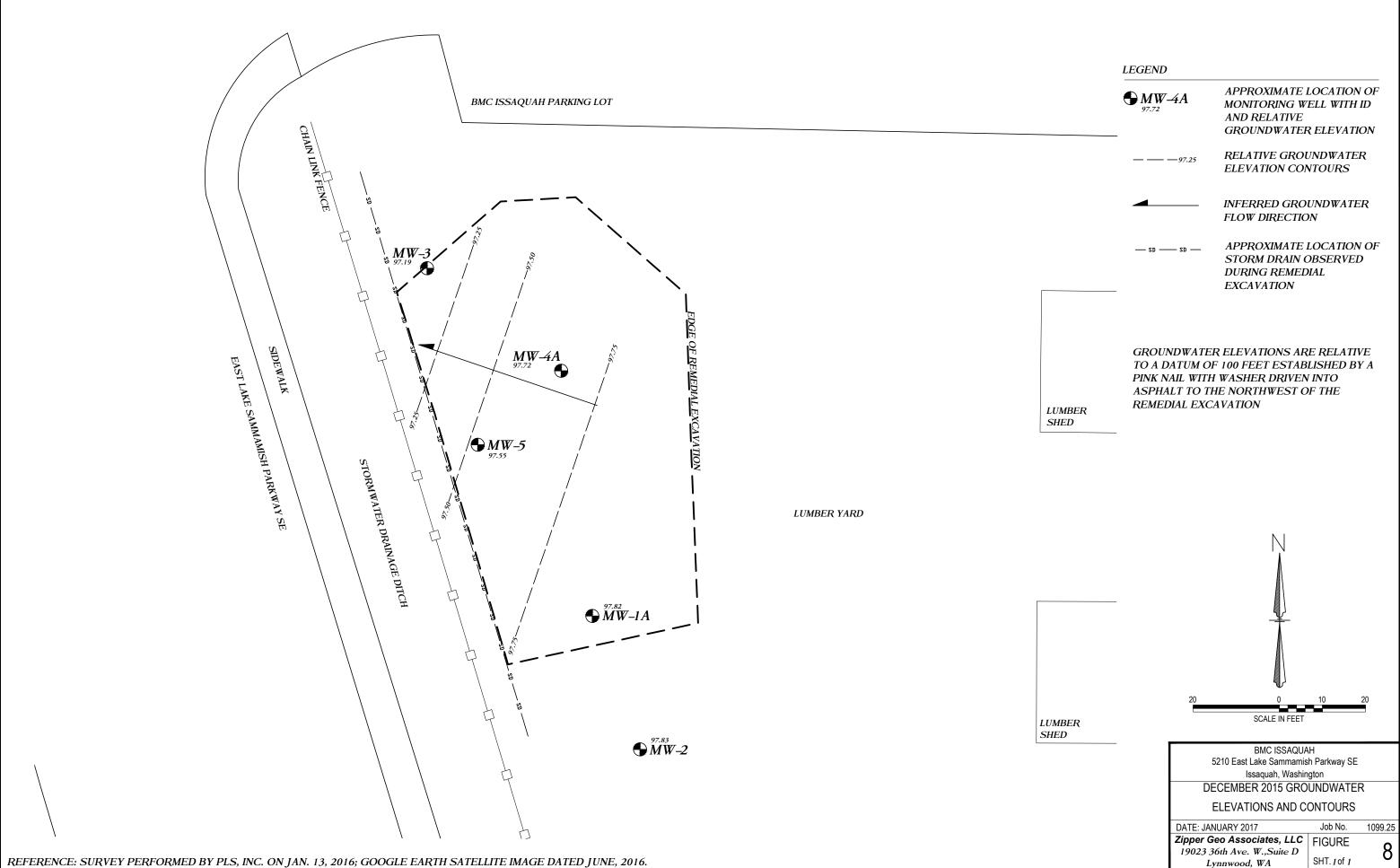
Boring Location: - Drilling Com					ironme	ental		Bo	ore Ho	ole Di	<u>a.:</u> 6'					
	Elevation: -	Drilling Me	<u>thod:</u>		ow Ste		-		amme					MW	-1A	
Date	<u>e Drilled:</u> 11/20/2015	<u>Drill Rig:</u>		-	ck Mou				gged			ST	_			
	SOIL DESCRIPTION	<u>ا</u> ا	fer	P	ENET						<b>E</b> (bl	ows/fo	ot)	Its		
( <del>I</del> ) Н	The stratification lines represent the approximate boundaries	Sample Number SAMPLES Recovery	Ground Water						on Te					Blow Counts	ting	
Depth	between soil types. The transition may be gradual. Refer to	AMF Reco	pund		A Ham	mer	Weig	ght ar	nd Dro	op:				Ň	Testing	
	report text and appendices for additional information.	S V	Gro	0			20			40			6	n Ĕ		
0 -	<u> </u>			Ì			1									
$\vdash$	3 to 4 inches of asphalt	ή Ι														
┝	Loose, moist, tan, sandy GRAVEL (Fill). No obvious	/	8_8													
	, hydrocarbon odor noted. , Soft, very moist, blue-gray, SILT with trace fine sand. No															
	by obvious hydrocarbon odor noted.		11/20,													
- 5 -	Soft, very moist, mottled green and light brown, SILT with	S3	/15											0		
	\ trace fine sand. No obvious hydrocarbon odor noted.													Ŭ		
<b></b>	Soft, wet, gray, SILT with some fine-medium sand. No obvious hydrocarbon odor noted.															
10	Exploration completed at 10 feet.	1 -	` <u> </u>													
	Groundwater observed at approximately 3 feet ATD.															
$\vdash$																
$\vdash$																
$\vdash$																
15													+			
$\vdash$																
										_						
										_						
20																
20																
$\vdash$																
$\vdash$																
$\vdash$													+			
25	SAMPLE LEGEND GROUNDWATER LEGEND					$\sim$	· % F	Fines	s (<0.0	<u>  </u> 175 n						
.	2-inch O.D. split spoon sample     Image: Clean Sand					č			er (Mo			ntent				
	3-inch I.D. Shelby tube sample 🔯 Bentonite				Plastic								l imi	+		
.	Grout/Concrete		Plastic Limit Natural Water Content						Linn	ι						
			BMC Issaquah													
	TESTING KEY				5210					-		DLW	~, C			
	TESTING KEY       Blank Casing         GSA = Grain Size Analysis          ✓          Groundwater level at				JZIU	Lı							/y _			
	- time of drilling (ATD) or		Issaquah, WA Date: - Project No						100	9.25						
	200W = 200 Wash AnalysisImage: Consol. = Consolidation TestImage: Consol. = Consolidation Test		Date.	-										102	9.25	
	Att. = Atterberg Limits		Zipper Geo Asso 19023 36th Ave. W			. W,	Suit		ľ		rin Dg:		MW	-1A		
					Lynnv	vooc	l, W/	A				Pad	ge 1	of 1		

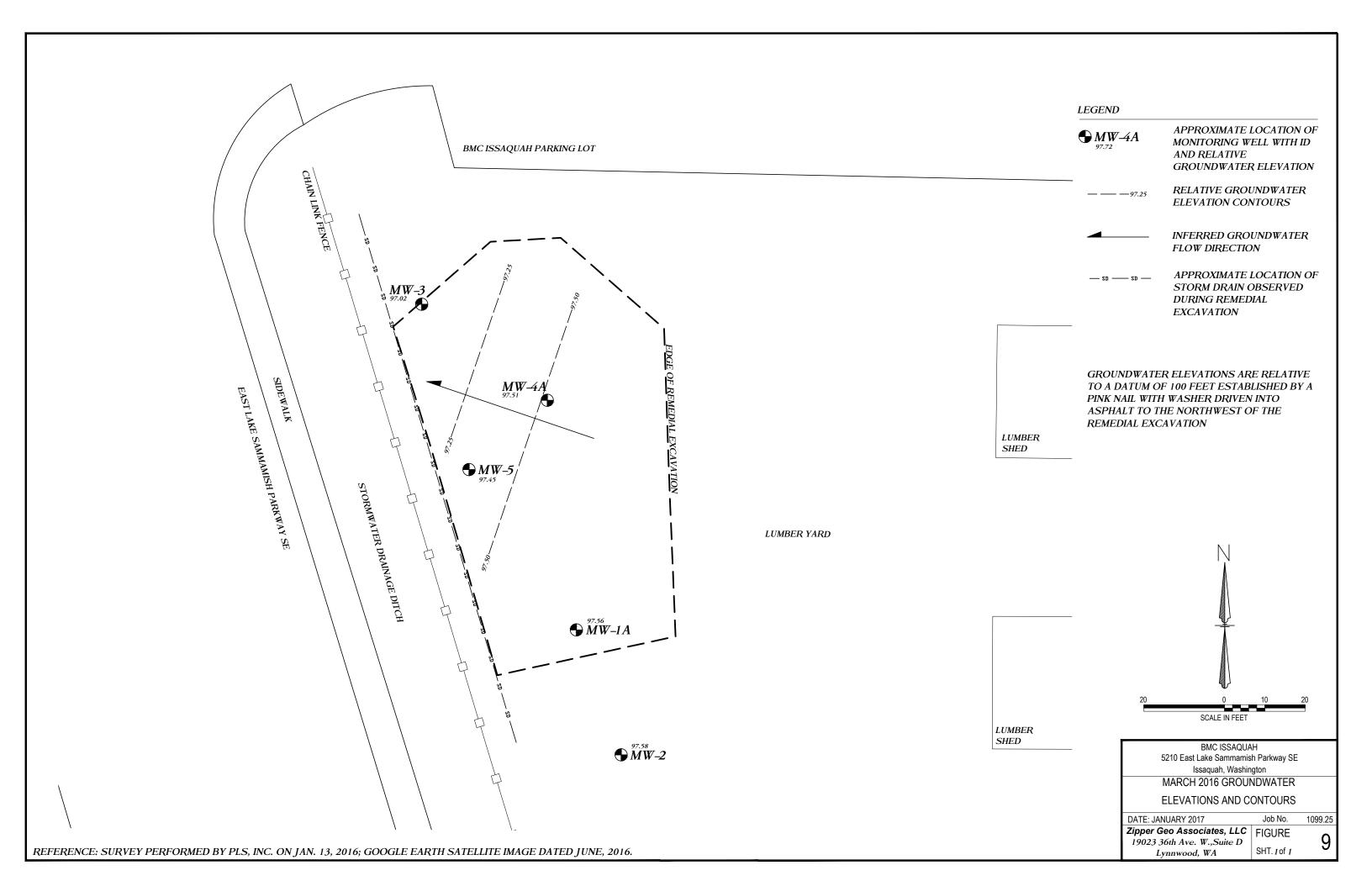
Bori	ng Location: -	Drilling Co	mpany:	En	viro	nme	ntal		E	Bore	e Ho	le D	)ia.:	6"				
	Elevation: -	Drilling Me	thod:					uger	-		nmer						MW	-4A
Date	<u>e Drilled:</u> 11/20/2015	<u>Drill Rig:</u>	1	-		Mou					ged I			JST		_		
	SOIL DESCRIPTION		ter										CE (	blow	s/foot	:)	lts	
Depth (ft)	The stratification lines represent the approximate boundaries	Sample Number SAMPLES Recovery	Ground Water	4							n Tes						Blow Counts	Testing
Dept	between soil types. The transition may be gradual. Refer to	AMI Recc	punc	4	וב	Ham	mer	We	ight	and	l Dro	p: 				_	No No	Tes
	report text and appendices for additional information.	N N	Ū	0				20				40				 60	Ē	
- 0 -	、3 to 4 inches of Asphalt	/ _																
	Ň/		<b>e</b> z 12															
	Loose, moist grading to wet, tan, gravelly SAND with trace silt (Fill). No obvious hydrocarbon odor noted.		ראַ אַ									+						
			L 11/2															
			0/15															
- 5 -	Soft, very wet, gray SILT with trace fine sand. No obvious	S1		+													0	
	hydrocarbon odor noted.																	
				-														
				-														
-				-														
10	Exploration completed at 10 feet.	-  ⊥		-														
	Groundwater observed at approximately 2.5 feet ATD.																	
15																		
20																		
25																		
	SAMPLE LEGEND GROUNDWATER LEGEND										<0.0							
	2-inch O.D. split spoon sample 🔯 Clean Sand										(Moi		e) C	Conte	ent			
	🛛 3-inch I.D. Shelby tube sample 🛛 🕅 Bentonite				Plo	istic	Lim	it			Э—		-	Liqu	uid Li	imit		
	Grout/Concrete		Natural Water Content															
	Screened Casing										ssa	-						
	TESTING KEY Blank Casing				52	210	E							۱P	kwy	/ SI	Ε	
	GSA = Grain Size Analysis Groundwater level at time of drilling (ATD) or								SSC	aqu	Jah	, V	VA					
1	200W = 200 Wash Analysis $\frac{1}{2}$ on date of		Date:	-										-	t No		1099	
	Consol. = Consolidation Test Att. = Atterberg Limits		Zipper Geo Associates 19023 36th Ave. W, Suite I Lynnwood, WA					I	BC L	0 .00	INC G:	<sup>3</sup> N	/IW	-4A				
1					Ly	nnv	000	a, W	ΙA					F	Page	e 1 (	of 1	

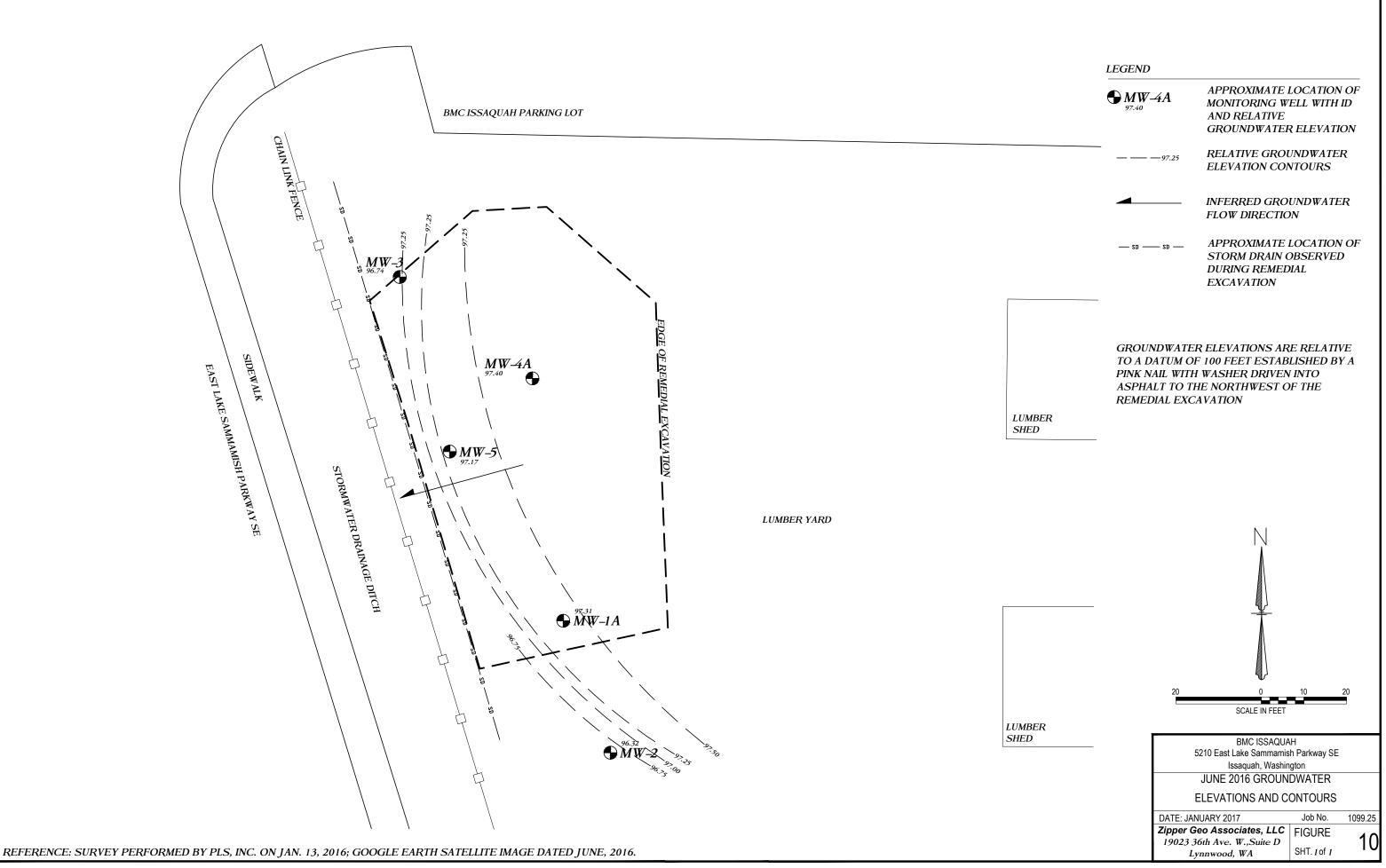
Bori	ng Location: -	Drilling Cor	mpany:	Er	viro	onme	enta	I		B	ore	Hol	e Di	a.: 6	<b>5</b> "		Т		
Top Elevation: -		Drilling Met	thod: Hollow Stem Auger		H	<u>Hammer Type:</u>				<b>MW-5</b>									
<u>Date Drilled:</u> 11/20/2015				_	Truck Mounted Logg					<u>ged by:</u> JST			$\downarrow$						
	SOIL DESCRIPTION	<u> </u>	l a		PE	NET	RA	TIC	DN	RE	SIS	STA	NC	<b>E</b> (t	olows	s/foot	:)	ţs	
(ft)		Sample Number SAMPLES Recovery	Ground Water	4		Star	ndar	d P	ene	etrat	tion	Tes	st					Blow Counts	bu
Depth	The stratification lines represent the approximate boundaries between soil types. The transition may be gradual. Refer to	AMP Recov	pur	4	Δ	Han	nme	r W	/eig	ht a	ind	Dro	p:					Ŭ ≩	Testing
Ō	report text and appendices for additional information.	San San	Jo U	Ĭ				20					40					Blo	Г
- 0 -		<u>                                     </u>		۰ ۲				20					40				60	·	
	、3 to 4 inches of Asphalt	1 T						_											
	Loose, moist grading to wet, tan, sandy GRAVEL with trace		8.	84										_					
	silt (Fill). No obvious hydrocarbon odor noted.																		
			1/20/15																
- 5 -			5	$\square$															
- , <sub>-</sub>	Soft, wet, light brownish gray, SILT with some fine sand, little	S2				T												0	
	coarse sand near contact. No obvious hydrocarbon odor																		
	noted.			$\square$															
$\square$											++								
10	Exploration completed at 10 feet.	1 ⊥	i i i i i i i i i i i i i i i i i i i	╢										+			+		
	Groundwater observed at approximately 2.5 feet ATD.					+					++-								
						+					++-	+			+-+-+		+		
	1										++				+				
						$\left  \right $					++-				+				
15				$\downarrow$															
	1																		
20	1																		
20				T										+					
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$\square$	1					++					++								
						+					++-				+-+-		+		
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25									<u>  </u> о/ г	-:	- (		75 m	<u>  </u>				l	
Ι.	SAMPLE LEGEND     GROUNDWATER LEGEND       2-inch O.D. split spoon sample     Image: Clean Sand												75 n		onte	1			
					וס	+ia											· - :.		
」	3-inch I.D. Shelby tube sample 🖾 Bentonite				۲ı	astic	: Lin		-					•	•	uid Li	mii		
	Grout/Concrete							ľ					Con						
					F	<u>- 1 c</u>	. –						qu		וח		C.	-	
	TESTING KEY     Blank Casing       GSA - Grain Size Analysis <ul> <li>Groundwater level at</li> </ul>				5.	210	) E	LC							1 14	kwy	15	F	
	$\underline{-}$ time of drilling (ATD) or		$\vdash$						IS	sa	qu	ah,	, W			<u> </u>		100	
			Date:	-									Т		-	t No		1099	9.25
	Consol. = Consolidation Test Att. = Atterberg Limits					Ge							E			NC	ì	MM	V-5
	Att. = Attenderg Linnis		19	<del>)</del> 02		86th					te [	)		L	00	G:			
					Ľ	ynn	NOC	od,	VV F	1					F	Dude	<u> </u>	of 1	

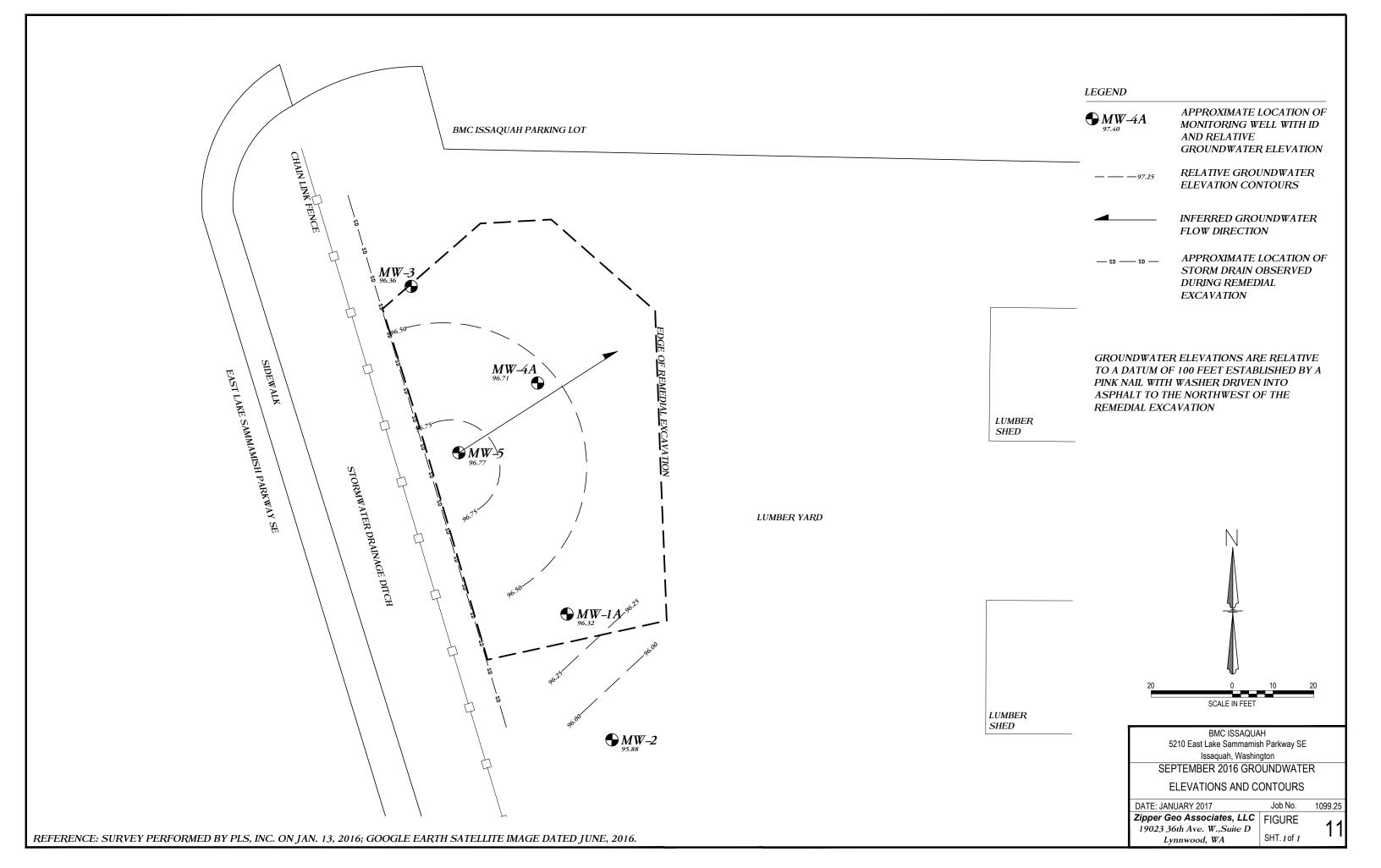
Appendix L – Post-Remediation Groundwater Contour Maps

Appendix M – Post-Remediation Groundwater Quality Results











December 16, 2015

Mr. Jon Einarsen Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036

Dear Mr. Einarsen,

On December 11th, 5 samples were received by our laboratory and assigned our laboratory project number EV15120103. The project was identified as your 1099.25. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan Laboratory Director

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## CERTIFICATE OF ANALYSIS

CLIENT: CLIENT CONTACT: CLIENT PROJECT:	19023 - 36th Ave W., Suite D Lynnwood, WA 98036 CLIENT CONTACT: Jon Einarsen			DATE: ALS JOB#: ALS SAMPLE#: ATE RECEIVED: LECTION DATE:	12/16/2015 EV15120103 EV15120103-01 12/11/2015 12/10/2015 2:06:00 PM			
CLIENT SAMPLE ID MW-2 WDOE ACCREDITAT								
		SAMPLE	DATA RESULTS					
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	IALYSIS BY	
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	12/14/2015	PAB	
Benzene	EPA-8021	U	1.0	1	UG/L	12/14/2015	PAB	
Toluene	EPA-8021	U	1.0	1	UG/L	12/14/2015	PAB	
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	12/14/2015	PAB	
Xylenes	EPA-8021	U	3.0	1	UG/L	12/14/2015	PAB	
SURROGATE	METHOD	%REC				ANALYSIS AN DATE	IALYSIS BY	
TFT	NWTPH-GX	90.6				12/14/2015	PAB	
TFT	EPA-8021	82.3				12/14/2015	PAB	

U - Analyte analyzed for but not detected at level above reporting limit.

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		CERTIFIC	ATE OF ANALYSIS										
CLIENT:	Zipper Geo Associ	ates		DATE:	12/16/2015								
	19023 - 36th Ave V			ALS JOB#:	EV15120103								
	Lynnwood, WA 980	036		ALS SAMPLE#:	EV15120103-02								
CLIENT CONTACT: Jon Einarsen			D/	ATE RECEIVED:	12/11/2015								
CLIENT PROJECT: 1099.25			COL	LECTION DATE:	12/10/2015 2:46:00 PM								
CLIENT SAMPLE ID	MW-1A		WDOE AC	CREDITATION:	C601								
		SAMPLE	DATA RESULTS										
			REPORTING										
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR		DATE	BY						
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	12/14/2015	PAB						
Benzene	EPA-8021	U	1.0	1	UG/L	12/14/2015	PAB						
Toluene	EPA-8021	U	1.0	1	UG/L	12/14/2015	PAB						
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	12/14/2015	PAB						
Xylenes	EPA-8021	U	3.0	1	UG/L	12/14/2015	PAB						
					ANALYSIS ANALYSIS								
SURROGATE	METHOD	%REC				DATE	BY						
TFT	NWTPH-GX	87.7				12/14/2015	PAB						
TFT	EPA-8021	84.0				12/14/2015	PAB						

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		CERTIFIC	ATE OF ANALYSIS						
CLIENT:	Zipper Geo Associ	ates		DATE:	12/16/2015				
	19023 - 36th Ave V			ALS JOB#:	EV15120103				
	Lynnwood, WA 980	036		ALS SAMPLE#:	EV15120103-03				
CLIENT CONTACT:	Jon Einarsen		D/	ATE RECEIVED:	12/11/2015				
CLIENT PROJECT:	1099.25		COL	12/10/2015 3:12:00 PM					
CLIENT SAMPLE ID	MW-5		WDOE AC	C601					
		DATA RESULTS							
			REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	IALYSIS BY		
ANALYTE	METHOD	RESULTS		FACTOR					
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	12/14/2015	PAB		
Benzene	EPA-8021	U	1.0	1	UG/L	12/14/2015	PAB		
Toluene	EPA-8021	U	1.0	1	UG/L	12/14/2015	PAB		
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	12/14/2015	PAB		
Xylenes	EPA-8021	U	3.0	1	UG/L	12/14/2015	PAB		
						ANALYSIS AN	ALYSIS		
SURROGATE	METHOD	%REC				DATE	BY		
TFT	NWTPH-GX	88.6				12/14/2015	PAB		
TFT	EPA-8021	85.5				12/14/2015	PAB		

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		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ	ates		DATE:	12/16/20	015	
	19023 - 36th Ave V			ALS JOB#:			
	Lynnwood, WA 980	036		ALS SAMPLE#:	EV1512	0103-04	
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	12/11/20	015	
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	12/10/20	015 3:37:00	PM
CLIENT SAMPLE ID	MW-4A		WDOE AC	CREDITATION:	C601		
		SAMPLE	DATA RESULTS				
			REPORTING	DILUTION	UNITS	ANALYSIS AN	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR		DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	12/14/2015	PAB
Benzene	EPA-8021	U	1.0	1	UG/L	12/14/2015	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	12/14/2015	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	12/14/2015	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	12/14/2015	PAB
						ANALYSIS AN	IALYSIS
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	90.6				12/14/2015	PAB
TFT	EPA-8021	86.7				12/14/2015	PAB

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		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ 19023 - 36th Ave V	V., Suite D		DATE: ALS JOB#:	12/16/20 EV1512		
	Lynnwood, WA 98	036		ALS SAMPLE#:		0103-05	
CLIENT CONTACT:	Jon Einarsen			ATE RECEIVED:	12/11/20		
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	12/10/20	015 4:00:00	PM
CLIENT SAMPLE ID	MW-3		WDOE AC	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
			REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AN DATE	IALYSIS BY
ANALYTE TPH-Volatile Range	METHOD NWTPH-GX	RESULTS U	50	1	UG/L	12/14/2015	PAB
Benzene	EPA-8021	U	1.0	1	UG/L	12/14/2015	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	12/14/2015	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	12/14/2015	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	12/14/2015	PAB
						ANALYSIS AN	IALYSIS
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	85.7				12/14/2015	PAB
TFT	EPA-8021	86.6				12/14/2015	PAB

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CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	 12/16/2015 EV15120103 C601
CLIENT CONTACT: CLIENT PROJECT:	Jon Einarsen 1099.25	

### LABORATORY BLANK RESULTS

# MBG-121315W - Batch 99838 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	UG/L	50	12/13/2015	PAB

### MB-121315W - Batch 99838 - Water by EPA-8021

				REPORTING	ANALYSIS	ANALYSIS
ANALYTE	METHOD	RESULTS	UNITS	LIMITS	DATE	BY
Benzene	EPA-8021	U	UG/L	1.0	12/13/2015	PAB
Toluene	EPA-8021	U	UG/L	1.0	12/13/2015	PAB
Ethylbenzene	EPA-8021	U	UG/L	1.0	12/13/2015	PAB
Xylenes	EPA-8021	U	UG/L	3.0	12/13/2015	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

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CLIENT:	Zipper Geo Associates	DATE:	12/16/2015
	19023 - 36th Ave W., Suite D	ALS SDG#:	EV15120103
	Lynnwood, WA 98036	WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25		

### LABORATORY CONTROL SAMPLE RESULTS

# ALS Test Batch ID: 99838 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	85.5		12/13/2015	PAB
TPH-Volatile Range - BSD	NWTPH-GX	90.5	6	12/14/2015	PAB

### ALS Test Batch ID: 99838 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	ANALYSISBY
Benzene - BS	EPA-8021	95.5			12/13/2015	PAB
Benzene - BSD	EPA-8021	95.7	0		12/13/2015	PAB
Toluene - BS	EPA-8021	94.1			12/13/2015	PAB
Toluene - BSD	EPA-8021	94.0	0		12/13/2015	PAB
Ethylbenzene - BS	EPA-8021	93.1			12/13/2015	PAB
Ethylbenzene - BSD	EPA-8021	94.5	2		12/13/2015	PAB
Xylenes - BS	EPA-8021	95.4			12/13/2015	PAB
Xylenes - BSD	EPA-8021	96.2	1		12/13/2015	PAB

APPROVED BY

Laboratory Director

 Page 8

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 FAX 425-356-2626

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 FAX 425-356-2626

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2-MW	01/21	90:2	OZH	1			~		1			1							2
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HERE ETOBI SER	Han poo	Suite.			NWTPH-HCID	NWTPH-DX	BTEX by EPA-8021	E by EPA-8021	genated Volatile	ile Organic Cor	/ EDC by EPA	Euro / Euro uy Erra ezeu (sou) Semivolatile Organic Compou	yclic Aromatic I	Pesticides	Metals-MTCA-5	TCLP-Metals			NUMBER OF CONTAINERS
MOE TO STORE (428) 582-99	E-MAIL:	stores stores	tz Jua	stade	0.00	ux		MTBE by EPA-8021 EPA-8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EUD / EUC by EFA 6200 (Soli) Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by	U by EPA 8081/8082	RCRA-8	VOA 🗌 Semi-Vol 🗌			ONTAINERS
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APANY Zipper	st uss	10000	52			ų							EPA-8270 SIM		TAL	Herbs			
JECT ID: 1099.25	· / · · ·	10,00		<u>1 </u>		TA2I3				-	1		11		1		DTHER	(uppde)	

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March 17, 2016

Mr. Jon Einarsen Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036

Dear Mr. Einarsen,

On March 16th, 5 samples were received by our laboratory and assigned our laboratory project number EV16030125. The project was identified as your 1099.25. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan Laboratory Director

Page 1
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CLIENT: CLIENT CONTACT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 98 Jon Einarsen	V., Suite D	D	DATE: ALS JOB#: ALS SAMPLE#: ATE RECEIVED:	3/17/20 EV1603 EV1603 03/16/20	0125 0125-01	
CLIENT PROJECT:	1099.25			LECTION DATE:		16 12:15:00 l	PM
CLIENT SAMPLE ID	MW-2		WDOE AC	CREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A DATE	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	03/17/2016	PAB
Benzene	EPA-8021	U	1.0	1	UG/L	03/17/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	03/17/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	03/17/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	03/17/2016	PAB
SURROGATE	METHOD	%REC				ANALYSIS A DATE	NALYSIS BY
TFT	NWTPH-GX	86.9				03/17/2016	PAB
TFT	EPA-8021	99.3				03/17/2016	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

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		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ	ates		DATE:	3/17/20	16	
	19023 - 36th Ave V			ALS JOB#:			
	Lynnwood, WA 980	036		ALS SAMPLE#:	EV1603	0125-02	
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	03/16/2	016	
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	3/16/20	16 12:40:00	PM
CLIENT SAMPLE ID	MW-1A		WDOE AC	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
			REPORTING	DILUTION		ANALYSIS A	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	03/17/2016	PAB
Benzene	EPA-8021	U	1.0	1	UG/L	03/17/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	03/17/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	03/17/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	03/17/2016	PAB
						ANALYSIS A	
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	88.8				03/17/2016	PAB
TFT	EPA-8021	104				03/17/2016	PAB

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		CERTIFIC	ATE OF ANALYSIS						
CLIENT:	Zipper Geo Associ	ates		DATE:	3/17/20	16			
	19023 - 36th Ave V			ALS JOB#:					
	Lynnwood, WA 980	036		ALS SAMPLE#:	EV1603	EV16030125-03			
CLIENT CONTACT:	Jon Einarsen		D/	ATE RECEIVED:	03/16/2	016			
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	3/16/20	16 1:15:00 P	M		
CLIENT SAMPLE ID	MW-5		WDOE AC	CREDITATION:	C601				
		SAMPLE	DATA RESULTS						
			REPORTING LIMITS	DILUTION FACTOR		ANALYSIS A DATE			
ANALYTE	METHOD	RESULTS	_	FACTOR	UNITS				
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	03/17/2016	PAB		
Benzene	EPA-8021	U	1.0	1	UG/L	03/17/2016	PAB		
Toluene	EPA-8021	U	1.0	1	UG/L	03/17/2016	PAB		
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	03/17/2016	PAB		
Xylenes	EPA-8021	U	3.0	1	UG/L	03/17/2016	PAB		
						ANALYSIS A	NALYSIS		
SURROGATE	METHOD	%REC				DATE	BY		
TFT	NWTPH-GX	89.6				03/17/2016	PAB		
TFT	EPA-8021	109				03/17/2016	PAB		

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		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ	ates		DATE:	3/17/20	16	
	19023 - 36th Ave V			ALS JOB#:	EV1603	0125	
	Lynnwood, WA 980	036		ALS SAMPLE#:	EV1603	0125-04	
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	03/16/2	016	
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	3/16/20	16 1:35:00 P	M
CLIENT SAMPLE ID	MW-4A		WDOE AC	CCREDITATION:	C601		
		SAMPLE	E DATA RESULTS				
			REPORTING	DILUTION			
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	03/17/2016	PAB
Benzene	EPA-8021	U	1.0	1	UG/L	03/17/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	03/17/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	03/17/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	03/17/2016	PAB
						ANALYSIS A	
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	92.0				03/17/2016	PAB
TFT	EPA-8021	110				03/17/2016	PAB

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		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ	ates		DATE:	3/17/20	16	
	19023 - 36th Ave V			ALS JOB#:	EV1603	0125	
	Lynnwood, WA 980	036		ALS SAMPLE#:	EV1603	0125-05	
CLIENT CONTACT:	Jon Einarsen		D/	ATE RECEIVED:	03/16/2	016	
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	3/16/20	16 1:55:00 P	M
CLIENT SAMPLE ID	MW-3		WDOE AC	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
			REPORTING	DILUTION			
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	03/17/2016	PAB
Benzene	EPA-8021	U	1.0	1	UG/L	03/17/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	03/17/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	03/17/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	03/17/2016	PAB
						ANALYSIS A	NALYSIS
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	86.5				03/17/2016	PAB
TFT	EPA-8021	103				03/17/2016	PAB

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CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	 3/17/2016 EV16030125 C601
CLIENT CONTACT: CLIENT PROJECT:	Jon Einarsen 1099.25	

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### LABORATORY BLANK RESULTS

# MBG-031616W2 - Batch 102321 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	UG/L	50	03/16/2016	PAB
U - Analyte analyzed for bu	t not detected at level above rep	8				
ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	UG/L	1.0	03/16/2016	PAB
Toluene	EPA-8021	U	UG/L	1.0	03/16/2016	PAB

UG/L

UG/L

1.0

3.0

03/16/2016

03/16/2016

PAB

PAB

U - Analyte analyzed for but not detected at level above reporting limit.

EPA-8021

EPA-8021

Ethylbenzene

Xylenes

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CLIENT:	Zipper Geo Associates	DATE:
	19023 - 36th Ave W., Suite D	ALS SDG#:
	Lynnwood, WA 98036	WDOE ACCREDITATION:
CLIENT CONTACT:	Jon Einarsen	
CLIENT PROJECT:	1099.25	

#### LABORATORY CONTROL SAMPLE RESULTS

### ALS Test Batch ID: 102321 - Water by NWTPH-GX

				LIMITS	ANALYSIS ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD QUAL	MIN MAX	DATE
TPH-Volatile Range - BS	NWTPH-GX	78.1		66.5 122.7	03/16/2016 PAB
TPH-Volatile Range - BSD	NWTPH-GX	79.5	2	66.5 122.7	03/16/2016 PAB

### ALS Test Batch ID: 102321 - Water by EPA-8021

				LIM	ITS	ANALYSIS	ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD QUAL	MIN	MAX	DATE	
Benzene - BS	EPA-8021	100		83	120	03/16/2016	PAB
Benzene - BSD	EPA-8021	102	2	83	120	03/16/2016	PAB
Toluene - BS	EPA-8021	104		85	115	03/16/2016	PAB
Toluene - BSD	EPA-8021	105	2	85	115	03/16/2016	PAB
Ethylbenzene - BS	EPA-8021	103		85	113	03/16/2016	PAB
Ethylbenzene - BSD	EPA-8021	104	1	85	113	03/16/2016	PAB
Xylenes - BS	EPA-8021	103		85	116	03/16/2016	PAB
Xylenes - BSD	EPA-8021	105	2	85	116	03/16/2016	PAB

APPROVED BY

3/17/2016

C601

EV16030125

Laboratory Director

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ALS	1

Laboratory Analysis Request Chain Of Custody/

(Laboratory Use Only)

ALS Job#

	IIIIp.//www.alsgroual.colii	1110-										Date	Date 31616	6 Page	-	Q	~
PROJECT ID: 1099.25					ANALYSIS		REQUESTED	TED						OTHER (S	(Specify)		
REPORT TO ZOA																	
	3										NIS 02	□ JAT	dîeH				
ADDRESS: 19023 36th A.R.	Ave. W	2. Suite	5							072	5PA-82		1sə,				
Lynnosa wy								0928		8 A93	3 Vd (H	log iic	d 🗌				έNΟΙ
PHONE: 425 982 99 28	FAX:					· · · ·	09	4EPA	vater)	λq sp			loV-in				
P.O. #:	E-MAIL:											] 8-AF					
INVOICE TO ZGA COMPANY: ZGA																	•
ATTENTION:						100	1208										
ADDRESS:							3-493										
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SAMPLE I.D.	DATE	TIME	TYPE	LAB#	TWN	ITWN NWTB		golsH Volati	EDB \ EDB \		PCB	Metal	Metal				NUN
1. Nw-2	3494E	12:15pm	Μ	1		XX									· · · · · · · · · · · · · · · · · · ·		
2. MW-1A	. dirma	12:40pm	van ander	Ц		X X											5
3. MW-5	filster a serie a spin	1:15pr		η		X X											ત
4. Mw-44	di Taning Descalage	1:35pm		4		X											5
5. MW-3	Þ	1:55pm		S		$\frac{1}{2}$					-						2
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SPECIAL INSTRUCTIONS																	
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a Polizzarishad Prin Max N A A	1000 M		21 A Palille	· `	1.00 mar		õ	Organic, Metals & Inorganic Analysis	Metals	& Inord	עורוט I Anic /	Nnalvsi	יזר עו מר מי מ	I UNIVAROUND REQUESTED IN BUSINESS DAYS Janic Analysis	DUSIFIESS L	ays	

Specify: 
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 Standard
 Standard
 Standard

 Fuels & Hydrocarbon Analysis
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 SAME S 2. Relinquished By: Received By:\_\_

Received By:\_

\*Turnaround request less than standard may incur Rush Charges



June 15, 2016

Mr. Jon Einarsen Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036

Dear Mr. Einarsen,

On June 10th, 6 samples were received by our laboratory and assigned our laboratory project number EV16060078. The project was identified as your 1099.25. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Jagur-

Rick Bagan Laboratory Director

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CLIENT: CLIENT CONTACT: CLIENT PROJECT:	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 98 Jon Einarsen 1099.25	V., Suite D		DATE: ALS JOB#: ALS SAMPLE#: ATE RECEIVED: LECTION DATE:	6/15/201 EV1606 EV1606 06/10/201 6/10/201	0078 0078-01	٩M
CLIENT SAMPLE ID	Drum B-1		WDOE AC	CREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	390	50	1	UG/L	06/14/2016	PAB
Benzene	EPA-8021	U	1.0	1	UG/L	06/14/2016	PAB
Toluene	EPA-8021	2.8	1.0	1	UG/L	06/14/2016	PAB
Ethylbenzene	EPA-8021	1.4	1.0	1	UG/L	06/14/2016	PAB
Xylenes	EPA-8021	13	3.0	1	UG/L	06/14/2016	PAB
SURROGATE	METHOD	%REC				ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	87.9				06/14/2016	PAB
TFT	EPA-8021	86.3				06/14/2016	PAB

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

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		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ	ates		DATE:	6/15/202	16	
	19023 - 36th Ave V			ALS JOB#:	EV1606	0078	
	Lynnwood, WA 980	036		ALS SAMPLE#:	EV1606	0078-02	
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	06/10/20	016	
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	6/10/20 <i>1</i>	16 11:15:00	AM
CLIENT SAMPLE ID	MW3-6/10		WDOE AC	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
			REPORTING	DILUTION		ANALYSIS	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	06/13/2016	PAB
Benzene	EPA-8021	U	1.0	1	UG/L	06/13/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	06/13/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	06/13/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	06/13/2016	PAB
						ANALYSIS	ANALYSIS
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	85.7				06/13/2016	PAB
TFT	EPA-8021	85.4				06/13/2016	PAB

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		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ	ates		DATE:	6/15/201	16	
	19023 - 36th Ave V	V., Suite D		ALS JOB#:	EV1606	0078	
	Lynnwood, WA 98	036		ALS SAMPLE#:	EV1606	0078-03	
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	06/10/20	016	
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	6/10/201	16 1:30:00 P	M
CLIENT SAMPLE ID	MW2-6/10		WDOE AC	CREDITATION:	C601		
		SAMPLE	DATA RESULTS				
			REPORTING	DILUTION		ANALYSIS	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	06/13/2016	PAB
Benzene	EPA-8021	U	1.0	1	UG/L	06/13/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	06/13/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	06/13/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	06/13/2016	PAB
						ANALYSIS	ANALYSIS
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	88.6				06/13/2016	PAB
TFT	EPA-8021	86.1				06/13/2016	PAB

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		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ	ates		DATE:	6/15/201	16	
	19023 - 36th Ave V	V., Suite D		ALS JOB#:	EV1606	0078	
	Lynnwood, WA 980	036		ALS SAMPLE#:	EV1606	0078-04	
CLIENT CONTACT:	Jon Einarsen		D/	ATE RECEIVED:	06/10/20	016	
CLIENT PROJECT:	1099.25		COLI	LECTION DATE:	6/10/201	16 1:10:00 F	M
CLIENT SAMPLE ID	MW1A-6/10		WDOE AC	CREDITATION:	C601		
		SAMPLE	DATA RESULTS				
			REPORTING	DILUTION		ANALYSIS	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	06/13/2016	PAB
Benzene	EPA-8021	U	1.0	1	UG/L	06/13/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	06/13/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	06/13/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	06/13/2016	PAB
						ANALYSIS	
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	89.1				06/13/2016	PAB
TFT	EPA-8021	83.2				06/13/2016	PAB

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		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ	ates		DATE:	6/15/201	16	
	19023 - 36th Ave V	V., Suite D		ALS JOB#:	EV1606	0078	
	Lynnwood, WA 980	036		ALS SAMPLE#:	EV1606	0078-05	
CLIENT CONTACT:	Jon Einarsen		D/	ATE RECEIVED:	06/10/20	016	
CLIENT PROJECT:	1099.25		COLI	LECTION DATE:	6/10/201	16 12:23:00	PM
CLIENT SAMPLE ID	MW5-6/10		WDOE AC	CREDITATION:	C601		
		SAMPLE	DATA RESULTS				
			REPORTING	DILUTION		ANALYSIS	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	06/13/2016	PAB
Benzene	EPA-8021	U	1.0	1	UG/L	06/13/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	06/13/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	06/13/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	06/13/2016	PAB
						ANALYSIS	ANALYSIS
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	86.6				06/13/2016	PAB
TFT	EPA-8021	84.4				06/13/2016	PAB

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		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ	ates		DATE:	6/15/201	16	
	19023 - 36th Ave V	V., Suite D		ALS JOB#:	EV1606	0078	
	Lynnwood, WA 980	036		ALS SAMPLE#:	EV1606	0078-06	
CLIENT CONTACT:	Jon Einarsen		D/	ATE RECEIVED:	06/10/20	016	
CLIENT PROJECT:	1099.25		COLI	LECTION DATE:	6/10/201	6 11:50:00	AM
CLIENT SAMPLE ID	MW4A-6/10		WDOE AC	CREDITATION:	C601		
		SAMPLE	DATA RESULTS				
			REPORTING	DILUTION		ANALYSIS	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	06/13/2016	PAB
Benzene	EPA-8021	U	1.0	1	UG/L	06/13/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	06/13/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	06/13/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	06/13/2016	PAB
						ANALYSIS	ANALYSIS
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	86.6				06/13/2016	PAB
TFT	EPA-8021	85.4				06/13/2016	PAB

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CLIENT:	Zipper Geo Associates	DATE:	6/15/2016
	19023 - 36th Ave W., Suite D	ALS SDG#:	EV16060078
	Lynnwood, WA 98036	WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25		

#### LABORATORY BLANK RESULTS

# MBG-061016W - Batch 105302 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	UG/L	50	06/10/2016	PAB
U - Analyte analyzed for but MB-061016W - Batch	t not detected at level above rep 105302 - Water by EF	0				
ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Ponzono	EDA 9021			1.0	06/10/2016	DAD

		••	LINITS			
EPA-8021	U	UG/L	1.0	06/10/2016	PAB	
EPA-8021	U	UG/L	1.0	06/10/2016	PAB	
EPA-8021	U	UG/L	1.0	06/10/2016	PAB	
EPA-8021	U	UG/L	3.0	06/10/2016	PAB	
	EPA-8021 EPA-8021 EPA-8021	EPA-8021         U           EPA-8021         U           EPA-8021         U	EPA-8021         U         UG/L           EPA-8021         U         UG/L           EPA-8021         U         UG/L	EPA-8021         U         UG/L         1.0           EPA-8021         U         UG/L         1.0           EPA-8021         U         UG/L         1.0           EPA-8021         U         UG/L         1.0	EPA-8021         U         UG/L         1.0         06/10/2016           EPA-8021         U         UG/L         1.0         06/10/2016           EPA-8021         U         UG/L         1.0         06/10/2016           EPA-8021         U         UG/L         1.0         06/10/2016	EPA-8021         U         UG/L         1.0         06/10/2016         PAB           EPA-8021         U         UG/L         1.0         06/10/2016         PAB           EPA-8021         U         UG/L         1.0         06/10/2016         PAB           EPA-8021         U         UG/L         1.0         06/10/2016         PAB

U - Analyte analyzed for but not detected at level above reporting limit.

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CLIENT:	Zipper Geo Associates	DATE:
	19023 - 36th Ave W., Suite D	ALS SDG#:
	Lynnwood, WA 98036	WDOE ACCREDITATION:
CLIENT CONTACT:	Jon Einarsen	
CLIENT PROJECT:	1099.25	

#### LABORATORY CONTROL SAMPLE RESULTS

# ALS Test Batch ID: 105302 - Water by NWTPH-GX

	indici by initi				LI	MITS	ANALYSIS	ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	MIN	MAX	DATE	
TPH-Volatile Range - BS	NWTPH-GX	94.7			66.5	122.7	06/10/2016	PAB
TPH-Volatile Range - BSD	NWTPH-GX	96.5	2		66.5	122.7	06/15/2016	PAB

### ALS Test Batch ID: 105302 - Water by EPA-8021

				LIN	IITS	ANALYSIS	ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD QUAL	MIN	MAX	DATE	
Benzene - BS	EPA-8021	91.1		83	120	06/10/2016	PAB
Benzene - BSD	EPA-8021	92.3	1	83	120	06/10/2016	PAB
Toluene - BS	EPA-8021	94.1		85	115	06/10/2016	PAB
Toluene - BSD	EPA-8021	92.7	2	85	115	06/10/2016	PAB
Ethylbenzene - BS	EPA-8021	95.7		85	113	06/10/2016	PAB
Ethylbenzene - BSD	EPA-8021	96.9	1	85	113	06/10/2016	PAB
Xylenes - BS	EPA-8021	99.1		85	116	06/10/2016	PAB
Xylenes - BSD	EPA-8021	100	1	85	116	06/10/2016	PAB

APPROVED BY

6/15/2016

C601

EV16060078

Laboratory Director

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Drum B-1       b/10       9:50       H_20       I       X       X         MW3-b/10       11:15       2       X       X       IIII       IIIII       IIIII       IIIIII       IIIIII       IIIIIII       IIIIIIIIIII       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	SAMPLE I.D.	DATE	TIME	TYPE	LAB#				-	/ 803		-		-	TCLP				NUN	BEC
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"Turnaround request less than standard may incur Rush Charges



September 8, 2016

Mr. Jon Einarsen Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036

Dear Mr. Einarsen,

On September 7th, 5 samples were received by our laboratory and assigned our laboratory project number EV16090032. The project was identified as your 1099.25. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

**ALS Laboratory Group** 

Rick Bagan Laboratory Director

Page 1
ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental



CLIENT: CLIENT CONTACT: CLIENT PROJECT: CLIENT SAMPLE ID	Zipper Geo Associ 19023 - 36th Ave V Lynnwood, WA 98 Jon Einarsen 1099.25 MW3-090716	V., Suite D	COLI	DATE: ALS JOB#: ALS SAMPLE#: ATE RECEIVED: LECTION DATE: CCREDITATION:	9/8/2016 EV1609 EV1609 09/07/20 9/7/2016 C601	0032 0032-01	М
CLIENT SAMPLE ID	101003-090710			CREDITATION.	0001		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	09/07/2016	PAB
Benzene	EPA-8021	U	1.0	1	UG/L	09/07/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	09/07/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	09/07/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	09/07/2016	PAB
						ANALYSIS DATE	ANALYSIS BY
SURROGATE	METHOD	%REC				DATE	DĬ
TFT	NWTPH-GX	89.0				09/07/2016	PAB
TFT	EPA-8021	88.1				09/07/2016	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

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		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ	ates		DATE:	9/8/2016	6	
	19023 - 36th Ave V			ALS JOB#:	EV1609	0032	
	Lynnwood, WA 98	036		ALS SAMPLE#:	EV1609		
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	09/07/20	016	
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	9/7/2016	6 10:26:00 A	M
CLIENT SAMPLE ID	MW4A-090716		WDOE AC	CREDITATION:	C601		
		SAMPLE	DATA RESULTS				
			REPORTING	DILUTION		ANALYSIS	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	09/07/2016	PAB
Benzene	EPA-8021	U	1.0	1	UG/L	09/07/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	09/07/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	09/07/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	09/07/2016	PAB
						ANALYSIS	
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	95.9				09/07/2016	PAB
TFT	EPA-8021	95.0				09/07/2016	PAB

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		CERTIFIC	ATE OF ANALYSIS					
CLIENT:	Zipper Geo Associ	ates		DATE:	9/8/2016	6		
	19023 - 36th Ave V	,		ALS JOB#:	EV1609	0032		
	Lynnwood, WA 98	036		ALS SAMPLE#:	EV1609	EV16090032-03		
CLIENT CONTACT:	Jon Einarsen		D/	ATE RECEIVED:	09/07/20	09/07/2016		
CLIENT PROJECT:	1099.25		COLI	LECTION DATE:	9/7/2016	6 11:08:00 A	M	
CLIENT SAMPLE ID	MW5-090716		WDOE AC	CREDITATION:	C601			
		SAMPLE	DATA RESULTS					
			REPORTING	DILUTION		ANALYSIS		
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY	
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	09/07/2016	PAB	
Benzene	EPA-8021	U	1.0	1	UG/L	09/07/2016	PAB	
Toluene	EPA-8021	U	1.0	1	UG/L	09/07/2016	PAB	
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	09/07/2016	PAB	
Xylenes	EPA-8021	U	3.0	1	UG/L	09/07/2016	PAB	
						ANALYSIS		
SURROGATE	METHOD	%REC				DATE	BY	
TFT	NWTPH-GX	94.8				09/07/2016	PAB	
TFT	EPA-8021	90.6				09/07/2016	PAB	

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		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	Zipper Geo Associ	ates		DATE:	9/8/2016	6	
	19023 - 36th Ave V	,		ALS JOB#:	EV1609	0032	
	Lynnwood, WA 980	036		ALS SAMPLE#:	EV1609	0032-04	
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	09/07/20	016	
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	9/7/2016	6 11:52:00 A	M
CLIENT SAMPLE ID	MW1A-090716		WDOE AC	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
			REPORTING	DILUTION		ANALYSIS	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	09/07/2016	PAB
Benzene	EPA-8021	U	1.0	1	UG/L	09/07/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	09/07/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	09/07/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	09/07/2016	PAB
						ANALYSIS	
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	91.6				09/07/2016	PAB
TFT	EPA-8021	89.9				09/07/2016	PAB

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		CERTIFIC	ATE OF ANALYSIS					
CLIENT:	Zipper Geo Associ	ates		DATE:	9/8/2016	6		
	19023 - 36th Ave V			ALS JOB#:	EV1609	0032		
	Lynnwood, WA 98	036		ALS SAMPLE#:	EV1609	EV16090032-05		
CLIENT CONTACT:	Jon Einarsen		D	ATE RECEIVED:	09/07/20	2016		
CLIENT PROJECT:	1099.25		COL	LECTION DATE:	9/7/2016	6 12:36:00 F	M	
CLIENT SAMPLE ID	MW2-090716		WDOE AC	CCREDITATION:	C601			
		SAMPLE	DATA RESULTS					
			REPORTING	DILUTION		ANALYSIS		
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY	
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	09/07/2016	PAB	
Benzene	EPA-8021	U	1.0	1	UG/L	09/07/2016	PAB	
Toluene	EPA-8021	U	1.0	1	UG/L	09/07/2016	PAB	
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	09/07/2016	PAB	
Xylenes	EPA-8021	U	3.0	1	UG/L	09/07/2016	PAB	
						ANALYSIS		
SURROGATE	METHOD	%REC				DATE	BY	
TFT	NWTPH-GX	93.6				09/07/2016	PAB	
TFT	EPA-8021	91.4				09/07/2016	PAB	

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CLIENT:	Zipper Geo Associates	DATE:	9/8/2016
	19023 - 36th Ave W., Suite D	ALS SDG#:	EV16090032
	Lynnwood, WA 98036	WDOE ACCREDITATION:	C601
CLIENT CONTACT: CLIENT PROJECT:	Jon Einarsen 1099.25		

### LABORATORY BLANK RESULTS

# MBG-083116W2 - Batch 107649 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	UG/L	50	08/31/2016	PAB
U - Analyte analyzed for but n MB-083116W2 - Batch 1	•	8				

				REPORTING	ANALYSIS	ANALYSIS	
ANALYTE	METHOD	RESULTS	UNITS	LIMITS	DATE	BY	
Benzene	EPA-8021	U	UG/L	1.0	08/31/2016	PAB	
Toluene	EPA-8021	U	UG/L	1.0	08/31/2016	PAB	
Ethylbenzene	EPA-8021	U	UG/L	1.0	08/31/2016	PAB	
Xylenes	EPA-8021	U	UG/L	3.0	08/31/2016	PAB	

U - Analyte analyzed for but not detected at level above reporting limit.

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ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

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CLIENT:	Zipper Geo Associates	DATE:
	19023 - 36th Ave W., Suite D	ALS SDG#:
	Lynnwood, WA 98036	WDOE ACCREDITATION:
CLIENT CONTACT:	Jon Einarsen	
CLIENT PROJECT:	1099.25	

#### LABORATORY CONTROL SAMPLE RESULTS

# ALS Test Batch ID: 107649 - Water by NWTPH-GX

				LIN	IITS	ANALYSIS	ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD QUAL	MIN	MAX	DATE	
TPH-Volatile Range - BS	NWTPH-GX	88.3		66.5	122.7	08/31/2016	PAB
TPH-Volatile Range - BSD	NWTPH-GX	82.2	7	66.5	122.7	08/31/2016	PAB

### ALS Test Batch ID: 107649 - Water by EPA-8021

				LIN	IITS	ANALYSIS	ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD QUAL	MIN	MAX	DATE	
Benzene - BS	EPA-8021	101		83	120	08/31/2016	PAB
Benzene - BSD	EPA-8021	100	0	83	120	08/31/2016	PAB
Toluene - BS	EPA-8021	96.4		85	115	08/31/2016	PAB
Toluene - BSD	EPA-8021	95.5	1	85	115	08/31/2016	PAB
Ethylbenzene - BS	EPA-8021	95.4		85	113	08/31/2016	PAB
Ethylbenzene - BSD	EPA-8021	96.5	1	85	113	08/31/2016	PAB
Xylenes - BS	EPA-8021	97.3		85	116	08/31/2016	PAB
Xylenes - BSD	EPA-8021	98.1	1	85	116	08/31/2016	PAB

APPROVED BY

9/8/2016

C601

EV16090032

Laboratory Director

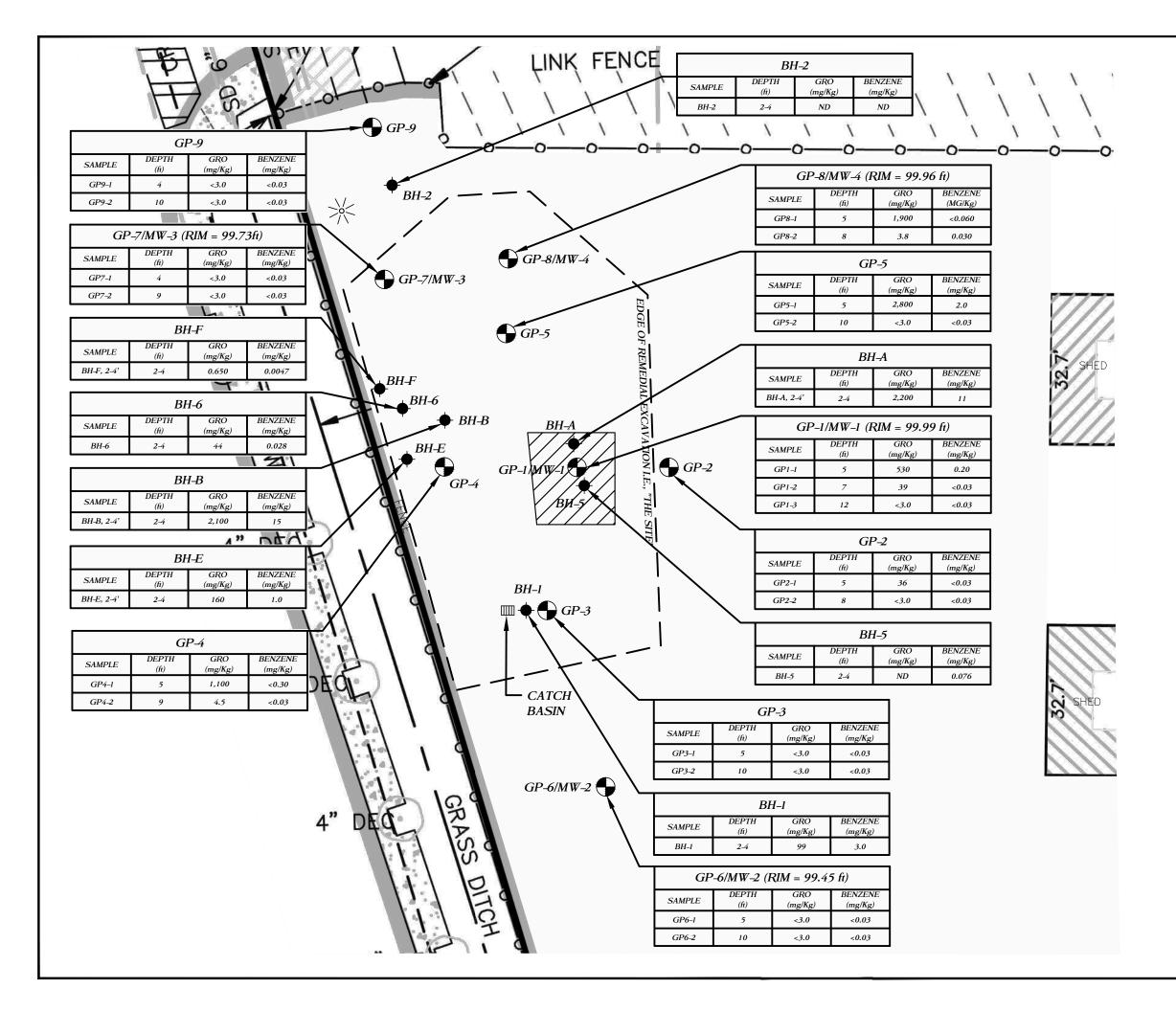
Page 8
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Environmental J

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	Chain Of Custodv/	Of C	usto							ALS Job#	(Le	aborato	(Laboratory Use Only)	(fulc	[
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(ALS) Fax (429) 350-2020 http://www.alsglobal.com							Date .	91	<u>рМ</u> с,	114 Page 1		đ	-		]
PROJECT ID: 1049.25	ANALYSIS REQUESTED	REQUES	ΠD					<b>b</b> a	δ	OTHER (Specify)	cify)				
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MANAGER: JON EINELSEN							TAL								
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ATTENTION: SAME	>	(†208 A⊂ †208 A¶	janic Cor	by EPA 8	e Organic	Aromatic	CA⊧5 □	er (Speci	V 🗌 elt					S HI O	D IN G
	грн-ду грн-ру грн-на	X pλ El			litslovi										
SAMPLE I.D. DATE TIME TYPE LAB#	TWN	BTE)			mə2										<u>)</u> ЭН
1. mw 3-090716 9/7 09:24 Hz 0 1	×	×											10	3	
2. mW4A-090716 10:26 2	*	×											• 0	3	
3. mws-090716 11:08 3	×	×											00	ત	
4. MW14-090716 11:52 4	×	x					,						<u>د م</u>	3	
5. mw2-090711 1 12:36 & S	×	×											3	~	
ő															
10.															
SPECIAL INSTRUCTIONS CC Jeff and Evelyn															
SIGNATURES (Name, Company, Date, Time):	14:53	0	TURNAROUNI Organic, Metals & Inorganic Analysis	Metals	& Inorg	TURN	IARO Analy	IND RI sis	GUE	TURNAROUND REQUESTED in Business Days* janic Analysis OTHER:	siness OTHE	Days ER:	J.		
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Appendix N – Compiled Analytical Results Figures



#### LEGEND

GP-1/MW-1 (RIM = 99.99 fi)	GROUNDWA WELL NUMI APPROXIMA GROUNDWA	ATE LOCATION ATER MONITC UMENT RIM	DRING N.	
-ф- ВН-1	1998 TRC IN LOCATIONS APPROXIM	WANCED DUR NVESTIGATION SARE ATE, REFEREN T TO SCALE.	N. ALL	
*	PINK NAIL W	FIC BENCHMA VITH WASHER ELEVATION = .	2	Т
	UNDERGRO CAVITY IDE PENETRATI APPROXIMA FORMER US	ATE LOCATION DUND STORAG NTIFIED BY GI NG RADAR SU ATE LOCATION STs AND PUMI D BY TRC (199	GE TANK ROUND JRVEY, J N OF P ISLAN	AND
	"THE SITE" I	PER WAC 173	-340-200	)
	20	0	10	20

 BMC WEST

 5210 East Lake Sammamish Parkway SE

 Issaquah, Washington

 SUMMARY OF REMEDIAL INVESTIGATION

 SOIL ANALYTICAL RESULTS

 DATE: FEBRUARY 2018

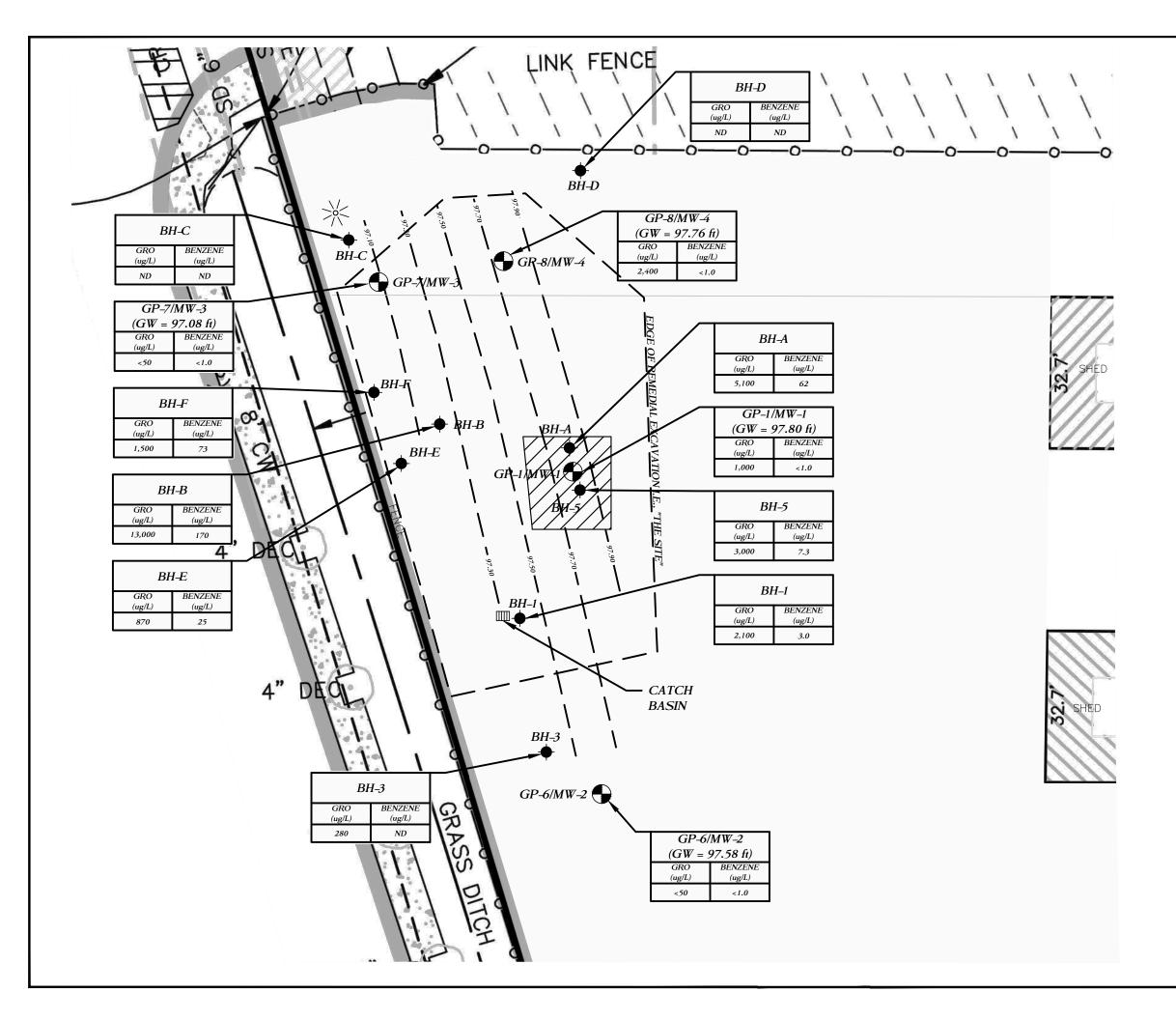
 Job No. 1099.25

 Zipper Geo Associates, LLC

 19023 36th Ave. W., Suite D
 FIGURE

 Lynnwood, WA
 SHT. 1 of 1

SCALE IN FEET



#### LEGEND

GP-1/MW-1 (GW = 97.80 ft)	DIRECT PUSH/GROUNDWATER MONITORING WELL NUMBER AND APPROXIMATE LOCATION. GROUNDWATER ELEVATION ON 5/8/2013 IN FEET.
-∲- ВН-1	BORING ADVANCED DURING 1998 TRC INVESTIGATION. ALL LOCATIONS ARE APPROXIMATE, REFERENCE FIGURE NOT TO SCALE.
*	SITE SPECIFIC BENCHMARK PK NAIL WITH WASHER ASSUMED ELEVATION = 100 FEET
<b>9</b> 7.60 <b></b>	ESTIMATED GROUNDWATER SURFACE CONTOUR WITH ELEVATION IN FEET
	APPROXIMATE LOCATION OF UNDERGROUND STORAGE TANK CAVITY IDENTIFIED BY GROUND PENETRATING RADAR SURVEY
	"THE SITE" PER WAC 173-340-200
	N

20 0	10	20
SCALE IN FEET		
BMC WEST		
5210 East Lake Sammamish Parkway SE Issaquah, Washington		
· •		
SUMMARY OF REMEDIAL INVESTIGATION		
GROUNDWATER ANALYTICAL RESULTS		
DATE: FEBRUARY 2018	Job No.	1099.22
Zipper Geo Associates, LLC	FIGURE	1
19023 36th Ave. W.,Suite D Lynnwood, WA	SHT. 1 of 1	4
1 1		

